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THE ISLANDS
OF
TITICACA AND KOATI



The peaks of Sorata (Hanko-uma or Illampu and Hanko-Kunu or Hilampi) from the port of Chililaya

The pearls of Sorata (Hanko-uma or Dlampa and Hanko-Kumu or Hilampi) from the port of Chililaya

THE ISLANDS

OF

TITICACA AND KOATI

Illustrated

BY

ADOLPH F. BANDELIER



NEW YORK
1910

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PREFACE

The explorations which I began under the auspices of the late Mr. Henry Villard of the city of New York in July, 1892, were continued until April 1, 1894, when Mr. Villard gave the collections I had gathered for him to the American Museum of Natural History at New York. After that date my work was entirely for the Museum.

In July, 1894, I started for Bolivia accompanied by my wife—Fanny Ritter Bandelier. Arriving at La Paz on August 11th, we visited first the ruins of Tiahuanaco, on the 29th, remaining nineteen days on the site, securing specimens, and surveying the ruins for the purpose of making a general plan of them. We also took notes on architectural details.

Soon after our return to La Paz we made another excursion, this time to the slopes of the well known Illimani. There, at an altitude of 13,000 feet, we explored remains of terraced garden beds, small dwellings of stone, and burial cysts, above the hacienda of Llujo.

It was not until the 26th of December that we could carry out our plan to visit the Island of Titicaca. The Prefect of La Paz, Don Genaro Sanjinéz, gave permission to the steamer plying between Puno and Chililaya to touch at that Island for us. But we had, first, to obtain from the owner of Challa (the principal hacienda on the Island), authorization to reside on his property and to investigate and excavate on the premises. Not only was our request granted at once, but Don Miguel Garcés, the owner, accompanied us on the steamer to Challa, installed us there and imparted strict orders to the several hundred of Aymará Indians liv-

ing on his property to treat us with the same respect as himself or any other member of his family. This injunction was observed as long as our friend remained with us. After his departure, it was only by dint of lavish expenditure of money, and sometimes by assuming an austere attitude, that we held our own among the aborigines. We landed at Challa on January 1, 1895, and remained on the Island of Titicaca until April 15th, with the intermission of one week (early in February) which we spent at the village of Copacavana on the Bolivian mainland, where we witnessed the Indian festivities on the occasion of a church celebration, at the famous shrine of Copacavana.

With this sole exception, we remained three months and a half on Titicaca Island, completely isolated from the outer world. Civil war in Peru attained its climax during that time and all communication between Puno and Bolivia was cut off. Our supplies gave out; not even coffee could be had at the ill-provided pueblo of Copacavana. Furthermore, an Indian insurrection broke out at Yunguyu (on Peruvian soil, six miles from Copacavana) and spread with great rapidity along the Bolivian frontier, threatening to involve the Bolivian Aymará and endanger life and property of the inhabitants of Copacavana.

So, having completed our surveys and excavations on the Island, we retreated to Copacavana and thence, as the situation grew more and more untenable, to Puno. Don Miguel Garcés accompanied us, for in the meantime Lima had fallen into the hands of the Opposition and peace was being restored in Peru. At Puno we prepared for a return to the Island with means for navigating the Lake, distinct from those of the natives which kept us at the mercy of Indian ill-will. The house of Cazorla Brothers at Puno secured for us the use of a flat-bottomed scow propelled by wheels driven by hand. We also improved our stay at Puno for surveying and photographing (there was an itinerant photographer at Puno at the time) the ruins at Sillustani on Lake Umayo.

On May 26th we again landed at Challa, with our hand-wheeler and ample provisions. On the 18th of June we had completed our investigations there with the exception of the photographic work, which had yet to be postponed, since the apparatus was still in the hands of the Bolivian custom-house officers at La Paz.

We next moved to the Island of Koati, where the owner, Dr. Venceslao del Carpio, had given us permission to survey and excavate. There we remained until the 2d of July, when we returned to Copacavana. Our collections had been carried to Chililaya, thanks to the Very Reverend Father Francisco Martinez, Commissary-General of the Franciscan order, whose authority prevailed in our favor, upon the reluctant and hostile Indians.

Another week spent on the Island of Titicaca, with the photographic apparatus received at last, one more day on Koati, and our seven months' work on and about these Islands came to an end. Only those who have resided for some time in that section of Bolivia can appreciate the obstacles it presents to scientific investigation. Climate, nature and man conspire to impede, annoy and obstruct.

On August 2d we landed at Chililaya and remained till the 29th of the month, carefully packing our cumbrous collections and excavating some of the ancient burial sites near by. Mr. Louis Ernst of Chililaya had been, and was, our financial mainstay during the time, and we have been the recipient of many courtesies from him, as well as from the late Dr. Rosquellas, Captain of the Port of Chililaya. On the 29th of August, 1895, we were once more at La Paz, thence to direct our steps to the Illimani a second time, and later on to Peru, where we remained during part of the year 1896, preparing the substance of this report.

In the following pages I cannot pretend to more than a picture of our work on the Islands of Titicaca and Koati, with such results as appear to me worthy of presentation. In my documentary researches, I have met with the most

friendly support: in Peru, Bolivia, and in the United States since our return. At the national Archives and Library of Lima the Director, Don Ricardo Palma, and his able assistant, Carlos Alberto Romero, have literally showered upon me favors of the greatest value. At La Paz my intimate friend Don Manuel Vicente Ballivian has opened every door that was supposed to give access to material; and at New York, the friendship of Mr. Wilberforce Eames, the Superintendent of the Lenox branch of the New York Public Library, of his assistant, Victor Paltsists, and, at the Astor, the liberality shown by the General Director, Dr. G. Billings, have been invaluable.

In conclusion, I gladly pay a tribute of sincere gratitude to our special friend at La Paz, Mr. Theodore Boettiger, head of the firm of Harrison & Boettiger of that city. To him we owe countless attentions and especially assistance of the most effective nature. Among the many others, at La Paz also, to whom we remain indebted in an analogous manner, I would yet specially mention Mr. Frederick G. Eulert. To name all, would furnish too long a list, however much we should like to express, to each one in particular, our feelings of respect and esteem.

AD. F. BANDELIER.

NEW YORK CITY, January 11th, 1905.

ERRATA

P. xvi, l. 10.
For Victor Paltsists read Victor H. Paltsits.

P. xvi, ll. 11, 12.
For Dr. G. Billings read Dr. John S. Billings.

NOTICE TO READERS

The Spanish and Indian names used in this volume are to be pronounced, not according to the English, but according to the Continental manner of pronunciation, the *j* having the guttural sound of the Spanish.

The scale of plans and diagrams is reduced from the original in every instance, as well as the size of the illustrations of objects, in comparison with the original.

The flag on plans and diagrams indicates, in every case, the magnetic and not the true North. The magnetic declination not having been accurately determined at the time I made my surveys, I preferred not to assume the responsibility of adopting an approximate deviation of the needle, which at the time was supposed to be about 12 degrees to the east of north.

The colored plates are due to the skilful hand of my friend and countryman Mr. Rudolph Weber, who has also made and retouched the photographs of objects and reproduced the frequently defective landscapes and scenes of Indian life.

Ad. F. Bandelier.

THE BASIN OF LAKE TITICACA


P R O V I N C I A
DE
H U A N C A N E
Vilque Chico
Huayrho
MOCOMOCO
I. SOTO
I. AMANTANI
LAGO CHUCUITO
I. CAMPANARIO
I. TAQUILI
PENINSULA DE CHUCUITO
Boca S. Bartolome
Bahia de Puno
L A G O T I T I C A C A
3835 METROS SOBRE EL NIVEL DEL MAR
GOLFO DE HACHACACHE
I. TITICACA
I. COATI
PENINSULA DE HACHACACHE
Chucuito
Acora
RIO SAN ANTONIO
RIO BLANCO
PAMPA DE ILAVE
Ilave
Pomata
Yunguyo
LAGUNA CINAMARCA
P R O V I N C I A
Zepita
GOLFO DE TARACO
Desaguadero
Huancullani
LAGO TITICACA

PLATE I

Map of Lake Titicaca and surroundings

Reduced copy from atlas of Peru, by A. Raimondi

PLATE I

Map of Lake Titicaca and surroundings

Reduced copy from atlas of Peru, by A. Raimondi

Part I

THE BASIN OF LAKE TITICACA

IN the heart of the western part of South America, between the 15th and 17th degrees of latitude, south of the equator, and between the 68th and 70th degrees of longitude, west of the meridian of Greenwich, lies the extensive water sheet of Lake Titicaca at an average altitude of 12,500 feet above the level of the sea,[1] and distant in a straight line about 300 miles from the Pacific Coast and at least 2000 miles from the Atlantic shores of Brazil. The Republic of Peru claims two-thirds of its area,[2] and the Republic of Bolivia the remaining southeastern third; but the boundary line is rather indefinite between the two countries, across Lake Titicaca as well as on the mainland. The great chain of the Bolivian Andes, or Cordillera Real, skirts the Lake on its eastern side. This mountain chain, from the towering peak of Hanko-Uma or Illampu (the tallest of the Sorata group) to the imposing mass of the Illimani southeast of the city of La Paz, runs from northwest to southeast, and the Lake in the same direction forms a deep trough west, or rather southwest, of that snowy range.

The irregular shape of this elevated inland basin of water is best understood by glancing at the accompanying map. Its length from northwest to southeast is about 130 miles, and its greatest width is about 41 miles between the Peruvian coast at Ilave and the Bolivian shores at Carabuco. Such figures, at the present stage of geographical knowledge of

Bolivia, can only be approximations.[3] Minute indications of geographical position, altitude and dimensions are not always essential in an anthropological monograph; but whenever they could be secured they will be given, if only as a respectful tribute to the labors of others. Landscape and scenery, the nature of vegetation, the appearance, relative distance of high mountains and their relation to the cardinal points, hence to prevailing atmospheric currents, the indentations of the shores and the distribution of affluents, are more important to archaeology and ethnology than geographical data of mathematical accuracy.

An undulating level, gradually slanting from the height of the Crucero Alto (14,666) to Puno on the Lake-shore (12,544),[4] skirts the Lake in the northwest and north. The elevated ranges of Santa Rosa and Vilcanota, which overshadow the true source of the Amazon River,[5] are not visible from Puno. North of that port the Lake makes an inroad forming its most northerly lagune, on the banks of which are the approaches to the settlements of Taraco and Huancané. Navigation on Lake Titicaca does not touch these points;[6] steamers ply directly between Puno and the Bolivian shore at Huaqui. The extreme northwestern shore of the Lake is not visible from the Island of Titicaca nor from the mainland of Copacavana, so great is the expanse of the water sheet in that direction.

Puno, a Spanish settlement founded in the seventeenth century[7] and now the capital of a Peruvian department, nestles at the upper end of a large bay called the Lagune of Chucuito. Its surroundings are typical of the bleak and chilly Puna of these regions. Trees are scarce, the slopes overgrown with a scrubby vegetation, rocks protrude boldly here and there, and the sheet of blue water expanding in advance of the port is encircled by dreary shores and reddish cliffs. The Lagune of Chucuito terminates between two narrow projections—the Peninsula of Capachica in the north and that of Chucuito in the south. On its southern banks

lie villages known since the earliest times of Spanish colonization—Chucuito, formerly an important seat of provincial government, and Acora,[8] in the vicinity of which are many aboriginal monuments partly described by E. G. Squier.[9] The shores are bleak, but, as everywhere on the Puna, their appearance is deceptive. While destitute of arboriferous vegetation, they are not unproductive. Such culture-plants as withstand the cold climate find sufficient soil for growth. The scarcity of level ground has compelled, and still compels, people to go to the slopes for cultivation. Hence "andenes," or terraced garden-beds ("takanas," also "patas," in Aymará), are visible everywhere from the Lake, presenting an appearance of symmetry not held out upon closer inspection. With the time-honored system of rotation observed by the Indians, the great number of these terraced patches is no indication of a former dense population.[10] Neither are they exclusively ancient, many belonging to Colonial or to modern times.

Beyond the narrows at Chucuito the large Islands of Taquili and Amantaní stand out in plain relief. The former lies nearly in front of the straits, the latter north of it. Taquili, sometimes used as a place of captivity for political offenders, was explored to some extent, more than a decade ago, by the very unfortunates condemned to pine on its unprepossessing shores.[11] Their desultory diggings yielded human bodies, cloth, pottery, copper and silver trinkets; in short, usual remains of the "Chullpa" kind; as popular terminology improperly designates vestiges, that do not bear either the stamp of Cuzco influence,[12] or that of the ancient coast-people. Amantaní is said to be covered with similar remains. Puno itself is surrounded by ruins. Many are scattered over the heights around Lake Umayo, the shores of which bear the famous constructions of Sillustani;[13] and much of archaeological interest is yet buried at Mallqui-Amaya, the hacienda of my friend Don Agustin Tovar.

Beyond the narrows, the main Lake spreads out before us.

In the rainy season it presents a vast expanse of grayish water under a darkened sky, and it is not unusual to witness one or several waterspouts at a time.[14] Thunderstorms are of daily and nightly occurrence during summer months, from November to April. When we crossed the Lake, on the night of December 31st, 1894, our steamer, the "Yapura," was struck by lightning. There was no peal, only a quivering of the craft. We were then yet inside of the Lagune of Chucuito. Saint Elmo fires appear on the masts of the ship during such stormy nights.

If the voyage is made in winter, when calm and clear days prevail, then the view is different. The placid watersheet spreads out in dazzling blue, traversed here and there by streaks of emerald green. A sky of incomparable beauty spans the heavens. Not a breeze ruffles the mirror-like waters. On the gently sloping shores of Peru, the principal villages are barely discernible; Ilave, in the vicinity of which a large human statue of stone and many sacrificial offerings were discovered in the early part of the seventeenth century,[15] and Pomata, whither the Dominicans (the first missionaries of these sections) withdrew after the missions from Chucuito to Copacavana had been unjustly taken away from them; Juli,[16] concealed by its promontory of gray and pale green.[17] In the dim distance appear some of the "Nevados" that separate the Lake region from the volcanic ranges above Moquegua—the Cavalluni, the Uilcaconga, and others. They appear as patches of perpetual snow rising between arid ranges. That part of Peru has a considerable population of Aymará-speaking Indians, and under Spanish rule was very thrifty,[18] but it lacks, absolutely, the picturesque element in nature. That same region, however, abounds in ancient ruins which yet await exploration.[19]

Facing the prow of the steamer, in the southeast, there advances into the Lake what seems to be a long promontory capped by rugged mountains of moderate elevation. The

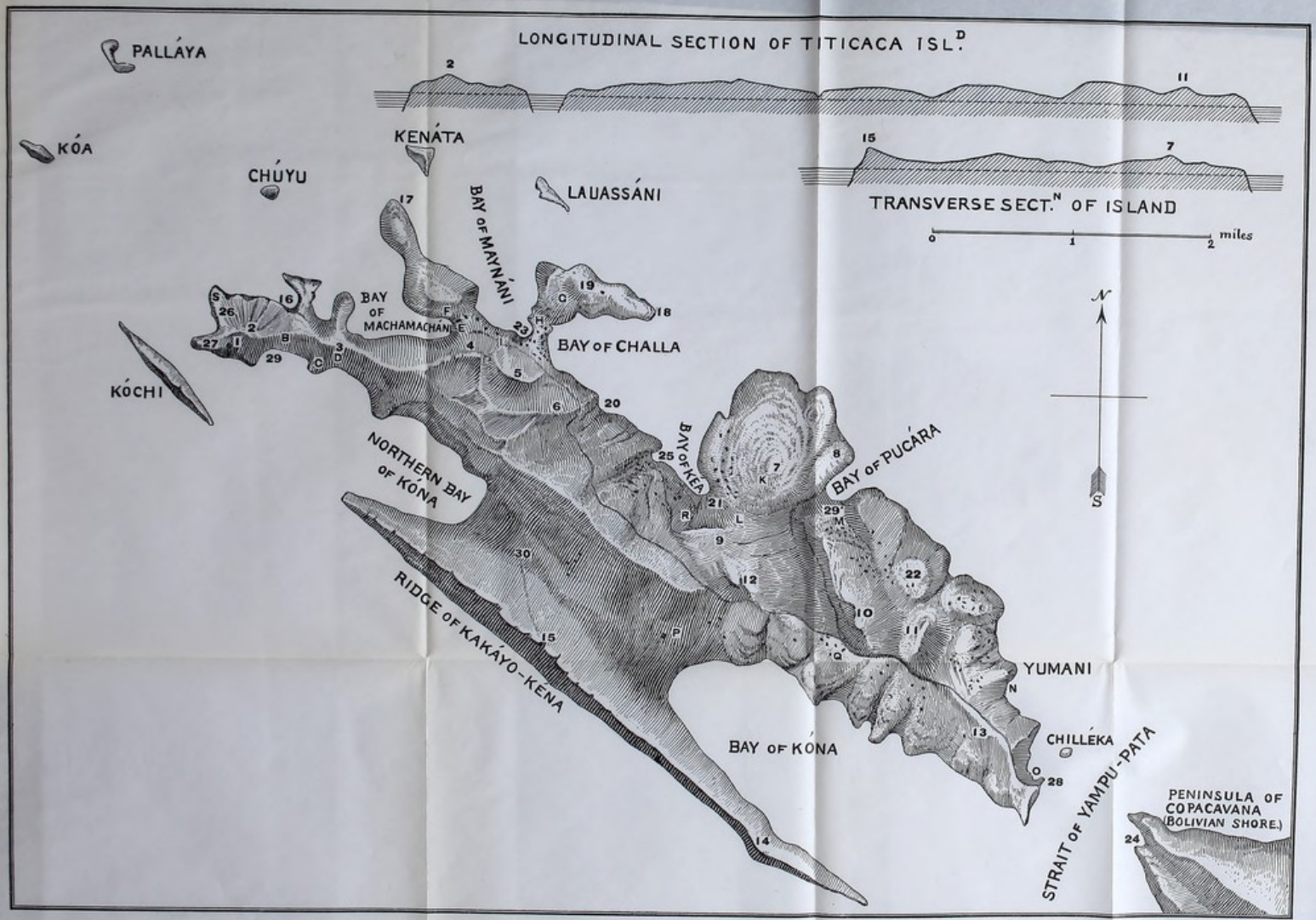


PLATE II

Map of the Island of Titicaca and surroundings

Reduced and redrawn from the original made by the author, by Rudolph Weber

A. Challa B. Yumani

Summits

1. Turi-Turini
2. Ticáni
3. Muro-Kato
4. Calvario
5. Challa Pata
6. Ita-Kollu
7. Kea-Kollu
8. Lique-Lique
9, 12. Santa Barbara
10. Kuru-Pata
11. Palla-Kasa
13. Kefiuáni
14. Kundur-o-uaua-chéui
15. Chullun-Kayani
16. Arcu-paneu (also bay)
19. Marcuni

Promontories

17. Yejachi
18. Ujata-Kala
27. Kanalluyu
28. Punco

Bays or Inlets

16. Arcu-paneu
24. Yampu-Pata
25. Chimpa-Uaya
28. Coyani
29. Kéopi-pýru

Miscellaneous

21. Kéa settlement
22. Uaccyu
23. Gardea
26. Ticani-Pampa

Prominent Ruins

a. Titi-Kala, Sacred Rock
b. Chincana
c. Chucaripu-Pata
d. Chucaripu
e. Kasapata
f. Llaq'-aylli
g. Ciria-Pata
h. Collca-Pata
i. Santa Maria
k. Kea-Kollu
l. Kea-Kollu Chico
m. Pucara
n. Fountain of the Inca
o. Pilco-Kayma
p. Kona
q. Apachimaca
r. Kuru-Pata
s. Sicuyu
29. Titin-Uayani
30. Qaivini, ancient Inca road

N.B. Santa Barbara is also called Llalli-sioi-Pata

PALLAYA
KOA
CHUYU
KOCHI
BAY
OF
MACHAM
NORTH
OF
KO
A
B
C
D
1
2
3
5
16
25
27
29

northern end of this projection is the Island of Titicaca, and its southern continuation with the rugged peaks above it, the Peninsula of Copacavana. Through the narrow Straits of Yampupata, which separate the Island from the Peninsula, steamers take their course. Beyond, dusky ranges skirt the farthest horizon to the southeast and east, apparently sweeping around in a semi-circle, forming the eastern shores of the Lake and its southeastern termination. High above this unprepossessing belt of bleak slopes, rocky humps, and scattered islets, bristles a chain of gigantic peaks clad in eternal snow. Draped with formidable glaciers that descend far below the snow line, the twin peaks of Sorata, two colossal monuments, connected by an icy crest, constitute its northern pillars. Thence, declining to the southward, it sweeps away, until a glistening pyramid,[20] bold and steep, the Huayna Potosi or "Karka-Jaque" (Ka-Ka-a-Ka) terminates the chain as visible from this part of the Lake. North of the Sorata group, a more distant range extends along the whole of the northeastern horizon. It is as heavily snow-clad as the other, but probably not as elevated. The first chain is the Andes of Bolivia. The other range—belonging partly to Bolivia, partly to Peru—comprises the Andes of Carabaya, the great Ananéa, and the high ranges of Suchez, Altaráni, Lavanderáni, Sunchuli, and Akkamáni, west of Pelechuco and north of Charassani.[21]

Utter monotony, gray, brown and black in winter, of a greenish hue in summer, would be the characteristic of landscape on Lake Titicaca, when at its best in brilliant sunlight, were it not for the long ranges of snowy peaks that bristle along fully one half of the horizon like a silver diadem. Bold and rugged, every peak sharply individualized like those of the Central Alps in Switzerland, with an abundance of glaciers, the Andes of Bolivia well deserve the appellative of Cordillera Real (royal range), by which they are sometimes designated. When, in the last moments of sunset, the lofty peaks and bold crests assume a vivid golden

hue, while the glaciers at their base turn purple and violet, the Andes fairly glisten. Then a ghastly veil falls over them and they turn livid. Newcomers may turn away thinking that night has set in; but in a few minutes light floods the snowfields again. It turns red, while the summits become living flames of a rosy hue as intense and dazzling as any Alpine glow in Switzerland or Tyrol. Such a spectacle is not unfrequent on the Lake, and it is usually accompanied by the presence of long delicate cirro-strati above the southern horizon, which turn fiery red, before the rosy display begins on the Cordillera. Yet we saw the Alpine glow in wondrous beauty, when there was not even a cloudlet in the sky.[22]

The educated traveller cannot fail to be deeply impressed by the majestic beauty of these mountains, so colossal in height that a picture of the Sorata range is clearly reflected in the waters of the Lake.[23] The Indian, however, is not moved by sights of nature; accustomed to depend upon it, he estimates everything from the utilitarian standpoint of his wants, hopes and fears.

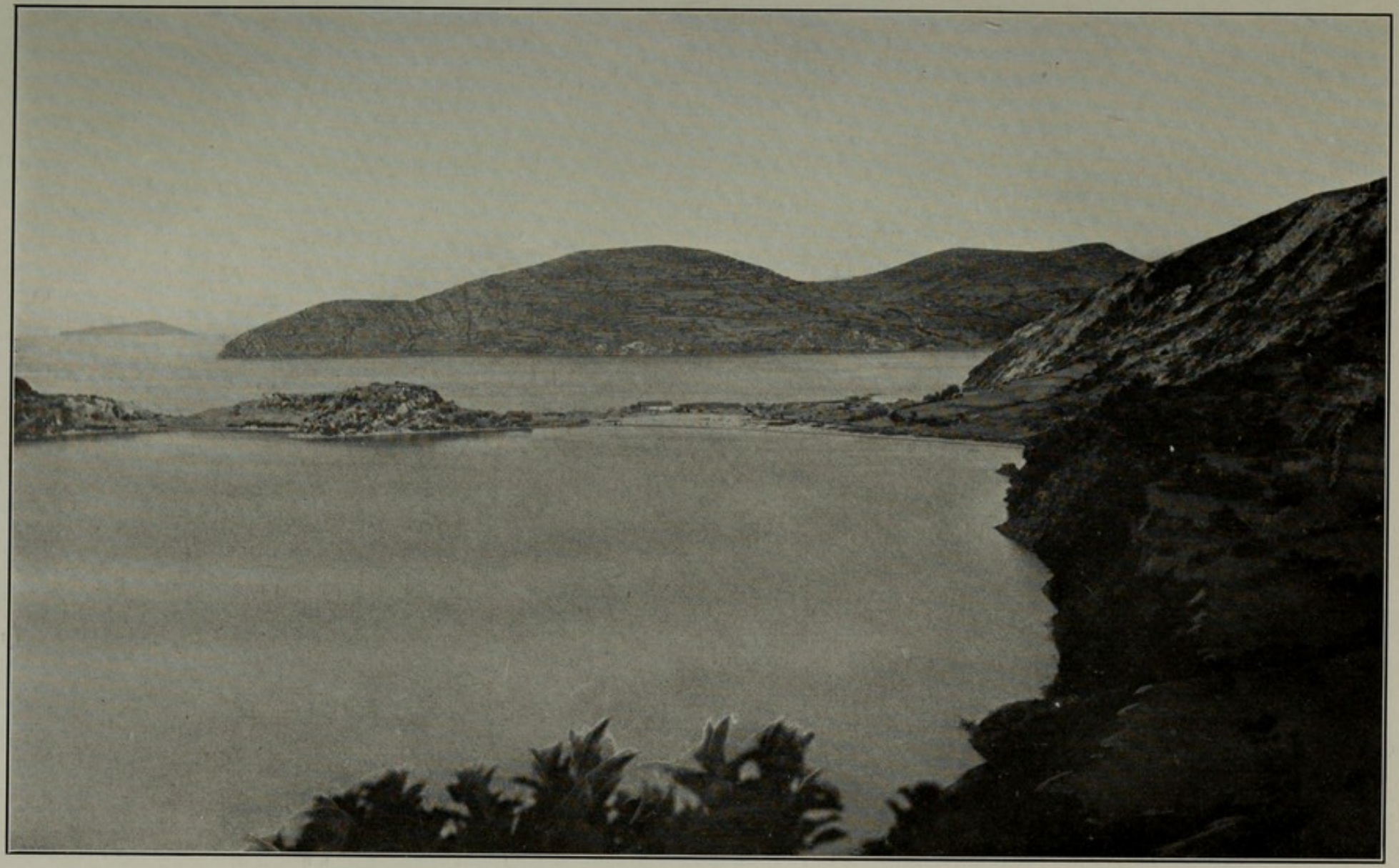
The Aymará Indian calls each "Nevado," or snowy peak, "Achachila"; that is, "grandfather." They apply this term to every prominent feature; still the importance of the Achachila is not always in proportion to its size. While on the slopes of Illimani, I also heard the Indians of Llujo call the mountain "Uyu-iri," feeder or fosterer of their homes. The word "Illimani" itself is a corruption of "Hila-umani"—"he who has much water," derived from the fact, that the water courses useful to them descend from that mountain, and that precipitation is most abundant along its slopes. On the Island of Titicaca, the great Illampu or "Hanko-Uma" (white water) is the most prominent, as it almost directly faces the Island, and therefore is more particularly known to the Islanders. Nevertheless, my inquiries touching the *name* of it (inquiries made for the purpose of eliciting some information about tales or legends, possibly extant),

PLATE III

The isthmus of Chatle, the promontory of Kos-Kolin with the bay of Kos to the left and the island of Kos and in the distance

PLATE III

The isthmus of Challa, the promontory of Kea-Kollu with the bay of Kea and the Island of Koati in the distance



were quite as often answered by "Illimani" also; while to the other peaks, the term "Kunu-Kollu" (snow-height) was indiscriminately applied. The Indian of the Island considers such conspicuous landmarks as fetishes, chiefly originators of cold and angry blasts.

Lake Titicaca does not derive its principal water supply from the great Bolivian chain. Only one of its main tributaries, the Rio de Achacache, descends directly from the Cordillera Real. The Suchez has its headwaters in Peru (among the Andes of Carabaya); also the Ramis, in the narrow defile at the foot of the Cordillera of Vilcanota, near the line dividing the Department of Puno from that of Cuzco;[24] and the other streams rise either in the range dividing the basin of Titicaca from the Pacific slope, or south of the Lake.

The drain of the Cordillera of Bolivia is chiefly toward the Atlantic, and not toward the Pacific slope. Lake Titicaca lies at the foot of that range like a trough, filled with slightly brackish water,[25] and fed only to an extent that maintains an equilibrium between the supply and the outflow through the Desaguadero.[26]

The trough formed by Lake Titicaca is mostly very deep. Soundings of more than six hundred feet, and as many as a thousand or more, are not uncommon. The Bolivian or northern shore is lined by greater depths than the Peruvian side.[27] Bays like the Lagune of Chucuito near Puno, the inland basin between Tiquina and Chililaya, and probably the basin of Uinamarca, are comparatively shallow, but the main Lake is a cleft, sinking abruptly at the foot of the Andes and rising gradually to the western shore.

A discussion of the numerous theories, that have been advanced, from time to time, regarding the origin of this singular inland sea, would prove useless. There are indications of a former connection between opposite shores of the Lake. The Peninsula of Copacavana seems to have been connected, at one time, with the Peninsula of Santiago

Huata. The channel of Tiquina has an average depth of only 140 feet.[28] The southeastern lagunes or bays in which the Lake terminates, show a greatest depth of about sixty feet; whereas to the northward along the Bolivian shore, depths of from 600 to 800 feet have been recorded. The Strait of Tiquina, that narrow channel through which steamers pass after leaving the Islands of Titicaca and Koati, may therefore have opened at a time when the watery basins about Chililaya existed independent of the main Lake; and the outflow at the Desaguadero may have been a result of the breaking of a barrier that formerly united the Peninsula of Huata with that of Copacavana.

Such problems can be solved only by a close study of the region in general, and this study has not as yet been undertaken. It may be said that Lake Titicaca, in most of its features, is as unknown as the least visited of the inner African lakes. The shores are so indented and their topography is so complicated, that a coasting voyage of a year at least would be needed to achieve a complete investigation.

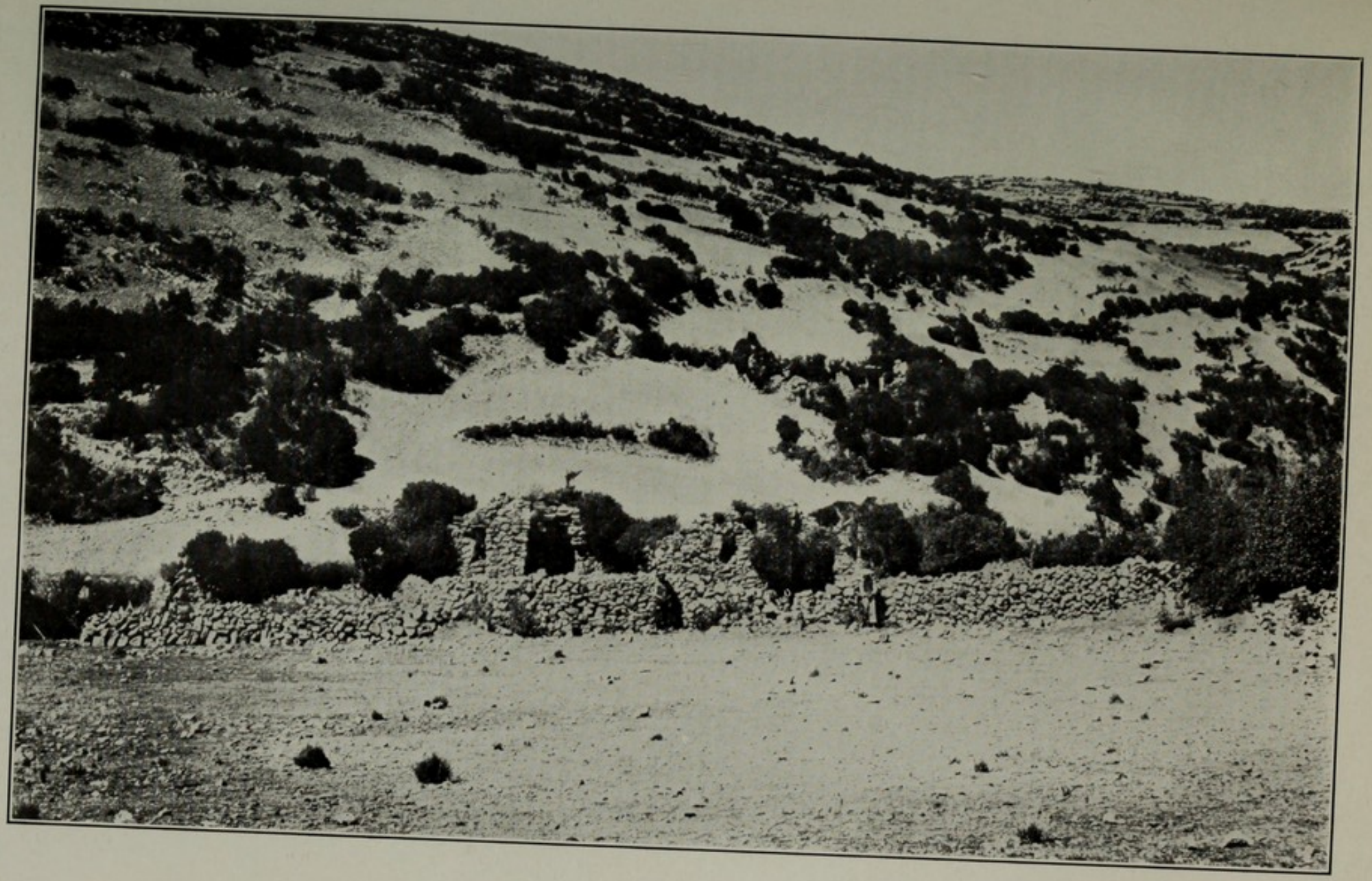
We have as yet found but faint traces of geological myths among the folk-lore and traditions of the Aymará Indians inhabiting the shores. This negative result, however, is not final, since it was only from the Island of Titicaca, and to some extent from the Peninsula of Copacavana that, previous to 1897, we had been able to secure scraps of what may be called folk-lore. At Tiahuanaco, stories are told concerning a time when the sun had not yet risen into the heavens, but none of them bear any relation to the condition of the Lake or to any modifications in its contours. We were told by an old Indian that the builders of the edifices of stone (now in ruins) were "Gentiles," and were destroyed by a flood. The appearance of the sun in the heavens is said to have occurred *after* this supposed destruction. It is not an uncommon belief that the waters of the Gulf of Taraco once reached as far inland as Tiahuanaco, now about five miles distant from the shore. Some of the explanations

PLATE VI

The ruins at Pierre Pont from the north

PLATE IV

The ruins at Pucara from the north



of the name are even based on this hypothesis, giving it the meaning of: "dry beach." [29]

Among the traditions recorded by early Spanish chroniclers, that of the appearance of a white man on the shores of Lake Titicaca appears to be connected with a dim recollection of geological phenomena. Ticiviracocha (also called Tuapaca and Arnauan) is represented by Cieza [30] as having come from the south and as having been endowed with such power that, "he converted heights into plains and plains into tall heights, and caused springs to flow out of bare rocks." [31] A century after Cieza had written his chronicle, an Augustine Monk, Fray Antonio de la Calancha, referred to a tradition in regard to a disciple of Tonapa, called Taápac, stating that the Indians of the Lake-shore killed him, placed his body on a raft, or *balsa:* "and thrust that craft on the great lagune aforesaid; and so, propelled by the waves and breezes . . . it navigated with great swiftness, causing admiration to the very ones who had killed him; their fright being increased by the fact that the Lake, which at present has very little current, at that time had none at all. . . . When the balsa with its treasure reached the beach at Cachamarca where the Desaguadero now is (this tradition is well established among the Indians), this same balsa, breaking through the land, opened a channel that previously did not exist, but which since that time has continued to flow. On its waters the holy body went as far as the pueblo of the Aullagas.[32] . . ." According to this legend (provided the tale is genuine native folk-lore, as the author asserts, and not from after the conquest) it would appear that the opening of the Desaguadero occurred *within the scope of dim recollection of man.*[33]

The story that sun and moon were created *after* the inhabitants of Tiahuanaco had been visited by a disastrous flood, is told by several authors from the early times of Spanish colonization; as well as the myth that both orbs rose primarily from the Lake, or from some point of its surface.[34]

The fact that nearly all the traditions, so far as we know, about the earliest times, and the natural phenomena supposed to have occurred at those times, centre in Tiahuanaco, may be not without significance. The tale preserved to us by Calancha points to a time within range of ancient folklore in Bolivia and Peru, when the waters of the Lake *had no outlet.* It may, however, be only a myth of observation. According to Agassiz there are indications of a slow gradual sinking of the level of the Lake.[35] This has been denied by others; and I beg to suggest that such a change may not have been general. Thus the Lagune of Uinamarca and the Gulf of Taraco could have slowly receded from their shores without affecting the level of the main Lake.

Storms on Lake Titicaca are violent, and the waves, though short, dangerous. The indigenous balsa is a clumsy, slow, exceedingly primitive craft, but it cannot sink. If cut in twain, each piece floats for itself and can afford refuge to human beings.[36] Swimming is out of the question, since the temperature of the water is so low that the swimmer soon gets numbed and sinks.[37]

Animal life on the Lake is seldom seen away from the shores. Gulls (*Larus serranus*) now and then follow the steamer, and an occasional diver (*Podiceps, Tachyobaptus,* and *Centropelma*)[38] furrows the water in that lively, dashing way which recalls the motion of a diminutive tug-boat. On expanses covered with lake-reed or "totora" (*Malacochaete totora*) swarms of these agile swimmers bustle about the handsome "choka" (*Fulica gigantea*), a stately bird of black metallic plumage with bright colored head and crest. A dark green stork-like bird, possibly a *Tantalidae,*[39] stalks through marshy approaches to deeper water. In the main Lake, animal life appears almost extinct; of the six kinds of fishes, officially known,[40] not one appears on the surface. The natives claim that there are at least a dozen species of fishes in Lake Titicaca.

As we approach the long promontory of the Peninsula

of Copacavana, Titicaca appears in its insular shape. Beyond its northwestern outline small islets,—the steep and grass-covered dome of Koa, flat Payaya, tiny Chuju, —elongated Lauassani, rise above the waters.[41] They seem like scattered remains of a causeway formerly uniting Copacavana with the Bolivian mainland at Huaicho, of which there remains, on the south, the Island of Titicaca and its surroundings and in the north the islands of Apingüila, Pampiti and Campanario.[42]

The Straits of Yampupata, which divide Titicaca from the Copacavana Peninsula have a width of about two-thirds of an English mile;[43] and on both sides of the Straits, around the Island of Titicaca, and between that of Koati and the mainland at Sampaya, the Lake has a depth of from 580 to 600 and more feet. It is when issuing from that short and picturesque channel that the two peaks of Sorata are seen to greatest advantage. The steep and bold slopes of the Island, with countless andenes traversing them horizontally, and the precipitous sides of the mainland, form what appears like a rustic portal, above and beyond which the truncated pyramid of Hilampi and the dome of Hanko-Uma stand out in incomparable grandeur.[44] The Island of Koati, in the midst of the placid waters of the Lake, breaks the sombre monotony of the Bolivian shore between Ancoraymes and the Peninsula of Huata.

At Yampupata, the work of man begins to appear on every side. The bold promontory of Chañi hides from view the celebrated sanctuary of Copacavana, but the hamlet of Yampupata, with its houses of stone and its humble chapel, nestles close to the rocky point terminating the Peninsula. Traces of cultivation, in the shape of andenes, are everywhere seen. We pass the two balsas plying between Yampupata and Puncu, the extreme southerly point of the Island of Titicaca. The Aymará Indians, who manage these clumsy ferries, either gloat stolidly at the steamer as it sweeps by, or if they are in numbers and in festive mood, they

break out in rude and sometimes very uncivil demonstrations.

Even on the little Island of Chilleca near the end of the Straits, traces of cultivation, such as potato patches, are visible. On the main Island we see, at one glance, the ruin called "Pilcokayma" (an ancient structure attributed to the Peruvian Incas), the modern hacienda of Yumani with its tile-roofed buildings; cultivated as well as abandoned andenes on the indented slopes; a grove of mostly modern trees surrounding the so-called "Fountain of the Inca," near the shore; and, higher up, Indian houses scattered here and there, some with red roofing of tiles, others with the usual covering of thatch. As we glide along, hugging the Peninsula of Copacavana, we see that almost every fold of that steep and rugged shore bears a small hacienda. High up on the slope of one of these folds, the village of Sampaya clusters picturesquely between terraced garden-beds. Opposite, the entire length of the Island of Koati is striated with andenes. The eastern Bolivian shore is so distant that none of its villages, situated near but not *on* the shore, are visible. The northeastern side of the Strait of Tiquina is rocky and almost uninhabited; the southwestern side, although nearly as steep, is extensively cultivated. The reason of this is that slopes exposed to the north, in this hemisphere, are those which receive directly the warmth of the sun. The two villages of San Pablo and San Pedro Tiquina[45] occupy respectively the southern and northern shores of the narrows near their southeastern extremity. From here the most southerly pillar of the snowy range, the "Nevado" of Illimani,[46] hitherto invisible, seems to rise suddenly and directly out of the water, at the other end of the shallow lagune which we now enter. To the right opens the basin of Uinamarca dotted with islands mostly inhabited. The larger ones, Patapatani and Coána, also Cumaná, divide that lagune from the bays of Huarina and Chililaya. On the left, the shore bears extensive haciendas like Compi and

PLATE V

The lacinuda of Cibalia and heights of Cibalia Pata

PLATE V

The hacienda of Challa and heights of Challa Pata



Chua, also the hamlet of Huatajata. On the main Lake, and as far as the passage of Tiquina, scarcely a craft is met, but now the water becomes enlivened by flotillas of small balsas, each raft with a sail of reeds and managed by one man or sometimes by two men. These are fishing craft, that do not go into the Lake where their labor would hardly prove remunerative. The coast of these interior basins is rich in totora,[47] whereas the depth of the Lake along the shores of Koati and Copacavana does not permit the growth of this aquatic reed except in small patches. The Indians of Huatajata and of the islands near by, are to a great extent fishermen. A balsa does not last long, but a new one is easily constructed. Many of the Lake Indians are rather fearless navigators and undertake comparatively long voyages, trusting to the winds to direct their course. It is not uncommon to see Indians, from Huaicho and Ezcoma, drift across the widest part of the Lake to Ilave, Juli or Pomata. From the Island of Titicaca a three days' voyage to Puno is by no means a rarity; and trips to Ancoraymes are of frequent occurrence. As the balsa is propelled much more by sail than by the imperfect oars, the direction of atmospheric currents is watched and used so far as possible. Happily these currents blow with considerable regularity. Thus the southeast wind usually prevails until midday. Afterward the wind veers to the northwest and blows from that quarter until after or about midnight.

Thunderstorms and tempests occur very often. During the summer months they are of daily occurrence. The violence of the wind depends upon localities, upon the degree of shelter, and the existence of a funnel through which the moving air must rush at greater speed and with increased power. The Straits, both of Yampupata and of Tiquina, are exposed to violent blasts, and so is the vicinity of Copacavana. The middle of the Lake, which the people call the "Pampa de Ilave," is also feared on account of the power which the wind, coming from the snow-capped Andes,

wields over this shelterless expanse. Tempests almost invariably come from the northwest and we have known them to last several days, the maximum violence reoccurring daily about 4 P.M. Such storms are mostly dry in winter, or with a slight fall of snow or hail, chiefly on the heights. But snow falls every year on the shore also. In February we have many times seen the ground at Copacavana white with snow, also on the Island and the Peninsula of Santiago Huata. In June we had light snow-falls, accompanied by thunder and lightning and soft hail, on the Island of Koati.

Lightning strokes are locally frequent, they descend with much greater frequency at certain places than at others. Copacavana is one of these dangerous spots. On the Island of Titicaca, on the narrow isthmus where the hacienda of Challa stands, we counted as many as twenty lightning strokes in little more than half an hour. All of them struck either the water, or the rocky heights of Challa Pata and Iñak-Uyu near by.

To give the results of meteorological observations at one point only, and then draw conclusions from them as to the climate of the Lake in general, would be misleading. A glance at the map accompanying, however faulty it may be, will show that the indented form of the shore-line, the distribution of the Cordilleras in regard to the northern and southern portions, and the greater or less distance of the heights bordering on the Lake, create a number of local climates. Thus, while the shores exposed to the north are warmer than those exposed to the south, and northern exposures those in which more delicate culture plants (like maize) can alone be raised, yet some sites along the southeastern Bolivian shore enjoy a milder climate than others, near by or on the opposite side. Huarina, for example, is warmer and milder than Chililaya, six miles distant from it to the southwest. The reason for it is that some villages on that side are built against the coast-hills, and the cold blasts from the Cordillera blow over these hills and di-

rectly on to the shore opposite, making it chilly and disagreeable in the afternoons.

Thermometrical observations made but at one or two points have only a local value and for the specified period of time; but it may still be of interest to note the results of such observations, made by my wife, chiefly on the Island of Titicaca, during several months of the year 1895.

For the month of January the mean of 37 observations was 54$^{9}/_{10}$ degrees. For the month of February, the mean of 120 observations was 55$^{2}/_{10}$ degrees. For March, the average of 107 observations was 54$^{8}/_{10}$ degrees. The mean for these three months, embracing the height of summer and the autumnal equinox, is therefore 55 degrees, Far.; and the variation in the mean, from one month to the other, amounts to barely one half a degree. The maxima were, in January, 63½; in February, 65; and in March, 64. The minima were, in January, 47; in February, 45; and in March, 43. In the month of April the observations could only be conducted during the first half of the month, and at three distinct localities, according as we moved our domicil in the interest of excavations. Hence averages for that month possess no value. At Yumani, a point several hundred feet above the Lake, the thermometer reached its maximum between the 1st and 15th of April at 59 degrees, and its minimum at 45. During the interval between the 26th of May, when we returned to Titicaca after a protracted stay at Puno, and the 18th of June, the extremes were respectively 60 and 39 degrees. On the Island of Koati the extremes, from the 18th of June to the 1st of July inclusive, were 50 and 33 degrees. While the above figures probably represent the maxima of the whole year, I have doubts about the minima. The lowest point reached by the thermometer falls below freezing point. I infer this from the fact that, on the morning of August 18th, we found the Bay of Huarina covered with ice a quarter of an inch thick. Should, however, the figures

given represent the extremes for that year (the difference will be very small), the annual range of temperature of about 32 degrees shows an unusually equable climate. But that climate is also constantly humid, hence always chilling. It rains nearly every month. In January, 1895, we had 19 days of rain (always with thunderstorms); in February, 22; in March, 16; in April, 14; in May, 6; in June, 10; in July, 1; and in August, 2. All these months, as well as the last third of December, 1894, were spent on some point of the Lake-shore. The constantly low temperature, together with frequent precipitation, renders the climate disagreeable, although by no means unhealthy.

Vegetation exists wherever there is room for it, but it is seldom handsome. The "keñua" (*Polylepsis racemosa*), the wild olive tree (*Buddleya coriacea*), and the *Sambucus Peruvianus* are about the only *indigenous trees.* These grow only on favored sites and are stunted and low. The beautiful and richly flowering shrub called "cantuta,"—the large carmine, yellow or white flowers[48] of which are so abundantly represented on ancient textiles and on pottery,—thrives in sunny localities. The potato takes the lead among indigenous culture plants, next comes the oca (*Oxalis tuberosa*), the "quinua" (*Chenopodium quinua*), and in sheltered places only, maize of the small bushy kind. Since the sixteenth century, barley and the common large bean[49] have been added to this modest list. Kitchen vegetables would grow well in many places if they were cultivated; but the Aymará Indian is such an inveterate enemy of innovation that all attempts at introducing new plants which might bring about a wholesome reform in his monotonous diet, have failed. Thus on the islands there is cabbage growing wild; on Koati we have seen almost arboriferous cabbage plants. The garden near Challa on Titicaca (erroneously designated as "Garden of the Incas,") is filled with trees, shrubs, and with an abundance of flowers. It has beds of strawberries that ripen annually; but every-

IV ετλη

Περὶ βοτάνων τῆς Ἰωνίας

PLATE VI

The promontory of Uajrán-Kala



thing is sadly neglected, now that the owners no longer reside on the estate. The Indian uses the dahlias, the forget-me-nots, the beautiful roses; he scrupulously plucks and devours all the fruit; but not a single effort would he make for preserving the plants. Only the strict orders imparted by the owners have saved that beautiful site from utter, wanton destruction. The useful seeds that were distributed among the Indians of Titicaca for their benefit were sown, because it was so ordered, and they germed, grew and prospered. The Indians made use of the proceeds during the first year; afterward no more attention was paid to the plants. I might state that one of the causes for this lies in the fact that few people on the face of the earth are so possessed by greed for money as the Aymará Indian of the Lake region. Only what can procure coin at once, is prized by him. Hence plants and trees, however productive in the course of time, are of no consequence to him, as they do not immediately yield the coveted cash. At present, vegetables and fruits could hardly be made profitable on the Islands, for there is no market. Navigation on Lake Titicaca is restricted by the laws of Bolivia to Puno, Huaqui, and Chililaya, and no intermediate point can be touched without special permission from the government. The Islands of Titicaca and Koati, belonging to Bolivian waters, are therefore cut off from communication with the outer world, Copacavana excepted, which is too small a village to offer any inducement. Hence culture plants other than the potato, oca, quinua, maize, bean and barley are of no immediate advantage to the Aymará Indian of the Lake. Cupidity, low cunning, and savage cruelty are unfortunate traits of these Indians' character. These traits are not, as sentimentalism would have it, a result of ill-treatment by the Spaniards, but *peculiar to the stock,* and were yet more pronounced in the beginning of the Colonial period than at the present time.[50] The Aymará Indian is not at all stupid, but the degree of intelligence he

possesses seems to be used mostly for evil. Such traits do not necessarily strike the *traveler,* but if one has to *live* with the Indians they become woefully apparent.[51]

In the course of the pages to be devoted to the Islands of Titicaca and Koati, many other points relating to nature and to the inhabitants of the shores and Islands will be mentioned. The picture that I have attempted to present of the Lake and its immediate surroundings is only a superficial sketch. It is not a gay picture. Nature is mostly cheerless in that region. Dismal monotony reigns all around, in topography, and in color of landscape; a stunted vegetation, animal life distributed by local groups and with few prominent forms. The climate is as monotonous as the landscape, in the slight variations of temperature which it exhibits throughout the year; cold, moist, and abounding in threatening phenomena, dangerous to man directly and indirectly.[52] There are no means for rendering comfortable the shelter which one builds, for the Puna has scarcely any combustible material within reach of the native except llama dung: "táquia."[53] The only redeeming features are: The sight of the glorious Andes, and the magnificent sky, when it condescends to exhibit itself in full splendor. These redeeming features, however, have no influence on the Indian;[54] *his* heart is untouched by beauties of nature.

That nature, so uninviting on the whole, must have, for ages, exercised a steady pressure on the mind of the Indian who was, and is yet, wholly dependent upon it. Three methods of subsistence were open to him,—hunting, agriculture and fishery. Hunting was limited to quadrupeds of great fleetness and to water-fowl. Although the guanaco and the vicuña were formerly abundant, they are shy and swift, and it was only in communal hunts that the Indians could secure such game.[55] The same may be said of the indigenous deer, or "taruca."[56] Birds were not so difficult to obtain, and an abundance of edible water-fowl is still seen in many places on the shores. Agriculture enjoyed the ad-

IIV ətvrd

Ivəzə Kəmə ətrt mğəl ət ətrt mğəl to ntəbrə əft tə əərt mğəl to Cpəəlf

PLATE VII

Large Keñua tree at the garden of Challa

vantage of a moist climate, and, in the dry season, of irrigation. But the plants that could grow were of but few species and all of the coarsest kind of food. The cold rendered impossible the storing of the potato, in its natural condition. There is not enough combustible wherewith to dry the bulb in quantities, hence the Indian resorted to the expedient of freezing the potato and then squeezing all the liquid out of it, thus preparing the insipid "chuñu," one of the meanest articles of vegetable diet.[57] Maize was rarely cultivated. To the dweller on the beach, fishing was possible. Yet it does not seem to have been extensively practised.

Thus the primitive inhabitant of the Titicaca basin was, as his neighbor and congener of the Puna and Cordillera, weighed down by a hard climate and scanty resources. It is true that the Indian, having the llama at his disposal, had the resource of commerce; but that commerce also was checked by division into tribes resulting from Indian social organization.[58] The configuration of the shores favored segregation into small groups, at war with each other. This condition of affairs survives to-day, in the regular hostilities between the Indians of neighboring villages as well as between those of neighboring haciendas. Bloodshed is inseparable from Indian festivals and from certain days in the year. Besides, in the northwest of the Lake, the Aymará are contiguous to another linguistic group, the Quichuas, and historical folk-lore is filled with instances of warfare between tribes of the two powerful and numerous stocks.[59] In the east and southeast, the Aymará spread as far as the hot regions on the eastern slopes of the Andes and, there, came in contact with savages of the Amazonian basin, all of which were, and still are, cannibals. The character of the Aymará Indians could not, therefore, develop under favorable conditions.

On the whole the Indian of the Titicaca basin is a being well fitting the nature of that basin. Even the Quichua, although generally of a milder disposition than the Ay-

mará, is more taciturn and far less approachable than his congeners near Cuzco. These Quichuas show characteristics as unprepossessing as may be found anywhere among the American Indians.

The accompanying map of Lake Titicaca, although incomplete, is the best now extant. It is interesting to compare it with the one made in 1573 by order of the Viceroy Don Francisco de Toledo, a copy of which has been given to me by Don Enrique Gamero of Puno. To this modest but exceedingly well informed gentleman, whose data on the Lake and its environs will be, when published, the most reliable ones concerning the region, I herewith express sincere thanks for many an act of kindness, among which the gift of the ancient map herewith presented is by no means the least.

NOTES

THE BASIN OF LAKE TITICACA

PART I

[1] The altitude of Lake Titicaca is variously given. On the adjoining map it is stated as 3835 meters, or 12,578 feet. James Orton gives it as 12,493 feet (*The Andes and the Amazon*, p. 427), according to the railroad surveys. The correct altitude, however, is 12,466.

[2] The (very indefinite) line passes through the northwestern point of the Island of Titicaca, leaving that Island, Koati, and the parts southeast of these islands, as well as the Peninsula of Copacavana and all that lies east of the channel of the Desaguadero, within Bolivian territory.

[3] "It spreads over 2500 geographical square miles, being 100 miles long, with an average breadth of twenty-five miles" (Orton: *The Andes and the Amazon*, p. 427). It is evident that the author speaks only of the main Lake and does not take in the basins at each extremity, northwest and southeast. Ignacio la Puente gives the following figures: "Su mayor diámetro desde la desembocadura del rio Ramis hasta una ensenada no lejos de Aygache mide 194,460 metros; el ancho en su máximo, tomado en una direccion perpendicular á la longitud, desde Carabuco, hasta la desembocadura del rio Juli es de 68,524 metros" (*Estudio Monográfico del Lago Titicaca; bajo su aspecto físico é histórico*, in *Boletin de la Sociedad Geográfica de Lima*, Tomo I, p. 365). These figures correspond to 122 and 44 miles. But the mouth of the Ramis is *not* the extreme northwestern, nor is the bay near Aygachi the extreme southeastern, terminus of the Lake.

[4] These figures are taken from the railroad surveys and are therefore reliable.

[5] That source is at La Raya, 159 miles, by rail, northwest of Puno, and 14,150 feet above the level of the sea. The altitudes of the Santa Rosa, or "Kunurona," and of the Vilcanota are not yet known. Modesto Basadre assigns to Vilcanota 17,825 feet, and to the other 17,590 feet (*Los Lagos de Titicaca*, in *Boletin de la Sociedad Geográfica de Lima*, Tomo III, pp. 44–45). Paz-Soldan gives the height of Vilcanota according to Pentland at 5362 meters, or 17,586 feet (*Atlas Geográfico del Perú*, p. 14). Orton, in a foot-note, says of Pentland's measurements of the Bolivian Andes that "they must have come down 300 feet," as he determined the altitude of Titicaca at 12,785 feet, instead of 12,466 (*The Andes and the Amazon*, p. 428). Pentland's figures for the summits of the Cordillera are below reality. It is much to be desired that the elevation of the most prominent

peaks of the western or coast range of Peru be accurately determined. It is likely (unless some higher peak be found yet in northern Peru) that Koropuna, in the Peruvian coast range of the Department Arequipa, is the culminating point of the continent. It exceeds 23,000 feet in height, whereas Aconcagua, in Chili, is but 6940 meters (22,763 feet) above sea level. Pentland also determined the altitude of Misti, the slumbering volcano of Arequipa, at 6600 meters, or 21,648 feet, whereas it is now fully ascertained, through the careful barometric observations of Professors Pickering and Bailey, that Misti is only 19,250 feet in height. Its neighbor, Charchani, is 1000 feet higher.

[6] Points on the Peruvian shore can be reached without difficulty, if the steamers are ordered to touch there, but in Bolivian waters they are not even allowed to stop in the Lake or off from the shore. These stringent regulations have their cause in the active contraband going on all along the frontier.

[7] Manuel de Mendibúru leaves it in doubt whether 1668 or the year following (*Diccionario Histórico-Biográfico del Perú*, Tomo III, p. 226). The date is that of the establishment of Puno as capital of a department. The village (*pueblo*) of Puno existed prior to 1548 (*Parecer de Don Fray Matías de San Martin, Obispo de Charcas, sobre el Escrúpulo de si son bien ganados los Bienes adquiridos por los Conquistadores*, in *Documentos inéditos para la Historia de España*, Vol. LXXI, p. 451). Pedro Gutierrez de Santa Clara (*Historia de las guerras cíviles del Perú, 1544 to 1548*, Madrid, 1905, Vol. III, pp. 44 and 493) mentions Puño as a village (pueblo) extant in 1546. There is no doubt about the identity of Puño with Puno, as the former is described as on the Lake, before reaching Chucuito (then the most important settlement) on the Cuzco trail.

[8] Chucuito is to-day a village of about 800 inhabitants. It was the capital of the province and is mentioned as such at an early date in Spanish documents. The Indian insurrection of 1780–1781, injured it seriously. Acora has, at the present time, about 500 inhabitants. I do not vouch for the accuracy of these figures; they are taken from Modesto Basadre (*Puno*, in *Boletin de la Sociedad Geográfica de Lima*, Tomo III, pp. 215–216).

[9] *Perú, Incidents of Travel and Exploration in the Land of the Incas*, pp. 350–354.

[10] Further on, when treating of the islands, I shall have occasion to refer to the ancient system of rotation in tilled tracts. That system was general and by no means an introduction by the Incas. The length of time allowed each tract for rest and recuperation differs according to localities, conditions of the soil, etc.

[11] The objects secured were, as usual, scattered, so that I have not as yet been able to see any of them.

[12] I make this statement provisionally. The pottery from Cuzco is of a well-defined type and one easily recognized. Whether that type originated in the Cuzco valley or elsewhere in the scope of territory occupied by Indians speaking the Quichua language is a question I do not venture to consider.

[13] Besides Sillustani, there are other remains at Hatun-Kolla near by, at Mallqui-amaya, and a number of other sites; also on the Peninsula of Capachica. None of these have ever been studied.

The best account of Sillustani that has yet been written is that of Squier (*Peru*, pp. 376–384). In the same work (p. 385) there is a very good picture of the sculptured stones at Hatun-Kolla.

The picture contained in the work of Charles Wiener (*Pérou et Bolivie*, 1880, p. 387), as well as his description of the ruins of Sillustani, shows

that the author has never visited the site. It suffices to quote his text on page 386: "Trois tours en granit noir dont deux encore complètement debout s'élèvent sur le bord de l'eau." There is not a single one of the numerous (not merely *three*) towers "on the edge of the waters" of Lake Umayo. They all stand high above it and at some distance. Wiener's picture of the Chullpas is as inaccurate as his description.

The same can be said of the picture of Sillustani in the Atlas of Rivero and Tschudi (*Antigüedades Peruanas*), and of their remarks upon the ruins; with the difference, however, that no pretense to ocular inspection is made by these authors.

[14] We witnessed one of these phenomena, from the port of Puno, in the month of May of last year. Don Enrique Gamero, whose intimate acquaintance with the Lake has no equal, assured us that he had seen as many as five at one time.

[15] The report on the large monolith, sculptured, discovered at a distance of two *leguas,* from the village of Ilave, is taken from the work of Father Pablo Josef Arriaga, S.J.—*Extirpacion de la Ydolatria del Pirv,* Lima, 1621, Cap. IX, p. 53: "Avisado tengo a vuestra Señoria la diligencia, que tengo haciendo contra Yndios hechizeros, y principalmente en razon de vn Idolo de piedra de tres estados en alto muy abominable, que descubrí, dos leguas de este pueblo de Hilavi, estava en vn cerro el mas alto, que ay en toda esta comarca en vn repecho que mira hazia donde nace el sol, al pie del cerro ay mucha arboleda, y en ella algunas choças de Yndios que la guardan, ay tambien muchas sepulturas antiguas muy grandes, de entierros de Yndios muy sumptuosamente labradas de piedras de encaxe, que dizen ser de las cabeças principales de los Yndios del pueblo de Hilavi. Estava vna plaçuela hecha a mano, y en ella vna estatua de piedra labrada con dos figuras monstruosas, la vna de varon, que mirava al nacimiento del sol, y la otra con otro rostro de muger en la misma piedra. —Las quales figuras tienen vnas culebras gruessas, que suben del pie a la cabeça a la mano derecha, y izquierda, y assi mismo tienen otras figuras como de papas. Estava esta Huaca del pecho a la cabeça descubierta, y todo lo demas debaxo de tierra. Tres dias tardaron mas de treinta personas en descubrir todo el sitio al derredor deste Ydolo, y se hallaron de la vna parte, y otra adelante de los dos rostros, a cada parte vna piedra quadrada delante de la Estatua, de palmo y medio de alto, que al parecer serian de aras, o altares muy bien puestos, y arrancadas de su assiento con mucha dificultad, se halló donde estava asentada la ara de la estatua, con vnas hogillas de oro muy delicadas, esparcidas vnas de otras, que relucian con el Sol.—Mucho trabaxo é pasado en arrancar este Ydolo, y deshacello, y mas en desengañar a los Yndios." I regard this statement, which Arriaga copies from a letter, addressed by one of the official "visitors" of the rites and idolatries of the Indians, to the Bishop of La Paz in 1621, as fully reliable in the main. There may be some exaggeration in the dimensions of the statue, although three fathoms, or approximately eighteen feet, is the length of the tallest monolith (lying on the ground) at Tiahuanaco also. It would seem as if the stone had been placed so as to overlook Lake Titicaca, for the range of hills behind Ilave (Hilavi) dominates the view in that direction. The interpretation of the figures is of course subject to doubt. It is not impossible that fragments of the carved stones might yet be found at or near the site. The "burials" may have been those of former shamans, around the idol or, they may have been houses with house-burials, as on the Puna near by.

The Augustine F. Alonzo Ramos (*Historia de Copacabana,* edition 1860, edited by Sans, p. 49) mentions the same idol, but gives it only a length of three and a half varas (ten feet, about). He also quotes the visitor Garcia Cuadrado, and adds: "Estaba en el cerro llamado Tucumú fronterizo á Titicaca, lo adoraban sobre una losa grande, como al dios de las comidas." The difference in size, between Arriaga's statement and that of Ramos, is noteworthy.

[16] The first missionary of the Province of Chucuito (which then extended as far as Copacavana, Zepita, and the Desaguadero) was Fray Tomás de San Martin of the order of St. Dominic. It is stated that he entered the province in 1534, which is an error in date. That date is from Mendibúru (*Diccionario,* Tomo VII, p. 187). That Fray San Martin was the first missionary is asserted by Fray Juan Melendez (*Tesóros Verdaderos de las Yndias, Historia de la Provincia de san Ivan del Perv del Orden de Predicadores,* 1681, Tomo I, p. 619): "El Conuẽto de Santiago de Pomata está fundado en un pueblo de Yndios deste nombre, que es de los mas principales de la grãde Provincia de Chucuytu á las orillas de la laguna de Titicaca. Reduxole á la Fé con todos los demas de su distrito el Ylustrisimo Don Fray Tomás de San Martin, comenzando la labor de su Evangelica sementera, é introduciendo en este, y los demas lugares de aquella nombradissima Provincia, muchos Frayles de su Orden, que acabando de sembrar, el grano limpio de la Divina palabra, cogieron para la Yglesia una cosecha de almas inumerables. Tuuimos (como hemos dicho) Conuentos en esta Provincia en Chucuytu, en Juli, en Copacauana, y en los demas de sus pueblos Vicarias, hasta el año de 1569, en que despojados nuestros Frayles de toda la Provincia, sucedió todo aquel quento què ya dexamos escrito del Virrey Don Francisco de Toledo, y el modo, y los motivos, que tuuimos para boluer al pueblo de Pomata" (p. 399). In the year 1565, the Convent of San Pedro Martir de Juli contained twelve Dominican friars, and at the chapter celebrated in the same year, the order received the "houses" (monasteries) of Acora, Ilave, Zepita, Yunguyu, and Copacavana (p. 411). In regard to the causes that led to the separation of the Dominicans from Chucuito, I refer to the same volume (pp. 444 and 446). That the removal of the Dominicans was an act of injustice is admitted by the authors of the order of Augustines, which order subsequently profited by it, in receiving the mission of Copacavana. (See Fray Antonio de la Calancha: *Corónica Moralizada del Orden de San Augustin en el Perú,* 1653, Tomo II, Cap. VII, p. 35; also, Fray Andrés de San Nicolás: *Imágen de N.S. de Copacavana Portento del Nuevo Mundo Ya Conocida en Europa,* 1663, Cap. VI, fol. 33.)

[17] Juli is known as being the place where the Jesuits established their first printing press in Peru.

[18] The Province of Chucuito embraced, under Spanish rule, all the territory between Puno and the Desaguadero. See map of 1573, published herewith. Diego de Robles says of the Indian population of the province: "Los frailes Dominicos de Chicuito han tenido tales formas, que pudiendo aquella provincia dar mas de otro tanto de lo que da, han sustentado que Chicuito esté tasado en muy poco: siendo en aquella provincia doze ó treze mil indios tributarios, y casi cinquenta mil de todos edades" (*Memorial sobre el Asiento del Perú,* in *Documentos inéditos del Archivo de Indias,* Tomo II, p. 36; no date given, but certainly about 1570). According to Luis de Morales Figueroa, the number of tributary Indians of Chucuito was 17,779. The proportion being 1 to 3½ for the aggregate population, the latter would have been at that date about 62,000 (*Relacion de los*

Indios Tributarios que hay al presente en estos reinos y Provincias del Perú; Fecha por Mandado del Señor Marqués de Cañete, between the years 1591 and 1596; contained in Volume II of the *Relaciones de los Vireyes del Perú,* Madrid, 1871, p. 333). If we compare with these figures the more or less exact ones given by Modesto Basadre in his article entitled, *Puno,* in Volume III of the *Boletin de la Sociedad Geográfica de Lima,* we get the following data: District of Chucuito, 7000 (p. 215); Acora, 7500 (p. 216); Juli, 6500 (p. 365); Ilave, 10,000 (p. 366); Pomata, 3500 (p. 367); Yunguyu, 8000 (p. 368); Zepita, 9000; Desaguadero, 1000 (p. 369); Huacullani, 2000 (p. 370); Pisacoma, 1200; and Santa Rosa about 1600. Total for these eleven districts, nearly 57,300, all of which are Aymará Indians, the whites being in almost insignificant minority. To this number we would have to add, for a fair comparison, the Indian inhabitants of the Peninsula of Copacavana and of the Islands of Titicaca and Koati, which amount to at least five thousand, if not more. The conclusion is reached that the Indian population, of that district at least, has not at all diminished since the early times of Spanish colonization, but has rather increased. While this is no surprise to me, it shows how unjustified is the hue and cry about extermination of the natives of Peru by the Spaniards. I could easily furnish more examples of the kind from all over Peru and Bolivia.

[19] Ruins exist near Pomata, at Yunguyu, at Tanca-tanca, etc. Basadre mentions some of these (*Puno,* p. 218). We saw pottery from Pomata which was almost identical with that of the so-called Chullpas in Bolivia. The pottery of Yunguyu, however, is of the type called Inca or Cuzco. The Miguel Garcés collection contains a number of Yunguyu specimens. This gives color to the statements that Yunguyu was a village or station of the Incas; a sort of entrance to the Peninsula of Copacavana. See Calancha, *Corónica Moralizada,* Tomo II, Cap. II, fol. 5: "En el asiento de Yunguyu vienen á estar tan vezinas las costas de la Laguna, que baña al promomtorio de una parte i otra i afirman los Yndios naturales, que estũo el Ynga muy puesto en plática ronper la tierra, i azer lugar por donde las aguas se comunicasen, i aqui tuvo echada una cerca que tomava de costa á costa, i en ella sus puertas, porteros, i guardas. . . ." Calancha mostly copies from the book of Fray Alonso Ramos, of which two perfect copies exist in Bolivia. Fray Rafael Sans, the aged Recollect missionary of Bolivia, has given what he calls a partial reprint of Ramos from an incomplete copy now in Spain. This book bears the title, *Historia de Copacabana, y de la Milagrosa Imágen de su Vírgen.* Third edition, 1886. He says (Cap. VII, p. 14): "El haber sacado el Inca á los naturales de la Isla trasladándolos á Yunguyo, fué por que quiso poner de custodios del famoso adoratorio del sol á gentes de su confianza. . . ." In the same work he speaks of storehouses (*graneros*) established near Locca, midway between Copacavana and Yunguyu (Cap. XVIII, p. 47).

[20] The name Huayna Potosi (young Potosi), a Quichua word, is not properly given to the splendid pyramid of the "Ka-Ka-a-Ka." The latter name is found as early as 1638, in the first volume of Calancha: "En lo que gastavan mas sacrificios, i estremavan el culto era en el cerro Illimani Cullcachata, i en el mas frontero del pueblo llamado Cacaaca, este por ser muy eminente i estar siempre nevado, fué muy venerado de todos los desta Provincia de Omasuyo, en estos cerros les dava rèspuestas el Demonio, i eran continuos sus oráculos." But the word "Ka-Ka-a-Ka" itself is a corruption of "Karka-"—(or "Kaka-")

"Jaque," (rock man). The altitude of the Ka-Ka-a-Ka is, as near as can be ascertained, 20,320 feet; the extremes being: Minchin, 20,170; and Conway, 20,560 (Sir Martin Conway: *Notes on a Map of Part of the Cordillera Real of Bolivia,* in *Geographical Journal,* May, 1900).

[21] I have no reliable data in regard to the altitudes of these ranges, but they are certainly very high, judging from the masses of perpetual snow that covers them. They are on the Peruvian side, known as "Nevados de Carabaya" and pertain to the Department of Puno.

[22] We noticed that the alpine glow occurred oftener on the Illimani alone than on the whole chain. Most beautifully this splendid phenomenon is witnessed from La Paz, either from the bridge spanning the river, or the Alameda or Prado.

[23] This has been denied, but we saw the reflection too often and too distinctly from the Island of Titicaca to entertain any doubt.

[24] The Rio de Pucará that rises at the base of La Raya is a branch of the Rio Ramis and possibly the principal one. Hence I consider La Raya as the true source of the Ramis.

[25] The water of Lake Titicaca is brackish, but not enough so as to be unpalatable. We drank it during our stay on the Island of Koati for two weeks and found it wholesome and not disagreeable.

[26] According to La Puente, the Lake receives much more water than is expelled through the channel of the Desaguadero, and he accounts for the uniform level of the Lake by evaporation, which according to Octavio Pardo is fifty millions of cubic meters in twenty-four hours. In regard to the outflow at the Desaguadero, Puente adds: "El caudal de sus aguas puede estimarse á la salida del lago en 4822 metros cúbicos por minuto" (*Estudio Monográfico del Lago Titicaca,* in *Boletin de la Sociedad Geográfica de Lima,* Tomo I, p. 382).

[27] Measured depths along the Bolivian shore, immediate proximity of islands and beach excepted, are mostly in excess of 600 feet. The western or Peruvian half shows as greatest depth, 185.69 meters, or 609 feet; whereas due east of it, near the promontory at Huaicho, depths of 252.5 meters and 256.5 meters, or 828 and 841 feet, are recorded. Wiener states: "J'eus la satisfaction de pouvoir faire une série de sondages qui me donnèrent en beaucoup d'endroits la profondeur de 530 mètres" (*Pérou et Bolivie,* p. 390). How far this writer is capable of stretching the truth can be judged by the following passage on the same page: "La Cordillère neigeuse de Sorata se trouve á plus de 30 lieues du rivage." Now Hanko-Uma is, in a direct line, *not twenty-five English miles from the shore!*

Near the little Island of Koa (see map) a depth is recorded of 400 meters, or 1312 feet. I do not know on what basis that statement may be resting. We visited Koa and it is certain that the water is very deep there, but we had no means for soundings.

[28] Wiener affirms that the straits of Tiquina have a depth of not less than 70 meters, or 230 feet (*Pérou et Bolivie,* p. 390).

[29] "La mas reputada y admitida interpretacion es la que ha dado el Sr. José Rosendo Gutierrez: *Thia* sustantivo que se traduce por borde ó ribera; y *Huanaco,* participio pasado del verbo desecar. El enigma queda asi decifrado: Borde desecado. Esta interpretacion, justo es confesarlo, está en consonancia con la naturaleza del terreno y aspecto físico de la localidad" (Puente: *Estudio Monográfico,* p. 381). I remain perfectly neutral in regard to the many interpretations, leaving it for linguists to solve the problem. But I would re-

mark here that the name Tiahuanaco does not seem to have been the *original one* of the ruins. In the work of the Jesuit Father Bernabé Cobo, entitled, *Historia del Nuevo Mundo,* concluded in 1653 and published at Sevilla in 1890, there is the following passage: "El nombre que tuvo este pueblo antes que fuese señoreado por los Incas, era *Taypicala,* tomado de la lengua aymará, que es la materna de sus naturales, y quiere decir 'la piedra de enmedio;' porque tenian por opinion los indios del Collao, que este pueblo estaba enmedio del mundo, y que dél saliéron despues del Diluvio los que tornaron á poblar." Another writer of the same order and a contemporary, Father Anello Oliva, asserts: "Passó á las partes de Tyyay Vanacu por ver sus edificios que antiguamente Llamaban Chucara, cuya antiguedad nadie supo determinalla" (*Historia del Perú y Varones Insignes en Santidad de la Compañia de Jesús,* 1631, Lib. I, Cap. II, p. 39; at present published by subscription at Lima). In Aymará, Taypicala signifies "stone between" or "in midst of."

[30] *Segunda Parte de la Crónica del Peru, Que trata del Señorío de los Incas Yupanquis y de sus Grandes Hechos y Gobernacion,* published in Madrid in 1880, in *Bibliotéca Hispano-Ultramarina,* by Marcos Jiménez de la Espada. Cieza is one of the first authors who wrote about traditions of the Collao, as the regions northwest, west, and south of Lake Titicaca were called. It is worthy of notice, however, that Cieza in his *Primera Parte de la Crónica del Perú* (in Vol. II of the *Historiadores primitivos de Indias,* published by Enrique de Vedia) does not refer to the extraordinary power attributed to the white men, in his second part. He simply says: "Antes que los ingas reinasen cuentan muchos indios destos collas que hubo en su provincia dos grandes señores, el uno tenia por nombre Zapana y el otro Cari, y que estos conquistaron muchos pucares, que son sus fortalezas: y que el uno dellos entró en la laguna de TITICACA, y que halló en la isla mayor que tiene aquel palude gentes blancas y que tenian barbas, con los cuales peleó de tal manera, que los pudo matar á todos" (Cap. C, p. 443; see also Cap. CV, p. 446). When quoting Cieza I shall always refer to Vedia's publication of the first part of his writings.

[31] This was after the sun had risen out of the Lake and Island of Titicaca. "Antes que los Incas reinasen en estos reinos ni en ellos fuessen conocidos, cuentan estos indios otra cosa muy mayor que todas las que ellos dicen, porque afirman questuvieron mucho tiempo sin ver el sol, y que padeciendo gran trabajo con esta falta, hacian grandes votos é plegarias á los que ellos tenian por dioses, pidiendoles la lūbre de que carecian; y questando desta suerte, salió de la isla de Titicaca, questá dentro de la gran laguna del Collao, el sol muy resplandeciente, con que todos se alegraron. Y luego questo pasó, dicen que de hácia las partes del Mediodia vino y remanesció un hombre blanco de crecido cuerpo, el cual en su aspecto y persona mostraba gran autoridad y veneracion, y queste varon, que asi vieron, tenia tan gran poder, que de los cerros hacía llanuras y de las llanuras hacía cerros grandes, haciendo fuentes en piedras vivas; . . . Y este tal, cuentan los indios que á mi me le dixeron, que oyeron á sus pasados, que ellos tambien oyeron en los cantares que ellos de muy antiguo tenian, que fué de largo hacia el Norte, haciendo y obrando estas maravillas, por el camino de la serrania, y que nunca jamas lo volvieron á ver . . . Generalmente le nombran en la mayor parte Ticiviracocha, aunque en la provincia del Collao le llaman Tuapaca, y en otros lugares della Arnauan" (*Segunda Parte de la Crónica del Perú,* Cap. V, p. 5). The Tuapaca may be the same as the Taápac of

Calancha, of which more anon. It is noteworthy that this tale hints at a temporary darkening, not at a primitive appearance of the sun. A contemporary of Cieza de Leon, and one who had still better opportunity for gathering original information relating to the Indians was Juan de Betanzos. He spoke Quichua fluently and resided long in the country, whither he had come with the conquest and where he married an Indian girl from Cuzco. Betanzos relates: "Y en estos tiempos que esta tierra era toda noche, dicen que salió de una laguna que es en esta tierra del peru en la provincia que dicen de collasuyo un Señor que llamaron Con Tici Viracocha, el cual dicen haber sacado consigo cierto numero de gentes, del cual numero no se acuerdan. Y Como este hubiese salido desta laguna, fuese de alli á un sitio ques junto á esta laguna, questá donde hoy dia es un pueblo que llaman Tiaguanaco, en esta dicha provincia ya dicha del Collao; y como alli fuese él y los suyos, luego alli en esta dicha provincia ya dicha del Collao; y como alli fuese él y los suyos, luego alli en improviso dicen que hizo el sol y el dia, y que al sol mandó que anduviese por el curso que anda; y luego dicen que hizo las estrellas y la luna. El cual Con Tici Viracocha, dicen haber salido otra vez antes de aquella, y que en esta vez primera que salió, hizo el cielo y la tierra, y que todo lo dejó oscuro; y que entonces hizo aquella gente que habia en el tiempo de la escuridad ya dicha; . . ." (*Suma y Narracion de los Incas que los Indios Llamaron Capaccuna; que fueron señores en la ciudad del Cuzco, y de todo lo á ella subjecto . . . Agora nuevamente Traducido é Recopilado de la Lengua India de los Naturales del Peru,* por Juan de Betanzos; Vecino de la Gran Ciudad del Cuzco, Cap. I, Parte I, p. i; in the same volume as the *Segunda Parte de la Crónica del Perú,* of Cieza). The book of Betanzos is dedicated to the Viceroy Don Antonio de Mendoza, and was finished in 1550. At that time, and when Cieza was in Peru, the traditions of the Indians could not yet have suffered much alteration through Christian influence, and hence the purity of these tales as genuine folk-lore is very probable. The well known author, Garcilaso de la Vega, a *mestizo* of Inca descent on his mother's side, asserts that he gives, in Chapter XVIII of Book I of the first volume of his *Comentarios Reales* (original edition, Lisbon 1609, folio 16), the true traditions of the Indians of the Collao: "Dizen pues que cessadas las aguas se aparesció vn hombre en Tiahuanacu, que está al mediodia del Cozco, q̄ fué tan poderoso que repartió el mundo en quatro partes, y las dio á quatro hombres que llamó Reyes, . . . "

[32] This is not a literal translation; hence I give the original text also: "Echaron el cuerpo bendito en una balsa de eno, ó totora, i lo arrojaron en la gran laguna dicha ; serviéndole las aguas mansas de remeros, i los blandos vientos de pilotos . . . navegó con tan gran velocidad que dejó con admiracion espantosa los mismos que le mataron sin piedad; i crecióles el espanto, porque no tiene casi corriente la laguna i entonces ninguna . . . Llegó la balsa con el rico tesoro en la playa de Cachamarca, donde agora es el desaguadero. I es muy asentada en la tradicion de los Indios, que la mesma balsa rōpiendo la tierra abrió el desaguadero, porque antes nūca le tuvo i desde entonces corre, i sobre las aguas que por alli encaminó se fué el santo cuerpo hasta el pueblo de los Aullagas muchas leguas distantes de Chucuito i Titicaca azia la costa de Arica i Chile . . . " (*Corónica Moralizada,* Vol. I, pp. 337–338). Calancha extensively describes the actions of two mythical persons, whom he calls saints, and their travels across the South American continent from Brazil to Tarija in southern Bolivia

and thence as far as the Titicaca basin: "Al uno llamarõ Tunupa, que quiere decir grã sabio, señor i criador, i al otro Taápac, que significa el ijo del Criador, asi lo testifica el Padre Fr. Alonso Ramos, en su Copacavana: i este nonbrado asi, fué de quien quedaron mas memorias de echos en su vida, i de portentos en su muerte en las Provincias del Callao [Collao], Chuquito i los Charcas" (*Ibid.*, p. 320). Hence we are again referred to the book of Ramos as the source of the information imparted to Calancha. Indeed in the *Historia de Copacabana* of Sans, already mentioned, which purports to be (at least in its first part) a reprint of the work of Ramos, we find that the body of Taápac, after he had been killed by Indians on the Island of Titicaca, was placed on a balsa and set adrift on the Lake. "Y refieren los antiguos: que un recio viento lo llevó hasta tocar en tierra de Chacamarca; que la abrió con la proa, haciendo correr las aguas hacia el sud, formando asi el Desaguadero, que antes, dicen que, no lo habia, y por ese nuevo rio fué flotando hasta los Aullagas . . ." (Cap. XVII, p. 96). Title and date of the book of Ramos are: *Historia del célebre y milagroso Santuario de la Ynsigne Ymágen de NrãSrã de Copacabana*, Lima, 1621. The traditions referred to seem to be folk-lore of the Indians of Copacavana and perhaps of the Island of Titicaca.

[33] It is strange, however, that an author of the same period as Calancha, and an Indian at that, Juan de Santa Cruz Pachacuti Yamqui Salcamayhua, while speaking of Tonapa and his miraculous deeds, makes no mention of his death, still less of his portentous opening of the Desaguadero. He limits himself to saying: "Dizen quel dicho Tunapa pasó siguiendo al rrio de Chacamarca, hasta topar en la mar" (*Relacion de Antigüedades deste Reyno del Pirú.* Published in 1879 by the Ministerio de Fomento at Madrid, in the volume entitled: *Tres Relaciones de Antigüedades peruanas*, p. 240). However, he agrees with Ramos in that the route taken by Tonapa from Tiahuanaco was toward the Desaguadero. Salcamayhua was an Indian from the southern part of the actual Department of Cuzco, and the traditions which he relates are Quichua as well as Aymará, while those referred to by Ramos and Calancha are exclusively Aymará folklore. This may explain the difference.

[34] It would be superfluous to quote extensively in support of a statement that is so abundantly repeated by almost every Spanish author. The belief in the rising of the sun out of Lake Titicaca was perhaps the result of daily observation, for it may appear to the Quichua inhabitants of the northwestern extremity of the Lake that the sun does actually rise out of the water. Later on I shall again refer to this tale of the origin of the sun and moon from the Island of Titicaca.

[35] "El profesor Alejandro Agassiz examinando atentamente las terrazas de las costas del lago, se ha persuadido que el nivél de las aguas ha bajado de 121 metros 92″ á 91 metros 44″" (Puente: *Estudio Monográfico*, p. 367). My friend Agustin Tovar, in his short but very interesting study entitled: *Lago Titicaca; observaciones sobre la disminucion progresiva de sus Aguas*, in *Boletin de la Sociedad Geográfica de Lima* (Tomo I, pp. 163–167) records a number of indications of the gradual diminution or shrinking of the great watersheet. Thus he states that, thirty-three years ago, the Lake reached as far as the suburbs of Puno, where to-day cultivated plots are scattered all along, the water having receded at least five *cuadras*. He also refers to a tradition current among old Indians to the effect, that the Lagune of Umayo, where the

famous ruins of Sillustani stand, was formerly connected with Titicaca by an intermediate lagune called Illpa. Umayo is five leguas from the shore of the great Lake.

[36] A case of a balsa being cut in twain by one of the Lake steamers during a dark night, in the Straits of Yampupata, was related to us by the survivors. They simply held on to the pieces and were saved.

[37] A table of temperatures of the water, at depths from 8.36 meters to 256.49 (26 to 841 feet), has been given by Agassiz, and I refer to it from Puente (*Estudio*, p. 368). The extremes are 15 centigrade at 30 meters 10″ (99 feet), and 10.6 centigrade at 137 meters 10″ (450 feet). The greatest difference between the temperature at the surface of the water and the bottom temperature was at 46 meters 88″ (154 feet).

[38] I give these technical names from Puente (*Estudio*).

[39] I never saw the bird, however common, near enough to note details. It is most likely a bandurria, which Puente calls *Falcinellus Ridgwayi* and *Theristicus caudatus* (*Estudio*, p. 376). Tschudi mentions two kinds of ibis, the bandurria, *Theristicus melanopsis;* and the yanaruico, *Ibis ordo* (*Perú*, 1846, Vol. II, p. 100).

[40] "En el lago existen seis especies de pescados pertenecientes a las familias de los *Cyprinoides* y *Siluroides*" (Puente: *Estudio*, p. 376). Probably taken from A. Agassiz and S. W. Garman: *Exploration of Lake Titicaca.* The species eaten to-day are: the suchez, *Trichomycterus dispar;* the umanto, *Orestias cuvieri*, and especially the boga, *O. Pentlandii.*

[41] I refer to a belief, current among all the Indians on the Islands of Titicaca and Koati and on the Peninsulas of Copacavana and Tiquina, of the existence, in the Lake, of a large aquatic animal described as resembling either a seal or a sea cow. When treating of these islands I shall give further details. We never saw this mysterious beast, but the Garcés collection contains a tooth said to have been taken from a specimen. It may be, as Professor W. Nation suggested to me, that it is a gigantic *Silurus;* but the fact that it has been seen several times, according to the Indians, "asleep on the beach," would indicate a seal-like animal.

[42] A grave objection to the former existence of a ridge in the direction indicated lies in the fact, that the Lake has an enormous depth along that line.

[43] In No. 10 of the *Revista of La Paz*, Vol. I, No. 10, there is an article entitled: *Plano del Lago Titicaca* by J. L. M. The author gives the width of the Strait of Tiquina at 860 meters, or 2820 feet, a little over half an English mile. Puente (in *Estudio*, p. 378) gives it at 629 meters.

[44] The altitude of Illampu is, according to Conway (*Notes on a Map of Part of the Cordillera Real*), 21,490 feet (taking the mean of three determinations). The extremes are: Pentland, 21,286; Conway, 21,710. The extinct volcano Sajáma, in the western Cordillera of Bolivia, is probably higher, but not as high as the Sapo and Koropuna in the Department of Arequipa in southern Peru. The proper name of Illampu is Hanko-Uma (white water). Illampu is a corruption of "Hila-llampu" (literally, much fine snow). I owe this suggestion to Dr. Macario Escobári, of La Paz, Bolivia. The name Hila-llampu, or, by contraction, Illampu, is given to the mountain at some distance from it, on the Puna. The northern summit, about 200 feet lower, is called Hilampi (brother with); also "Hanko-Kunu" (white snow).

[45] The church of San Pedro Tiquina is quite old. Sans notices a chapel at San Pedro Tiquina as early as 1582. The mention is from a written statement by the Indian Francisco

Tito Yupanqui who carved and finished the celebrated image of the Virgin so much venerated at Copacavana: "É estubo en Tiquena la Vérgen en la capilla de San Pedro un poco de tiempo" (*Historia de Copacabana*, p. 136). San Pablo was an annex to the Augustine convent of Copacavana in the seventeenth century. During the great Indian uprising of 1781 it was (like most of the settlements in that region) the scene of a horrible Indian butchery.

[46] Illimani is a corruption of "Hila-Uma-ni" (much water possesses, literally). At Llujo, on the northwestern slopes of the mountain, or rather cluster of peaks, the Indians assured us that it was properly called "Jillimani" (Spanish *j*), but they also called it Achachila and Uyuiri. The latter was interpreted to us as signifying: feeder of the crops; because the waters of the Illimani irrigate the fields of the natives of that section. But this etymology appears quite doubtful. In *Descripcion y relacion de la Ciudad de La Paz,* from 1586 (contained in the second volume of the *Relaciones geográficas*), is the following: "Hay otra adoracion que se llama Hillemana (Illimani), ques una sierra alta cubierta de nieves que perpetuamente se le hacen, y asi Hillemana quiere decir; 'cosa para siempre,' y desta causa los naturales la tienen en adoracion" (p. 71). "En esta cordillera se van continuando muchas sierras unas de otras y cada una tiene su nombre; y la ques mas notable cerca desta ciudad se llama Hillemana, ques una sierra que perpetuamente está nevada, y asi el nombre quiere decir: 'cosa perpetua'" (p. 75). I never heard this definition in Bolivia.

The altitude of Illimani is 21,190 feet, according to the mean of six determinations, the difference between the extremes being 340 feet (Conway: *Notes,* etc.). Sir Martin Conway was the first and thus far the only one who reached the summit, in September, 1898. A number of years ago, some Indians from the hacienda of Tanimpata attempted the ascent. One reached the upper snowfields, but never returned. Wiener claims to have ascended as high as 20,112 feet, to the second peak, which he called "Pic de Paris" (*Pérou et Bolivie,* p. 408). Few explorers (if any) have resided so long in close proximity to the glaciers of Illimani as we did in 1894, 1895 and 1898. We were very anxious to ascertain everything relating to ascensions of the mountain, and have been assured that the only known attempt to ascend Illimani (the one by Indians excepted) was made by Professor Rod. Falb and President Pando of Bolivia (then a youth), who reached an elevation of about 20,000 feet and were still at a considerable distance from the summit. Of an ascension by Wiener, *nobody had any knowledge,* and his claim was derided as pure invention, both here and at La Paz. In 1877, when Wiener states he made his ascension, Falb had already made his, but not a word is said about it in Wiener's book! Without positively asserting that Wiener's ascent is a myth, I am forced to state that we were unable to find anyone who knew anything about it or believed in it, in Bolivia and all along the Illimani.

On the 10th of October of 1895 we made a reconnoissance from the hacienda of Cotaña. Cotaña lies at 8150 feet, according to our barometric observations, compared and reduced by Professor S. J. Bailey of the Harvard Observatory of Arequipa. Wiener has, on page 405, only 8006. We followed the route taken by Falb, but having been delayed until 6.30 A.M. by our guide, it was noon when we arrived at Chua-chua-ni (altitude 13,670), where the mules had to remain. Thence we climbed to 16,050 and found ourselves above one of the small glaciers issuing directly from

the upper snowfields. It was already 3 P.M. and we were not prepared to spend the night on that spot. Now, it is evident from Wiener's description that he took the same route, but his measurements give figures as much as 2,000 feet in excess of ours, which as stated were carefully reduced after long comparison of the instrument with the barometers of the Arequipa Observatory. The description of the ascent is also completely at variance with the truth. Furthermore it is impossible, even if starting at 2 A.M. as Wiener claims to have done, to reach the altitude he mentions at 4.30 P.M., and return to Quichu-uaya, which he calls the "residence of the Ilacata" (p. 412), at 9 P.M. of the same day. A descent from Illimani at night is fraught with such dangers as to be practically impossible, especially when we consider that there are no guides to be obtained, and that one has to grope his way even in the daytime. To give an idea of the marvelous rapidity of Mr. Wiener's ascent, in regions where the rarification of the air is a powerful obstacle, I give his own figures (page 413): Starting from an elevation of 15,092 feet at 11 A.M., he ascended, in two hours and thirty-five minutes, 1770 feet; thence in 69 minutes, 1450 feet; thence again in 36 minutes, 1200 feet; and finally the last 600 feet in an hour and a half. The time noted includes that used for observing and recording the hypsometer!

[47] The main use of the totora is for constructing balsas. Even the largest of such craft are made of long bundles of reeds; they form the hull and bulwarks. But the totora is also a nutritive plant, as the tender points are often eaten by the Indians, and even by Creoles, in the shape of a salad, with red peppers. It is said to be of fair taste. The totora grows only in shallow bays and inlets. It is found in abundance in the bay of Huarina, hence the great number of fishing balsas cruising between Chililaya and Tiquina. All along the shores of the Peninsula of Copacavana the water is deep and descent from the beach abrupt; hence but very few balsas are seen, because of the scarcity of totora wherewith to construct them.

[48] Of the genus *Cantuta.* The most prominent is the red variety, *C. buxifolia,* the yellow is rare and the white rarest (see A. Raimondi: *Elementos de Botánica Aplicada á la Medicina y la Industria,* 1857, p. 285; also Puente: *Estudio,* p. 387).

[49] The bean is of the kind called *habas,* a large and coarse variety. The Indians eat it toasted. That this kind of bean is not indigenous is shown by the following statement of Father Bernabé Cobo, S.J.: "Las habas, Garbanzos, Lentejas y Frijoles pequeños, llamados en España Judihuelos, se han traido á esta tierra y se dan donde quiera copiosamente.—En algunas partes, como en la diócesis del Cuzco y en la de Chuquiabo, han entrado mucho los Indios en el uso de las Habas, y hacen sementeras dellas, particularmente en las tierras mas frias que templadas, donde suelen helarse los maizales, porque las Habas sufren mas los hielos que el Maiz y que otras muchas legumbres" (*Historia del Nuevo Mundo,* Tomo II, p. 417).

[50] Even Cieza says of the Collaos in general: "Y que eran viciosos en otras costumbres malas" (*Primera Parte de la Crónica del Perú,* Cap. C, p. 443). Pedro Pizarro says: "Estos indios destas provincias del Collao es gente sucia, tocan en muchos pecados abominables . . ." (*Relacion del Descubrimiento y Conquista de los Reinos del Perú,* 1571, in Vol. V of *Coleccion de Documentos inéditos para la Historia de España,* p. 280). Such statements could be easily multiplied.

[51] The stranger, who remains but a short time among the Aymarás, is

easily misled by their submissive manners, their cringing ways, and especially by their humble mode of greeting the whites. Upon closer acquaintance, however, the innate ferocity of character cannot remain concealed. That they are, at this day, occasional cannibals is well known throughout Bolivia. Further on I may refer to several very recent cases of cannibalism, not in one district only, but in various parts of the territory occupied by the Aymará stock.

[52] Hailstorms are not only frequent but often destructive. The quantity of hail that falls now and then on certain spots of the shore is astounding. We have seen it remain for two days after the storm, completely whitening the ground as if covered with heavy snow. The Aymará name for hail is: "chij-chi."

[53] The combustible most in use is dried animal dung. Where stunted shrubbery is within reach, as on the Island and on some parts of the Peninsula of Copacavana, it is used in preference to the repulsive táquia, as the other combustible is called. But at most places this relief is not at hand.

[54] Among the Aymará I have found the same utter lack of sense or taste for the beautiful or picturesque in nature that had struck me among northern Indians. The phenomena of nature that fill man with awe and cause him to tremble for his chattels or his person, are the only ones that affect the mind of the Indian.

[55] The vicuña and the guanaco were both common, in ancient times, on the shores of the Lake or rather in the districts near these shores. Among the animal bones collected and sent to the Museum by us, there are remnants of both of these species of *Auchenia*. In addition to the communal hunt or "chacu," single hunters pursued the fleet quadrupeds, using the *bolas*, or "lliui." Cieza says of the Collao: "Desde Ayavire comienzan los Collas, y llegan hasta Caracollo. Al oriente tienen las montañas de los Andes, al poniente las cabezadas de las sierras nevadas y las vertientes dellas, que van á parar en la mar del Sur Sin la tierra que ocupan con sus pueblos y labores, hay grandes despoblados, y que están bien llenos de ganado silvestre" (*Primera Parte de la Crónica del Perú*, Cap. XCIX, p. 442). Garcilaso de la Vega, like Cieza and others, asserts that the chacu was especially an Inca custom or institution and that the promiscuous hunt of the auchenias was prohibited; but, as usual, he contradicts himself. I refer to the following passage: "La gente plebeya en general era pobre de ganado (sino eran los Collas que tenian mucho) y por tanto padecian necessidad de carne, que no la comian sino de merced de los Curacas, ó de algun conejo que por mucha fiesta matauan. . . . Para socorrer esta general necessidad mandaua el Inca hazer aquellas cacerias, y repartir la carne en toda la gente comun, . . . " (*Comentarios Reales*, Tomo I, fol. 135). Hence he confesses that in the Collao the hunt of these quadrupeds was free. Later on I shall refer to the society called "Chayllpa," which seems to correspond to the esoteric order of hunters among the New Mexican pueblos. One of their dances is called the "chacu-ayllu," or "chokela" and is a ceremony recalling their ancient communal hunts. Pedro Pizarro explicitly says: "Cada año hacian cercos en que tomaban destas vicuñas y guanacos y las tresquilaban para la lana para hacer ropa para los señores, y las reses que morian hacianlas cecina muy delgada secandola al Sol sin . . . En estos despoblados habia grandes ganados como digo: y hacianse estos cercos por mandado de los señores, hallandose ellos presentes algunas veces y recreándose en ellos" (*Relacion del Descubrimiento*, p. 280). By "señores," he certainly does not mean the chiefs of Cuzco exclusively.

[56] *Cervus antisiensis*.

[57] The preparation of this insipid article in ancient times was not different from the process now used. Fray Diego de Mendoza writes as follows: "Las papas que en esta Region se dan, son de las que se haze el Chuño, amargas, que llaman Luque ["choque," probably]. Sacanlas de la tierra, y sobre una camada de paja, las tienden á que les de el yelo, quando mas riguroso cae de noche; y de dia las ponen al Sol, por termino señalado, despues las cubren de paja, y pisan reciamente, estrujándolas, luego las ponen al Sol á que los enjugue sin dexarlas humor algun, y quedan de tres partes la vna . . . . . El Chuño blanco, ó moray, de regalo, lo benefician á las corrientes de el agua, y despues lo enjugan, y sazonan como el otro" (*Chrónica de la Provincia de S. Antonio de Los Charcas del orden de nr̃o seraphico P. S. Francisco, en las Indias Occidentales, Reyno del Perú*, 1664. Lib. I, Cap. v, p. 37). The same, or very nearly the same, process is used to-day. For the common or black chuñu, small and indifferent-looking potatoes are selected; for the white or "tunta," white potatoes with thin skins are set apart. In case of the common chuñu, the potatoes are crushed; but in making the tunta the potatoes remain entire. Both kinds are first thoroughly soaked and the black chuñu remains in pools of standing water for a long time, until it emits an almost pestilential odor. They are next spread out to freeze, and when thoroughly frozen, crushed to express every drop of liquid, and then dried. The white tunta, as stated, is not crushed, and furthermore it is washed in running water. The process has remained substantially the same since pre-Spanish times.

[58] "Concuerdan unos y otros que sus antecesores viviã con poco órden antes que los ingas los señoreasen; y que por lo alto de los cerros tenian sus pueblos fuertes, de donde se daban guerra, y que eran viciosos en otras costumbres malas" (Cieza: *Crónica*, Part I, Cap. III, p. 443). I limit myself to this quotation, as it expresses more or less what all other sources state.

[59] I purposely omit mentioning in the text the Uros, a small group of Indians who were found living at and along the Desaguadero and still live in that vicinity. The language of the Uros has been studied, and again quite recently by Dr. M. Uhle of Berlin. Until such linguistic researches appear in print we should withhold any opinion in regard to this singular group of Indians, living as they do completely surrounded by people of another linguistic stock. The condition of the Uros seems to have been the same in the sixteenth century as now, although they are considerably intermingled with Aymará blood through intermarriage. In the church books of Tiahuanaco, kindly loaned to us by the parish priest, Father Escobari, we found a number of marriages with Uro Indians (*Libro de Cassados que perteneze á este pueblo de Tiaguanaco comienza á ocho de henero de 1694.* Ãs MSS. . . The book ends 1728). Church records are very important, since they contain the names of a number of ayllus, or clans. In three instances the names of Uros are given, together with the name of the clan to which they belong, and the name of the village in which they lived. Thus, from Huarina, Uros are mentioned as belonging to the ayllu Pocona; from the Desaguadero, the clan Camana; and from Challacollo, the clan Cuchisa. Whether these clans were of the Uro tribe or Aymará I am not able to say. The best description of the Uros at my command is by Calancha: "Estos son Indios Uros barbaros sin policia, renegridos, sin linpieça, enemigos de la comunicacion, i nada afectos al culto de nuestra Fé; tienen por sustento i grangeria pescar en la laguna de Paria

quien tiene treynta leguas de circunferencia procedida de la gran laguna de Chuquito llamada Titicaca . . . . los que abitan en tierra, es en sepulturas debajo de tierra por el frio, i quando viven en la laguna, son sus casas sobre barbacoas i enea; vease el encuentro, que siendo tierra donde nieva i graniça, duerman en sotanos i viven en el agua; los Indios Vros nacen, se crian, viven, en esta laguna sobre el agua en la enea, que acá llaman totorales, son muy espesos, i deste genero de junco livianos, aqui abitan sin mas ropa ni cubierta (con ser tierra muy fria) que unas esteras desta enea. Andan alli desnudos ó casi en carnes, comen muchas vezes la carne cruda, i el pescado casi vivo, i las raizes desta totora ó enea. No sienbran, ni tienen labranças . . . Su lengua es la mas escura, corta i báruara de quantas tiene el Perú toda gutural, i asi no se puede escrivir sin gran confusion . . . Sus idolatrias son adorar al Sol i á esta laguna, á quien azen adoraciones de sumision, i le ofrecen comidas de Maiz, pero ellos ensuzian el mismo Dios que adoran . . . son lobos porque se comen una oveja cruda, i traen la uña del dedo pulgar de la mano derecha tan larga i tan afilada, que desuellan sin necesitar de cuchillo . . .'' (*Corónica Moralizada*, Tomo I, p. 350). The feuds between the Quichuas and the Aymarás and the tales of warfare between Zapana and Cari, the former from the Peruvian Collao and the latter from Chucuito, are too often reported in older sources to need special quotations here.

THE ISLANDS OF TITICACA AND KOATI

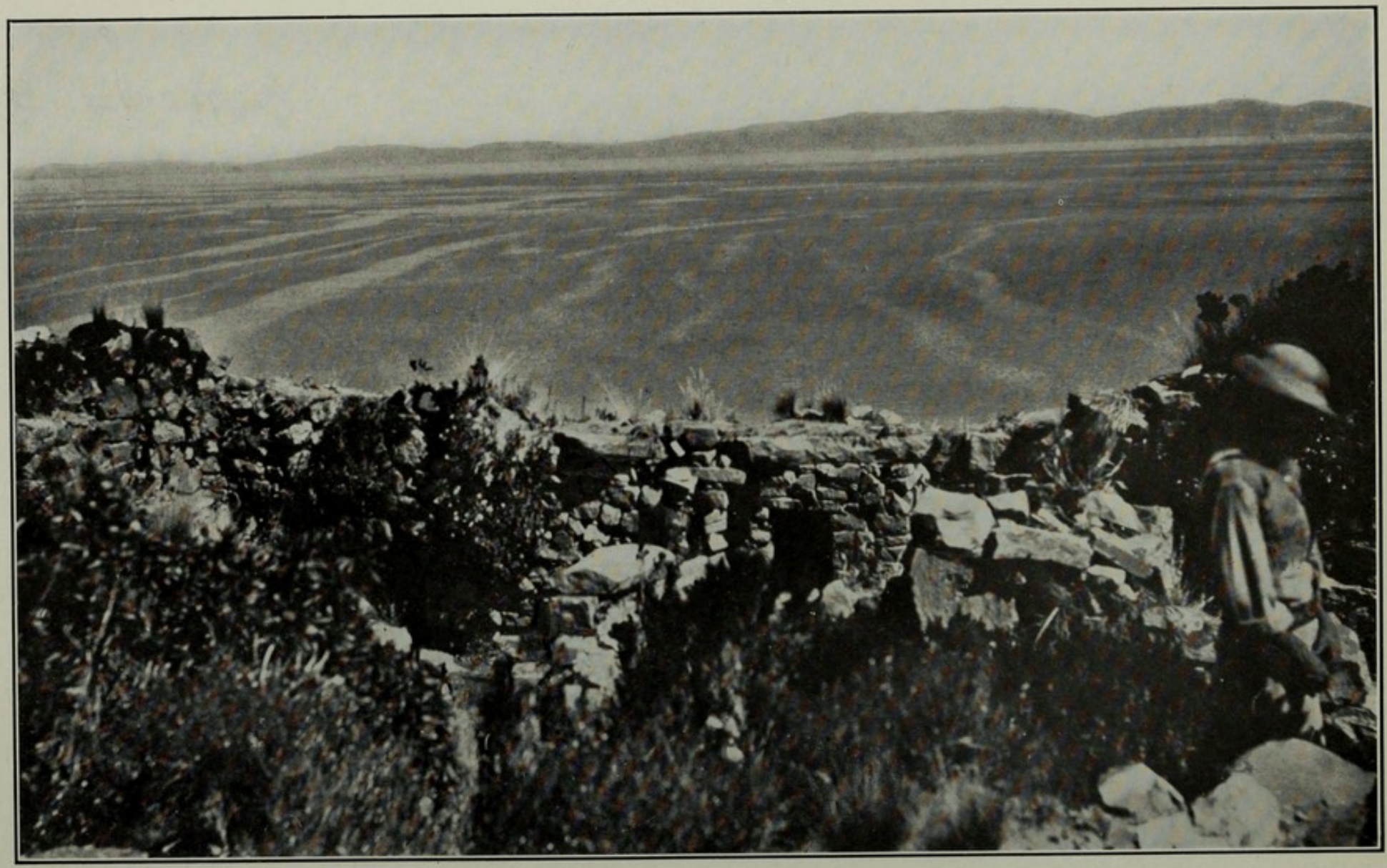


PLATE VIII

The western lake with the Peruvian coast, seen from the Chincana

PLATE XIII

Type material of the Permian genus Lepidopleurus

Part II

THE ISLANDS OF TITICACA AND KOATI

THEIR PHYSICAL ASPECT AND GENERAL CONDITION

THE shape of the Island of Titicaca, the largest of the many that dot the surface of the great Lake, has been compared to that of an elongated toad; and Koati has been said to resemble a whale. In both instances the comparison is fair. The longitudinal axes of both Islands run from southeast to northwest; and Titicaca appears, as already stated, like a continuation of the Bolivian mainland of Copacavana in the direction of the northwestern end of the Lake, near Huancané.

I refer to the accompanying maps of these Islands, executed on the scale of 2560 feet to the inch, for an idea of size and form. Although made with care, I cannot guarantee their absolute exactness. The theodolite which I used was not a first-class instrument, and had suffered at Llujo from constant use among large deposits of iron ore.[1] While subsequent surveys will doubtless correct many defects, I still believe my maps to be sufficient for the purpose for which they were made, namely, to illustrate shape and size, and especially the topography in connection with the location of ancient ruins.

Koati, where its extreme northwestern headland of Uila Peki (f, of the adjoining map) approaches the nearest point on Titicaca, lies about four miles east-southeast of the latter. Koati is separated from the Peninsula of Copacavana at Sampaya by nearly two miles; but Titicaca, as stated, is

only two-thirds of a mile from Yampupata on the same Peninsula. The greatest length of Titicaca, counting from the Puncu (28) to Sicuyu (s), is seven miles. Its greatest width, from the beach below the steep ridge of Kakayo-Kena at Chullun-Kayani (15) to the eastern foot of Kea-Kollu (7), is not quite three miles. Koati measures one and three fourths miles in length and not over one half of a mile at its greatest width. The highest points on Titicaca—Chullun-Kayani and Palla-Kasa (11)—rise slightly over eight hundred feet above the level of the Lake, whereas Uila-Ke on Koati is not over four hundred feet high. The highest points of the two Islands are, respectively, 13,300 feet and 12,900 feet above the level of the Pacific Ocean.

The surface of Titicaca is so broken, and its contour so indented, that a trip across the whole length of the Island is indispensable for obtaining a clear idea of its topography. The "Puncu" is the landing-place for visitors reaching the Island by the way of Copacavana.[2] Set ashore there, they find themselves at the foot of steep slopes covered with a stunted vegetation, and traversed laterally by innumerable terraced garden-beds, or andenes. A trail, rather steep and rocky, leads upward to a denuded crest. Along this trail a magnificent panorama gradually unfolds. First of all, one finds himself looking down on an ancient ruin, the structure called Pilco-Kayma, flanked by smaller buildings and by terraces that sweep around folds descending to the beach. The waters of the Lake bathe that beach in long, dark-blue ripples; and in the distance rests the Island of Koati with its reddish headland. Above the Promontory of Santiago Huata bristles Illampu, "the crown of the Andes."[3] Reaching the crest, the panorama becomes more extensive and more varied. To the right, the buildings of the hacienda of Yumani (B) nestle close to the rounded top of a bold promontory. Far below the hacienda rise groves of trees surrounding the garden of Yumani and the so-called "Fountain of the Incas" near the water's edge. Indian houses

PLATE IX

The Island of Kosti from Summaya

PLATE IX

The Island of Koati from Sampaya



dot undulating slopes in the north, slopes that descend abruptly toward the Lake and rise abruptly to the top of Palla-Kasa (11), one of the two highest summits of the Island. We cross the crest, and a view spreads out as different from the one described as shadow from sunlight. The side from which the trail rises is the sunny side; beyond the crest the view opens to the southwest and south, away from the sun. The distant horizon is encompassed by the monotonous shore-line of Peru. The main Lake expands like a sheet of silver beyond the crest of Kakayo-kena, and the red hump of Condor-o-ua-ua-cha-ue (14). At the foot of this long and narrow promontory, that forms the southwestern wall of the Island, lies the southern Bay of Kona, scarcely ever ruffled by tempests. From the trail the slope descends toward this bay in steep grades, terminating in narrow strips of green and divided by grayish ledges of rock down to the water's edge. The trail runs on to the northwest, hugging the base of higher points: first, Kuru-Pata (10), at the foot of which opens a little valley affording a glimpse of the northeastern shore, where, at the Bay of Pucára, the conical height of Kea-Kollu (7) rises; further on, the twin heights of "Llalli-Sivi-Pata," or Santa Bárbara (12 and 9), again hide the sunny side from view, and the Bay of Kona and the long ridge of Kakayo-kena with its dark green bottom appear on the left. After leaving the cluster of huts at Apachinanca (q) the landscape becomes desolate for a while; but from the corner of Llalli-Sivi-Pata on, the somber western portions of the Island disappear and the eye rests with delight on the graceful summit of Kea-Kollu, the bays of Kea and Challa, and the inlets of Champu-Uaya (20) and Coyani (25). The slopes are dotted with Indian houses, and green in summer with cultivated patches and terraces and long lines of shrubbery growing out of the decaying walls of abandoned andenes. Illampu stands out beyond the Lake, and the snowy ranges of Charassani loom up in the north. To the left rise the heights of Challa-Pata,

Iñak-Uyu, and the Calvario (6, 5, 4). After we have turned the slope of Iñak-Uyu, the sandy isthmus of Challa lies at our feet, with the house of the hacienda (the hospitality of which we enjoyed for so many months), its chapel, and some straw-roofed Indian dwellings. That isthmus leads to the Peninsula of Uajrán-Kala (18, 19). We look over the handsome Bay of Challa, the peninsula beyond, the Bay of Maynuani, the projections of Llaq′-aylli and Ye-já-chi (f and 17), and the little Islands of Lauassani, Kenata and Chuju. It is not a view; it is a relief-chart spread out at our feet.

To reach, from Challa, the extreme northwestern point of the Island at Sicuyu, the trail must be followed along the beach by the once beautiful and, with all its decay, attractive garden (23), to the Isthmus of Kasapata (e) and its ruins. Directly north of it rises the Peninsula of Llaq′-aylli. This short stretch is one of the most lovely on the Island, and the view from Kasapata, across the Bay of Maynuani, the Isthmus of Challa, and beyond the northern promontory of Kea, is enchanting. Koati lies in full view, and the great Bolivian Cordillera closes the horizon. Kasapata is the last inhabited spot in that direction. Beyond it, and as far as the crest of Muro-Kato (3), bare rock predominates on the slopes descending from the Calvario. The basin at the foot of what is called the "Sacred Rock," or "Rock of the Cat," Titi-Kala (a), is covered with shrubbery. West of the Sacred Rock a green slope descends to the northern Bay of Kona, and here the view changes again to the shadowy side. The ridge of Kakayo-kena terminates in a point in the north as well as in the south. The waters of the bay are always placid, for the Island of Kochi protects them. Northwest of the Sacred Rock, the Promontory of Ticani (2) terminates the Island. Its rapid slopes bear scrubby vegetation, except on the south, where the rocks of Turi-turini (41) stand out in vertical cliffs. The extreme northwestern projection, Sicuyu, is low and partly covered by thickets, and the view from it extends far to the north-

west, where the surface of the Lake meets the horizon. Sicuyu is a forlorn spot, well fitted for an abode of the dead.

Titicaca is perhaps one of the most picturesque Islands on the globe, from the number of bays, inlets, promontories, and bold summits. Besides the two large bays of Kona and the one of Challa, the Island counts along its shores twenty larger or smaller coves and inlets. An equal number of sharply defined mountain-tops, rising from 400 to 800 feet above the Lake, give to its surface a peculiarly varied aspect. Hence the scenery abounds in contrasts. Surrounded by the magnificent water-sheet of the Lake, in full view of the Andes,[4] Titicaca lacks but arborescent vegetation and the presence of civilized man with his resources for comfort, to make it a spot worthy of being counted among the precious sites on the earth's surface.

The rocks of the Island, as well as those of that part of the Peninsula of Copacavana that lies immediately in front of it, belong to the carboniferous series. Seams of coal crop out at various points, and a coal mine has been worked at Yampupata for a number of years.[5] At Kea I saw a handsome specimen of fossil plants of the carboniferous age. The strata on the Island are much tilted, and lifted up toward the northwest, as far as I could notice. Only the long ridge of Kakayo-kena is formed almost exclusively of limonite, and that mineral crops out at its base even, in the bottom of southern Kona. But I should not be surprised if other minerals were found also, for instance, at Kea-Kollu. The geological structure of the Island has not, to my knowledge, been closely studied, although D'Orbigny devoted some attention to it.[6]

It may be said that the greater portion of the Island is covered with scanty vegetation, scant in forms and scrubby in size. No part of it appears completely denuded except the northern slopes, from the vicinity of Challa to Sicuyu, and even there only in places, as on the rocky slides between

Kea and the foot of Iñak-Uyu, to the summit of that height and its neighbors of Challa-pata and Calvario, and thence to Ticani. Vertical cliffs rise in a number of places; but even at the foot of rocky slides, in cavities at the water's edge, lovely groups of ferns are seen. The only indigenous tree-form is the keñua (*Polylepsis racemosa*), found in small groves and in few places. This tree does not grow to any considerable height, but its trunk assumes a great bulk in the course of many years of growth. At the garden of Challa there is a very ancient keñua tree, the diameter of which is quite five feet.

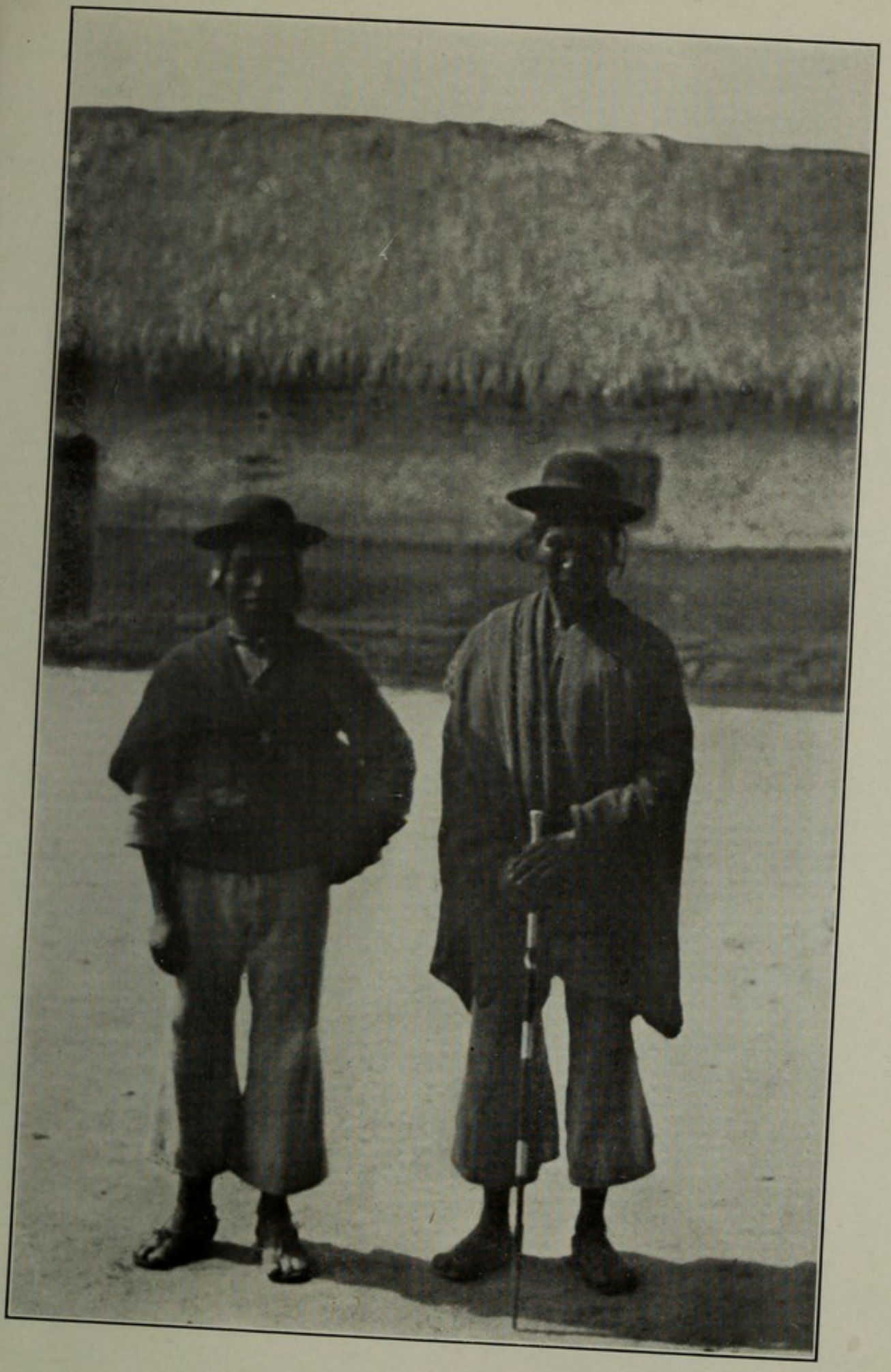
The abundance of fresh water with which the Island is supplied fosters the growth of vegetation to a degree not common at that altitude. Springs are numerous and the water of excellent quality. In summer, when rains are most abundant, lively brooks and even small cascades rush down the steep declivities. Hence, wherever the sun can strike disintegrated rock, thus moistened, vegetable germs may thrive and tiny groups of plants will arise. Wherever, on steep slopes, a thin crust of soil impinges on bare rock, the "kara," a tall Yucca or Dasylirion-like plant with fleshy, dentated leaves and sharp spines, grows in profusion. The popular Spanish name for this singular and quite abundant vegetable type is *comida de oso* (literally, bear food). It is especially abundant on the northern slopes of the Calvario and of Ticani. A number of plants grow upon the Island, which are used by the Indians for medicinal purposes, or are known to them as having medicinal properties. Mrs. Bandelier collected and sent to the Museum a number of plants, gathered under the direction of an Indian medicine-man on the Island. The list appended contains about twenty species used for healing and for sorcery, two practices which are inseparable among the Indians. Besides, there are some which the Indians do not care to indicate to the stranger. One of the most common and most generally used of these medicinal plants is the verbena.

PLATE X

The Indian authorities (Ilacata and Alcalde) of Challa
on Titicaca Island

PLATE X

The Indian authorities (Ilacata and Alcalde) of Challa on Titicaca Island



Shrubbery grows mostly along the lines of abandoned andenes, and in and among the ruins. It forms the dark-green lines that striate the steep slopes of the Island and gives them a peculiar aspect from a distance. The handsome shrub of the country, the red cantuta, is found at Pucára (m) and at several other places on declivities facing the north. It is possible that this beautiful shrub was transplanted thither from the mainland during colonial times.

In shallow bays like that of Challa, and in the inlets forming the shores of southern Kona, the useful totora grows in a belt of varying width. It is only at Challa that its growth is sufficient to permit the construction of balsas. The supply at Kona is too small, hence the Indians of the hacienda of Yumani are dependent upon those of Challa for the material for the ferry on which they cross the Yampupata channel.

Animal life is by no means scarce, but mostly aquatic. Of quadrupeds we have seen only a field rat. But it is well known that a species of wildcat, called "titi" (and "mulumulu" on the flanks of the Illimani), occasionally comes across from the mainland.[7] On the Island, raids by the titi are rare, and I doubt very much if it can be rightly called an "aquatic feline," as the people of the country sometimes describe it.[8] Birds are abundant. The beautiful "alkamari," known in the Peruvian Sierra under the name of "chinalinda," a tall buzzard of handsome chestnut plumage, white breast, and bright yellow feet, stalks about, and always in pairs. It allows the stranger to approach quite near and only rises to fly away a short distance. A gray eagle soars along the shore. Stately gray-and-black night-herons stand on rocks in secluded inlets. The Bay of Challa, especially, is enlivened by flocks of divers, and by handsome chokas. We have seen, between the belt of totora and the beach, as many as thirty divers chasing each other, together with a number of chokas tranquilly swimming among the bustling crowd. From time to time the beach was visited by

a pair of "huallatas," the stately goose of the Puna,[9] white, with dark wings—a beautiful bird, and capable of domestication.[10] What is commonly called the "cuervo," a species of cormorant, is most abundant on the small Islands near the northern extremity of Titicaca, where it has its nests, and where hundreds are usually seen to roost. The "leke-leke," or "llicIli" (*Charadrius resplendens*, Tschudi),[11] often visits the sandy beach of Challa or the marshy bottom of Pucára. Lastly, swarms of small green parrots (*Bolborhynchus andicola*[12]) occasionally appear (to the detriment of crops) and fill the air with discordant screams. To see such a flock suddenly arise from a thicket recalls a handful of emeralds thrown into the air.

Reptiles are represented by toads, and by small lizards seen on dry and rocky spots and among ruins. The Indians say that a large water-snake, over twelve feet in length and of proportionate thickness, which they call "yaurinka," frequents the rocky shores of the southern Bay of Kona. We have no positive evidence of the existence of this reptile,[13] nor of that of the large aquatic animal resembling a seal,[14] which, according to the belief of the Indians and many of the white and mestizo population, exists in the waters of the Lake. It is interesting to note the tenacity of this belief, which can be traced to several generations and to a number of different sources having no possible connection. We are reminded by it of certain fantastic animal types carved on metallic objects from the Island of Koati, as well as of pottery from the village of Ancoraymes, on the eastern Bolivian mainland,[15] also of the ancient wooden goblet, found at Santa Maria, representing an Indian spearing a huge fish.

Fish are seen often in the clear waters of the Lake. The Indians of Titicaca are not much addicted to fishing, but we were told that as many as twelve different kinds of fish are found in the Lake. The two most common are the boga (*Orestias*) and the suchis.

PLATE XI

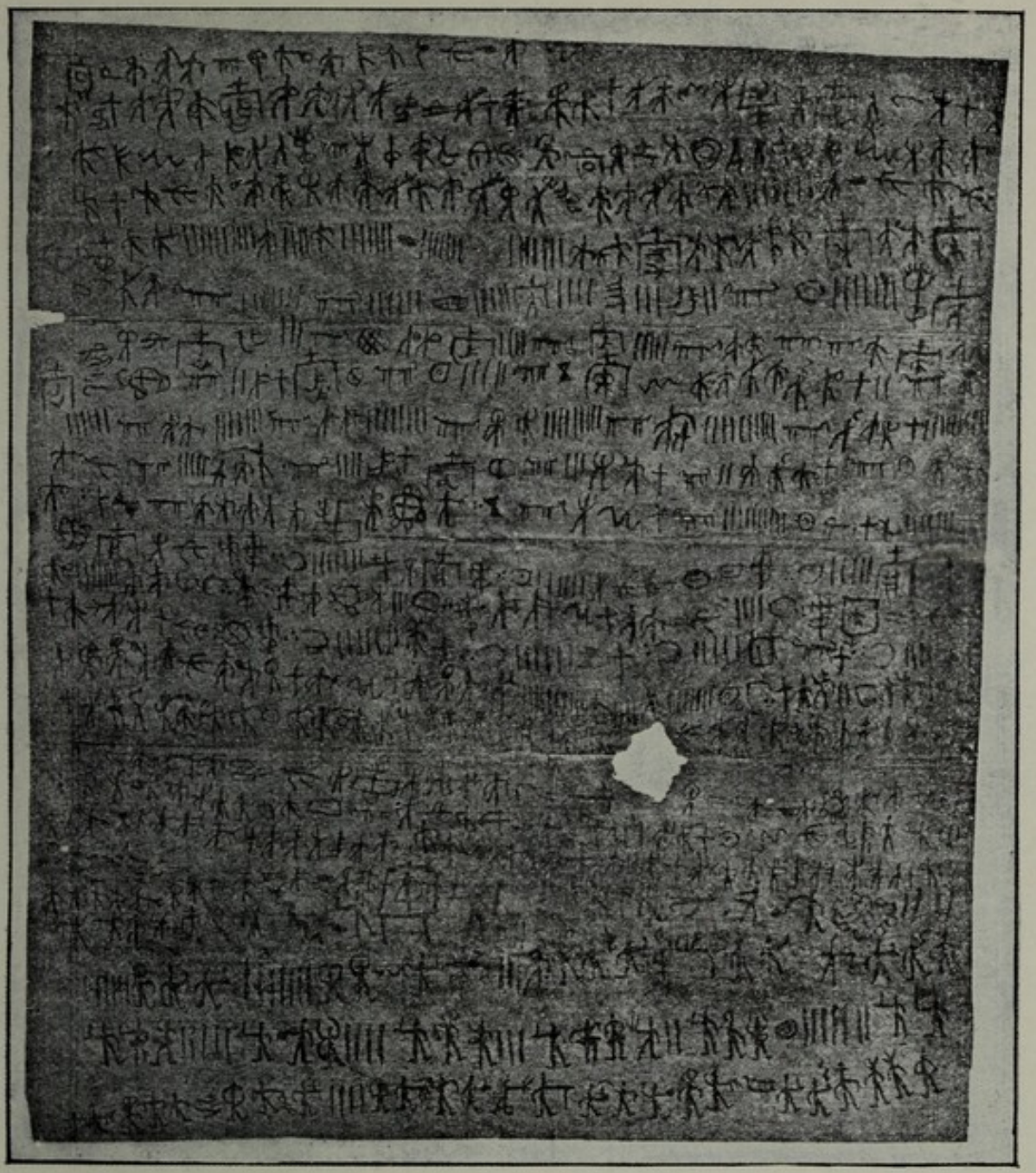
Reduced copy of Indian pictograph (church ritual), from "Boletin de la Sociedad Geografica de Lima, Vol. V."

Original presented to that Society by Don Abel Mendez of Puno, Peru

PLATE XI

Reduced copy of Indian pictograph (church ritual), from "Boletin de la Sociedad Geografica de Lima. Vol. V."

Original presented to that Society by Don Abel Mendez of Puno, Peru



Insects are not numerous. A small spider, with steel-colored abdomen and red legs, is abundant about rocky sites and ruins. I saw at Sicuyu, when opening burial cysts, a small scorpion. *Hymenoptera* are more numerous, *Lepidoptera* scarce, and limited, so far as we saw, to Diurnidae of the *Argynnis, Vanessa,* and smaller genera. I would recall here the remarkable specimen of pottery sent to the Museum from our excavations at Kasapata, on which is a very good representation of a crepuscular moth and of a diurnal butterfly common to warmer climates. The execution of the painting of these butterflies is so true that it could have been done only from nature; that is, by capturing the specimen and spreading it out after the manner of modern collectors. Of *Coleoptera* we have seen only very few specimens. Insects which are disagreeably prominent through their intrusion upon man, like *Pediculus capitis* and especially *Pediculus vestimenti,* also *Pulex irritans,* are, to the disgust of him who must associate with the Indians, painfully abundant on Titicaca Island.

Having already referred, in the preceding chapter, to the climate in general, I would beg to add only a few statements relative to the physical appearance of the Island of Koati.

Although the air-line distance from the eastern end of Koati to its western termination is but one and three fourths miles, the Island is more than two miles long, if the sinuosities of the crest are followed. The shape is that of a gable-roof. The western termination is a butte of red rock, nearly two hundred feet high, and the eastern end is formed by similar rocks abruptly terminating over a low sandy projection. With the exception of that point and the triangular low projection of Uito-pampa (e), the beach all along is narrow and mostly covered with drift and boulders. The slopes are steep, slightly folded, and, on the north side, covered with a bushy vegetation and rather tall grass. Along the crest, single keñua trees, and even clusters, are not uncommon. Wild olive trees also occur. On the

whole, Koati has, on its northern slope, a better flora than Titicaca. The southern, in many places, never receives direct sunlight, and therefore is much colder. In June we noticed thin ice, for whole days, in shady recesses along the southern shore. The only source of fresh water on the Island is a small spring at the western end of Uitopampa, and its supply is insufficient even for half a dozen persons. Hence the inhabitants must drink the water of the Lake, which is, as stated before, slightly briny. Animal life on Koati is similar to that on Titicaca, but less abundant.

While treating of Koati, I will briefly describe its actual condition (1895) in regard to population and products. The permanent population of Koati is, in reality, reduced to about twelve or fifteen Aymará Indians of both sexes. Their dwellings, with one exception, all lie on the southern or shadowy side of the Island. At times, however, the Indian population increases to thirty and forty through accessions from the village of Sampaya on the mainland, to which pueblo the Indians of Koati belong. The Island is owned by Dr. W. del Carpio of La Paz, who visits his property once or twice a year, leaving, at the time we visited it—1895—its management mainly in the hands of the Indian authorities of Sampaya. Intercourse between Koati and the mainland is therefore irregular. When the Indians have to go to the village or to Copacavana, a balsa or two will cross and recross; but if they have no cause for making the trip, the visitor on Koati may remain cut off from all the world for several weeks. Sometimes even money, unless offered in excessive quantities, cannot induce the Aymará Indian to confer a legitimate favor.[16]

Culture plants on Koati are limited to potatoes, oca, quinua, and maize. The northern part of the Island is especially adapted to the cultivation of Indian corn. In 1895 the Indians had on the Island some domestic animals, among them one llama. Since then conditions are somewhat improved. An attempt by the owner to plant eucalyptus trees

on the southern side, and in front of the buildings of the hacienda, gives hope for a favorable result. The construction of the building at a point as chilly as the slope above Uito-pampa appears at first incomprehensible; but the proximity of the mainland and the convenient landing-place, owing to shallowness of the water (which elsewhere around Koati is of great depth), explain the selection.

In the course of this study I shall again refer to Koati, but I now revert to the Island of Titicaca, where the population is much more numerous, the resources are more varied, and the relation to the Indian population of the mainland of greater importance.

The Island of Titicaca belongs to the jurisdiction of Copacavana, hence to Bolivia, in administering judicial and ecclesiastical matters. Originally the whole Island was the property of the Garcés family of Puno, in Peru. The residence of the owners was Challa. A number of years ago the southern extremity became property of the Bolivian family of Guarachi, so that the Island is now divided into two haciendas, the much larger one of Challa belonging to Peruvians, and the smaller southern portion owned by Bolivians. The Island is permanently inhabited only by Indians, for the owners reside there but a short time in the year. The local authorities are Indians, namely, an alcalde and an ilacata at Challa, and another alcalde and another ilacata at Yumani. The Indians are estimated at 800, all told, of which by far the greater number belong to the northern hacienda. It cannot be said that there is a village on the Island. There is a group of houses at Challa, another cluster at Kea and on surrounding eminences, a scattered group at Pucára, houses here and there on the slopes, and hamlets at Yumani and Uacuyu (22). A considerable portion of the soil is, notwithstanding the steepness of the slopes, cultivated or at least tillable, thanks to the system of terraced garden-beds adopted by the Indians since time immemorial, or rather forced upon them by the nature of the ground. There are

also pasturages, like the bottom of Pucára, the grassy swellings of Ciriapata and Marcuni (g and 19). The western portion of the Island, especially the long and elevated ridge of Kakayo-kena, is uninhabited, although patches of ground are occasionally cultivated even there.

The crops raised are: Potatoes, oca, quinua, beans of the large and coarse kind called *habas,* and a little maize. Of the now neglected gardens I have already spoken. Potatoes being the main staple, the manufacture of chuñu is also the chief industry. The products are carried on donkeys and by carriers as far as the Puncu, thence by balsa to Yampupata on the mainland, and to Copacavana on the backs of donkeys or on the backs of men. What the hacienda of Challa gives to its owners is sometimes carried to Puno by balsas in a three days' voyage; and what the Guarachi family needs at La Paz is taken to that city on pack animals from Yampupata.

Domestic animals abound on the Island. The Indians have, as usual, a good supply of ugly mongrel dogs, which they feed as little as possible. There are some domestic fowl, many donkeys, and occasionally a diminutive mule. A horse is sometimes seen. Sheep exist in large flocks. Vicious and powerful bulls are used for ploughing with the preadamite plough, and even the master, much more the stranger, is not safe from these savage and treacherous brutes. The cows are ill fed and uncared for; but still they give milk, which is converted into a very fair cheese and sent to Puno. A sporadic cat, few rats and mice, some very familiar swine, a few ducks and geese, and a very ill-natured turkey, together with the guinea-pig (called in Bolivia "rabbit"—*conejo,* and in Peru "cuy"), constituted, during our stay on the Island, the remainder of domesticated animals. As *Pediculus vestimenti* to the Indian's garb, and *capitis* to his hair, so is the guinea-pig to the Indian's kitchen. These extremely reproductive animals render existence in a cooking-place desperately lively for the unac-

PLATE XII

Manuel Mamani, one of the leading medicine-men (Lay'ka)
on Titicaca Island

PLATE XII

Manuel Mamani, one of the leading medicine-men (Lay'ka)
on Titicaca Island



customed visitor. Sleep in such a place, with the many-hued, rat-footed, and tailless rodents bustling about and chattering with their teeth, is impossible, unless one is extraordinarily tired.

Although there is an abundance of water-fowl, ducks included, on and about the Island of Titicaca, the Indian does not take advantage of it as a supply of meat; but he frequently hunts for the eggs. The yolk is green and the taste decidedly fishy and unpalatable; but the Indian relishes such food. It is chiefly on the small islands near the northwestern extremity of Titicaca that thousands of birds roost, and thither the Indian goes in his balsa, returning sometimes with a full load of eggs and also of young birds. These Islands (see map) are six in number, the smallest of which is Chuju, and the largest Kochi, or "Kuji-huata." Lauassani, which is the most eastern, is low and flat and has at its eastern extremity a still lower extension, which feature has given rise to the belief that an ancient dyke formerly connected it with the main Island. We could not find anything to support this belief; but noticed some faint vestiges of walls and terraces on the island indicating that in ancient times it may have been, at least temporarily, inhabited.

West-northwest of Lauassani lies Kenata. It has the shape of a triangular pyramid, and on its steep slopes are traces of ancient terraces. We did not land on Chuju, but passed near enough to be able to scan its sides. No vestiges of ancient remains could be seen. Payaya, which is farthest from Titicaca to the north, is low and flat, like Lauassani, and we saw what appeared like remnants of walls. Koa is by far the tallest. It has the shape of a cupola; slopes are very steep, in many places vertical. On its eastern side grottoes have been washed out by the water, and one of them has a handsome portal with two openings. Graceful ferns drape them. One of these entrances is the doorway to a long winding passage, the floor of which is covered with

water for some distance. This passage has not yet been explored, as the fear that it might be the home of some aquatic animal has deterred every one from penetrating to more than a hundred feet.[17] It is believed this natural gallery traverses the whole island and has an exit on the opposite western side. We were shown the almost inaccessible cleft where that exit is supposed to be. Kochi is by far the largest of the cluster. We did not visit it, owing to the late hour of the day,[18] but we saw it very near and from all sides. It appeared bleak and denuded, and Don Miguel Garcés informed us that it contained no vestiges of antiquity and that its slopes were exceedingly slippery. It is near Koa that, according to Baluarte, the extraordinary depth of 400 meters (1312 feet) is said to have been noted. I do not know on what authority this statement is made, but Koa has the reputation of being surrounded by the deepest waters of the Lake.

The lower islets, Lauassani and Payaya, are covered with dense shrubbery and abound in handsome flowering plants. These islands struck us as bearing more abundant and vigorous vegetation than most sites on Titicaca. The grass especially is rank and tall. Hence small flocks of sheep are sometimes carried to them and left to pasture for months. They need no herder and no care whatever, feed and water being both abundant, and some shelter being afforded either by the shrubbery or by the rocks and cliffs.

These islets are, as stated, the home of thousands of aquatic birds. Koa especially, with its numerous rocky shelves, is inhabited by countless families of black, slender-necked cormorants. When we approached the island, on the eastern side, every ledge and projection was occupied by nests filled with eggs or with young birds. Six Indians had attached themselves to our crew for the purpose of robbing the nests. On our homeward voyage to Challa we met a balsa, the only occupant of which was paddling his craft toward the Island of Kenata on a similar errand.

NOTES

THE ISLANDS OF TITICACA AND KOATI

THEIR PHYSICAL ASPECT AND GENERAL CONDITION

PART II

[1] The group of ruins called, respectively, Condor-konoña, Kupanita, and Torno Kupana, above the hacienda of Llujo, and 12,900 feet above the sea, are built on ferruginous rock with an abundance of limonite, in nodules and otherwise. The compass of my theodolite became so much affected thereby that I had to have it remagnetized at La Paz. It was done as well as possible, but not with the accuracy that would have been obtained elsewhere.

[2] Squier gives the plan of an ancient edifice through the remains of which the trail from the Puncu passed at this time (*Peru*, p. 333). There are faint vestiges left, but it would not be possible now to recognize the plan still obtainable in Squier's time. I fear that my gifted predecessor occasionally looked at things on Titicaca with rather imaginative eyes; for instance, the "line of an ancient road supported by terraces of large stones" (p. 335) cannot be found any more, and I doubt very much if it ever existed. With these exceptions, his description of the trail across the Island is very good.

[3] I borrow this beautiful and appropriate term from Squier (*Peru*). The plate which faces page 268 of his book gives a fair idea of the appearance of the mountain as well as of the scenery in general.

[4] From the northern half of the Island Illimani is not visible, but from the knoll in front of the hacienda of Yumani. I consider the panorama from that spot to be one of the most magnificent mountain views in America or Europe. The eye embraces, in almost a semicircle, the Cordillera of Charassani as well as the whole of the Bolivian range, from Illampu to Illimani.

[5] The mine was opened and worked by a Scotchman, Mr. Alexander Dun, but the conditions of trade and commerce were such that it had to be closed. David Forbes (*Report on the Geology of South America*, 1861, pp. 48, 49) mentions carboniferous formations on both sides of the Lake. Since his time it has become a well-known fact.

[6] I have not at my command the works of D'Orbigny and Gabb and hence quote them from the essay of Puente so often referred to (*Estudio Monográfico del Lago Titicaca*, pp. 384, 387). In regard to the quality of the coal we heard various opinions. Many claim that it is excellent, and

others declare the reverse. It has not as yet been fairly tested.

[7] The existence of this wildcat has been denied, but we have abundant proof of it. Among others, it is mentioned by Puente: "En los cerros que rodean la laguna se halla el gato montés, *Titi*, mas grande que el doméstico, de color pardo, alistado como la piel del tigre real, que vive de la caza de aves que le proporciona el lago" (*Estudio*, p. 387). Further on I shall refer to the connection of that animal with some traditions regarding the Island.

[8] If, as Puente states (see note 7), the titi feeds also on waterfowl, it would account for the belief that it is amphibious, a statement which was gravely repeated in the La Paz newspapers in 1895.

[9] *Chloephaga melanoptera*, or *Bernicla melanoptera*. In the Peruvian Sierra it is called "huachua." We found this beautiful bird also at the foot of the glaciers of Illimani, in altitudes exceeding 13,000 feet.

[10] There are two domesticated huallatas at Uacuyu, a group of buildings above the hacienda of Yumani.

[11] *Perú*, Vol. II, p. 100.

[12] Professor W. Nation. See Puente, *Estudio*, p. 374.

[13] Fray Andrés de S. Nicolas (*Imágen de N:S: de Copacabana*) mentions a belief, that the shrine on Titicaca was guarded by large snakes. Cobo (*Historia del Nuevo Mundo*, IV, p. 62) states: "Contaban los indios viejos que era guardado ese santuario por una sierpe ó culebra grande; y pudo ser haberles hecho el Demonio ese engaño para cebarlos más en él que les hacia en lo principal; más, lo que yo entiendo, es que el decir que cercaba toda la isla una culebra entendieron, y se debe entender, por el agua de la laguna que ciñe la isla, la cual en los dias claros retocada con los rayos del Sol, hace que en la playa las olas parezcan culebras pintadas de varios y diversos colores." This effect of light is often seen on the Lake and from the Island.

[14] The usual description recalls a sea-cow. Don Miguel Garcés has in his collection a tooth supposed to have been taken from the dead body of such a creature, found in some remote corner of the beach near Copacavana. There lives at Challa an Indian who lost his mind upon seeing the animal on the beach. Very large Siluridae are known to exist elsewhere. I refer among others to the enormous specimen caught years ago in the Lake of Neuchâtel, in Switzerland. It is very curious that nearly all those who have seen the mysterious beast have noticed it on the beach, asleep. Upon being aroused it plunged into the water and disappeared. Those that were seen at Tiquina in the month of May of 1895 were described to us as follows: Length about twelve feet, head like that of a bear with a tuft of hair of moderate length (not a mane, as has been stated), body covered with short and smooth hair of a coffee-brown color. The animal approached the shore toward evening, and was neither shy nor savage. At Huarina I was told by the principal inhabitants that whole families of these animals have been seen in sheltered coves, sunning themselves, and that it was well known to the Indians and older inhabitants. Several apparitions of the mysterious creature on the beach, at diverse places, but always about the peninsulas of Copacavana and Santiago Huata, have been related to us by parties having no connection with each other.

[15] I allude to the heads forming handles of goblets or pitchers, mostly painted, which we obtained chiefly from the singular site of Kea-Kollu Chico (1), and more particularly to the three pieces of gold-leaf in the shape of two-legged animals, obtained at Koati. The latter may be anything from a hippopotamus to a condor.

[16] Years ago Koati was inhabited by two parties who exposed themselves to the grave suspicion of making counterfeit money. When, however, Bolivian troops were sent to search the Island for proof, nothing could be found. The craft that landed the detachment, returned to some remote point on the mainland; and the little band of soldiers with their officers found themselves in the worst of plights. There was no food on Koati and no way of getting out of the Island. At last it became possible to communicate with the shore and to secure relief.

[17] It was at Koa that, about sixty years ago, an Indian saw, asleep on rocks in the grotto, a beast resembling a cow. The sight so frightened him that he did not venture to awaken the creature, but he saw it near enough to describe its shape and color; and both agree with the description by parties who claim to have seen the animal at Tiquina and within six feet of the beach.

[18] It was in June that we were finally enabled to visit the smaller islands. The positive orders of Miguel Garcés to have a balsa ready for us *at any time* were utterly disobeyed, by his own manager of the property as well as by the Indians. It was only when, through the kindness of Garcés and of Don Abel Mendez, we obtained a handwheel-boat at Puno, that we were able to make the voyage.

THE INDIANS OF THE ISLAND OF TITICACA



PLATE XIII

Indian dancers: the Chayllpa or Chokela on Titicaca Island

PLATE XIII

Indian dancers: the Chayilpa or Chopkela on Trinidad Island

Part III

THE INDIANS OF THE ISLAND OF TITICACA

FEW, if any, of the present inhabitants of the Island of Titicaca are direct descendants of the Indians who occupied it at the time of the conquest. After Pizarro had established himself at Cuzco in the latter part of 1533, he sent, early in December of that year, two Spaniards to reconnoiter the Lake region, of which he had already heard.[1] The two scouts remained absent forty days and returned with the following information:

"The two Christians that were sent to see the province of the Collao delayed forty days on their journey, from which they returned to the city of Cuzco, where the Governor was. They gave him an account and report of everything they had learned and seen, as will be related below. The country of the Collao is distant, and far away from the ocean, so much so, that the natives inhabiting it have no knowledge of it (the sea). The land is very high, somewhat level and, besides, unusually cold. There are no trees, nor is there any firewood, and what of the latter they may use, is gotten by them in exchange of goods with those who dwell near the sea called Ingri, and reside also along the rivers in the lowland, where the country is warm; and *they* have firewood. From these they obtain it against sheep and other animals and vegetables; for the rest of the country is sterile, so that all sustain themselves on roots of plants, on herbs, maize, and some little meat. There are in this province of the Collao many sheep, but the people are so submissive to the

lord to whom they owe obedience that, without his permission or that of the principals or governors that are in the country by his command, none are killed, and not even the lords and caciques venture to slaughter and eat any, unless it be with his license. The country is well settled because it is not destroyed through war as are the other provinces. Their settlements are of moderate size and the houses small, with walls of stone coated with earth (clay), and thatched with straw. The grass that grows in that country is sparse and short. There are a few streams, but small ones.

"In the middle of the province is a big lake about a hundred leagues in size nearly, and around this lake is the most peopled country. In the center of the lake are two small islands, in one of which is a mosque temple and house of the sun, which is held in great veneration, and in it they go to present their offerings and perform their sacrifices on a large stone that is on the island, called Thichicasa, which, either because the devil conceals himself there and speaks to them, or because it is an ancient custom as it is, or for some other reason that has never been found out, they of the whole province hold in great esteem and offer to it gold and silver. There are [on this Island] more than six hundred Indian attendants of this place, and more than a thousand women, who manufacture Chicca [chicha] to throw it on this rock."[2]

After this first hasty visit by the Spaniards (either late in December, 1533, or in the first days of January, 1534), it is not impossible that Titicaca as well as Koati were abandoned by the Indians of Inca descent.[3] Cieza states: "On large islands that are in the lake they (the Indians living on the shore) plant their crops and keep their valuables, holding them to be safer there than in the villages along the road." This was in 1549, fifteen years after the first visit.[4]

What transpired during these fifteen years is vaguely indicated by various sources. Thus the name of the first

PLATE XIV

Indian dancers: the Kerua-Kera on Tikopea Island

PLATE XIV

Indian dancers: the Kena-Kena on Titicaca Island



Spaniard who visited the Island is given as Illescas, an officer of Pizarro.[5] It is not clear, however, if Illescas was one of the first two explorers or whether he commanded a larger party sent *afterward* to seize the gold and silver supposed to have accumulated on the Island.[6] A modern source, claiming to base on the earliest manuscript information, asserts that a visit to Copacavana was made by Gonzalo Pizarro in 1536, and that, on that occasion, the Indians were apportioned according to the system of "Encomiendas."[7] If any reliance could be placed on the source alluded to, Diego de Illescas would have been at Copacavana in 1536, in company with Belalcazar and Pedro Anzurez de Campo-redondo, but it is well known that Belalcazar was in Ecuador at the time, and that Anzurez returned to South America in 1538![8]

In 1536 the Spaniards were blockaded at Cuzco by the Indians for ten months. Hence, while it might be barely possible that a small detachment had stayed on the Lake, cut off from communication with Gonzalo and Hernando Pizarro, but on friendly terms with the Aymará Indians, it is very doubtful. No mention is made of it in any contemporaneous document at my command.[9]

A work of considerable importance on Peruvian antiquities, but written more than a century after the conquest, by the Jesuit Father Bernabé Cobo, contains the statement that Francisco Pizarro sent three Spaniards to the Lake to visit the Island and take from it a statue, half gold and half silver, which they are said to have brought to Cuzco.[10] If this is true, it must have happened *subsequent* to the *first visit,* else it would have been alluded to in the report from 1534. Nevertheless, Cobo favors the (then general) belief that the main ceremonial objects were, upon the coming of the Spaniards, concealed or thrown into the Lake. The Augustine Fray Alonzo Ramos, who was a resident of Copacavana at the same time as Cobo, but wrote fully thirty years before him, states: "To what we have already said

about [the temple of] Titicaca we shall add that it was the most frequented one in the realm and with great riches, which, according to common belief, the Indians threw into the Lake when the first Spaniards entered the Island with the captain Illescas."[11] Vizcarra affirms in regard to the Island of Koati: "And when the Captains Alzures [Anzures] and the Illescas, with the Franciscan Fathers, came to the peninsula [Copacavana], although they attempted it in 1536, they could not reach it [Koati] from lack of time, and because they thought it was, as well as that of the sun [Titicaca], deserted and waste."[12] After the blockade of Cuzco had been raised and the bloody dissensions between Almagro and Pizarro terminated through the death of the former, Francisco Pizarro himself came to Cuzco in 1538,[13] while his brothers Hernando and Gonzalo invaded the Collao with the avowed intention, says the treasurer Manuel de Espinall, of going to an island called "Titicacao," said to contain much gold and silver.[14] Their attempt seems to have failed, for the younger Almagro, in his accusation against Pizarro (1541) accuses Hernando Pizarro of an attempt to hunt for the treasure *in the Lake,* in which attempt ten Spaniards were drowned![15] It shows that five years after the first visit the gold and silver believed to have existed at the shrines of Titicaca and Koati were already looked for in the waters of the lagune and *not* any more on the Islands. I am loath to admit as yet that any visit was made to the Islands between 1534 and 1538, and incline to the belief (until otherwise informed) that the *Quichua* attendants of the shrines, after secreting the principal fetishes, abandoned both isles, the Aymará Indians alone remaining. What the first Spanish explorers of Titicaca reported on the numbers of its Indian occupants (1600) must be taken with due reserve.[16]

It appears, therefore, that the Islands were occupied, as a place of worship mainly, at the time of the conquest, and long previous, but that a part of the population abandoned it very soon after the first visit by the Spaniards. Informa-

tion concerning the Island from times anterior to 1533 rests, of course, exclusively on tradition.

In 1550 Pedro de Cieza finished the first part of his valuable *Crónica del Perú,* in which he mentions folklore to the effect that "white men" with long and flowing beards had "once upon a time" inhabited Titicaca and were exterminated by (Aymará) Indians from the Collao.[17] A contemporary of Cieza, and, like him, a soldier—Pedro Gutierrez de Santa Clara—has preserved what he claims to be genuine Indian lore, according to which the inhabitants of the Island, many centuries prior to the sixteenth, invaded the mainland and established themselves at Hatun-Colla, near Puno. According to the same source, the Inca tribe were originally Islanders and made war on the people of Cuzco, which warfare began about in the fourteenth century.[18] I merely allude here to these very uncertain tales, having to treat of them in another chapter of this monograph and with greater detail. The same is the case with the (much better founded) statements concerning the occupation of the Island by the Inca, in the latter half of the fifteenth[19] century, which will be discussed in the archaeological sections. Suffice it to mention here that at the time when the Inca first visited the Island they found it inhabited by Aymará of the Lupaca branch, or rather, who spoke the Lupaca dialect of the Aymará idiom. It seems that these were partly driven to the mainland, while some Quichua and a number of women established themselves, or were established, around the shrine and at other sites, chiefly for ceremonial purposes.[20]

After the Spaniards had become complete masters of northern Bolivia, in 1538, it becomes difficult to trace the condition of the Island until the end of the century. On the map made by order of the Viceroy Don Francisco de Toledo in 1573 (herewith published) the "Embarcadero," or place where people from the Peninsula of Copacavana were wont to embark in order to cross over to Titicaca Island, is indi-

cated; hence it may be the Island was inhabited at the time. From the same time (1571–1574) Juan Lopez de Velasco, cosmographer royal, conveys the information (obtained at second or third hand) that in the "great lagune of Chucuito, in the language of the Indians *Titicaca,*" there are "many islands peopled by natives, who navigate it in their canoes and plant their crops on the islands, and keep in them, guarded as in a stronghold, the most precious things they have; and so, anciently, in the time of the Incas, there was a temple of the sun, great and very rich." While the Count de la Gomera was Governor of Chucuito (end of the sixteenth and beginning of the seventeenth century) he caused "all the uncultured Indians to be removed from the islands."[21] Whether this measure was limited to the islands in the vicinity of Chucuito or whether it was also extended to Titicaca and Koati is not certain. At the close of the sixteenth century the Dominican Fray Gregorio Garcia, a resident of Peru and Bolivia for a number of years, describes the islands as deserted, which might indicate that they were depopulated under pressure of official measures.[22] On the other hand, the Augustine Antonio de la Calancha, about thirty years later, published: "On the islands which its archipelago embraces, and especially on the largest one of Titicaca, there are great numbers of Indians, either as fugitives from the Doctrine, or on account of being troubled by the Corregidores and Caciques, or as fishermen for their own sustenance, and not a few of them in order to continue in their idolatrous practices."[23] Thus, although the Island may have been abandoned for a number of years, at the close of the sixteenth and in the beginning of the seventeenth century, it was reoccupied afterward by Indians, but there seem not to have been any white settlers on it until the eighteenth century, or perhaps later. I have as yet been unable to find out if the Island was inhabited at the time of the great uprising of 1780.

The historical notices presented above are meager, but

PLATE XV.

Indian dancers: Kera-Kera and Praripani on Tricoya Island

PLATE XV.

Indian dancers: Kena-Kena and Pusipiani on Titicaca Island



they indicate that few, if any, direct descendants of the Indians who occupied Titicaca in the early part of the sixteenth century can be looked for on the Island to-day. While the great majority of the Islanders are to-day Aymará by language, and regard themselves as such, it is not unlikely that Quichua, even Uro, and perhaps Chachapoyas elements[24] are mixed with them, and the statement of the actual owners of Titicaca, that its present Indian population is of comparatively modern origin and has settled on it from various places, should not be lost sight of.

While the women on the Island are usually of the low stature of other female Indians, there are among them some of middle height and more slender than, for instance, the Pueblo Indian women of New Mexico. Among the men there are some tall and well formed figures, with pleasant faces; many are of low stature and have sinister countenances. It is not unusual to meet an Indian with a remarkably low forehead and abnormally elongated skull. It is known that flattening of the forehead was carried on for at least half a century after the Spanish authorities had peremptorily forbidden the practice.[25]

The Indians, not only of this Island but of the Puna in general, are rather a hardy race. Nevertheless, diseases are as frequent among them as among ourselves. With us, care is taken to keep the upper extremities of the body cool and the feet especially warm. The Aymará Indian goes barefooted, trudges for hours, nay for whole days, in the ice-cold waters of the Lake up to the knees, while on the head he carries a pointed woolen cap with ear-laps drawn down, and a hat over that cap. Over his shirt or jacket he wears a poncho, more or less thick and more or less ragged and dirty, that reaches, when very long, as far as the knees. Thus only the upper part of the body is protected and the feet are bare. It is true that their feet gradually obtain a natural protection through the skin being thickened and hardened by constant exposure. Usually, the Indian wears

a sandal of leather.[26] Shoes or gaiters are worn only on festive occasions and are quite clumsy. The soles are about an inch in thickness, the heels three inches high, the uppers thick, often decorated with painted rivets and strings, and in the soles are ponderous nails with rounded heads. This festive foot-gear of the Aymará presents a striking but not graceful appearance.

The Aymará of Titicaca, and probably the whole tribe, suffer from colds, coughs and lung diseases.[27] Protracted exposure to the cold waters, such as a long voyage on the Lake during stormy weather in an unprotected balsa, produces sometimes an ailment which we successfully cured with nitrate of potash.[28] Skin diseases we found to be common on the Island. During our stay Mrs. Bandelier was besieged by men, women, and children begging for relief from what they erroneously call itch. All our supply of Peruvian balsam became exhausted, for, if applied together with sulphur, the treatment was invariably successful. This contagious disease began to show itself at the end of January, and by the middle of March over thirty of both sexes and all ages had been cured. It is certain that smallpox and measles occur, although we had no cases during our stay there. It is equally true that the former, especially, makes the same havoc among the Indians of Titicaca as among northern tribes. A number of less dangerous diseases have come under our observation and have usually yielded to the contents of our medicine chest, specially prepared at Lima. From consumption down to toothache, nearly the entire scale has been represented.[29] A very common ailment is indigestion, produced by a happy combination of coarse food and excess of alcoholic liquids. Beside exposure to cold and moisture, the mode of living is the chief cause of the ailments to which these people are subjected. Their houses are mostly of stone, the more or less shaped blocks being laid in common adobe mud.[30] They are usually of one room only, and I noticed the same distribution of the

home into three buildings or more, which I had previously noted among the Indians of central and southern Mexico.[31] A residence usually consists of at least three small rectangular and thatch-roofed buildings, each with its door and without any windows. One of these buildings is the kitchen, another is officially regarded as the dormitory, and there are one or more storehouses. This arrangement prevails in the Bolivian as well as in the Peruvian Puna. Around Juliaca and up the valley toward Ayaviri the numerous dwellings of the aborigines, each surrounded with several outhouses of almost the same size and shape, are scattered over the level expanse like so many tiny hamlets.[32]

Living in close, low, and usually very filthy abodes is not hygienic. Furniture is limited to the most primitive. Instead of a bedstead, there is a so-called "gallo," or bench, made of adobe. On this bench the ponchos of the inmates are spread, and there they sleep, sometimes with a straw mat under the poncho. Not unfrequently the dormitory is united with the cooking-place,[33] and then the family shares the room with numerous guinea-pigs, domestic fowl, or dogs, and even with swine of tender age.[34]

In the kitchen of the hacienda buildings at Challa there dwelt the "Unya-siri," or Indian warden of the house, with his consort, a number of guinea-pigs, two white rabbits, and an occasional chicken. Chairs are not common, but still they are found and are invariably, as well as the tables, of the low kind so common ten years ago among the Pueblo Indians of New Mexico.[35]

In the house of our "compadre" at Kea-kollu, where we spent a number of "picturesque" days, a table had been built with two ponderous stone slabs supporting a heavy stone plate. Such a home is not without some attempts at decoration. The walls have niches, and these niches sometimes contain a carved image and a few modest flowers. A saucer containing fat stands before the object of worship, and a burning wick timidly protrudes from the vessel.

Crucifixes are not rare, although not generally displayed. Painted images we do not remember to have seen in Indian homes on the Island.[36] It lies so utterly "out of the world!"

The valuables of the Indian are stored, or hidden away rather, in the store-rooms, and it is more than indiscreet to attempt to enter one of these. Hence a store-room is only known to us from the outside, or as far as the casually opened door permitted, in which case one or more of the family would surely block the way as thoroughly as possible. Mistrust is one of the leading traits of Aymará character, a mistrust which is partly the consequence of frequent abuses committed by political and ecclesiastical authorities. It is also due in part to the possible concealment, in such places, of objects of ancient worship and especially of sorcery. I would say here that the Aymará Indian is as mistrustful of his own people as he is of a stranger.[37]

The kitchen furniture reduces itself to a hearth of clay, called "kere," provided with a firehole, and one or more holes on which to place cooking vessels. There are no chimneys or flues in Indian houses.[38] As the brushwood is often green, or the substitute of táquia[39] is used, the dingy place becomes filled with a pungent smoke injurious to the eyes. The cooking vessels are of clay mostly;[40] an iron kettle or pan is regarded as a first-class treasure and stolen from the unsophisticated stranger as often as possible. The pottery is not made on the Island but at various places of the Puna, as, for instance, at Ancoraymes, on the northern shore of the Lake; and it is bought either at the Copacavana fairs or on an occasional voyage by balsa to that village or to Achacache. It may be said that the kitchen and household furniture of the Islanders, and inhabitants of the Puna in general, display the same combination of ancient and modern as that of the sedentary Indians of the southwestern United States and of Mexico,[41] the preponderance being slightly in favor of modern implements. Ancient vessels are occasionally met with, but they are seldom well cared for. It is

chiefly the larger jars that are preserved for the storing of grain and for the preservation of chicha.[42]

The most important household utensil, from ancient times, is the grinding slab with its grinder, both of stone, called in common parlance, and in Peru and Bolivia, the *batán*. Father Cobo says of this indispensable utensil: "For grinding their corn and bread they have in their houses smooth and broad slabs on which they pour out a small quantity only, and when that is ground, as much again. They grind it by placing on this slab a stone made in the shape of a half-moon, about two palms in length and one in width, not round, but somewhat elongated, with three or four inches of edge. They take hold of the horns with their hands and, lowering and lifting alternately the arms, move it edgewise from one side to the other over the maize, and by means of this labor and difficulty grind it, as well as anything else, although now most of them use our mills. This instrument we have called batán . . . but the Indians call it 'maray,' naming the lower stone 'callacha' and the upper 'tanay.' "[43]

The batán, whether ancient or modern, has nothing of the elaborateness of the "metate" used in Mexico and adjacent countries. It is simply a ponderous slab, unadorned and seldom even roughly shaped. Any suitable flat rock is selected for the purpose, but by preference an ancient batán is taken from some neighboring ruin. The crusher is usually a small oval boulder, picked up among the drift. Whereas the metate is worked on the incline, the batán is used in a horizontal position and indiscriminately for grinding red pepper, maize, dried meat, and quinua, or coffee when the latter can be procured. Mortars, ancient as well as modern (the latter manufactured at Viacha out of white stone), some with pestles and others with simply a rounded pebble, are frequently met with, and are used for grinding herbs and other condiments.[44]

An Indian kitchen containing the hearth, several "ga-

los," pots and pans, brushwood or táquia, and the batán, and occupied by a number of human beings, a colony of guinea-pigs, a dog or two, and the like, is one of the most crowded places on the globe.

Indian architecture in the Sierra, hence on the Island also, displays a marked tendency to exclusion of fresh air. The doors are not only low but even the sill is raised. Windows there are none,[45] hence light is excluded as well as air, unless the door be open. I must say, however, that the same is the case in most of the hacienda buildings on the Puna. The rooms are much more spacious than those in Indian abodes and the ceilings higher, but the windows have no panes; they are closed with rude shutters, and he who must work during the day in these apartments has to open the door and sit in the humid cold, muffled in vicuña blankets and overshoes (if he has any), in order to be able to write or draw.

The constant cold prevailing in these regions[46] is the main reason for excluding air, from the houses of the aborigines as well as from those of the better classes. Against this chilly air there is no way of protection, since there is no timber, hence no clean combustible, in the land. Both the Indian and the white are driven out of the house into sunshine, if there is any, and as long as it lasts. Should it be a rainy day, or at night, crowding is the only way for the Indian to obtain warmth, and if to that crowding the additional heat of a close kitchen can be added, life is rendered at least supportable. Leaving the door open, to let out the smoke or from force of habit, the Indian family agglomerates, either in the dark or by the dim light of a rare tallow dip until one after the other falls asleep. Usually the door of the dormitory is closed at night but rarely locked, although the doors of store-rooms are fastened.[47] Then everybody slumbers, men, women, girls and children, on "gallos," on ponchos, covered or uncovered, but never undressed. The Indian sleeps to-day very much as Cobo de-

PART VII

Imprimé par ordre du Chancelier-Président du Conseil : signé Chauffrid

Vu et approuvé : Le Président du Conseil-Chancelier : signé Cobenzl

PLATE XVI

Indian dancers: Chirihuanos and Chunchu-Sicuri at Copacavana



scribes it from early times: "Everywhere they sleep in the same clothes in which they go about in the daytime, except that the males take off the *Yacolla* and the women the *Lliclla;* and when they rise in the morning all the dressing they have to do is to shake and arrange their hair . . . "[48] The dress of to-day still preserves some primitive features with the addition of breeches and sometimes a jacket as well as a shirt for the men, and of a chemise and skirts for the women. The ancient costumes are described as follows: Cieza de Leon mentions the pointed caps of the men, called by him "chucos,"[49] whereas "lluchu" is the name now given to them on the Island and on the Peninsula of Copacavana as well as at La Paz. Cobo, who gives the most detailed description, but who wrote nearly a century after Cieza, says of the costume: "Their dress was simple and limited itself to only two pieces, also plain and without lining or folds (plaiting); the men wear below, in place of breeches or underwear, a scarf a little wider than the hand and thin, and so tied around the loins as to give an appearance of decency . . . this they call *guara,* and only use it after they are fourteen and fifteen years of age. Over the *guaras* they put a vestment without sleeves or collar, which they call *uncu,* and we call it undershirt, as it has the cut of our shirts; and each one is woven separate, since they do not, as we do, weave large pieces and then cut off from these for their garments. The texture is like a piece of thick, coarse stuff, its width is three and a half palms, and its length two ells. The opening for the head and neck is left so that there be no need of cutting it open, and, once taken from the loom, all that is required is to fold it and sew the sides with the same thread with which it was woven, just as one sews a bag, leaving in the upper part of each side opening enough to stick through the arms. This garb commonly reaches as low as the knee or three or four fingers (inches) above it.

"The cape is less intricate. They make it of two pieces,

with a seam in the middle, two and a quarter ells long, and one and three quarter ells broad. It has four corners or ends like a mantle or blanket, and for this reason we call it mantle, but the name which the Indian gives it is *yacolla.* They throw this over the shoulders, and when they dance, work, or do anything in which it might be an obstacle, they tie it with two ends over the left shoulder, leaving the right arm free. Beneath this mantle and above the underwear, they carry a bag or wallet hanging from the neck, named *chuspa,* one palm in length, more or less, and proportionately wide. This hangs down to the girdle below the right arm, and the strap to which it is hung passes over the left shoulder. This bag replaces to them our pockets. This is the common and usual costume of the males, arms and legs being bare, and this costume they make of wool in the mountains and of cotton in the hot lands."[50]

Of the female dress the same author speaks as follows: "It consists of two mantles: one of these they wear like a tunic without sleeves, as wide above as below, and covering them from the neck to the feet. There is no slit in it for putting through the head, and they wrap themselves up in it in the following manner: they wrap the body in it from under the arms downwards, and pulling up the edges over the shoulders, they join and fasten them with their pins. From the girdle down they tie and cinch the body with a scarf, broad, thick and handsome, called *chumpi.* This tunic or wrapper is called *anacu;* it leaves the arms free and naked and it remains open on one side so that, although the edges overlap a little, when they walk they flutter and open from the *chumpi* or scarf down, showing part of the leg and thigh. . . . The other mantle is called *lliclla;* this is thrown over the shoulders and, gathering the edges over the breast, they fasten them by means of a pin. These are their mantles or mantillas, which come down as far as half the limb, and they take them off when they work or when they are at home.

"Their pins with which they fasten the dresses are called *tupus,* and they are very queer and as long as a third of an ell and less, and the smallest of half a span and as thick as small bones. At the top they have a thin and round plate of the same metal, as large as a *reál* of eight (half a quarter or twelve and a half cents), more or less according to the size of the *tupu,* with the edges so thin and so sharp, that they cut many things with them. Most of these *tupus* or *topos* have many trinkets of gold and silver dangling from the heads. In these pins they place their greatest pride. Anciently they were made of gold, of silver and copper; to-day the most of them are of silver with some carvings and paintings on the heads, made with special curiosity.

"To adorn their heads consists in carrying the hair very long, washed and combed; some wear it loose and others plaited. They tie it with a ribbon, more or less as wide as a finger, of many colors and striking, which they call *vincha,* that crosses the forehead. On the head they put a piece of very fine *cumbi,* called *pampacona,* and this piece of cloth they do not wear its full width, but folded, so as to be only one sixth of an ell wide. One edge comes down over the forehead and the other, twisting it around the head so as to leave the hair free on the sides, falls down over the back of the neck.

"On the chest, from one shoulder to the other, they used to wear necklaces of certain beads called *chaquiras,* which were made of bones and sea shells of various colors. They neither wore ear-pendants nor perforated their ear-laps."[51]

Of the ancient costumes of the males, the pointed cap, poncho and breech-clout have remained. The pins and needles are also used.[52] The men have adopted, besides shirt and jacket, a wide kind of breeches, open behind from the knee down—the so-called *calzòn,*[53] known in Peru also as characteristic of the Aymará dress. A bright colored scarf, sometimes with striking designs, fastens this species of breeches about the waist, and the trousers are turned in-

side out when they are at work or in a specially bellicose mood. Scanty protection of the lower extremities, careless and unclean dress, and the pointed cap with the small, narrow-brimmed and round-topped felt hat, are, for the men, the essential components of an every-day Aymará costume on the Islands as well as along the shores of the Lake and on the Puna.

This costume is not very hygienic, in the climate in which it is worn. The houses are certainly not hygienic, nor is the manner of living. Custom and habit keep the Indian in the old road he still travels; although improvements have been made since the conquest, not only in dress but chiefly in household utensils and in implements. Thus the houses have doors, often of rawhide only, but still doors made to close and with wooden hinges, some also with hinges of iron. Lumber being an unknown quantity in the Puna, the Indian seizes upon every empty box in which the alcohol which furnishes him with most of his spiritual nourishment is transported, and with the aid of the few iron tools he has either bought or stolen, and a stone as hammer, he manufactures a door. Of the same material he occasionally makes a low table and perhaps an equally low stool with high square back, called by courtesy a chair.

All these are advances; and for their scantiness we must not blame too severely the Spanish colonist nor the former colonial government. I cannot sufficiently insist upon the extraordinary situation of the Spanish colonies. Importation was difficult, and transportation still more, to the interior of as secluded a region as Bolivia and the environs of its great Lake. Hence advances could be made but very, very slowly. If the Creole met with great obstacles, how much greater were they for the Indian who, besides, looked upon every innovation, every unknown and uncomprehended implement or source of comfort, with suspicion and superstitious aversion.

During primitive times, the Aymará Indians needed no

other instrument in order to manufacture garments and dresses, or to mend them, than a needle which they called "ciracuna," made of a spine (thorn) as long as half a "geme" (five and a half inches), as thick as one of our darning needles, perforated at one end and very pointed.[54] Copper and bronze needles ("yauri") were used also.[55] To-day they have, on the Island and elsewhere, sewing needles, pack needles, metallic pins, and, at Sampaya on the main-land, as well as at Copacavana, the sewing machine. The maul of stone used for breaking clods of the often very hard soil is still in use; but the "chonta," a first cousin to the Mexican "coa,"[56] with a heavy blade of steel, has long ago supplanted the hoe of stone, copper or bronze. The wooden plough, drawn by treacherous bulls (not by cows), is in general use. Knives, forks, spoons, and ladles are of metal in many Indian abodes. Iron axes and hatchets, iron shovels, and occasionally planes, saws, bits and augers, are found in possession of the Indians and they know how to use them. Still the aborigine yet grasps a stone in preference to a hammer, and he *ties* in preference to *nailing*.[57] He steals modern tools as diligently as he can, and no nail is safe from him, no end of rope or leather strap, even if they belong to a parcel or to a saddle, and if the removal endangers the safety of parcel or rider. But after he acquires such civilized implements and auxiliaries he does not take any care of them. The owners of Challa have repeatedly given tools to their Indians. The latter used them rather deftly, but after a year or so the saw was blunt and rusty, and the hatchet had lain in the mud so long that when a neighbor's offspring dug it out of the mire it became transformed into a harmless toy. Then they will beg or steal from a stranger's scanty supply of tools, to neglect these in turn, as soon as they have no immediate use for them.[58]

This carelessness is exhibited toward everything. The Indian puts on a new shirt and wears it day and night until it is a disgusting rag; then he tries to get another one.

Every article of clothing he serves in the same way. He likes animals, but does not give them any care. With very few exceptions, perhaps not a single one, the Indian houses are dilapidated. Sweeping with a very unhandy wisp of ichhu-grass is done mostly on the day previous to a feast, that is, only a few times each year. The accumulation of rubbish, it seems, propagates heat. Personal cleanliness is on the same level.[59]

In addition to the improvements already enumerated, I have to mention, as an advance made since the Spanish occupation in articles of household use and furniture, the so-called gallo or sleeping platform of adobe. In olden times the family slept on the floor.[60] The tile roof, not rare on the Island, is another improvement.

The Indians on the Island are not serfs. It would be more appropriate to call them "renters." In case of a sale they are not obliged to remain on the land. Those of the men who have lands in charge for cultivation cannot hire themselves out to others without permission of the proprietor; such as have no lands in charge may work for others, and it is not rare to find young men and boys, from the Island, at La Paz as servants or hired hands. The Indians have no real estate of their own, but occupy sites where their houses stand, and work little plots and fields for which they pay no direct rental. The compensation given the owners consists in:

(1) Cultivation of certain arable lands exclusively for the benefit of the owners, or, as it is called, for the "hacienda."

(2) Personal attendance, without compensation, at the houses of the owner, either when they dwell on the Island or at Puno, La Paz, or elsewhere. The men while performing such a service are called, "pongo"; the women, "mit'-áni."[61]

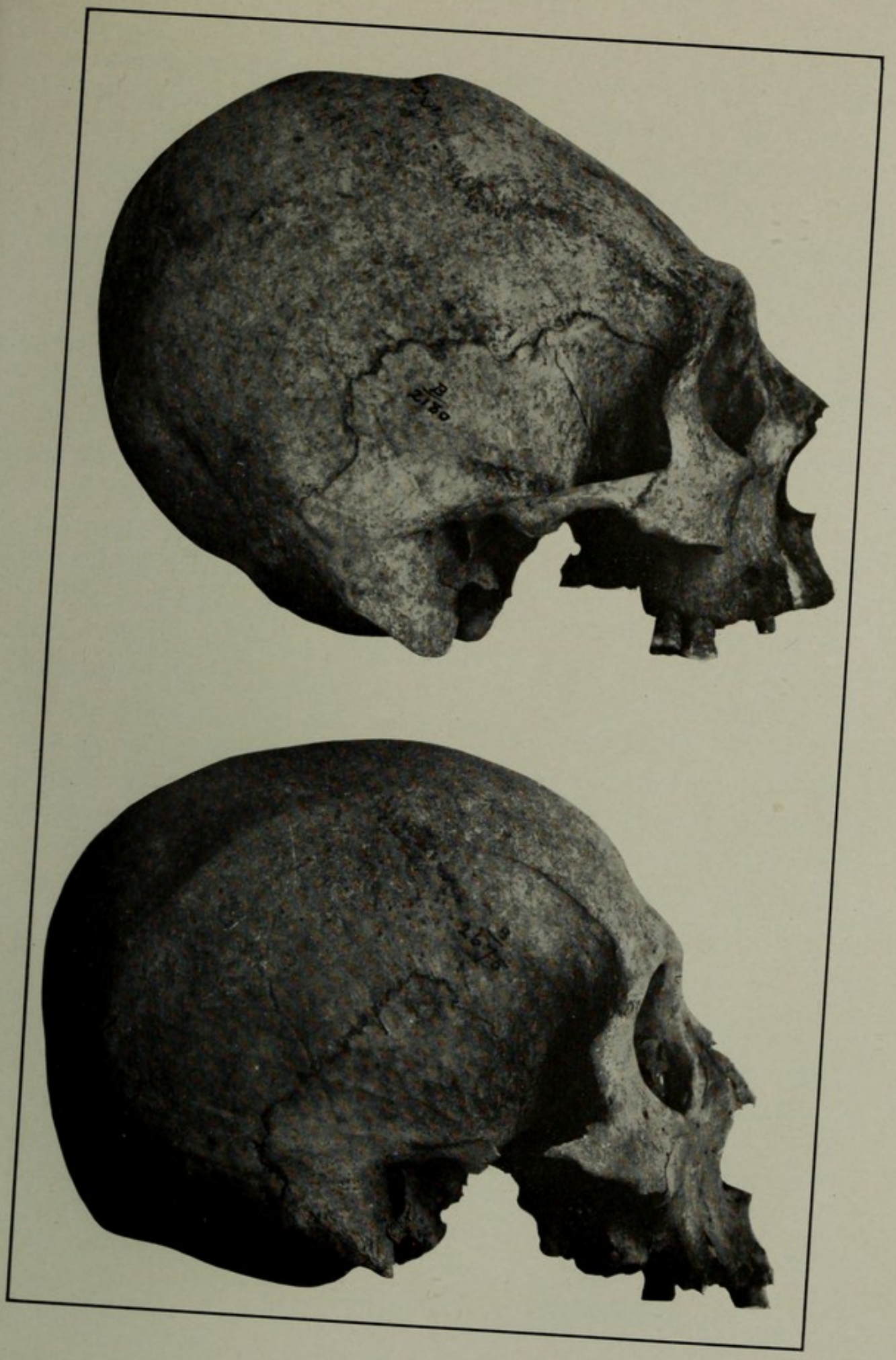
(3) Other special services, such as selling of the produce ("Aljiri") at Copacavana, guarding the house ("unya-siri"), herding of sheep and cheese-making. These services

PLATE XVII

Male and female Aymará skulls from Titicaca Island. The male skull artificially flattened

PLATE XVII

Male and female Aymará skulls from Titicaca Island. The male skull artificially flattened



are not entirely gratuitous, but compensated to a certain extent in products, that is, in sheep, cheese, milk, and the like. Money is neither received nor paid except when some of the products of the hacienda are sold, in which case the proceeds are received by the ilacata who keeps the accounts for the owners and settles with them and their "mayordomo," or overseer, who is the agent of the proprietors on the Island, although in the case of Challa he remains most of the time at Copacavana. Yumani has no mayordomo, as one of the owners resides there during fully one half of the year. The Indians are also obliged to transport the crops or products belonging to the hacienda to where the owners reside, or to Copacavana, which is the nearest market.

Of these four kinds of servitude only one, that of pongo or mit'-áni, may become vexatious. The pongos alternate every fortnight. Every fortnight a new set goes from the Island either to Puno, or to Copacavana if one of the family resides there, or to La Paz, or Sapahaqui, to attend at the houses of their landlords. This may become annoying at times, since it may fall upon one whose duties would lie nearer to home. But on the whole the proprietors of Titicaca treat their renters with a consideration akin to sacrifice of their own interests. This is especially the case in the working of the lands of the haciendas and in the gathering of crops. We had ample opportunity to convince ourselves of how much the Indians abuse the negligence of the owners, or rather their careless good nature; how little they did for the lands of the hacienda, and how the crops raised on them were stolen under the very eyes of the overseer. As for transportation of products from the Island, it is usually done by Indians who are called to Puno or other places of residence of the owners, hence it is not an extra duty, properly speaking.

According to Bolivian and Peruvian laws the Indian is, at least in theory, a citizen.[62] Hence he might vote. Such an exercise of the "rights of a free and enlightened citizen"

we have not had the pleasure of witnessing; but from descriptions it would be about as imposing an affair as voting in many parts of the interior of Mexico, where the Indian receives for his patriotic action a compensation that inevitably culminates in alcohol. The Indians from Titicaca would have to vote at Copacavana; but whether they exercise this right or not, and under what pressure, we have not yet been able to ascertain.

Communal tenure of lands was abolished in Bolivia, but the laws remained so far a dead letter.[63] In the case of the Island, it is private property, and the Indians are only renters; there is no communal tenure, though some features of it remain. Thus every year in autumn (southern hemisphere) a distribution of plots for cultivation is made. On Titicaca, the ilacata proceeded to make this distribution, on the ninth of March, 1895, among the Indians pertaining to the hacienda of Challa. Every one who has a family, or requires land, is allotted a tract of tillable soil proportionate to his wants. This tract he cultivates for one year only. Then it is left to rest for a term of four years, while he receives in exchange a new plot that has been recuperating about that length of time. The rule is not the same in all localities. There are districts or valleys where lands rest three, seven or ten years. It results from this that, while the surface of the Island (wherever rocks do not protrude) appears to have been "anciently cultivated," that cultivation has been far from simultaneous. Only a small proportion was tilled at any given time, the other portions lying idle to recuperate. This system of rotation is a very ancient one, and there is no doubt it was general all over the Sierra long before the Cuzco Indians overpowered the mountain tribes.[64] The lands on the Island may be classified as follows, starting from the basis that the entire real estate is vested in owners of originally Spanish extraction:

(1) Vacant expanses and pasturage,[65] the latter used by

the flocks of the hacienda, but the animals of the Indians obtaining their share of them with the knowledge and consent of the owners.

(2) Lands cultivated, for the exclusive benefit of the proprietors, by the Indians in common and without compensation.

(3) Individual plots distributed among the Indians annually and improved by them for their own benefit without payment of rent.

(4) The sites of the homes of the Indians which they occupy, without rent, as long as they please, or as long as they have no reason for abandoning their dwellings. Should they make a change, they can move to another site without being molested or compelled to ask for permission, as long as they do not inconvenience a neighbor or impinge on cultivated expanses or pasturages.

Thus the Indian has on the Island no real estate of his own, but he may exchange the plot annually allotted to him for cultivation for that of another Indian.[66]

Political jurisdiction is vested in the Corregidor of Copacavana; and the courts of Bolivia rule in matters of serious crimes. The curacy of Copacavana is the ecclesiastical authority; but the Indians still maintain, as everywhere on the Puna and in the Sierra, an organization of their own, one handed down to them from pre-colonial times, and which is based upon the clan as a unit. The clan in Quichua as well as in Aymará, in Peru as well as in Bolivia, bears the name of "ayllu." It is the well-known consanguine cluster, all the members of which acknowledge an official and traditional relationship, governing themselves independently of other clans, while the tribe is but a shell, protecting and holding together a number of clans through common consent.[67]

The rapid but irregular expansion of the sway of the Inca tribe of Cuzco did not modify these primitive organizations wherever conquered inhabitants were suffered to remain.

The ayllus remained as before, as well as two larger groups, each of which embraced several clans. These groups existed at Cuzco as geographical divisions, called, respectively, Upper and Lower Cuzco—"Hanan" and "Hurin-Cuzco."[68] Under the names of "Aran-Saya" and "Ma-Saya," analogous divisions are met with among the Aymará everywhere, and were found among them, together with the ayllu, by the Spaniards. At the present day the village of Tiahuanaco is divided into Aran-saya and Ma-saya, the former embracing what lies north, the latter what lies south, of the central square. In the older church books of Tiahuanaco the two "sayas" are noticed *occasionally*, the ayllu *always*.[69] At present the ayllus are much scattered, not in consequence of depopulation, but of wider dispersion through intercourse. A number of Indian families settling in another village became there an ayllu named after the place they came from, a custom also observed in former times;[70] thus there is an "Ayllu Tiahuanaco" at Coni, at the foot of Illimani. The Indians of Titicaca, at least those of Challa, belong (according to their own statement) to the cluster of Aransaya of Copacavana. They are divided into two localized clans: the ayllu of Challa and the ayllu of Kea. About the organization of the Indians of Yumani I could not ascertain anything beyond that they have their own officers. They were even more reticent than the Indians of Challa. Agglomeration on haciendas has been a disturbing factor in original grouping and government. To-day the owners of haciendas believe that *they* appoint the Indian functionaries without consulting the wishes of their Indians. These officers are: An ilacata, an alcalde, and at least two campos. The ilacata represents the administrative power. He distributes the lands for cultivation. He receives the products of tracts cultivated for the benefit of the owners and oversees certain labors done in common. The alcalde is the executive officer. All cases of strife, conflict, acts of violence come under his jurisdiction. He also heads the men in

case of warfare. So the former corresponds to the governor, the latter to the war-captain, of the New Mexico pueblos. On the Island these two principal officers are accepted rather than appointed by the proprietor on or about the first of January of each year;[71] also the campos, who are subalterns and assistants, watching the fields and the manner in which they are attended, the housing of the crops, their transport, the dispatching of pongos, and the like. All these officers have their staffs of office, with silver heads if possible, but no distinctive costume.

I have said that the owners *accept* the officers proposed. The natives of Challa told me emphatically that there existed a council of old men, and that this council *proposed* the ilacata, alcalde and campos to be appointed each year. The existence of such a body was denied by the owners. Probably both sides were right, each from their own standpoint. A council certainly exists, but it does not propose the men of its choice *directly;* it elects them! We had proof of this while on the Island, in the fact that the Indians, among themselves, were quietly speaking of somebody as next ilacata, whereas the owner himself had not yet thought of any one. In cases of great importance a public meeting may be called, at which even women have vote and voice.

The term ilacata is an Aymará word, whereas alcalde is Spanish. We endeavored to find out how the alcalde was called in Aymará, but without result.[72] In the documents concerning the great Indian uprising of 1780 and following years, of which José Gabriel Condorcanqui, or Tupac Amaru, was a conspicuous figure in the beginning, both the Indian alcaldes and the ilacatas are mentioned.[73] Among northern Peruvian Indians, the *gobernadores* seem to represent the Bolivian ilacata. The alcalde was and is the police-magistrate of his tribe, or *comunidad,*[74] hence he seems to be the counterpart of the *capitan á guerra* of the pueblos of New Mexico and northern Mexico; whereas the campos

are *alguaziles* or constables, similar to the *tenientes* of northern village-Indians. That the alcalde is a leader in warfare was plainly shown on the 16th of March, 1895, when the Indians along the Peruvian shores had risen and were threatening Copacavana. It was the alcalde to whom the Corregidor of Copacavana gave orders to come to the relief with armed men, and similar orders were imparted to all the Indian alcaldes within the jurisdiction. The ilacatas remained quietly at home, and we were assured that they had nothing to do with the warlike preparations.

With the intermingling and shifting of clans, the changes wrought thereby and the formation of new ones, it is not easy now to detect *primitive* customs in regard to marriage, naming of children and interment. It seems certain, however, that marriage originally was *exogamous,* with descent in the *female* line.[75] On the Island, regular marriage through the Church is officially required, but the Indians do not follow the precept. Baptism is more rigidly observed, and one reason for this may be the greater cheapness of the ceremony. Marriages are, according to the character of the parish priest, often expensive. The complaint raised against the clergy on that score is unhappily too well justified. It is true that with the advent of the Franciscans at the convent of Copacavana, a laudable change has taken place; still the Indians have remained rather loose in their marital relations, and little punishment is meted out to the unfaithful husband or wife. As to chastity, the natives are like Indians everywhere else, and like the population of these countries in general.[76] Not a single marriage having been performed while we were on the Islands, we cannot give any details from personal knowledge. We, however, took part as god-father and god-mother in an Indian baptism, which was carried out strictly according to the rules of the Church. As presents, we had to give the mother (not to the father) chocolate, rice, sugar, two skirts—one for herself and another for the baby—and two chemises for the

PLATE XLIII

Key-Kolb Chico and part of globe of Key-Kolb, from Brass

PLATE XVIII

Kea-Kollu Chico and part of slope of Kea-Kollu, from Pucara



child. The father being the sheep herder of the Island, we were excused from adding fresh meat to the gifts, but made up for it in the number of chemises.

We diligently inquired about aboriginal personal names, but were invariably told there were none, many personal names in Aymará having turned into family names since the conquest.[77] That primitive ceremonies are yet secretly performed, both at marriage and at the birth of a child, is beyond all doubt, for we have seen too many evidences of the power sorcery and ancient ceremonials still exert over the Indian in every phase of life. But it is not possible, in a single year's contact, to gain the confidence of so reticent a tribe as the Aymará. In regard to burials we were more fortunate. In the first place, we witnessed at least a part of the burial of an adult at Challa; but saw only what can be seen, with slight modifications, among the New Mexico pueblos, in church. The body was wrapped in ponchos; but what transpired in the *churchyard* while the body was being interred, we were not allowed to witness. At Tiahuanaco, however, we were reliably informed that when a child dies, a vessel containing water, some food, and a small wisp or broom, are put into the grave with the body. The belief is that it takes the soul several days' travel to reach heaven, and that the broom is required for sweeping the road in order to reach the last resting place.[78] While on the Island we were assured that on the death of an Indian peculiar ceremonies are performed around the body, and that when that body has been removed from the house, ashes are strewn on the floor inside the door-sill, and the house is locked from the outside. After burial the people examine the floor carefully. This is done by "old men," and seldom do they fail to discover foot-prints of men, women and roosters. The former are looked upon as prognosticating further deaths in the family, and the latter as indicating the presence of evil spirits whom they call "*devils.*" It is interesting to compare these practices with those in use among

the pueblos as well as with ancient Peruvian customs mentioned by early chroniclers.[79]

So far as our observation goes, organization, marriage and other customs, on the Island, seem to be like those we saw and heard of at other places in Bolivia. There are local variations, but the main features are the same. In another work I shall record data obtained elsewhere in Bolivia, and that throw much more light on all these questions. For the present I confine myself to what we observed and learned on the Island and in its neighborhood.

If we resume the foregoing, we find (1) the same disposition of buildings constituting the Indian home as in central and southern Mexico; (2) a degree of development in art and industry about on a level with that of the New Mexico pueblos half a century ago;[80] (3) communal tenure of lands; (4) a system of clanship ante-dating Spanish occupation, with indications that the original *gentes* may have partly disappeared, whereas new clans have sprung up, taking their names mainly from localities; (5) officers, elective in the clan, but under ostensible control of the government, and of the landowners where the Indians live on large estates, as on the Island; these officers corresponding to the governor, war-captain, and assistants of the New Mexico village; (6) marriage customs, officially regulated by the Church. Here I should add that in the seventeenth century the ayllu may have already lost control of marital rules,[81] marriages becoming indiscriminately indogamous and exogamous. The distribution of estates depends upon the will of the parents, and there is not, as among the pueblos, as strict a division between what belongs to the mother and what pertains to the father; and yet it is asserted that the *wife* controls whatever is housed, or contained in the house! We noticed that we never obtained articles of the household, such as ancient pottery used in a kitchen, except with consent of the women. (7) Burial rites resembling those of the Mexican and New Mexico sedentary Indians at the present time.

The life of the Indian on the Island is seemingly monotonous. Agriculture is his chief occupation. He plants maize in October and harvests it in May. Barley is sown in January and February, and matures in May also. Potatoes, which are the important staple, are planted in August and September, so are the oca, and the quinua, but early potatoes are already harvested in January and February, whereas oca and quinua can only be gathered in May. This cycle of crops recurs with unvarying regularity year in and year out, and this is the narrow circle within which the leading occupations of the Islanders, and of the Indians in general, are kept alive. Personal service to the owners bears the same character of monotonous periodicity. But as these duties require absence from home, and at places where there is more to be seen and heard (as, for instance, La Paz and Puno), the Indian of Titicaca has become more wide-awake and crafty, more malicious, than many of the Indians of other localities of the Puna; his wits are sharper, and he is by no means the clumsy being as which he may appear at first glance. While at home, little sociability can be noticed. They hardly gather except on feast-days. Life is much the same as in a pueblo of New Mexico.

The young men associate more, and chiefly at night. Many of them, or of such as are married but still young, go on trading expeditions to Yungas, to the hot regions beyond the snowy Illimani.[82] They take with them mules and donkeys laden with products, mostly chuñu and oca, also barley, and trade them off for coca, coffee, and sweet tropical fruit. These they sell either at Copacavana or on the Island, keeping a respectable lot for themselves. Such trips furnish food for discussion at home. An occasional voyage to the eastern Bolivian shore, to buy pottery and peaches, the former at Ancoraymes, the latter from the vicinity of Sorata, is another source of talk outside of the every-day treadmill. Gossip is as rank and rife among them as in any civilized community, and as the Aymará Indian is naturally

of a quarrelsome and rancorous disposition, squabbles in words and deeds are not uncommon. For such dissensions there is always ample pretext. When crops are being gathered, stealing is diligently practiced. They are as dishonest towards each other as towards the owners of the Island, and we know of an instance of an old man, who had to sit up night after night in the bitterest cold and in the open field, to guard his potato crop.

During our stay we had occasion to heal a group of Indians, all of the cluster of Kea, who had ill-treated each other on the most futile pretexts. But the great occasion for displaying prowess is with their neighbors, the Indians of the hacienda of Yumani. The latter are as pugnacious as those of Challa and, although much less numerous, provoke hostilities now and then by trespassing upon their neighbors' lands. The results are regular engagements with slings and stones, women supplying the men with projectiles, which they carry in their skirts. A number are badly wounded and now and then some are killed, for the Indian is dangerously expert with the sling. Such engagements end invariably in the rout of the Yumani warriors, but still they are renewed annually. Among the Aymará, hostilities between villages are common occurrences, and a number of persons are killed every year in fights between pueblos or haciendas, or on festive occasions.

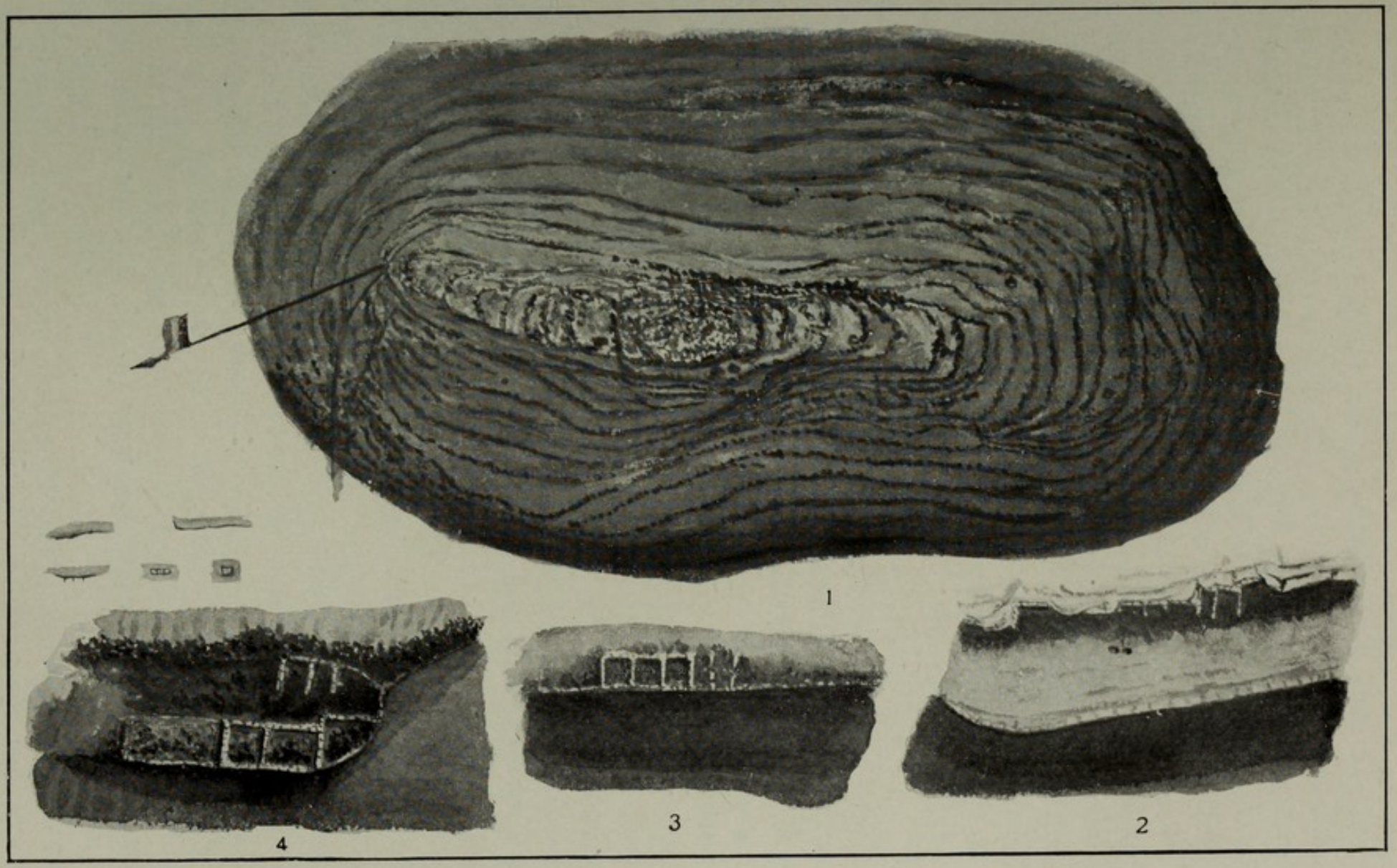
There is no school on the Island. An old man, who speaks Quichua as well as Aymará, teaches some of the children church hymns and Catechism in their own language. There is, as far as we could ascertain, one Indian, an old man, who is able to read and write. He does this lying on the floor, with his face down. His chirography is as original as his orthography is picturesque. Some of the Indians still preserve a kind of picture-writing, of which the annexed plate is a specimen. It is very difficult to obtain such pictographs. The Indians refuse even to exhibit them, and our tenders of money could not induce them to show us one of these curious

DAY SIX

1. Grandfather is eighty years old. He is 2 + 3 times as old as Kee-Kee. Kee-Kee is eight years old. How old is grandfather?

Plate XIX

1. Ground-plan of upper part of the height of Kea-Kollu. 2, 3, 4. Small houses built partly in the rock and partly against it, on the slopes of Kea-Kollu


1
2
3
4

pictographs. Their import is wholly religious; they are the Catechism, and church-prayers, pictorially represented. The one herewith presented belonged to Don Abel Mendoz of Puno, who sent it to the Geographical Society at Lima, and the copy is a photolithographic publication in that society's Bulletin.[83] Nobody has, as yet, been able to secure a literal translation, but it seems certain that they all relate to church ritual and are of post-Columbian origin.[84] For keeping their accounts with the hacienda, the Indians, on the Island as well as on the flanks of Illimani and elsewhere in the Sierra, still use a simple "quippu" or knotted string, also sticks with notches. We have seen the former in use at Llujo.[85]

Councils are held on matters of interest to the whole community, but where and when we could not ascertain. The affairs of the little commonwealths on the Island are discussed, and Indians are by no means indifferent to the outside world either. We noticed, during our stay among them while the civil war in Peru was going on, with what interest the Indians followed the course of events and how surprisingly well informed they were of military movements. When Chilian troops once trespassed on Bolivian territory and an invasion of Bolivia by them was feared, we obtained the news through our Indians at Challa and at once noticed that the occurrence was not by any means a matter of indifference to them. While the Indian uprising along the Peruvian border continued and negotiations were being carried on secretly between the insurgents and the Indians on the Peninsula of Copacavana, we now and then noticed fire-signals on the mainland both west and east, and it was not very reassuring to see a response flaring up on the summit of Kea-Kollu, the most convenient height for that purpose on the Island. Of sign-language we have, as yet, not seen any trace.

The condition of the Indian of the Puna appears to be poverty, nay, indigence. One who arrives on the great

central plateau and sees the Indian trundling along with bare feet or at best only with sandals, his body protected by a ragged poncho, following his donkey, as shaggy and uncouth as the master, or a llama; sees him devouring an unappetizing meal of chuñu and oca or roasted beans on the road, and sees the dingy, close, unclean home where the same kind of meal is taken, is led to deplore the fate of the aborigine.[86] And yet, the Indians own more wealth in money than many of the landholders in Bolivia, but this money they hide most anxiously. Frequent spoliations, especially since the separation of South America from Spain, is one reason why the Indian hides his wealth. He keeps it for certain festive occasions, on which he lavishly spends for display in dances and in orgies. He hoards also for another purpose. The Indian is slowly accumulating even firearms. On the Island, revolvers are by no means rare, neither is ammunition. The disconnected state of Indian society, their segregation, maintained also after the Spanish occupation, render an uprising very improbable; but should they ever be able to coalesce, the situation of Bolivia and of the Peruvian Sierra might become exceedingly critical.

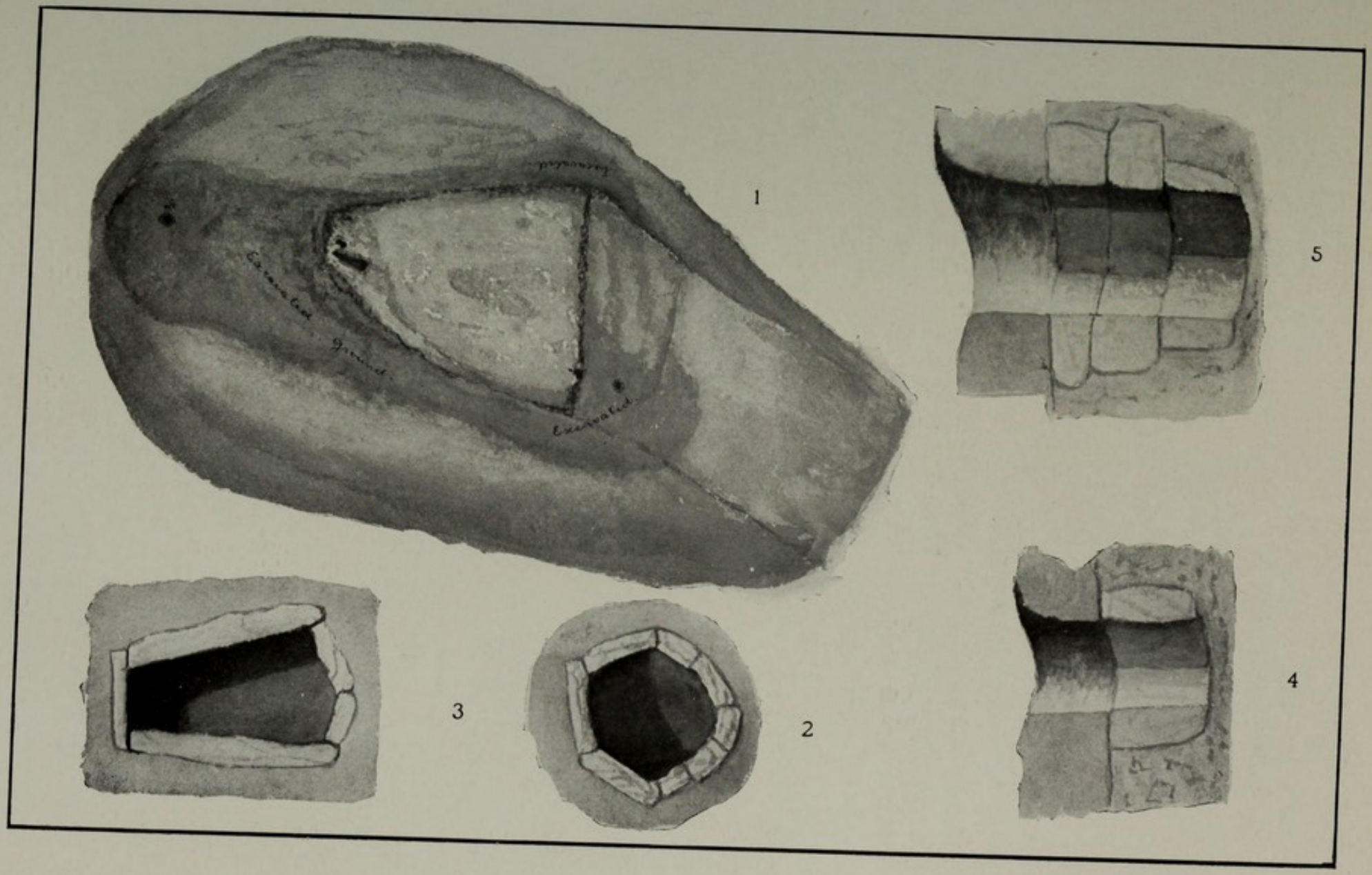
These are the main reasons why the Indian is so extremely anxious, as I have previously stated, to secure money. He uses it also as currency in his daily transactions. But there is a substance which he prizes even more, for certain reasons, than gold or silver, and this is *coca.* The dried leaves of *Erythroxilon Coca,* a product of the hot lands, are in many cases a greater incentive for the Indian to sell or to work than money.[87] Such has been our experience elsewhere. Coca is, to the older men among them, more indispensable than food or drink. I need not treat here of the qualities attributed to this plant, whether real or imaginary; but its leaves are, if not another currency, like shell-beads among northern Indians, often a much surer resource than silver or gold. The use of coca

PLATE XX

1. Crowned-head Red-Kolli Cuckoo. 2, 3. Plate of pencil eggs. 4, 5. Specimens of pencil eggs

PLATE XX

1. Ground-plan of Kea-Kollu Chico. 2, 3. Plans of burial cysts. 4, 5. Sections of burial cysts


1
5
3
2
4

is more common and more widely distributed among the male Indians than it was before the time of Pizarro, because the coca-plant was then cultivated to a limited extent only,[88] and the coca-producing regions have become more accessible. What has been published about plantations of coca on Titicaca Island for the benefit of the Incas is, at best, very doubtful.[89]

Both money and coca are indispensable to the Indians for *religious* purposes. As religious performances constitute an important part of their exterior life, and as their modes of thinking and the motives of their actions are dependent upon religious beliefs, I shall have to approach, though timidly, this important field as far as we were able to scrutinize it while on the Island of Titicaca and at Copacavana.

The Indian of Bolivia is a Catholic; at least nominally. He clings with utmost tenacity to his local church and certain sanctuaries, to the *images* they contain, and to every vestment and ornament. This attachment is manifested in the presence of the stranger and to any one who would endeavor to deride or profanate such objects. But, in case of a general uprising, I doubt very much (and in this I am confirmed by the opinion of reliable parish priests) whether the Indians would not return openly to a paganism which at heart they still profess and in secret actually practise. The great Indian rebellion of 1781 would have culminated in such a return.[90] The Aymará Indian, especially the younger generation and the sorcerers, are fetish-worshipers to-day, while they follow the rites of the church also. The latter is done sincerely, inasmuch as the Indian attributes to these rites and ceremonies power in cases when the ceremonials of his primitive creed are powerless; in other words: he sincerely believes Catholic rites and prayers to be "big medicine" for certain things, whereas he still clings to the other, and with still greater tenacity perhaps. I can but repeat, on this point, what I have already

published in regard to the tribes of the southwestern United States and of northern Mexico: "It is vain to deny that the southwestern Indian is not an idolater at heart, but it is equally preposterous to assume that he is not a sincere Catholic. Only he assigns to each belief a certain field of action, and has minutely circumscribed each one. He literally gives to God what, in his judgment, belongs to God, and to the devil what he thinks the devil is entitled to, for the Indian's own benefit. Woe unto him who touches his ancient idols, but thrice woe to him who derides his church or desecrates its ornaments."[91] Substituting "Aymará of Bolivia and Peru" for "southwestern Indian," and this statement stands as well for South America as for those parts of the northern hemisphere about which it was written.

The Indian, so far as we could observe, firmly believes in a spiritual being—spiritual in the sense that it is invisible to his eyes—which being is the Christian God, "Dios" or "Dius," and for which he has, at least on the Island, no other name.[92] The Indian professes great devotion to the patron saint of his chapel, and on the Island "Our Lady of the Light," the miraculous image of Copacavana, certainly stands higher in his estimation than the invisible "Dius." He attends church nearly every Sunday. The balsas that cross to Yampupata and recross, are filled with men, women and children on Saturdays, who go to pray at the sanctuary of "Nuestra Señora de Copacavana," and at the same time to sell their products at the Sunday fairs. They make vows, and discharge the obligations thereby incurred; they are anxious to have their children baptized; they sob and howl and sigh at church in a heartrending manner, and if they can steal a piece of the *hostia,* it will invariably be used for some medicinal, that is, witchcraft, purpose. At Tiahuanaco we were told that the Indians believe that when a child dies unbaptized it returns to the body of the mother, causing it to swell, a process which they call

"limbo," and to prevent this they use the *hostia.* They confess themselves regularly for some years, then again drop the "habit." They regard God and the saints usually as beneficent or rather as useful. Certain diseases, however, are attributed to an ill wind produced by God, and others to an ill wind due to some saint; hence the "pacha ayre" and the "santo ayre."[93] In some districts or villages, no image of a saint is tolerated in their houses, out of dread of that "ill wind" of the saints. Of retribution after death they have, as far as we could ascertain, no idea. Of the existence of evil spirits they are firmly convinced. On the Island, it is "Supay" who sweeps over the land in the hail-storm, and when their crops are destroyed by hail they say that Supay has preyed on them with his hordes of other fiends. How often were we, at night, startled by the lugubrious sound of the "Pu-tu-tu," a cow-horn, which the Indians blew on the approach of clouds threatening hail, in order to oblige Supay and his associates to take another course in their devastating career.[94] At Tiahuanaco and vicinity it is "Anchancho"[95] who plays the part of the spirits of evil, and when they fear his approach in a threatening storm, they also blow their pu-tu-tus and shout at the top of their voices: "Pass on, pass on!" On the Island, there seems to be greater indifference than on the mainland toward some church practices, as, for instance, they care very little for an official blessing of the crops. Mass, however, is *exacted* by them on the feast day of their patron saint. When the agents of the owners of Challa, through a very ill-timed measure, attempted to prevent the usual celebration on the twenty-fifth of July of 1895, our intervention alone prevented a serious outbreak. We noticed, however, that it was more the opportunity of celebrating the day with dances of old and immoderate drinking that would have been missed than the religious ceremony.

We could not detect, in the midst of the host of witchcraft

practices and reminiscences of ancient beliefs, any preference to a worship of either *sun* or *moon*. The definition of Indian fetishism given by Mr. Cushing applies also to the Aymará: "The A-shi-wi, or Zuñis, suppose the sun, moon, and stars, the sky, earth, and sea, in all their phenomena and elements, and all inanimate objects, as well as plants, animals, and men, to belong to one great system of all-conscious and interrelated life."[96] One thing struck us, namely, the belief that both sun and moon were *created* beings, and this is primitive belief, anterior to influences of a Christian origin.[97] What, however, the Aymará of the Island pays particular attention to are the "Achachilas," literally "grandfathers," spirits, dwelling at all conspicuous places, in all striking objects, and who are supposed to exert a constant influence upon man.[98] This belief in the "Achachilas" is nothing else but the fetishism so well characterized by Mr. Cushing, and which I have traced among every Indian tribe with which I came in contact.

Every conspicuous object in nature is believed, by the Aymará, to harbor its own spiritual nucleus or essence, that plays an active part in the life of its surroundings, man included. This Indian conception may be illustrated by examples that came under our observation. While we were at Challa, the Indians received orders to tear down some walls forming the southern side of a court, and to erect on the site a store-house of adobe. The first part of this work was performed without any ceremony, and this greatly incensed the warden or "unya-siri" who happens to be one of the leading medicine-men on the Island. He chided the workmen and insisted that, in order to prevent disaster to the new edifice, they should, before proceeding to demolish the walls, have burnt incense in each of the four corners; should have prayed (begging forgiveness) in each corner, and finally, in the centre, prostrating themselves, kissing the earth and looking up to the sky, with both hands raised in

PLATE XXI

Pottery from graves of Ayuará (Chulpa) origin in various parts of the Island. The two vases at the bottom may have been brought from the mainland, possibly from Tiahuanaco

PLATE XXI

Pottery from graves of Aymará (Chullpa) origin in various parts of the Island. The two vases at the bottom may have been brought from the mainland, possibly from Tiahuanaco



prayer. On the following morning the foundations of the new structure were to be laid, and for that purpose they had, the night before, prepared as many tiny bundles as there were corners, and an extra one for the centre. Each bundle contained: The fetus of a llama,[99] the fetus of a pig, a piece of llama-tallow,[100] leaves of a plant not found on the Island and called by them "uira-ko-ua," and *coca* leaves. These bundles are prepared by men only, and at night, and the parties are chosen the evening before by the ilacata, which shows that this officer has certain religious functions also. When all the workmen had gathered on the site, the one who directed the work, the *maestro,* or architect (a plasterer from the Peninsula of Copacavana), spread before him a "llik'lla," or square piece of embroidered cloth, made like a poncho, but smaller. Every Indian took three coca leaves, arranging them in the shape of a trefoil, and deposited them on the llik'lla, while the master of ceremonies was pronouncing the following prayer: "Children, with all your heart, put coca into your mouths [each took a mouthful of coca-leaves]; we must give to the virgin earth, but not with two hearts; with one heart alone." After this ceremony they set to work. In the afternoon when they had again gathered they all took off their hats, and the director said: "Children, we shall ask of God (Dius-at) and of the Achachila and the grandmother,[101] that no evil may befall us."[102] Then they buried the bundles, in each of the four corners and in the centre, adding to them "aji" (red pepper), sugar, and salt. After this the master again spoke as follows: "Let all of you together take coca [they put coca into their mouths], throw coca on the ground [upon this they began to scatter coca into the trench made for the foundation], give them their dues!" The old men responding: "Dius pagarat-kat, uauanaka!"—May God reward you for it, children! After this they threw earth on the bundles. In this ceremony the Christian God and the fetishes are both appealed to. The articles offered in sacrifice represent

olden as well as modern times. Thus the llama-fetus and llama-tallow, the "uira-koua" and the coca are ancient, the others are modern.

The above ceremony of invocation and sacrifice is called "tincat" (giving the "tinca"), and it is practised on almost every similar occasion. While we were excavating at Kasapata, a new house was erected near this site, and we were told that the same sacrifice had been performed before work was begun. On the first day, all the men who took part in that "house-raising" wore wreaths of flowers around their hats and caps. At Tiahuanaco we were assured that house-building is a communal undertaking of the ayllu, or of those of its members that are related to the family for which the building is erected, and that the only compensation for such assistance is chicha and food. The custom is undoubtedly primitive.[103]

Another ceremony, which we only partly witnessed, however, took place on the Island during the days of Carnival, February 24th, 25th, and 26th of 1895, and it is annually repeated. Already on the 24th preparations were going on in the practice of the drum here and there. On the following day, the Indians of Challa with the alcalde at their head brandishing a Peruvian flag, and with his hat, as well as those of most of the other participants, wreathed with flowers, went in procession, to the sound of drum and flute, to the fields at "Kea," there to exchange, for about half an hour, throws of peaches with the people of that settlement, and offer to the *soil* the tinca above mentioned. They burned this offering, burying the ashes in the fields with appropriate invocations, and sprinkling the ground with alcohol and red wine. Afterward they dug out small quantities of whatever fruit had been raised, which was taken home to be kept until the following season. The idea is, to give to the earth (which also is "Achachila") a remuneration or compensation for its favors.[104] The most instructive examples of Achachila worship that we were allowed to witness were those performed previous to our excavations

for antiquities, and without which no such work is expected to be successful. We had to go through this ordeal at three different places—on Titicaca, on Koati, and at Cachilaya, near Chililaya, on the mainland. I shall limit myself to a description of the performances on Titicaca, as the others showed but slight variations.

At the laying of the corner-stone, the architect or superintendent officiated, but for the ceremony initiating excavations a *medicine-man,* or shaman, was required. At Challa we had the desired dignitary at the very house of the hacienda and in the person of its unya-siri, or warden, Manuel Mamani, whose portrait accompanies these pages. He informed me (my wife was at first excluded from the deliberations, though afterward she was permitted to see some of the preliminaries) that the articles needed for the conjuration were: *Coca, uira-koa,* llama-tallow, the two fetuses, a piece of the skin of the "titi," or wild-cat, grape-brandy, wine, and especially "mullu." For this ceremony the latter is a fetish of white alabaster representing a bull or cow, and resembling, both in color and in shape, certain well-known fetishes of New Mexico.[105] The fetus could not be procured, but the other substances were ready on the day appointed, and in the afternoon a walk was taken with the conjurer to two of the places where we intended to begin, Kasa-pata, and the pasturages of Ciria-Pata (g). There, Manuel Mamani squatted on the ground, took off his hat, and greeted the "Achachilas" as follows: "Good afternoon, Achachilas: *Kasapata Achachila, Llak'aylli Achachila, Chincana Achachila, Calvario Achachila, Santa Maria Achachila, Ciriapata Achachila!* We have greeted all of you whom a *viracocha* [the common designation for a white stranger] has sent me to greet; for him [on his account] I have come, as he cannot speak to thee. Forgive me for asking of thee a favor." Then he took coca, made two trefoils of coca-leaves and placed them into as many balls made of llama-tallow (untu), wine, uira-koua, a piece of cat's fur,

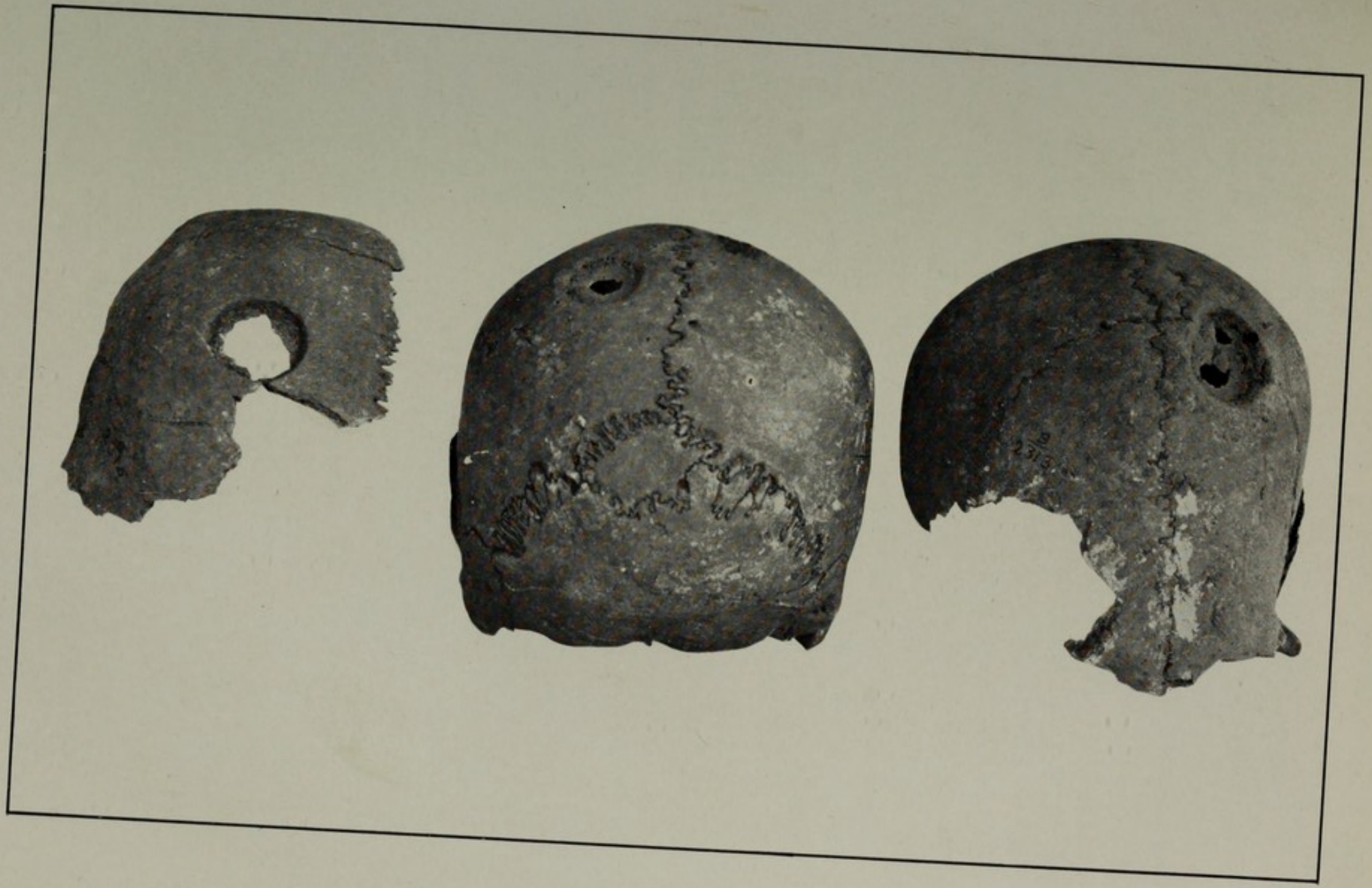
and mullu, rasping with his knife from the alabaster fetish. Then making two holes at some distance from each other, he placed one of the balls in each of them, covering the hole with a stone. This was an "official notice" to the Achachilas of the main ceremony that was to take place the night following. Ordinarily, this preliminary is performed the evening before, and the sorcerer then goes to dream about the most eligible spot. The Aymará believes in dreams as firmly as all other Indians; but in our case the dreaming part was deemed unnecessary, as we had already determined upon the locality. After nightfall, Manuel stealthily crept into our rooms. Squatting[106] by the side of a candle he formed twenty balls like those he had made in the afternoon, with the addition, however, of brandy. He also made two larger ones, in the centre of which he placed, in lieu of the usual trefoil, a bunch of coca leaves. With these twenty-two pellets, the remainder of a bottle of brandy, and a bottle of red wine, our procession of conjurers crawled up to Kasa-pata in the darkness of the night, over cliffs and slippery rocks, and with more than one tumble. The greatest care was taken to avoid dwellings, and a secluded spot selected for the operation. The medicine-man repeated the formula of the afternoon and sprinkled wine and afterward brandy in the direction of each of the five Achachilas named, saying: "All thy presents I have now brought." With this, he counted out the twenty balls one by one, each being counted as a *quintal,* or hundredweight,[107] and adding: "Thou hast to give me with all thy heart." Then a fire was built, and the twenty balls were placed on it. Manuel threw into the flames a substance which he refused to show us and which caused the fire to spit and to crackle. At this sound everybody had to run off a short distance while he exclaimed: "The Achachilas are eating!" After the fire had gone out he returned to the place and covered it with stones. Then he went with the two larger balls to another spot and dug a hole, saying: "The virgin earth is now invited, here is

Privat XXII

Druck von Kay-Koll & Co. in Chico

PLATE XXII

Trephined skulls from Kea-Kollu Chico



thy burial of treasure,"[108] and placed both balls into the hole. "The very things of the Inca thou hast to bring forth. Now, with thy permission we will take leave. Forgive me." With this the performance was at an end and we groped our way back, over the steep and wet rocks, without a single star on the dark firmament. By midnight we were home again, bruised and tired, and the next morning, the Indians, satisfied that we had the "Achachilas" in our favor, went to work, convinced that the yield would be abundant. Nevertheless at noon on the following day, while our laborers took a recess for lunch, another medicine-man among them poured out wine and alcohol in the direction of the five Achachilas, after each one of the laborers had taken a pinch of coca, and said: "Achachila, do not make me suffer much work, we are those who work under pay; to this viracocha thou hast to return what he paid to us, for this thou art beckoned [invited]." If an Indian is offered a glass of wine, or whenever he partakes of their favorite beverage, alcohol diluted to about sixteen or seventeen degrees, he first pours out a little, as libation. The well-known offering by the Peruvian and Bolivian Indians, at the "apachitas," is also to the spirits. Every pass, and the mountain peaks around it, are "Achachilas," and every Indian places a stone and some coca leaves in a corner or spot along the trail in order to influence the spirits in his behalf. The next one adds *his* votive offering, and thus heaps of pebbles and leaves gradually accumulate.[109] They have their counterparts in the "tapu" of the New Mexico Tehuas, the little stone heaps around many of the pueblos in general, and in the Apache reservation of Arizona. According to pueblo interpretation, each stone lying on twigs in one of these heaps signifies a prayer. The Quichuas and Aymarás claim it to be a sacrifice. A sacrifice is always accompanied by a wish, whether expressed in a formal prayer or not, hence the fundamental idea is the same in South America as in the southwest of North America.[110]

From what precedes it is clear that the number of Achachilas is immense. Every summit, every gorge, every spring, in short, every site more or less prominent is thought to be inhabited by such a spirit. Meteorological phenomena also are included, such as lightning, the rainbow and the clouds. One of their devices for rain-making consists in "calling the rain-clouds." It resembles the pueblo practice of invoking the "Shiuana" and beckoning to them to come. Near Tiahuanaco, there is a height whither the Indians repair whenever they need rain, to sacrifice coca and to call the clouds. The rainbow ("kurmi") is Achachila, and at Tiahuanaco they forbid children to gaze at it lest it might kill them.[111] In short, the Achachilas are the "Guacas" or "Huacas" of Peru; they are analogous to the "Shiuana," and "Kopish-tai" of the Queres, and to the "Ojua" of the Tehuas, in New Mexico.[112]

Whether the Indians have other fetishes besides the "Mullu" above referred to, I am unable to tell. All our endeavors to elicit information on that score were in vain. The queries were eluded, not answered.

Where the idea prevails that nature is occupied by a multitude of spiritual individualities more or less potent, it results that whatever man suffers, be it from disease or through accident, is attributed to evil *spiritual* agencies. In many instances there is a singular blending of ancient with Christian notions. Thus, at Tiahuanaco, we were informed that, when lightning strikes a house, it is abandoned for the day and night following, for they believe that "Santiago" (Saint James) has stumbled or made a mistake.[113] The doors are draped in black. The next day twelve boys, personifying the twelve apostles, are fed in the building. Once the meal over, these boys go home *without looking back;* if they turn around to look, lightning will strike one of them soon after. After their departure, the owner of the house and his wife return accompanied by a shaman, or medicine-man, who, after joining their hands, covers their heads

with a black poncho and utters a prayer to "Pachacamac" (I have my doubts about this word) in behalf of the future safety of the house. To this prayer the sorcerer replies in a changed tone of voice explaining the lightning-stroke as a mistake that shall never occur again. Huge stones are dreaded as swallowing people occasionally.[114] When the priest of Tiahuanaco once found it advisable to have such a stone removed, he obtained assistance only with the greatest difficulty, and after its removal the Indians sacrificed coca and alcohol to appease "Anchancho" and induce him not to take revenge upon them for the removal.

In the valuable essay on Zuñi fetishes already quoted, Mr. Cushing says: "In this system of life the starting point is man, the most finished yet the lowest organism, actually the lowest, because the most dependent and least mysterious. In just as far as an organism, actual or imaginary, resembles his, it is believed to be related to him, and correspondingly mortal. In just as far as it is mysterious is it considered removed from him, further advanced, powerful and immortal. It thus happens that the animals, because alike mortal and endowed with similar physical functions and organs, are considered more nearly related to man than are the gods; more nearly related to the gods than is man, because more mysterious, and characterized by specific instincts and powers which man does not of himself possess."[115]

The truth of this is also exemplified among the Aymará. They attribute to animals not only the gift of presage, but also the faculty of *intercession*. Innumerable are the beliefs in manifestations of evil omens. The owl, that unlucky bird, one of the most slandered in this world, must, of course, head the list, especially the large species or "urcu" (*Bubo magellanicus*). But the smaller *lechuza*[116] are also noted for the ominous significance of their cry. When Indians see an owl flying in the night they throw salt at it with the left hand. Domestic fowl also play a conspicuous part.

Whenever a hen crows like a rooster, or a rooster cackles like a hen, or when a rooster crows at the hour of evening prayers, it is a bad omen and the bird is forthwith killed. On the mainland, a little bird which they call "tiolas" is much dreaded, being charged with the disagreeable habit of taking away the "fat of the heart" while flying past a person, and thus causing his or her death. Another very unpopular bird is called "cochi-pachi," and its voice bodes no good.[117] Among quadrupeds, the skunk and the fox are, on the mainland, suspiciously watched, and if a fox crosses our path accidentally, we had better prepare for ill luck. Among domestic quadrupeds it is the guinea-pig or cuy, formerly, at least, much used in sacrifice and divining.[118] In case one of these lively creatures whines at night or chuckles, it is killed at once and its body thrown away, as it is a *conejo-brujo* (rabbit-witch) and will carry sickness into the family. The barking of dogs in a dark night is also an evil omen. The alcalde of Challa, a man not by any means gifted with an exalted imagination, and still less a coward, when returning from our room to his home one dark night, was terribly frightened by the sudden barking of the dog of the hacienda. He swore he would never visit us any more after sunset, as the dog had seen a ghost, and he thought to have noticed a dark figure near our door.

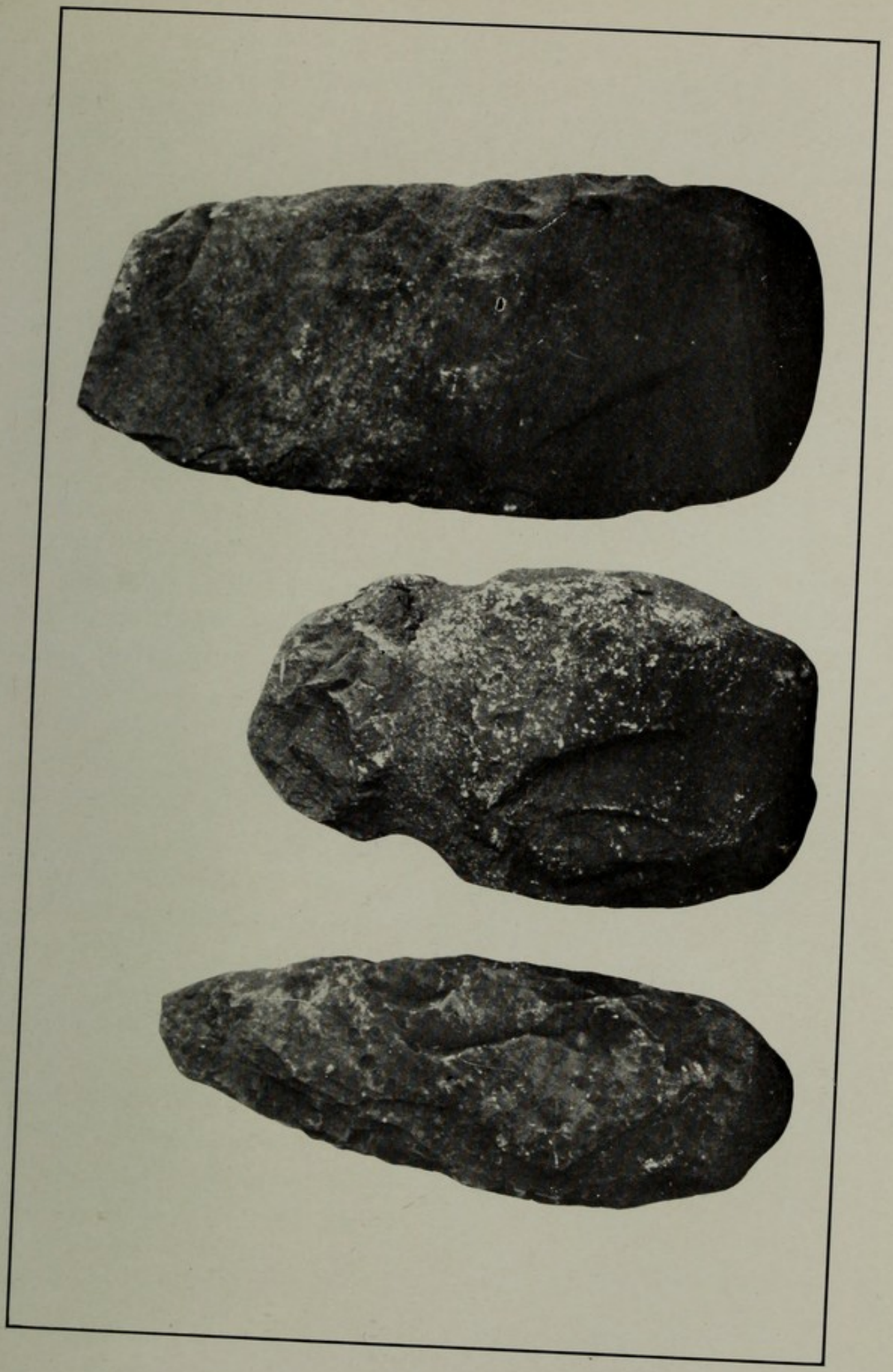
Belief in *fabulous* animals is also current. If the "marine monster" previously mentioned should not, in course of time, prove to be some large aquatic animal, we may classify it among the mythical beasts, although the belief in its existence is of rather recent origin. The fabulous animal most generally believed in, however, is the *carbuncle*. As everywhere else, the "carbuncle" is described as a cat, having on its forehead a blood-red stone which shines at night. On the Island it is confounded with the titi, and that name is also given to it.[119] We were told that the carbuncle dwelt in the snows of the high peak of Sajama, near Oruro, and impeded approach to the summit of that mountain.

PLATE XXIII

Axe-implements of stone from Tiboes Island

PLATE XXIII

Agricultural implements of stone from Titicaca Island



Spiders are used, by some sorcerers, for prognostics. From the movements of the legs of the insect, the diviner draws his inferences, in a similar manner as the Opata Indians of Sonora prognosticated from the motions of the cricket.[120]

We lack yet most of the information desirable in regard to the role of animals as *intercessors*. But we were positively informed that the group of dancers called "Chayll'-pa," and of which I shall hereafter speak, have among other duties that of *conjuring drouth*. They go to the summit of the height called Calvario (4), which is denuded of all vegetation, gather small stones and throw them into the Lake. But they also catch toads and throw them into the water, there to intercede for rain.[121] Among the objects of stone found on the Island, on the Peninsula of Copacavana, and chiefly on Koati, are frogs of stone, and we diligently inquired of the Indians whether these had been perhaps rain-intercessors after the manner of those used by the pueblos to-day. We never received any other but an evasive reply.

Another indication of intercession by animals is found in the dance called chacu-ayllu, or chokela, danced by the Chayll'pa. In this dance the vicuña plays the same part as, in symbolic dances of the pueblo Indians, the eagle, the deer, and the mountain-sheep. The chacu-ayllu is an ancient ceremonial, the signification of which as a "hunter's-dance" is no longer understood.

The Chayll'pa, whenever they appear in full costume, wear the skin of a young vicuña, head included, hanging down their backs. The "Kena-Kena," another group of dancers, wear a sleeveless jacket made of the skin of a jaguar. Animal forms are also represented in the fetishes called "Mullu," so extensively peddled about the country by the curious guild of Indian medicine-men and shamans known as "Callahuaya."

The Callahuaya speak the Quichua language.[122] Their

home is the province of Muñecas, east of the Lake, which province is partly inhabited by Quichua-speaking aborigines.[123] On the Island they are sometimes called Chunchos, but they have nothing in common with these forest Indians except inasmuch as they pretend (and it is probably true) that some of their medicinal herbs are gathered in the *montaña,* or forests, where the wild tribes (often called Chunchos *collectively*) dwell and roam. The Callahuayas are great and intrepid traveling peddlers; they extend their journeyings to the eastern as well as to the western seacoast, and one is as likely to meet a Callahuaya in Buenos Ayres as to find him offering his wares at La Paz, Copacavana or on Titicaca Island. Their costume differs from that of the Aymará, in that they wear pantaloons and broad-brimmed hats. A poncho with more or less intricate patterns, and always dirty, falls down from the neck as far as the knee, over the usually dilapidated breeches. Two big bags, like saddle bags, and a wallet with coca and other ingredients, handsomely woven, but stiff with grease, complete the official costume of the wandering Callahuaya. We met them everywhere. Between Puno and Sillustani we saw these quaint figures walking single file, wending their way in silence from Indian village to Indian village, from isolated dwelling to isolated dwelling, everywhere tolerated and everywhere received with undemonstrative hospitality. A close study of the Callahuayas at their home is much needed, and would reveal a host of interesting details on aboriginal medicine and witchcraft. As yet we can only speak of these singular and enterprising peddlers from what we saw of them far from the district which they inhabit.[124]

Objects peddled by the Callahuayas are mostly herbs, but these are not all indigenous. We bought, from a Callahuaya who came to the Island and offered his wares at Challa, the following remedies: (1) Against *melancholy: "yerba de amante"*; (2) against *rheumatic* cold: *"uturuncu,"*[125] to

be rubbed in; (3) against headache: *"yerba de Castilla"* and *sternutative powder of hellebore.* Hence, of these four substances, at least one came from some druggist. That such was the case was further proven by the fact that the Indian wizard himself called the powder *rapé.*

There is no doubt that the Callahuaya had other medicines, more efficient and certainly indigenous, but these he was careful not to show us. He was very soon taken in charge by some of the Indians of Challa and remained several days on the Island, without showing himself any more about the hacienda buildings. But—and this seems to be the principal treasure in which the Callahuayas deal—he had for sale a number of fetishes made of white alabaster. This mineral is said to be abundant in the region of Charassani, where the Callahuayas are at home. We purchased such of them as he showed us, and they were all sent to the Museum. One represents a snail, others clenched fists, and these are said to create contentment and give wealth. They were all besmeared with llama-tallow, "untu," the same substance that is indispensable for incantations. Other accessories were gold and silver tinsel, and red and black beans. These fetishes are sold not only to the Indians (and perhaps less to these), but to mestizos, and even to whites occasionally, as faith in the cures and supernatural gifts of the Callahuayas is very common and deeply rooted in all classes of society, though seldom confessed.

We certainly saw only such fetishes as the Callahuaya deemed safe to exhibit, and not the most interesting ones. The latter are more particularly called Mullu, and are of ancient origin and use. The word is Quichua, but has been adopted into the Aymará language. A Mullu is usually an animal figure, like the one used by Manuel Mamani in the ceremonies preceding our excavations. It is "good" for a great many things, and the Callahuayas also sell, secretly, *human* figures. We sent to the Museum a small one, found on the surface of the slopes of Ticani (2), and of a whitish

stone apparently arenaceous. When I showed this figure to one of the wizards on the Island, his eyes sparkled, and he displayed intense desire to obtain it, saying: "If it were Callahuaya, then it would be worth a great deal!" This significant remark caused us to interrogate him cautiously, and thus we ascertained that fetishes in the form of men and of women are still in use. We further found out that, while the *white* fetishes served for *good* purposes, the Callahuayas had fetishes of *black* or at least dark-colored stone, which were used for *evil sorcery*. Here our inquiries came to an end, as Mamani denied any knowledge of "black art."

Accessory information, however, was obtained in another way. A friend of ours, the Franciscan Father Juan Mariscal, on one of his intrepid tours among the then rebellious Indians of the Peruvian boundary, saw a whole arsenal of implements for witchcraft, which he tried to secure for us, but the owner refused to give them up. Our friend could barely more than glance at them. He noticed, however, human figures and other strange objects of wood and stone, and also of rags, but was not permitted to examine them closely as soon as the party having them in charge understood the priest's intention. On the hacienda of Cusijata, a short distance from Copacavana, a number of objects for evil sorcery were found, previous to our coming to Bolivia. One of the chief means for mortally hurting anybody through witchcraft is, to make a human figure out of grains of Indian corn, and pierce it with thorns. In order to separate a loving couple, two such figures are tied together with hairs (not fur) of a cat, and buried, with a live toad alongside of them.[126]

It will be noticed, that not only is witchcraft (good and evil) extensively practised among the Indians of Aymará stock, hence on the Island also, but that they have *symbolic* figures, of which, however, we saw very few. But any one visiting Bolivia can, if he looks at the roofs of Indian

houses, at once descry a primitive symbol placed there alongside of the crosses with which nearly every gable of an Indian home is decorated. This symbol is a *snake,* and represents *lightning.* We had noticed this figure without seeing in it more than an accidental ornament until at Challa the chapel of the hacienda was being repaired. Its low tower had been finished; the cross alone was lacking. To humor the Indians, we promised to obtain a cross at Copacavana, of iron or brass, and donate it to them. As our trip to Copacavana became delayed, our servant (a Bolivian mestizo, who afterward gave us untold trouble through his intemperance and dishonesty) volunteered to make such a cross, with the aid of our carpenter's tools, out of an old box unserviceable for packing, and an aged tin can. He kept his promise and, on completing the ornament, stated that he would have to add two figures of *snakes,* to be fastened diagonally over the cross. Upon asking the wherefore of this, we were told, by him as well as by the Indians, that the snake was a protection against lightning, and its symbolic picture. Figure (p. 108) shows the symbol in the text.

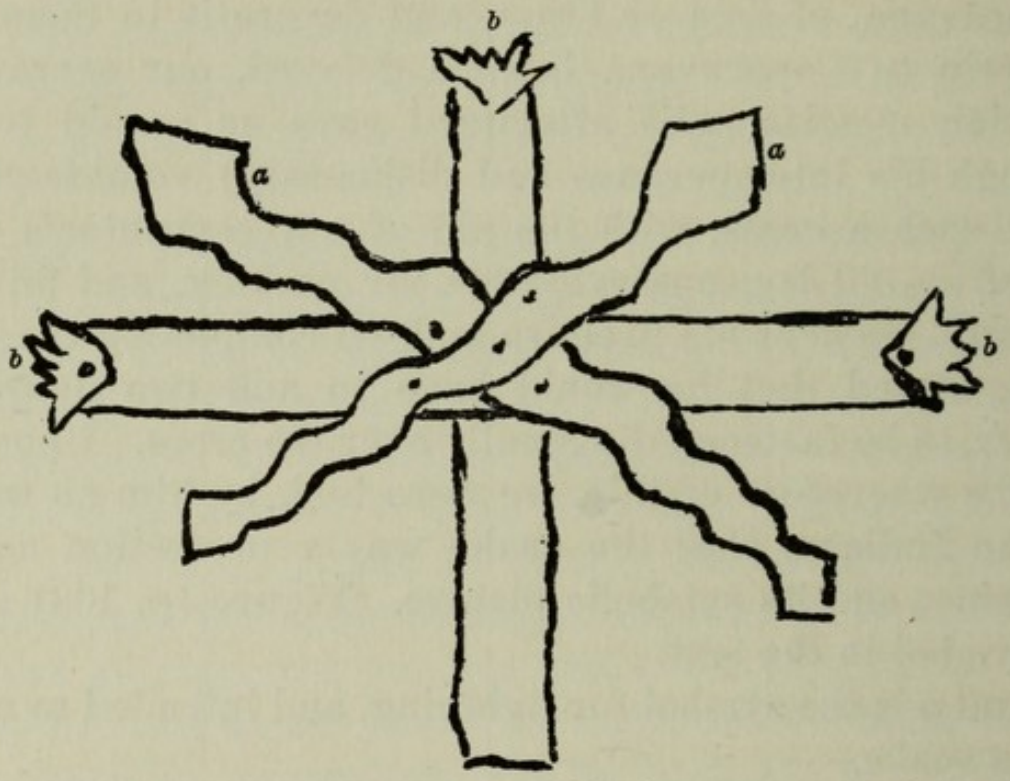
a and *a* is the symbol for lightning, and intended to represent a snake.

b, b, b, are called hands (*manos*) and also stand for lightning. As far as I could understand, the snake rather represents the downward ray, or thunderbolt.

The snake symbol is the more singular since that reptile is rarely met with on the high and cold table-lands, the only striking species being the aquatic "yaurinca," already mentioned.[127]

There can be no doubt that the dances of the Aymará are symbolic, although in many cases their true significance is now only known to a few Indians. Their dancing is clearly a *religious* act, and if the performances are accompanied by demonstrations of boisterous delight and by excessive imbibing, this does not militate against their intrinsically

serious character. The orgies into which nearly all, if not all, the Indian dances degenerate are not the result of degradation and growing viciousness since the advent of the Spaniards, as is often pretended; they are ancient customs, in which the intemperance displayed takes the character of *libations*.[128] It may be that the Indian of the Puna dances for mere enjoyment also,[129] but we know that every religious festival, and every public celebration in general, is accom-



Cross and Snake, the latter symbol for lightning, common on the gables of Indian houses on the Bolivian Puna.

panied by Indian dancing. The variety of dances is great, among the Aymará as well as among the Quichua. Some of these are common to all districts; many are danced only in certain localities. Some are performed at long intervals of time, others on every occasion, for reasons which only a protracted study of the Aymará will reveal, a study that, like the work of Mr. Frank H. Cushing among the Zuñis, of Dr. Washington Matthews among the Navajos, and of Miss Alice Fletcher among tribes of the central plains, must be carried on with much tact and patience.

It was not possible during our stay in the Lake basin and

on certain islands to penetrate deeply into the nature of ceremonies identified with the innermost nature of the Indian and his most hallowed reminiscences. I can present, therefore, but an incomplete *introduction* to the subject. The Aymará are much more reticent on these points than northern tribes. Besides, the true meaning of many dances is either lost or known only to few, and these few are just those whose confidence it is most difficult to gain.

Comparatively few dances are performed on the Island, and these are also danced at Copacavana. Hence what I shall say in regard to the Island will apply to the Peninsula, so far as ascertained. We heard that others are performed at Copacavana besides, and have no reason to doubt it. They differ from those of the pueblo Indians. The procession, sometimes men alone, sometimes men and women, files in with less regularity, and with a step that is rather a clumsy trotting. As there were always several groups dancing at the same time and changing places with each other, it was very difficult to watch the figures. Each group of dancers has a number of musicians, who do not, as in New Mexico, stand still and play their discordant and noisy instruments, but join the others in the dance. The figure is, sometimes, a meandering back and forth in single file; generally, however, and when there are women in the group, they describe a circle, with one man or a pair in the center whirling about like tops, the women especially. We have often wondered at the length of time a woman, encumbered with her many skirts and the bundle of blankets on her back, can endure that vertiginous gyration. The dancer often falls to the ground, and while it is sometimes from intoxication, it is also from sheer dizziness. No better idea can be gathered of the general character of these performances than at one of the great festivals at the sanctuary of Copacavana, for instance on the first and second of February. We went to Copacavana on the day previous and when, on the picturesque trail from Yampupata to the village, we de-

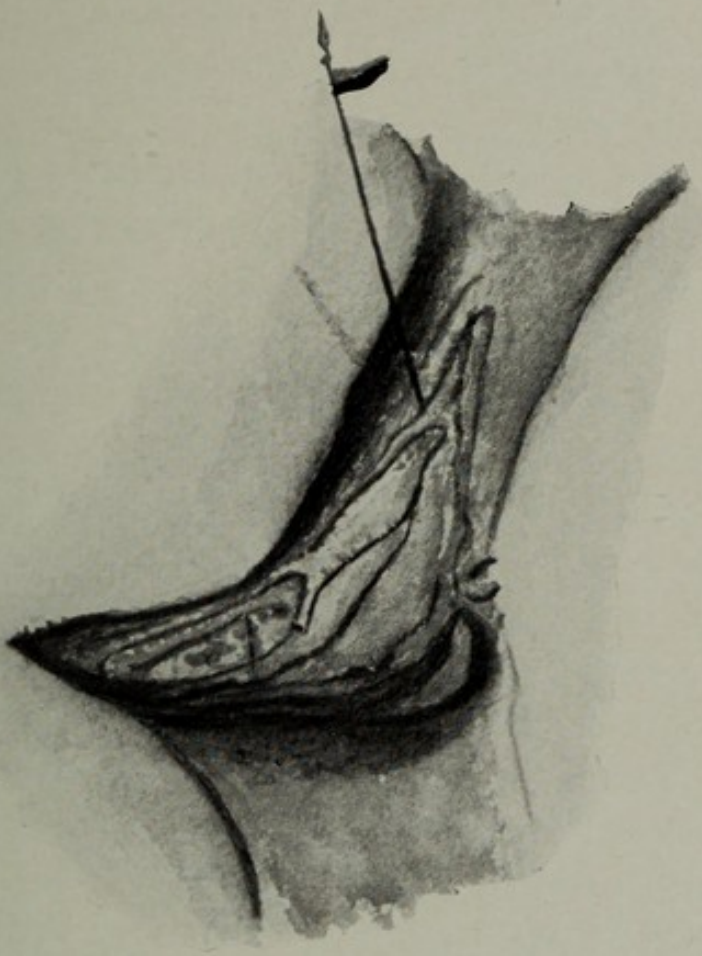
scended into the bottom by the Lake-side, loud shouting, singing, the rumbling of big drums, and firing of muskets was heard. Ahead of us on the road, a procession of white figures with gaudy head-dresses was moving toward the village. They were dancers going to the festival. In front walked the "Chunchu-Sicuri," their heads adorned with tall umbrella-like contrivances, each of the canes composing the frame carrying a tuft of red, yellow and green plumes. This head-dress is light, but at least three feet high. All these dancers were men. They wore the gray and laced jackets so common on the markets of La Paz, and over them a sleeveless bodice of jaguar-skin similar to a cuirass. A skirt, made of white cotton and nicely plaited, sometimes stitched handsomely, floundered about their limbs. The leaders carried the Bolivian tricolors and lances, and their head-dress consisted of a stiff hat, with three tiers of parrot plumes, in the national colors: red, yellow and green.[130] The noise made by this group, with flutes and drums of all sizes and descriptions, frightened our animals, although they were old and decrepit. Following the Chunchu-sicuri, a second procession wended its way to the village. This was the ancient and honorable cluster of "Chirihuanos." Their dress consisted of the usual festive garb of the Aymará: jacket, trousers, white shirt, and an occasional vest. Over these was draped a white mantle, graceful when new, but already much worn. Over this mantle a broad band of parrot feathers, beautifully worked, was fastened a drum. On the head they wore a black hat, but this post-Columbian head-gear was disguised by a profusion of mostly drooping plumes, white and red. With the first of these two groups a few women jogged along, joining in the discordant shouts and arrayed in their most select accoutrements: a number of gaudy skirts and the little bundle of blankets on the back. These women accompanied the Chunchu-sicuri, the Chirihuanos not allowing women to dance with them. Forcing our animals past this noisy pro-

PLATE XXIX

Present-day view of Oriel College, East

PLATE XXIV

Ground-plan of promontory of Collca-Pata



cession, we reached Copacavana and saw the devotion with which each cluster approached the sanctuary. They were admitted to church to offer their respects, and, upon sallying from it, began to dance, pound their drums, and blow their flutes in each of the four corners of the square or *plaza* successively. It may not be out of place here to give an idea of the appearance of this square on the evening before the festival.

At each of the four corners, which are also the four entrances, an altar had been erected. Two poles, about twenty feet in height, were set into the ground and decorated with colored cloth and ribbons, and connected, on the side towards the street, by blankets and ponchos stretching from one pole to the other so as to form a background. This background was further supported by two intermediate poles. At right angles to the former were set on each side two other masts of equal height, and these sides were also closed, leaving open only the front. In the quadrangular recess thus formed stood the altar, simply a table covered with cloth, blankets, or ponchos, on which the image is placed, and loaded with offerings and ornaments, sometimes of the crudest kind. Across the opening, from pole to pole, ropes are stretched at a considerable height above the ground, and from these ropes dangled silverware, sometimes of great value; plates, trays, cups, all from the early times of Spanish colonization, massive, and of quaint workmanship. Between them hung purses filled with money, ancient coins, spoons, in short, all that could be used for representing metallic wealth. We have seen some very remarkable pieces, that would be worthy of any museum of colonial antiquities. These treasures are the property of private individuals, sometimes of Indians, who keep them carefully concealed between festival and festival. There are also parties who loan or rent their plate for such occasions.

The four altars, although alike in the main, vary in details. In front of them gather the Indian dancers, one group

after another, they bow to the image, and then dance to the sound of their wretched instruments, finally in the center of the square also. None of these dances can compare with those of the New Mexico pueblos for symmetry. Everything seems to be carried on in a much looser way. Already on the evening before the festival the Indians begin to drink, and only the nature of the beverage has changed since ancient times; alcohol, diluted from forty degrees to sixteen or seventeen, taking the place of the primitive chicha. During the night, one or several trusty Indians keep watch at each of the altars. To keep awake, they drink, play the flute, and the dancers return to the plaza from time to time to repeat their performances and to disturb the slumbers of the inhabitants with their horrid noise. As, late in the evening, new groups come in, they add their din to that of their predecessors, so that the first night, or rather the night before the feast, is already a torture on account of the truly infernal uproar. The musical instruments of the Aymará are more varied than those of the pueblos. They have a great variety of drums, from the smallest to the largest, and from the most ancient type, similar to the tambourine, to the military drum, big and small. The Pan-flute, called in its tiniest form "kena-kena," and in its tallest (nearly of the size of a full grown man) "zampoña," is most numerously represented. Nearly every Indian carries a clarinet-like instrument or a fife as his constant companion when traveling.[131] These instruments, on a great feast-day, are represented by hundreds, and each group of players blows and beats as hard as possible, regardless of harmony with the tune executed by their next neighbors.

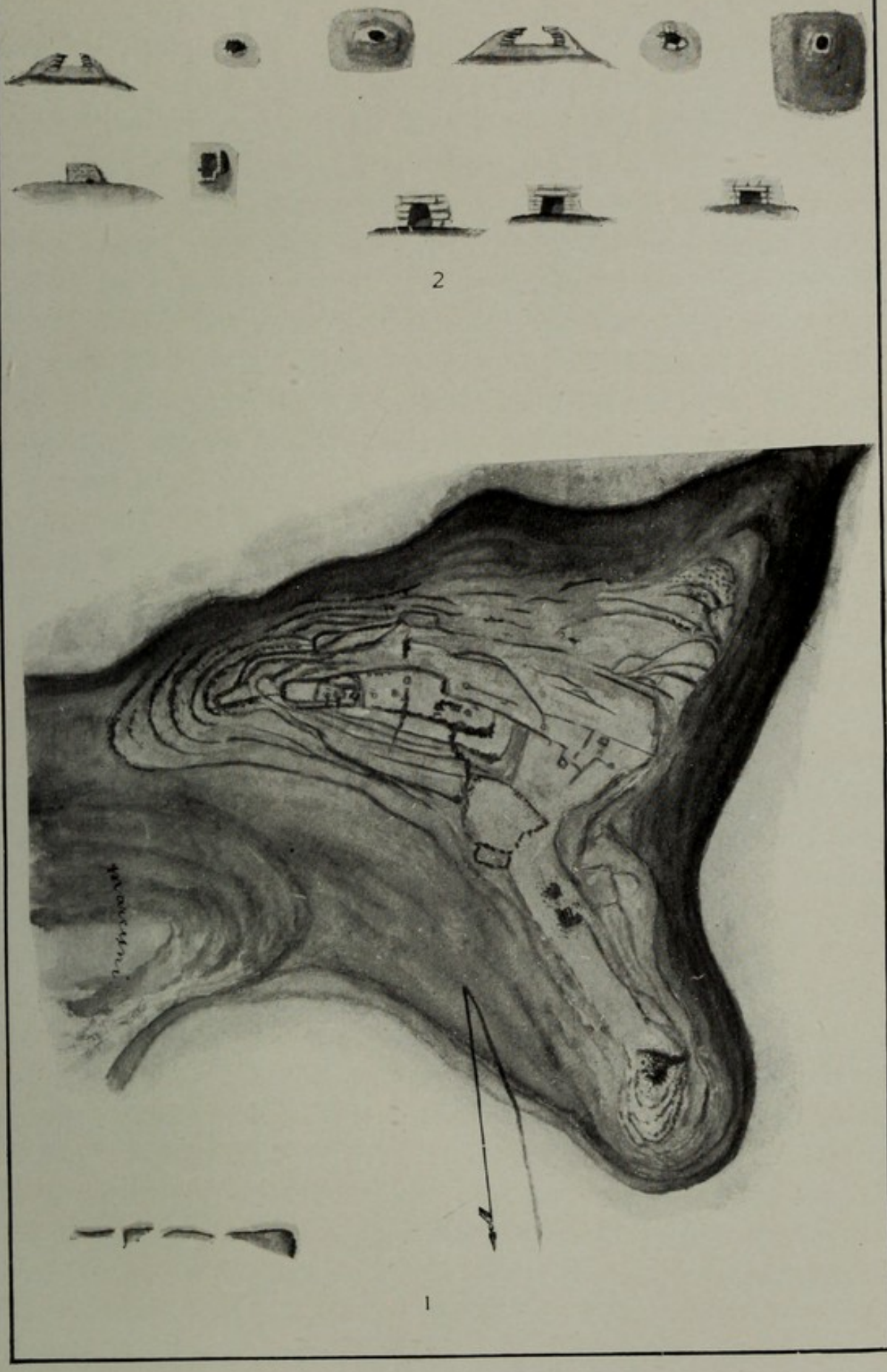
The second day of February was the great day of the festival. At daybreak hosts of dancers poured into the square, and the fifes, kenas, zampoñas, and drums made a deafening noise. The members of each group first knelt on the steps at the entrance of the churchyard and then filed into church, taking off their head-gears. Upon returning to

PLATE XXV

1. Ground-plan of Giriapeta. 2. Small houses (probably huts) at Giriapeta

Plate XXV

1. Ground-plan of Ciriapata. 2. Small houses (probably Inca) at Ciriapata



2

1

the square, they began their noisy performances at the corners and in the center. The following groups of costumed dancers made their appearance: (1) The Kena-kena, or Kenaicho. These were the most numerous, and all able-bodied young men. With them came a number of women and girls. The costume of the men is striking: A short jacket of cloth, black or brown or gray (the latter hue predominating), cut square above the waist and mostly with braids across the breast; the usual breeches, and beneath them often drawers with common white lace. All wear over the jacket a tiger- (jaguar-)skin in the form of a cuirass. Many of them also carry a broad band like a talbart of red, green and yellow parrot-plumes, and on the head a narrow-brimmed black hat of felt or plush, surmounted by an arch of plumes. From the band of this hat dangles, down the back, a train of tinsel, ribbons, and small mirrors. Nearly every Kena plays his fife, never the Pan-flute, and many have drums. (2) The Chayllpa. Their distinctive dress consists in a white cotton mantle hung edgewise across the shoulders, one of the ends reaching nearly to the knee, and over this mantle, the skin of a young vicuña, its head provided with eyes of glass, and profusely decorated with tinsel, ribbons, and tiny mirrors. A black felt hat with a load of drooping plumes, red and white, and a crown of similar plumage completes the costume. (3) The Chirihuanos (already described). Each is provided with a big drum. (4) The Inca-sicuri. Costume: velvet, cloth and silk, gold and silver embroidery, imitating the supposed dress of the Incas, and clearly of colonial origin.[132] (5) The Chunchu-sicuri (already described). They all beat small drums and play flutes or fifes. There are two bands of these each with a leader, whose distinctive mark is a hat with a triple row of bright plumes, and a long spear or lance which he brandishes sometimes quite offensively. (6) The Chaca-na-ni. They dance along with the Kenacho, and wear the same costume, without tiger-skins.

Add to these groups a great number of independent performers, male and female, in festive Indian dress, and hosts of spectators, hundreds of big and little drums, hundreds of flutes, from the tiniest to the biggest, and perhaps more fifes yet, the instruments rumbling, thundering, rattling, screeching, howling and screaming, without any regard to rhythm or harmony; hundreds of ugly voices singing monotonous melodies; now and then, here and there, a yell or a whoop; all the performers more or less intoxicated and drinking harder and harder towards nightfall—the scene is indeed very picturesque, very strange and brilliant in hues; but at the same time the din and uproar is so deafening, so utterly devoid of the slightest redeeming feature, that it forms one of the weirdest and, at the same time, most sickening displays imaginable.[133] Once started, this moving crowd, ever changing like a kaleidoscope, keeps on the distressing roar, night and day without intermission, for never *less* than two days and two nights, sometimes as long as *a whole week!* We had the excruciating "pleasure" of enduring three of these festivals at Copacavana, the first of which lasted three days and as many nights, only interrupted by hard showers. The second and third were continued for three days, but the nights were less noisy. At Tiahuanaco, however, the festival lasted *five days and four nights,* the din *never ceasing during that time.*

The Aymará dances which we have seen lack, as stated, the decorum of pueblo dances. Hence, much of their original symbolic character appears to be lost.[134] They all degenerate into an orgy, drunkenness prevailing among both sexes after the first afternoon. Once at this stage, the naturally quarrelsome character of the Aymará crops out and most Indian festivals in Bolivia end in bloodshed. It may even be said, that no Indian festivity is satisfactory without one or more homicides. Feuds between neighboring haciendas are often fought out on such occasions, for the Indian often carries, besides his sling (for which the

women provide round pebbles in their skirts) a dangerous weapon in the shape of a whip terminating at the upper end of the handle in a small tomahawk of steel. Whenever such fights take place it is not rare to see men swallowing the brains oozing out of the fractured skulls of the wounded, and women dipping chuñu in the pools of blood, and eating it, when well soaked, with loathsome ferocity.

Two peculiar performances took place on the second of February at Copacavana. One began before sundown, causing the uproar to subside somewhat for about an hour. Two processions marched into the square from opposite sides. Each was headed by a litter of wood borne on the shoulders of four or six Indians.

On each litter, and on an old carved chair decorated with boughs and other cheap ornaments, sat an "Inca," that is, a young Indian in the toggery of the "Inca-sicuri," and armed with a sling. When the two files met, both "Incas" rose in their litters and a dialogue began, treating of the historic strife between Huascar and Atahuallpa and abounding in challenges and insults; one of the "Incas" personifying Huascar, the other Atahuallpa. From words they came to throws with slings, pelting each other with roots instead of stones. The action was quite lively and lasted until one of the "Incas" gave up, considerably bruised and bleeding. After the combat, both stepped down from their litters and mingled with the crowd, dancing side by side. This performance is, of course, post-Columbian. It is one of the many semi-theatrical performances invented as a substitute for the idolatrous and often obscene primitive ceremonials.

The other took place after nightfall and in the darkest corner of the square, where not even the numberless firecrackers, rockets, and other luminous displays shed a spark of light. It was the "Mimula," an ancient round dance in which both sexes take part, and which is now only performed at night. Hence we could not discern any partic-

ulars, beyond a number of figures moving about on a small space and to some indifferent tune that did not even seem to be primitive.[135]

None of the groups of dancers heretofore enumerated have, like the New-Mexican pueblos and the Yaquis of Sonora, their particular jesters or clowns. But clumsy mimicries were executed, during the day, by mestizos wearing masks. There is a special group of clowns that appears on the scene everywhere and at every festival, even in public processions at La Paz. These are the "morenos"; not Indians, but mestizos, "cholos," young men who are not unfrequently paid for their performances. We saw them first at La Paz, afterwards at Tiahuanaco, and lastly at Copacavana. The dress of the morenos is usually very costly, being the costume of the eighteenth century, bright-colored frocks of velvet or silk, richly embroidered with gold and silver, vests to fit, knee-breeches, hats, and low shoes and masks, hideous rather than comical. With them go small boys wearing ugly masks of devils, and frequently a condor, that is, a performer arrayed in the plumage of that bird and with a mask imitating its head. If the morenos were less addicted to hard drinking, their pranks and jests might be more palatable. At Copacavana, however, they performed in a rather dignified way. Their costumes were plainer, and each played a small flute or fife. They evidently have nothing in common with the primitive dances of the Indians.[136]

At Tiahuanaco, the Indian dancers belonged to the plain "Sicuri," distinguished from the others by a towering head-dress of gray plumes of the American ostrich,[137] and to the Kenacho, with some Chacanani. The Kenacho had in their company women who wore the peculiar hats represented by Mr. Squier.[138] At Copacavana female performers wore simply their "nice" clothes, and each had the characteristic bundle slung around the neck. We have not, as yet, been able to obtain a *satisfactory* explanation of this custom, which seems to be ancient.

On the Island of Titacaca, the 25th of July, feast of the patron saint of Challa, could be only partially celebrated. But we coaxed the Indians into dancing during the afternoon. Before noon a group resembling the Chirihuanos in costume, but called "Pusipiani,"[139] came to the chapel to dance and play their fifes and drums before the building. The Chayllpa followed, and later on, besides these two clusters, the Kenacho and the Chacanani presented themselves. Within a very short time the courtyard of the hacienda was filled with dancers, with or without official costume, and with the same din and uproar, though proportionately less, than at other places and larger gatherings. The wonted disregard for symmetry and harmony prevailed, showing that discordant noise and irregular motions are inherent to most aboriginal dances of Bolivia; those of Peru we have not yet witnessed.

The existence of numerous groups of dancers, groups that are *permanent associations* and represented over a wide range of territory in villages, communities, and on estates, leads to the inference that there might exist, among these Indians, a special organization controlling these associations and upholding them in the midst of slowly encroaching civilization. But to obtain an insight into this organization is as difficult as it was among the Indians of New Mexico, until the classical researches of Mr. Cushing removed the veil with which the aborigine shrouded his *primitive religious customs*. The study of these features is an enormous virgin field, that claims the attention of students. We found the Aymará as reticent on such topics as any other Indian tribes and even more difficult of approach. Proficiency in their language is, of course, the first condition, and this we had not yet been able to acquire. Besides, with the exception of a few communities, who still live according to ancient customs, long residence and familiarization with the Indians in Bolivia may not be even as profitable as in the North. Adoption in an Aymará tribe is out of the question for

several reasons: First, there is among the Indians, bitter hatred against all that are not of their stock. An ethnological observer would be at once liable to suspicion as a spy; for the Aymará has many things to conceal from the white man. The local authorities and the landowners themselves are likely to take umbrage at investigations, the purpose of which many would fail to understand, and hence misconstrue. Furthermore the Indian himself has changed many of his customs, and it is a question how far a life of sacrifice and privations could be rewarded, *except* in places where the Aymará preserved most of his primitive habits through *rigid seclusion.* There are a few communities where a discreet and practical student might do important ethnologic work.

Beside the dances mentioned, we have heard of a number of others which it did not fall to our lot to witness. At Llujo on Hallow-eve, the Indians, unbeknown to us, danced the "Auqui-auqui" at their chapel. It was accompanied by prayers and offerings to the deceased. The people were pining for rain, and they believe that, when the bones of the ancient inhabitants are disturbed, drouth follows.[140] We had begun our excavations, and the Indians were mortally afraid of the consequences. On the night, however, of the day mentioned it began to rain and thereafter rained abundantly. The Indians thus became reconciled to our doings, and we never had better laborers and more willing ones than at Llujo.[141] Whether the auqui-auqui had anything to do with their intercessions we could not ascertain. That the chacu-ayllu is a rain-dance was at least *not denied* by our old wizard on Titicaca Island.

The first indication of an organization, are the officers called "Irpa," in Spanish *maestros de bayles* (literally, teachers of the dances). These officers, according to what was stated to us at Tiahuanaco, are appointed for *life,* but on Titicaca we were assured, by the Indians themselves, that the irpas are selected for each dance (by whom they did not

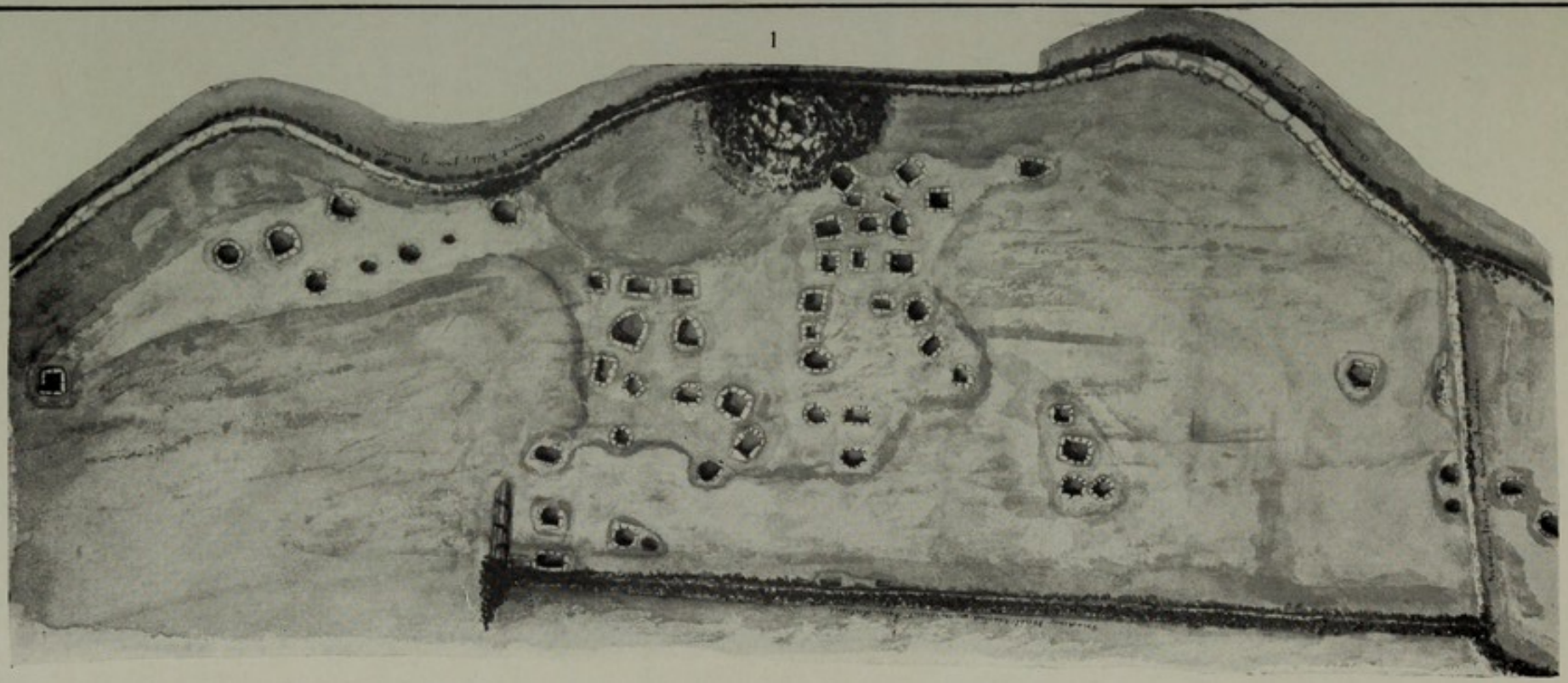
PLATE XXVI

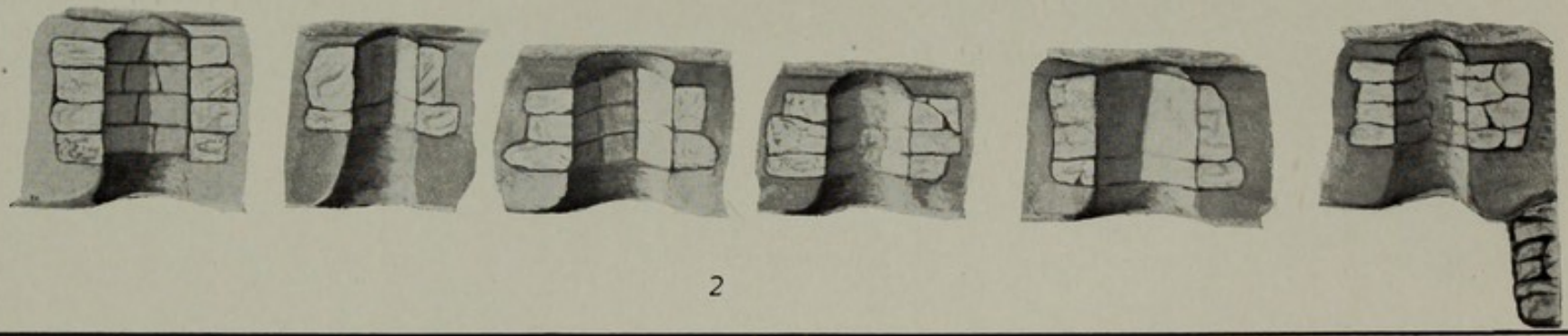
1. Impregnated cystolith of Ruscus to serve as Chitinbeet. 2. Section of Ruscus from Chitinbeet

PLATE XXVI

1. Largest cluster of graves at Ciriapata. 2. Sections of graves from Ciriapata

1





2

say), and that every band of dancers is divided into two groups, each with its director;[142] one group representing Aran-saya and the other Ma-saya. At Tiahuanaco it was asserted that each of these clusters danced on its own side of the square, the Aran-sayas on the north, the Ma-sayas on the south, and that if one section trespassed upon the ground of the other, bloody conflicts would ensue. We noticed such a division in church, but at the dances the confusion became so great, at Tiahuanaco as well as at Copacavana, that it was impossible to ascertain anything. The Indians of Titicaca belonging to the cluster of Aran-saya of the Peninsula of Copacavana, there could be no division on the Island. The irpas are not remunerated for their work. It is an honorary office, as well as that of "alférez" banner-bearer, or godfather to the festival, an introduction from colonial times.

The dances of the Aymará being a part of their *primitive* religious ceremonies, and but superficially connected with the church,[143] any association directing and conducting them must be a part of their *primitive* religious organization. I need not allude here to church-officials among the Indians, like the *fiscales,* but there is *one* office, at least, connected with the church, and little noticed, that possibly recalls certain functionaries among northern Indians who are more particularly keepers of *ancient* beliefs and rituals. We first heard of this office on Titicaca. It is called *Preste,*[144] and its incumbent was an old man, acknowledged to be a potent wizard. It was whispered that he was a lineal descendant of the ancient "gentiles," or "Chullpas." This preste is appointed, by the Ilacata and the old men, or *mayores,* for five years. His duties consist ostensibly in caring for the church, and overseeing preparations for feasts and the like; hence our aged friend Mariano Muchu, the preste of Challa, wandered to Copacavana as frequently as it was *indispensable on account of these duties,* but not oftener, and not out of devotion. We were assured by one

of the other shamans that this preste had also the obligation of *doing penance for his people!* I give these statements as we received them, and do not guarantee their veracity, although the same office was mentioned to us at other places.

The existence of wizards, sorcerers, and medicine-men among the Aymará Indians, has been frequently mentioned in the preceding pages. It was natural that, once informed of their existence, we should endeavor to obtain as much information as possible in regard to them; and it is easy to believe that this was a very delicate and difficult task. On general principles, and from what I had seen among the Peruvian Indians, we were prepared to find the shamans in Bolivia also, and the first somewhat detailed statements in regard to them were obtained at Tiahuanaco, though not from Indians. There, the term *brujo* (sorcerer) appeared to be a household word applied to all Indian medicine-men. There also we were told of the belief among the Indians that bones of dead "gentiles" could be introduced into the bodies of persons through evil witchcraft and taken out by some *brujo* through *sucking!* Later on, in the course of conversation with people of the country who spoke Aymará and appeared well versed in the customs of the Indians, we were informed that the titles of those who officiated as diviners were "Lay-ka" and "Yatiri."[145] Some become "Yatiri" because they have been struck by lightning and survived, therefore looked upon as endowed with supernatural gifts; a belief mentioned by older chroniclers and prevailing all over the mountainous districts of Peru.[146] We were assured that the layka consulted the coca, throwing its leaves like cards or dice when they wanted to discover hidden, lost, or stolen property, and that they also used playing cards. One of their performances was described to us as follows: The layka gather at night in some house and begin to drink. At midnight the light is put out, after previously consulting the cards, and then the owl ("jur-cu," or

"urcu") is called. The bird answers at once, and its cry is interpreted by the wizards as confirming the conclusion at which they arrived by means of the cards.[147]

On the Island of Titicaca, compelled to live for months with the Indians, we obtained more precise data. The incantation to which we consented in order to obtain an idea of such ceremonies, led us to know that Manuel Mamani, warden of the hacienda buildings (unya-siri), was one of the chief layka on the Island. Toward the end of our last stay at Challa he acknowledged it. But direct questioning in regard to his art and rank among the wizards proved useless. It made him offish and caused him to avoid, for a time, the familiar evening talks at our room. Neither gifts of coca nor of money could prevail upon him to speak. With other Indians the result was still worse. The preste, who had been pointed out to us, and by Manuel Mamani himself, as a very powerful shaman, shunned us from the moment he suspected we might interrogate him. Hence it was only through very indirect methods, and by comparing indications thus secured with statements freely made by whites and mestizos, that we were finally able to learn something. We found out that there were at least three principal wizards on Titicaca, and that (this from their own confession) they were subordinate to medicine-men of higher authority residing at Sampaya on the Peninsula of Copacavana. But it was also stated, and by Indians, that at Huaicho there resided some powerful magicians whom they obeyed. This would indicate that the religious organization of the Aymará of that region is independent of the two partialities of Aran-saya and Ma-saya. Among some of the whites and mestizos, a certain Indian family [and particularly one man], residing at Tiquina, was in very bad repute, as mighty sorcerers dreaded on the Peninsula, the Islands, and on Peruvian territory adjacent to Copacavana. But we found out, through the Indians themselves, that although that personage was indeed a noted shaman who frequently

abused the credulity of mestizos and even of whites, his influence was not so great with the *Indians*. Casual observations, hints caught here and there, the testimony of residents at Copacavana and Puno satisfied us that the influence of the shamans is as great among the Aymará as among northern Indians, and that it amounts to nearly absolute control of their actions and thoughts. We became convinced that among these wizards there is a proper organization, that there are degrees of rank, that some limit their performances to a certain sphere, others to another. On the evening of our last day at Challa we obtained, at last, some positive information. The Indians had been celebrating, and at our expense, which we readily allowed for obvious reasons. On the day before, two of the highest medicine-men from Sampaya, as it was afterward acknowledged to us, came to Challa under pretext of a friendly visit, and in the forenoon (while the aborigines were still undecided whether they would rejoice or do mischief) the Indians gathered around these wizards to see them consult the coca. We were not allowed to look on. The response must have been favorable, for our offers to defray the expense of the celebration were accepted, and the dances took place in the afternoon. At night the house-warden, being moderately intoxicated, called at our room to receive his gift of coca, and we found him inclined to intimate talk. We approached him first on the subject of the dances and elicited the following information, which I consider mostly reliable; but while it is probably true in regard to the Island and Copacavana, there may exist variations elsewhere.

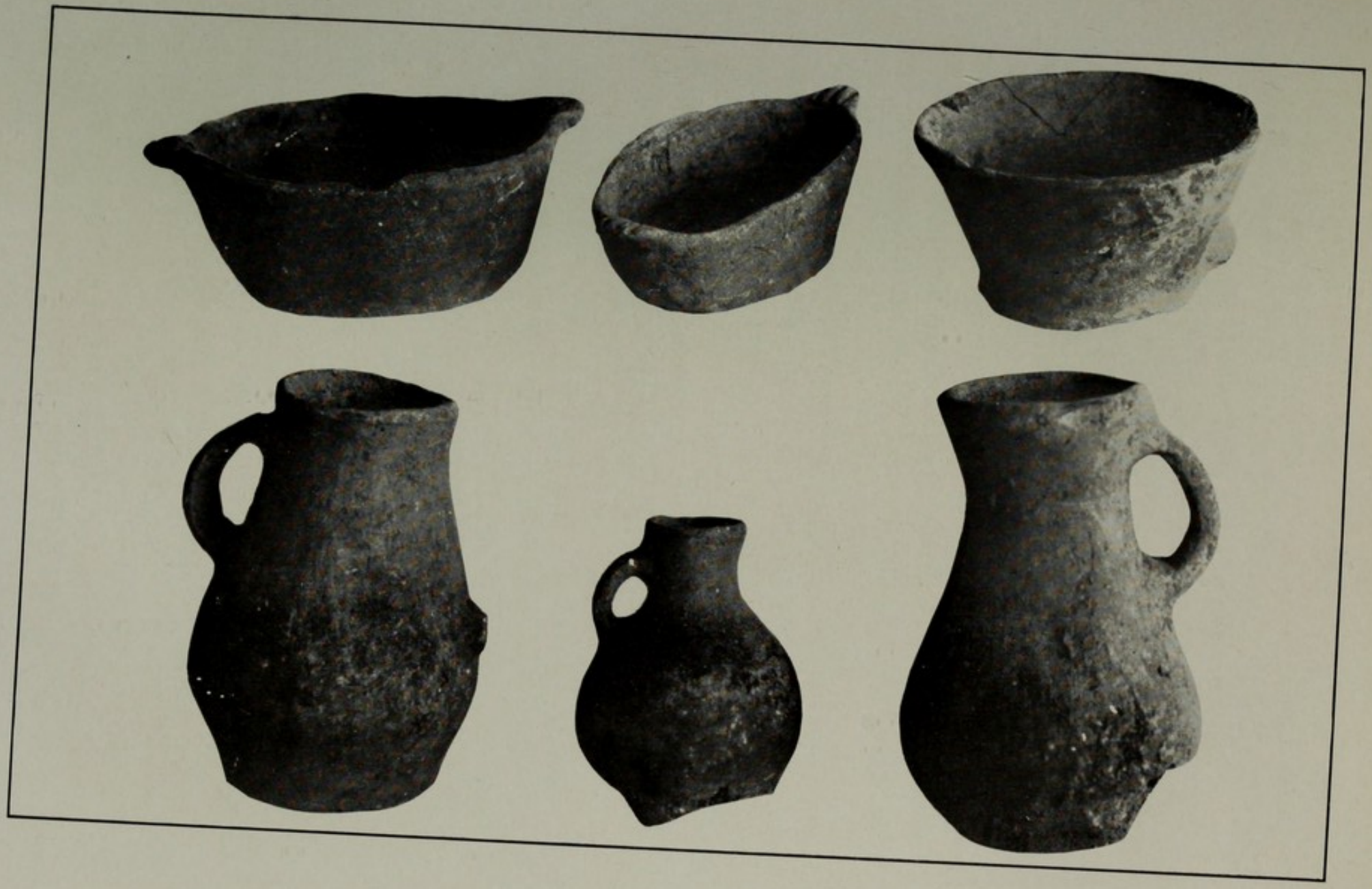
Manuel Mamani of Challa, our informant, stated that among the inhabitants of Titicaca the following dances and groups of dancers exist: The Mimula, which is seldom performed; the Pusipiani, the Chacanani, the Chayllpa.

These four groups he distinctly and emphatically declared to be *ancient* and *primitive*. The Mimula and Pusi-

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at the University Press.

PLATE XXVII

Chullpa pottery from Ciriapata



piani, he further asserted, were branches of the *highest of all,*—the Chirihuanos,—which were not on the Island, but had their headquarters at Sampaya, their leaders and highest shamans being layka from the Mamani family.

Besides these five *ancient* groups, there were the following more *modern* ones: The Kenacho, or Kena-kena; the Sicuri, the Inca-sicuri. The latter three clusters he represented as being less important. His statement as to the Chirihuanos being the oldest and the last three named the most recent and least important, was repeated to us, spontaneously, by Dr. del Carpio, the owner of Koati, who has good opportunity of securing information, since the headquarters of the Chirihuanos are in the near neighborhood of his property.[148]

We could not elicit from our Indian other information in regard to the Chirihuanos, Mimula and Pusipiani. As he himself belonged to the last-named, hence to a branch of the Chirihuanos, it is evident that he did not wish to talk "out of school." But in regard to others he was more communicative, as the Indian always is about matters that do not directly concern him.

He told us that it was the duty of the Chacanani "to fight," and that the Kenacho, or Kena-kena, have the same office, but as a recent and "younger" branch of the Chacanani. The Chayllpa he represented as being *hunters,* hence they dance the chacu-ayllu. But he also stated that the Chayllpa are charged with the duty of "making," or procuring, *rain,* by using frogs and toads as intercessors, and by collecting little stones on the rocky summit of the Calvario and throwing them into the Lake. In addition to these duties, the Chayllpa are expected to "make peace when the Chacanani and Kenacho begin to fight."

Assuming the above statements to be true (and from our present knowledge I must regard them as true in the main, at least so far as concerns the Island), these different groups of dancers form as many *esoteric societies.* Upon

being closely interrogated on their origin, our informant gave evasive answers, repeating, however, that the layka of Sampaya were the heads of the Chirihuanos; that he himself, as Pusipiani, was the leader of the latter on the Island (there may have been some exaggeration in this); and that initiation in any of the clusters depended upon the pleasure of the "old men" exclusively. We asked several times whether the parents of a child might, through some vow, or pledge, destine that child to become a member of any society of dancers. He either did not understand the query, or was wary enough to suspect the true import of it: at all events he emphatically asserted, that neither the parents nor the party himself could decide or choose.[149] But he also made the somewhat strange statement that the "old men" had power to transfer from one group to another!

There is much in this that recalls the esoteric societies discovered by Mr. Cushing among the pueblo Indians of New Mexico, which certainly existed among the ancient Mexicans and other tribes. Thus the Chacanani and Kenacho appear to be the *warriors,* the Chayllpa the *hunters.* I mention such analogies only as hints, and as problems for further careful investigation.

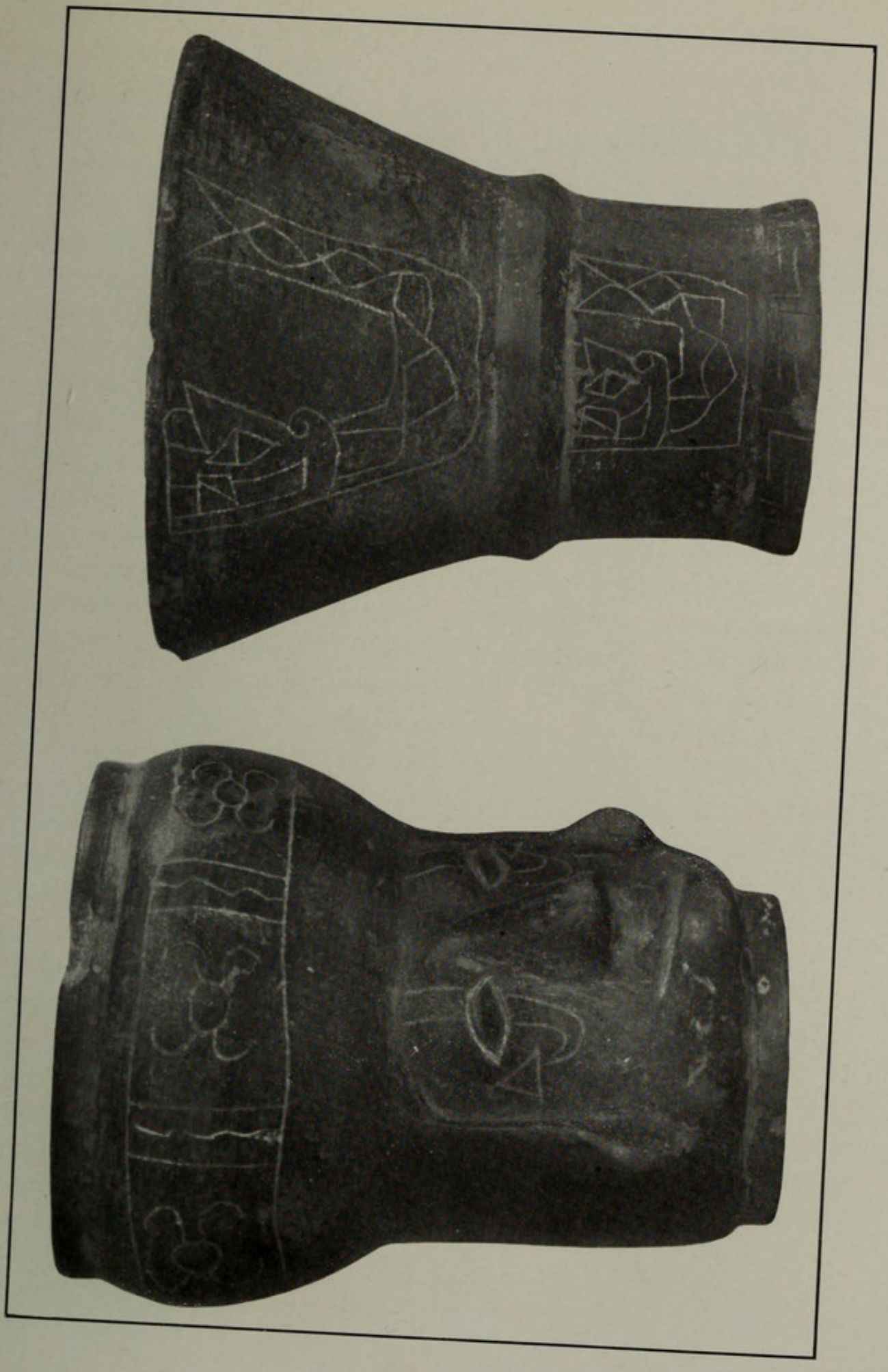
At all events, the existence of these groups, their organization and duties, are kept very secret. That their functions are connected with beliefs and rites antedating Spanish times, appears manifest. Not only the performances of the Chayllpa as procurers of rain, but other features indicate this. While the manufacture of costumes and toggery is partly carried on in broad daylight, the days and nights preceding a big dance are marked by doings to which outsiders are not admitted; the layka are, at such times, often absent from their homes or at least are not accessible to strangers. The dance itself seems to be but the *display,* not the *object,* of the performance. Its connection with festivals of the Catholic church is a veil under cover of which the Indian performs ancient ceremonies.[150]

PLATE XXVIII

Drinking cups (also used for sacrificial purposes) from Tittaea Island

PLATE XXVIII

Drinking cups (also used for sacrificial purposes) from Titicaca Island



These embody ethnologic features of great antiquity and considerable interest. I can only urge the necessity of studying the aborigines of this part of South America according to the methods so successfully employed within the last twenty-five years among northern Indians.

The great variety of shamans scattered over Bolivia among the Indians of all tribes and stocks, as well as among all Indians of Peru, renders their classification difficult. On the Island, there was a shaman over whom a cloud seemed to hover. He was mentioned as being "chama-kani," and regarded with mistrust because he had "dealings with the owl."[151] We tried to ascertain whether the medicine-men, the healers and curers proper, or doctors, so-called, were distinct from the diviners or prophets. It struck us that our medicine chest and the household remedies of my wife were so frequently put in requisition, and that even the layka Manuel Mamáni preferred to ask for *our medicaments* rather than, at least openly, use remedies of his own. It seemed as if he had no knowledge of aboriginal medicine. Still this same man, who usually accompanied us and particularly assisted Mrs. Bandelier in her gathering of medicinal plants, displayed on such occasions a very intimate acquaintance with herbs and their application in sundry cases. His knowledge was indicated by *what he refused to tell or avoided to acknowledge,* as well as by what he freely told. Thus we learned, from other sources, of plants which we saw and of which *he* refused to give even the names. On the other hand he revealed to us, unconsciously, many strange beliefs and customs, relating to medicine. Whenever one of us accidentally hurt himself by falling against a stone, he would enjoin us to take a small piece of the rock, reduce it to powder, dilute it with water, and drink it, lest the same rock might hurt us again. He it was who told us about the ailment called "larpata," a child's disease, caused by the sight *of a corpse.* In the list of medicinal plants sent in by my wife, a number of species

used in *witchcraft* are noted. Whatever remains of the aboriginal practice of medicine among the Aymará is kept secret, and this is doubly strange, since the more suspicious "art" of foretelling by means of the coca is practised by Indian sorcerers, not for Indians, alone, but frequently for the benefit of mestizos as well as of whites. Singular coincidences of prophecy with fact have been related to us. These oracles and the manner in which they are obtained further illustrate belief in the "Achachilas," so often mentioned here. The conjurer takes certain coca leaves, perfect in form, which, when thrown, fall with the lustrous side upward. Such leaves are to represent the "Achachilas," of the localities where the object or subject of the consultation is at the time, or where a certain action takes place directly connected with the matter at issue. We know of an instance where the object of the performance was to obtain information in regard to military movements connected with political disturbances in Peru and Bolivia. The consultation of the coca took place at Copacavana, and the shaman was an Indian of that Peninsula. He selected three coca leaves as representing, respectively, La Paz, Arequipa and Puno, the first through the "Achachila" of *Illimani,*[152] the second that of the *Misti,*[153] and the third of some height near Puno. That most of the diviners or layka are imposters cannot be affirmed. They to a great extent are sincere, but at the same time there are some who abuse credulity, especially of those who are *not* Indians. Upon the Indian mind these predictions, or oracles, exercise an astounding influence, much greater than a wonderful cure. Hence the diviners, among the Aymará, assume a position superior to that of the medicine-men. Our later investigations have fully established that the shamans are, among the Aymará, organized into several main esoteric clusters. But it is not the place to enter into details of researches carried on after our work on the Islands, in other sections of Bolivia.

That the Indian punishes evil sorcery as cruelly as he bows slavishly to what he considers *legitimate* magic art, applies in full force to the Aymará. When the Indians of Yunguyu broke out on the Peruvian frontier, they sacked the house of the Governor, a white man. On that occasion they discovered two innocent *dolls,* but they had been hidden beneath the floor. It satisfied the natives that they were *objects of black sorcery* and raised their fury to such a pitch, that the house was actually *torn to shreds.* We saw the wreck soon after, and I never saw such complete annihilation through the hand of man. In 1893 an Indian on the Island, well known to us, took it into his head that a certain woman was a dangerous witch. He seized the unfortunate on a favorable opportunity, thrust her into a burning brush pile until she was completely roasted and then—*ate her up!* Acts of cannibalism, by the way, are not uncommon among the Aymará of Bolivia, and many of them are well known to the authorities who, however, either deny or confess they are impotent against such customs. Where an Indian stock has preserved so many of its ancient customs and beliefs, it is natural to suppose that authentic traditions, mythical and historical lore, are still to be gathered. Since the Aymará possess an esoteric organization like that found among the aborigines of the North American southwest, it is chiefly among their *esoteric clusters* that we must look for ancient historical lore.

NOTES

THE INDIANS OF THE ISLAND OF TITICACA

PART III

[1] The earliest printed notice of Titicaca Island thus far known is from the year 1534. Still it is possible that rumors about the Island and its sacred site had gone beyond the limits of actual Peru. The report made by Juan de Samano, Secretary of Charles V, to the Emperor (1526) on the explorations along the South American west coast as far as Tacamez, in 1525, mentions a story told the Spaniards, by people from further south, about the country inland and a certain island near the coast with the effigy of a woman (*Relacion de los primeros descubrimientos de Francisco Pizarro y Diego de Almagro,* from Codex CXX of the Imperial Library of Vienna, in *Coleccion de Documentos inéditos para la Historia de España,* Vol. V, p. 200): "Hay una isla en la mar junto á los pueblos donde tienen una casa de oracion hecha á manera de tienda de campo, toldada de muy ricas mantas labradas, ádonde tienen una imájen de una muger con un niño en los brazos que tiene por nombre Maria Meseia: cuando alguno tiene alguna enfermedad en alguno miembro, hacele un miembro de plata ó de oro, y ofrecesela, y le sacrifican delante de la imágen ciertas ovejas en ciertos tiempos." The "sheep" here mentioned were the llama, and the offerings of these animals took place in the Sierra, not on the coast, where the llama cannot live for any length of time. The offering of parts of the human body imitated in gold recalls the little gold and silver fetishes so numerously found in the soil of the Island. The Spaniards could hardly be expected to have understood the natives at that time. Even an Indian interpreter could not impart to Europeans then already a correct idea of what he was told in his own language. No Indian had had time to become sufficiently familiar with Spanish, at least on the coast of South America. Hence the confusion in description and location. The notice printed in 1534 is, geographically, more definite, though still muddled, and the descriptive part bristles with exaggerations, by means of which the Indians sometimes hoped to get rid of the strangers by sending them on an adventurous journey far away. The document is the (exceedingly rare) folio, *La Conquista del Peru, llamada la nueua Castilla,* Sevilla, 1534 (without paging). The author is not known, but he must have been a companion of Pizarro. He says, on the last page: "Se q̄ dixo el Cacique q̄ ay otros muchos indios de aquella tierra de Caollo [Collao] y q̄ ay vn rio muy grande en el q̄l ay vna ysla

dõde ay ciertas casas: y que entre ellas esta vna muy grande toda cubierta de oro y las pajas hechas de oro: porq̃ los indios nos truxeron vn manojo dellas y q̃ las vigas y cuanto en la casa ay todo es oro: y q̃ tiene el suelo empedrado con granos de oro por fundir: y q̃ tiene dentro de ella mucho oro por fundir. Y esto oy dezir al cacique y a sus indios q̃ son de aquella tierra estãdo presente el gouernador. Dixo mas el cacique q̃ el oro q̃ sacã de aq̃l rio no lo cogẽ en bateas: antes lo cogen en vnas acequias q̃ hacen salir de aq̃l rio que laua la tierra q̃ tienen cauada: y assi mesmo quitan el agua de aq̃lla acequia como esta lauada y cogen el oro y los granos q̃ hallan q̃ son muchos: y esto yo lo oy muchas vezes: porq̃ a todos los indios de la tierra de Collao q̃ lo preguntauan deziã que esto era assi verdad.'' This information was obtained previous to September, 1533, as the cacique mentioned was Atauhuallpa. The river with which Lake Titicaca is confounded was probably the Carabaya, southeast of Cuzco, in Peru. The gold-bearing district of that name was known, and the Spaniards began to work its ''placers'' before 1544. Cieza: *Tercer Libro de las guerras civiles del Peru,* MSS. at Lenox Library, Cap. CXL, fol. 199: ''y en el inter que fué aquel viaje Diego Centeno despachó cartas al rico y muy nombrado rio de Caravia para que los Españoles que en sus riveras sacaban metal de oro dexasen por entonces aquel oficio y viniesen á servir al Rey usando el militar.''

Oviedo who wrote from hearsay of conquerors returned to Spain, is more sober and positive than the two anterior ones (*Historia general y natural de Indias,* Vol. IV, Lib. XLVII, Cap. II, p. 261). ''Aquella tierra de Collao tiene buena dispusicion é sitio: hay en ella una laguna que tiene quarenta leguas de circunferençia, y es dulçe é fondable é de mucho pescado: y en una isleta que dentro se haçe, tiene aquella gente la principal casa de sus ydolatrias y sacrificios, y es de mucha veneracion entrellos, é van alli como en romeria desde muy lexos tierra.'' I place his testimony here, as he obtained the information previous to 1540.

[2] The first visit by Spaniards to the shores of Titicaca Lake took place, as stated, late in December of 1533, but the date of their visit to the Island is not known. It must have been in the last days of that year or early in January, 1534. The information concerning this reconnoissance of the Lake, its shores, and the Islands is official, and embodied in the report which the secretary of Pizarro, Pedro Sancho, wrote at Jauja July 15, 1534, addressing it, in the name of Pizarro and the royal functionaries with him, to the Emperor. The original of this invaluable document may be lost, but an Italian translation of it was published by Ramusio (*Terzo volume Delle. Navigationi et Viaggi*), was printed in 1556, and incorporated *verbatim* in the second and third editions of 1565 and 1606. The translation was made directly from the original—''Questa translatione é cauata dall'originale'' (fol. 414). It states (fol. 413): ''Nel paese di Collao non si ha notitia del mare.—& é paese piano, per quel che s'é conosciuto, & grande, & molto fredde, & vi sono molti fiume, de quali se caua oro. Dicono gl'Indiani esser in esso vn lagune grande d'acqua dolce in mezzo della quale sono due Isole, per saper l'esser di questo paese, & al gouerno suo, mandó il Gouernatore duo Christiani accio gli rapportasseron d'esso lunga informatione, che sí partiron da lui nel principio di Decembre.'' The brief notice in Oviedo seems to be taken from this text. A retranslation from Italian into Spanish was made by the late Don Joaquin Garcia Ycazbalceta and printed in the appendix to his Eng-

lish version of Prescott's *Conquest of Peru. Historia de la Conquista del Perú, escrita en Ingles por W. H. Prescott. Traducida al Castellano por Joaquin Garcia Ycazbalceta,* Mexico, 1850. I owe the data concerning this very rare work to my friend Mr. Charles Paul McKie of Englewood, to whom I am, besides, indebted for other valuable information.

The title of the report of Sancho (above quoted) is: *Relatione per Sua Maesta di qvel che nel conquisto & pacificatione di queste prouincie della nuoua Castiglia é successo, & della qualitá del paese dopo che el Capitano Fernando Pizarro si partí & ritornó a sua Maesta. Il rapporto del conquistamento di Caxamalca & la prigione del Cacique Atabalipa,* etc. (Ramusio, 1565, III). The report is signed: Francesco Pizarro, Aluaro Ricchelme Antonio Nauarro, Garzia di Salzedo and Pero Sancho, and bears date as stated, Xauxa, July 15, 1534. The part of it translated in the text is on fol. 413: "I duo Christiani che furono mandati a vedere la prouincia di Collao tardarono 40 giorni nel lor viaggio, doppo ritornati alla cittá del Cusco, doue staua il Gouernatore, gli dierono nuoua & relationa di tutto quel che haueuan inteso & veduto, che é questa che qui disotto si dichiará. Il paese di Collao é lontano & appartato molto dal mare, tanto che le genti natiue che habitano non hanno notitia d'esso: é paese molto alto, & medio cremente piano, & con tutto ció, é fuor di modo freddo.—Non v'é in esso selua ne legna d'abrucciare, & quella che perció vsa, han in baratto di mercantia con quelli che habitano vicino al mare, chiamati Ingri, & che habitano anco al basso presso le fiumane, doue é paese caldo che questi hanno legna, et sí baratta con pecore & altro bestiame, & legumi, perche nel resto il paese é sterile, ehe tutti con radice d'herbe, et herbe, Maiz, & qualche poca carne sí sostentano, non perche in quella prouincia di Collao non sía buona quantitá di pecore, ma perche la gente é tanta soggetta al Signore a chi deue prestare obedienza, che senza sua licenza, ó del principale, ó Gouernatore che per suo comandamento sta nella terre, non n'vccide, posto que ancora i Signori: & Caciqui non ardizcano ammazzare ne mangiare niuna se non é con tal licenza.—Il paese é ben popolato, perche non é distrutto dalla guerra, come sono l'altre prouīcie, le sue terre sono di mediocre grandezza, & le case nicciole, le mura di pietra & terra insieme, coperte di paglia.—L'herba che nasce in queste paese, é rara & corta. Ví sono alcuni fiumi peró piccioli: nel mezzo della prouincia é vn gran lago di grandezza di presso cento leghe, & all'intorno di queste lago é il piu popolato paese, in mezzo d'esso sono due picciole Isolette, nell'vna delle quali é vna moschea & casa del Sole, laquale é tenuta in gran veneratione, & in essa vanno a fare le loro offerte & sacrificij in vna gran pietra che é nell'Isola che la chiamano Thichicasa, doue ó perche il Diauolo ví si nasconde, & gli parla ó per costume antico, como glié, ó per altro che non s'é mai chiarito, la tengono tutti quelli della prouincia in grande stime, & gli offeriscono oro & argento, & altre cose. Ví sono meglio di secento Indiani al seruitio di questo luogo, & piu di mille donne, che fanno Chicca per gettarla sopra quella pietra."

[3] See note 10.

[4] *Primera Parte de la Crónica del Perú,* Vedia, II. Cap. CIII, p. 445.

[5] Fray Alonzo Ramos Gavilan: *Historia de Copacabana,* edited by Father Rafael Sans; the original, to which I shall refer with greater detail in the last part of this monograph, is from 1621. Part I, Cap. XV, p. 21: "A lo dicho ya sobre el de Titicaca añadirémos que era el mas visitado del reino y de tamañas riquezas, las

que es fama comun echaron los indios a la laguna cuando entraron a la isla los primeros españoles con el capitan Illescas.''

[6] From the above it seems that Illescas had with him *more* than one soldier, whereas the first visit was by only two men. About the supposed visit of Illescas to Copacavana in 1536 see note 8.

[7] The source here mentioned is a doubtful one in so far as the author, an expelled monk by the name of J. Vizcarra F., from La Paz, Bolivia, pretends to give a synopsis of a work written and published in 1628 by Fray Baltasar de Salas (an Augustine), under the following title: *Excertas Aymáru—Aymára sobre de los Origenes de las Gentes deste Nuev-Orve Me Mrl. dirixido a la C: M: de Don Felipe Qvarto, N: Portntsmo Rey de las Españas, y Monarcha ynvictíssimo deste Nuevo Orve: por su hvmilde siervo Don Fray Baltásar de Sálas, fixo augustiniano: Quien fizo empremir* ESTA PARTE *desde los folios 141 fasta los 255 conlas licencias mvy conformes a Decreto del 13 de Marzo de 1625, Expetito en Roma por N: S: S: P: VRBANO OCTAVO,* etc. The remainder of the so-called facsimile is manifestly from the pen of Vizcarra. At the bottom of this title-page stands: *Antverpiae Exofficina Plantiniana, Apud Balthasarem et Ioánnem Moretos.—M. DC. XX. VIII.* The title given by Vizcarra to his production is: *W: T: Copacabana de los Incas Documentos Auto-linguisticos é isografiados del Aymáru-Aymára Protógonos de los Pre-americanos,* La Paz, 1901.

The whole is such an incongruous mass of more or less disjointed abstracts from Salas, pretended facsimiles, ridiculous and badly executed wood-cuts, and notes and discussions by Vizcarra which create the impression of being the work of an utterly disordered brain, that at first sight one throws away the book in disgust. Still there can hardly be any doubt of the existence of the work of Salas or at least of a fragment, in the hands of Vizcarra. The latter is believed (at La Paz) to have obtained (how is not definitely known) a number of ancient documents touching Copacavana, which he carefully conceals. The book of Salas had to be shown to the vicarial chapter of La Paz, and in consequence of it that ecclesiastic authority issued the following:

Permiso.

''Obtuvimos para copiar y reimprimir el Memorial histórico-linguístico del Padre Salas, impreso en 110 fojas el año mil, seicientos y veintiocho. Dicho fascículo se lee de pág. 141 á 255, inclusive; y, el mismo que, adjunto á cuatro legajos manuscritos, y estampados con el presente en conjunto, han merecido el siguiente AUTO. . . .

''Vicaría Capitular de la diócesis de La Paz, á veintiseis de Enero de mil novecientos y uno.

''No conteniendo nada opuesto á la doctrina Católica, segun la precedente censura de S:S: el Canónigo Doctoral, el libro 'Copacabana de los Incas' PARTE PRIMER—Que se propone reimprimir el Presbítero occurrente, concédese la licencia que para el efecto se solicita.

''Machicado.

''Larrea-Secretario.''

Hence the work of Salas exists, although probably not intact. If the abstracts that Vizcarra claims to give are genuine, then Salas must have been as insane as his modern editor. But no reliance can be placed upon quotations even. I limit myself to referring to pages iv–vii, where he states that Bartolomé Las Casas came to Peru in 1525(!), *six years before Pizarro,* and that he held a long parley—*in Spanish*—with an Indian girl in the vicinity of Cuzco! For other evidences of an utterly deranged mind, the book bristles with them, and, what is worst, it is next to im-

possible to discriminate between what is from Salas and what from the other. Nevertheless I cannot discard absolutely some of the material published by Vizcarra and shall have to refer to it occasionally, always with due reserve. .There is no doubt that he has incorporated in the hopelessly confused text of his work some statements based upon documentary evidence, but manipulated and altered them in such a manner as to throw a cloud on their authenticity. However, the core may, in some cases, be separated from the rubbish under which Vizcarra (and, perhaps, Salas himself?) has buried it. One of these cases is the following: On pages 324 and 525 he cites a document attributed to Fray Francisco de Gamboa, Augustine, dated Copacavana, July, 1620, in which that ecclesiastic is made to state: "Doy ffé Yo Fray Francisco de Gamboa, religioso Ermitaño de S: Augustin, que hube recogido cuarentidos Expedientes entre procesados absueltos, y entre cursantes, de las 'Fundaciones de Encomiendas' para Doctrinas de Indios Culláwas." Thus far probably Gamboa. What follows recalls Vizcarra, although there may be some original passages. "Entre los mas antiguos y principales de ellos, existen vários de mucha importancia para los ANALES de CCOPAKAWANA—cuyos trasumptos los ffice escrebir segun el presente—INVENTARIO de ENCOMIENDAS.—"*eK.*) Comarcas del.Inca Ccopakawa, eran siete el año mill y quinientos y treinta y seis. En el cual año 1536, fueron reducidas á una sola Doctrina de las Sacras Cruces, por Cédula firmada y sellada de mano própia de Don Pedro Anzurez y Henriquez de Campo-redondo; Don Diego Illescas, con sesenta arcabuceros; Don Sebastian Belalcazar, con sesenta arcabuceros. Con los Padres del Orden de S:Francisco tres Sacerdotes, y dos Laicos, es de saber: Fray Francisco de los Angeles Morales, y Fr. Francisco de la Cruz Alcozér, y Fray Franco. de STa Ana La Roca, y Fr. Matteo de Xumilla, y Fr. Alonso de Alcañices. Con otros cuarenta vecinos de España, venidos en dos armadas. La una de Quito por el Ccosscco y el Aricaxa. La otra de Lima por Arekypa y el Lupaka . . ." There are six more of these "Repartimientos" mentioned, all, however, on the Peruvian and Bolivian mainland. One is from the year 1557, three from 1538 and two from 1539. At the end stands the following: "De todo lo que certifico en Copacavana y Julio de 1620: && Fray Francisco de Gamboa." The mention of the presence of *Franciscans* at Copacavana in 1536 is somewhat surprising. One of the chroniclers of the Franciscan order in Peru, Fray Diego de Mendoza, in *Chrónica de la Provincia de S. Antonio de los Charcas del Orden de NRo seraphico P. S. Francisco, en las Indias Occidentales, Reyno del Perú,* Madrid, 1664, Lib. I, Cap. II, p. 10, states that Fray Marcos of Nizza came to Peru in 1532 and was present at the affair of Caxamarca with his six companions of the order: "Vino con seis Religiosos nuestros por su Comissario al Peru, año, de mil y quinientos y treinta y dos, y se halló con sus compañeros, y los Religiosos de Nuestro Padre S:Domingo en la prision, y muerte de Athahualpa, ó Atabalipa Rey Inga, segun el mesmo da testimonio, y lo refiere el Obispo de Chiapa." This reference is to the notorious book of Las Casas: *Breuissima relacion dela destruycion delas Yndias.* I quote from the Italian and Spanish version published in 1643, at Venice, by Giacomo Castellani under the title of *Istoria ó Breuissima Relatione della Distruttione dell' Indie Occidentali,* p. 114: "Yo fray Marcos de Nica de la orden de Sant Francisco, comissario sobre meros Christianos entraron en las prouincias del Perú, que fué de los primeros religiosos, que con los pri-

meros Christianos entraron en las dichas prouincias, digo dando testimonio verdadero de algunas cosas, que yo con mis ojos vi en aq̃lla tierra. . . .'' Among the occurrences Fray Marcos *saw*, no mention is made by him of the Caxamarca episode, but (p. 115) he claims (par. 14): ''Item soy testigo, & doy testimonio, que sin dar causa, ni occasion aquellos Yndios alos Españoles, luego, que entraron en sus tierras, despues de auer dado el mayor Cacique Atabalipa, que era Señor de toda la tierra mas de dos millones de oro alos Españoles, y auiendoles dado toda la tierra en su poder sin resistencia, luego quemaron al dicho Atabalipa. . . .'' The assumption that Fray Marcos was in Peru with his six companions already in 1532 is therefore gratuitous. It is also very doubtful if any Franciscan monks *could* have been in Bolivia in 1536. The coast was then blockaded by the Indians, and there was no communication with the interior. Fray Francisco de la Cruz was at Lima in 1535, according to Father Bernabé Cobo, S.J.: *Historia de la Fundacion de Lima*, from 1639, Lima, 1882. ''El principio que tuvo en esta cuidad la órden del seráfico padre San Francisco pasó de esta manera: al mismo tiempo que se fundó la ciudad, en el repartimiento de solares que el Marqués Pizarro hizo entre los pobladores, señaló sitio para convento de San Francisco en la cuadra en que ahora está fundado el de Santo Domingo, . . . Y como entonces se hallase presente un fraile Francisco de la Cruz, levantó en él una pequeña capilla ó ramada, y en ella dijo misa y predicó algunas veces al pueblo; ausentóse este Religioso dentro de breve tiempo, y no quedando otro de su órden dejó yermo y desamparado aquel lugar ó solar. . . .'' Further on it is stated: ''Tomó [Francisco Pizarro] posesion de este sitio y dió principio al edificio del Monasterio el año de mil quinientos cuarenta y seis [should be 1536], y fué su primer Guardian el padre fray Francisco de Santa Ana, el cual hubo de sacar este sitio de poder de ciertos vecinos poderosos que se habian entrado en él y edificado casas y huertas, y los primeros que en él edificaron fueron Cristóbal Burgos, Francisco de Godoy y Antonio Picado secretario del Marqués Pizarro.'' Two of the Franciscans mentioned in the book of Vizcarra could, therefore, hardly have been at Copacavana in the year 1536. (I do not reject the possibility of their having been there a few years later.) It is not to be overlooked, also, that the first missionary on the Lake-shore was the Dominican Fray Tomás de San Martin, according to Melendez. (See note relative to it in Part I.) While there is, probably, considerable truth in the statements of Father Francisco de Gamboa, it is evident, as I shall show further on, that the dates are not reliable or have been tampered with by Vizcarra, either from incompetency or intentionally. Whatever may be the date of the ''Encomienda'' of Copacavana, it establishes the fact that there were, probably about 1538 or 1539, seven ayllos at Copacavana and on the Islands. According to Diego Garcia de Villalon (*Sobre restitucion de indios*, in *Documentos inéditos sobre la Historia de Chile*, Vol XII, p. 204), Francisco de la Camara was, if not the first, at least one of the first ''Encomenderos'' of Copacavana.

[8] Vizcarra: *Copacavana de los Incas*, p. 324—*Inventario de Encomiendas:* ''En el cual año 1536, fueron reducidas á una sola DOCTRINA de las Sacras CRUCES, por Cédula firmada y sellada de mano própia de Don Pedro Anzures y Henriquez de Campo-redondo; Don Diego Illescas, con sesenta arcabuceros; Don Sebastian de Belalcazar, con sesenta arcabuceros. Con los Padres [see *ut supra*]. Con otros cuarenta vecinos

de España, venidos en dos armadas. La una de Quito por el Ccossco y el Aricaxa. La otra de Lima por Arekypa y el Lupaka. . . .'' On p. 59 he gives an abstract(?) from a document dated Koati, June, 1618, and signed by Fray Baltásar de Salas and others, in which it is asserted that in 1536 the Franciscans aforementioned planted seventy-five crosses along the Lake-shore from Copacavana to Pomata. The crosses were of wood brought from Aricaxa (now Larecaja). This is accompanied by a note: ''Renovamos las Cruces de cincuenta años atras.'' If the quotation is from an authentic text it throws an unfavorable light upon the reliability of Father Salas's statements.

Had there been one hundred and sixty Spaniards at Copacavana in 1536, they would have been compelled by duty and honor to go to the relief of Cuzco, where Hernando and Gonzalo Pizarro were then in the worst of plights.

The proof that neither Anzures nor Belalcazar were anywhere near Peru in 1536 is easily furnished. About Belalcazar no documentary evidence need be quoted, for it is well established and known that he was north of Peru, in Ecuador, at the time. As to Anzures, he returned to Peru in 1538! (*Exposicion de Hernan Jimenez acerca de las desavenencias de Pizarro y Almagro,* in *Documentos inéditos para la Historia de Chile,* Vol. VII, p. 256.) He had been sent to Spain by Pizarro, whence he returned early in the above year (Antonio de Herrera: *Historia general de los Hechos de los Castellanos,* etc., edition of 1729, Decada VI, p. 61). Hence he could not be at Copacavana with an armed force in 1536.

[9] The only place whence a Spanish troop could have reached the Lake in 1536 would have been Arequipa, but the date of the foundation of the first Spanish establishment in that valley is yet in doubt, 1535 and 1537 being variously mentioned. The Spanish town was officially founded in 1540.

[10] *Historia del Nuevo Mundo,* Vol. IV, p. 59: ''Sea lo uno ó lo otro, la estatua fué llevada á la ciudad del Cuzco por el Marques D:Francisco Pizarro, que envió á tres españoles por ella.'' I find, as yet, no confirmation of this statement.

[11] *Historia de Copacabana,* edition Sans, 1860, Cap. XV, p. 21. (See note 5.)

[12] *Copacavana de los Incas,* 33: ''Y cuando llegaron á la Península los Capitanes Alzures y los Illescas, con los Padres franciscanos, aunque intentaron en 1536, no pudieron llegar á esta, por falta de tiempo, y porque la creyeron como á la del Sol estar yerma y desierta.'' He gives no authorities for this statement, and it is probably one of his usual surmises.

[13] Manuel de Espinall: *Relacion hecha al Emperador de lo sucedido entre Pizarro y Almagro,* in *Doc. de Indias,* Vol. III, p. 192, June 15, 1539: ''En este medio tiempo, vino á la dicha ciudad del Cuzeo el gobernador D: Francisco Pizarro. . . .'' He further states: ''En este medio tiempo, vino á la ciudad del Cuzco el dicho Obispo.'' The Bishop mentioned was Fray Vicente de Valverde. In his *letter to the Emperor,* dated March 20, 1539, Valverde says: ''Yo llegué á esta ciudad Del Cuzco un lunes, 28 de Noviembre 1538, donde hallé al gobernador D:Francisco Pizarro. . . .'' It is not unlikely, therefore, that it was in 1538 Pizarro sent the three men alluded to by Cobo (see note 10) to get a statue, half silver, half gold, from the Island of Koati.

[14] *Relacion hecha al Emperador,* p. 192. (See note preceding.)

[15] Almagro the Younger: *Acusacion contra Don Francisco Pizarro á S:M:,* in *Doc. de Indias,* Vol. XX, p. 330: ''Queriendo entrar en la dicha laguna

de Titica ahogó ciertos españoles por los hacer entrar en la dicha laguna'' (p. 455). *Declaration by Joan Rodriguez Barragan:* ''Lo otro, quel dicho Hernando Pizarro por ir á robar el oro y plata questaba en la laguna de Titiaca, se aogaron en la dicha laguna diez ombres de los que llebó consigo á buscar la dicha plata por su culpa é causa por el dicho robo, é por les mandar acometer á cosas peligrosas en la dicha agua.'' Cobo: *Historia del Nuevo Mundo,* IV, p. 64. (See note following.)

[16] That the principal sacred objects were secreted before the time the Spaniards appeared in any number at Copacavana, is variously stated, from hearsay. Garcilasso de la Vega (*Comentarios reales,* 1609, Vol. I, Lib. III, Cap. XXV, fol. 80), *however,* quotes F. Blas Valera: ''y q̄ luego que los Yndios supieron la entrada de los Españoles en aquella tierra, y q̄ yuan tomando para sí quanta riqueza hallauan; la echaron toda en aquel gran lago.'' On what authority Father Valera (born in Peru, 1551, according to Saldamando) made this statement, is not said. Cobo, *Historia del Nuevo Mundo,* IV, p. 64: ''Porque, estando un dia en gran fiesta y regocijo, cuentan que oyéron unas tristas voces, y de ahí á un rato se metió por entre ellos un ciervo á todo correr, de lo cual los agoreros pronosticaron la noticia que los españoles tenían de su santuario y tesoros que en él habia y la breve venida que habian de hacer á él, como en efecto pasó; se dieron tan buena mano en esconderlos, que nunca han parecido.—Presúmese que los trasladaron á otras islas; aunque otros dicen que los ministros que á la sazon aqui estaban, ó los enterraron ó echaron á la laguna, porque no les gozasen los españoles.'' Also Ramos: *Historia de Copacabana,* edition of 1860, p. 21. I do not quote Calancha, since he copies mostly from Ramos.

[17] *Primera Parte de la Crónica del Perú,* Vedia, II, p. 443, Cap. C: ''Antes que los Ingas reinasen, cuentan muchos indios destos collas que hubo en su provincia dos grandes señores el uno tenia por nombre Zapana y el otro Cari, y que estos conquistaron muchos pucares, que son sus fortalezas; y que el uno entró en la laguna de Titicaca, y que halló en la isla mayor que tiene aquel palude gentes blancas y que tenian barbas, con los cuales peleó de tal manera, que los pudo matar á todos.'' In *Segunda Parte de la Crónica,* also called *Del Señorio de los Incas,* Madrid, 1880, Cap. IV, p. 4, he not only confirms his previous statement but gives the source whence it was obtained by him. ''Chirihuana, gobernador de aquellos pueblos que son del Emperador, me contó lo que tengo escripto. . . .'' Hence the tale might be uncontaminated Indian lore.

[18] *Historia de las guerras civiles del Perú,* Vol. III, Cap. XLIX, p. 421, *et seq.* Analogous tales are contained in the anonymous *Conquista y Poblacion del Perú,* in *Documentos inéditos de Chile,* to which I shall also refer in detail in the last chapter of this monograph.

[19] The approximate date of the occupation of Titicaca by the Cuzco people is about 1475. (See the two chapters following.)

[20] This is concurrently stated by the Augustine monks who wrote on Titicaca in the first half of the seventeenth century. Ramos, *Historia,* etc., p. 5, speaking of Tupac Yupanqui, to whom the occupation of the Island is attributed: ''Luego se declaró soberano absoluto de la isla, y mandó salir de ella á sus habitantes naturales, y sin darles audiencia los trasladó al pueblo de Yunguyo, pues no eran los mas morales ni los mas aparentes a sus intentos'' (p. 14). ''El haber sacado el Inca á los naturales de la isla trasladándolos á Yunguyo fué porque quiso poner de custodios del famoso adoratorio del sol á gentes

de su confianza.'' Fray Antonio de la Calancha (*Corónica Moralizada,* Vol. II, Lib. I, Cap. II) merely copies Ramos, and so does Fray Andrés de San Nicolas: *Imágen de N. S. de Copacavana,* etc., Madrid, 1663. The Jesuit Cobo, who wrote at length on the Island (which he visited from Copacavana), also states: ''La gente que habitaba la isla de TITICACA era natural de Yunguyo, á la cual envió el Inca á su pueblo, reservando algunos viejos que diesen razón y enterasen en los secretos de la isla á los que de nuevo hizo la habitasen. Porque, en lugar de aquella gente desposeida, metió otra traida del Cuzco, de quien tenía la satisfaccion y crédito que la gravedad del caso requiría.'' That the original inhabitants of Titicaca were Collas, that is, Aymará, is asserted by both Augustines and Jesuits. I merely refer to Ramos, *Historia,* p. 4, and to Cobo, *Hist. del N. Mundo,* IV, p. 55. Father Ludovico Bertonio, S.J., asserts that the Lupacas occupied the western Lake-shore (*Arte y Grammatica mvy copiosa dela Lengva Aymara,* 1603, reprint by Platzmann, 1879, p. 11), and the same is intimated by Ramos (pp. 11 and 27).

The fact of the establishment of women who had to devote at least part of their existence to ceremonial purposes is variously stated. Ramos: *Hist.,* p. 5, *et seq.;* Anello Oliva, *Historia del Perv,* etc., 1631, published at Lima, without date, about 1893.

[21] If the statements of Calancha are reliable, the islands were inhabited in 1589. *Corónica Moralizada,* Vol. II, Cap. XIV, fol. 78: ''A otros Religiosos cometieron el entrar á dotrinar en las islas, de que tanto dejámos dicho, que están en la gran laguna Titicaca, donde avia gran multitud de Indios; algunos con titulo de sus labranças, ó comercios, muchos por huir de la doctrina, i de el trabajo, otros por asistir en sus guacas, i adoratorios acõpañando á sus idolos, i todos, ó los mas, tenian de cristianos solamente ser bautizados.'' The Augustines took possession of the mission of Copacavana in 1589, and the above passage relates to their actions immediately after they had established themselves there. See also Lopez de Velazco: *Geografía y Descripcion universal de las Indias* (written in the years 1571 to 1574, published by Justo Zaragoza, Madrid, 1894).

In regard to the decree of the Conde de la Gomera, reference to it is found in Ramos: *Historia,* p. 20: ''Siendo Gobernador de Chucuito el Conde de la Gomera hizo sacar todos los indios incultos de las islas. . . .'' The province of Chucuito did not embrace Copacavana, nor the Islands of Titicaca and Koati, which pertained to Omasuyos; it is therefore unlikely that the decree of the Corregidor of Chucuito should have affected the Indians of that district.

[22] *Orígen de los Indios de el Nuevo Mundo,* edition of 1729, p. 75: The lagune of Titicaca ''tiene Islas, que antiguamente se habitaron, i labraron, aora están desiertas.'' This passage is also in the first edition, published in 1607, so that the information is from the end of the sixteenth or the beginning of the seventeenth century.

[23] *Corónica Moralizada,* Vol. II, fol. 31: ''En las Yslas q̄ contiene su archipelago, i como mayor en la de Titicaca, ay gran cantidad de Yndios, ó fugitivos de la dotrina, ó agraviados de los Corregidores, i Caziques, ó pescadores para grangerias, i no avrá pocos para asistir á la supersticion de sus idolatrias.'' The second volume of Calancha's work was published in 1653.

[24] There is to-day on the shores of the Copacavana Peninsula a site bearing the name Chachapoyas. That some Indians from that remote northern part of Peru may have been carried along with the Inca war-parties to the Lake-basin is not impossible. Ramos: *Historia,* p. 9: ''Pero, a pesar

de esa órden imperial, las mas estan perdidas que ni los apellidos se hallan, aunque existen todavia las estancias de los Chachapoyas, Cañares, Canas y alguna otra.'' He asserts that the Indians from Chachapoyas were among Tupac Yupanqui's followers.

[25] *Tomo Primero de las Ordenanzas del Peru,* 1752; *Ordenanzas de Toledo,* November 6, 1573, Lib. II, Tit. IX, Ord. VIII, fol. 145: ''ITEN, mando, que ningun Indio, ni India apriete las cabezas de las criaturas recien nacidas, como lo suelen hazar para hazerlas mas largas, porque de averlo hecho se les a recrecido, y reerece daño, y vienen a morir dello . . .'' Thirteen years later, the Corregidor of the province of Collaguas (Department of Arequipa, Peru), Joan de Ulloa Mogollon, in his report dated January 20, 1586: *Relacion de la Provincia de los Collaguas,* etc., in *Relaciones geográficas de Indias,* Vol. II, p. 40: ''Estos Collaguas, antes de la visita general que se hizo por mandamiento del excelentísimo virey don Francisco de Toledo, traian en la cabeza unos que llamaban en su lengua CHUCOS, á manera de sombreros muy altos sin falda ninguna, y para que se pudiesen tener en la cabeza, se la apretaban á los niños recien nacidos tan reciamente, que se la ahusaban y adelgazaban alta y prolongada lo más que podían, para memoria que habian las cabezas de tener la forma alta del volcan de donde salieron. Esto les está ya prohebido por ordenanza.'' Of the Indians of ''Cavana'' he says: ''Estos son muy diferentes en la cabeza á los Collaguas, porque, recien nacidos los niños é niñas, se la atan y la hacen chata y ancha, muy fea y desproporcionada; la cual se atan con unas cuerdas blancas á manera de mechas, y dando muchas vueltas alrededor, quedan las cabezas ensanchadas. Estáles prohibido ya esto por ordenanza. Conócense bien en la hechura de las cabezas el ques natural de Cavana y el ques Collagua, que, como está dicho, los Collaguas se ahusan la cabeza larga y estos Cavanas ancha y chata.'' The Indians of Cavana are Quichuas, those of Collagua spoke the Aymará language (p. 43). The Indian Salcamayhua, in his *Relacion de Antigüedades deste Reyno del Pirú,* written probably about 1613, but published in the original text at Madrid in 1879, in *Tres Relaciones de Antigüedades peruanas,* attributes the custom to the commands of the Inca war-chief Lloque Yupanqui (p. 253). This is purely an imaginary statement and explanation of the origin. Says Cobo (*Historia del Nuevo Mundo,* IV, 176): ''Unas naciones las hacian anchas de frente, apretándolas, para darles esta forma, con unas tablillas fuertemente liadas. Los Collas formaban la cabeza larga y puntiaguda . . . y para dar esta figura á las cabezas de los niños, las liaban y apretaban con vendas, y las traian así hasta edad de cuatro ó cinco años, que ya quedaban endurecidas y amoldadas á su tocado, largas, ahusadas y sin colodrillo.'' He affirms to have yet seen some old men with deformed skulls.

[26] That the sandal (''ayanque'' on the coast of Peru, and ''ojota'' in Aymará of Bolivia) was the primitive foot-gear of the Indians needs no references to early information. It is well known and established.

[27] Pulmonary affections were also noticed by us. We know of two cases, one of which a boy about sixteen years old, the other a young married woman.

[28] The disease is looked upon as venereal by the Indians, but our cure does not support the belief. Of venereal affections we saw some traces, although the Indian conceals such ailments as much as possible. They certainly exist among them, but I believe them to be less frequent and less violent in the Sierra than on the coast.

[29] It may not be devoid of interest to note what Father Cobo, from the

standpoint of knowledge of the seventeenth century, says about the physical properties of the Indian (*Historia del Nuevo Mundo*, III, p. 23 *et seq.*): "Son todos naturalmente flemáticos de complexión; y como la flema natural hace blanda y húmeda la sustancia de los miembros del cuerpo, tienen muy blandas y delicadas carnes, y así, se cansan presto y no son para tanto trabajo como los hombres de Europa; hace más labor en el campo un hombre en España que cuatro indios acá . . . Junto con ser flemáticos son en extremo grado sanguinos de donde les nace ser excesivamente cálidos, como se prueba en que en el tiempo de mayores fríos y hielos, si se les toca la mano, se les hallará siempre calor notable; y en la poca ropa que visten, que no les sirve de ningún abrigo, más que de cubrir sus cuerpos. Cuando van camino, duermen, aunque sea en muy frios páramos, donde les toma la noche, al cielo descubierto; y acontece caer sobre ellos un palmo de nieve y dormir entre ella con tanto reposo como si estuvieran en blandas y regaladas camas. Echase tambien de ver su excesivo calor, en que tienen unos estómagos más recios que de Avestruz, según la cantidad y calidad de los manjares que gastan. Porque, dejado aparte que son muy groseros y recios sus mantenimientos, los comen ordinariamente casi crudos y sin sazón, y con todo eso los digieren muy presto: y si bien cuando comen á su costa son muy parcos en la comida, con todo eso, comiendo á costa ajena, son unos lobos."

Concerning the diseases most common among the Indians of the Bolivian table-land, the *Relacion de la Provincia de los Pacajes*, in *Rel. geográficas de Indias*, Vol. II, p. 59, from about 1586, has the following: "Las enfermedades que tenían antiguamente eran viruelas, sarampion, cámaras de sangre, y que al presente tienen las mismas y tienen más otras enfermedades, que son bubas, que llaman GUANTI, y mal de corazon, y algunas tercianas y cuartanas que les procede de entrar en los Yungas por COCA, ques tierra caliente. Y para el remedio destas enfermedades no tenían médicos, sólo usaban de la sangría con un pedernal y de una yerba que hay en esta provincia que se dice ARATO, á manera de yerba-buena, la cual comían verde, y molida la bebían; y de otra yerba que se dice CHUQUICAYLLA ques á manera de aulagas, con que se sahumaban para las calenturas; y despues que entraron los españoles tuvieron conocimiento de una resina que se dice YARETA, á manera de trementina, ques para sacar frios y dolores."

[30] This is already recorded in the report of July, 1534: *Relatione per Sva Maesta*, etc. *Ramusio*, III, fol. 413: "Le sue terre sono di mediocre grandezza, & le case picciole, le mura di pietra & terra insieme, coperte di paglia." Cieza: *Primera Parte de la Crónica*, etc., Cap. XCLX, p. 442: "Los pueblos tienen los naturales juntos, pegadas las casas unas con otras, no muy grandes, todas hechas de piedra, y por cobertura paja, de la que todos en lugar de teja suelen usar." Cobo: *Hist. del N. Mundo*, IV, p. 166: "En la Sierra hacen las casas de piedra y barro y las cubren de paja. La piedra es tosca y puesta sin órden y concierto, mas que la van asentando y juntando con pelladas de barro." These descriptions, from 1534, 1550, and 1653, respectively, agree fairly well with the present appearance of Indian dwellings, less the few modern improvements mentioned in my text.

[31] *Archaeological Reconnoissance into Mexico*, second edition, p. 129.

[32] Cobo, in *Historia*, etc., IV, p. 163, describes the villages of the Sierras very well, also on pp. 166 and 167, but does not mention store-houses.

[33] Cobo: *Historia*, etc., IV, p. 171: "La cama que usan los de la sierra y tierra fria, es una manta gruesa de lana, llamada CHUSI, tendida en el suelo; la mitad les sirve de colchon y

otra mitad, que doblan por los piés, de cobertor ó frezada, y suelen dormir metidos en un Chusi todos los de una casa, padres é hijos, aunque los que van entrando en policia, por la honestidad, apartan yá camas . . . En todas partes duermen con el mismo vestido que traen de dia, excepto que los varones se quitan la Yacolla y las mujeres la Lliclla.'' This custom of sleeping together on one Poncho, so to say, is already mentioned in the sixteenth century. The Licenciado Joan de Matienzo, one of the most distinguished, and at the same time most studious in matters of the Indian, of the members of the royal Audiencia of La Plata (now Sucre, Bolivia), who came to Peru in 1559, states in *Gobierno del Perú con todas las cosas pertenecientes á él y á su historia,* MSS. at Lenox Branch of N. Y. Pub. Library, fol. 40: ''Y porque de dormir en el suelo les uienen enfermedades que se mande que tengan barbacoas en que duerman y porque el Padre y la Madre y hijos y hijas estan en vn boijo todos juntos y duermen juntos que se haga en cada casa o boijo un apartam*TO* en que esten las hijas y no como bestias.'' Like many salutary measures of the Spanish government, this one remained a dead letter in the interior. We saw many families on the Islands living and sleeping together in one room and partly on the floor, so to say, ''in a heap.''

[34] The guinea-pig (''cuy'' in Peru, ''*conejo*''—the Spanish for rabbit—in Bolivia) is indigenous; the hog is imported from Europe. Occasionally a cross of the domestic pig with the javalí of the forest is met with. There was such a specimen on the Island. It recalled the European wild boar in appearance and its meat was far superior to that of the common hog.

[35] Compare *Final Report of Investigations among the Indians of the Southwestern United States,* Vol. I, p. 269, and *Archaeological Reconnoissance,* p. 142. We saw, at Challa, on the Island, in the dwelling of the Alcalde Mariano Mamáni, a four-legged stool of stone, well made. It was imbedded in the wall and said to have been found in the Inca ruins of Kasapata. Pedro Pizarro describes as follows the seat used by Atahuallpa (*Relacion del Descubrimiento y Conquista de los Reinos del Perú,* etc., in *Documentos para la Historia de España,* Vol. V, p. 249): ''Estaba sentado este señor en un duo de madera de altor de poco mas de un palmo: este duo era de madera colorada muy linda, y teníanle siempre tapado con una manta muy delgada, aunque estuviese él sentado en él.'' Francisco de Xerez: *Verdadera Relacion de la Conquista del Perv y Provincia del Cuzco,* 1534, reprint of 1891, Madrid, p. 82: ''Y el tirano estaba á la puerta de su aposento sentado en un asiento bajo.'' Cobo: *Historia del Nuevo Mundo,* IV, p. 272: ''No tenían en sus casas sillas escaños ni género de asientos, porque todos, hombres y mujeres, se sentaban en el suelo, sacando los Caciques y grandes señores, que por merced y privilegio del Inca usaban de asiento dentro y fuera de sus casas, al cual llamaban DUHO, y era un banquillo de madera labrado de una pieza, largo dos palmas y alto uno, semejante en la hechura á un animal que tuviese las piernas cortas, la cabeza baja y la cola alta, porque comunmente le daban figura de animal. Tenía la superficie alta cóncava, para que ajustase con la parte por donde se asienta el hombre.'' With the exception of the statement that the right to use such stools was vested in the ''Inca'' and delegated by him to minor chiefs, the statement by Cobo is valuable. The words ''duho'' or ''duo'' are neither Aymará nor Quichua.

In the private collection of Mr. George G. Heye at New York City is a good specimen of a wooden seat from Puerto Rico, and there are two specimens at the American Museum

of Natural History, both from Turks Island. It seems therefore that these stools, or low chairs, were in use among a number of tribes, both in North and South America. Among many other sections I only mention here Nicaragua. Oviedo: *Historia general y natural,* edition of 1855, Vol. IV, pp. 109 and 111, *et seq.*

[36] We were assured, at Tiahuanaco, that the Aymará would not tolerate images of saints in their houses, from fear of the "Santo Ayre" or ill-wind from the saints, a species of disease.

[37] Although, in appearance, the Indian trusts his home and chattels by not locking the door of the former, this is not the result of confidence in his own people. In the first place, there are hardly locks to be seen in the villages of the aborigines, and, besides, he trusts to the magic power of primitive ceremonials that accompanied the construction of the buildings, and to the "Achachila" or "Paccarina" (see later, text and notes). Burglary, therefore, is as good as unknown. What he owns outside of the home and is not in care of special fetishes he guards carefully against robbery, from his own people even more than from whites or mestizos.

[38] Cobo: *Historia,* etc., IV, p. 170: "En todas las casas, por pequeñas que sean, hay su fogón detras de la puerta, el cual es de hechura de un hornillo pequeño, no mas alto que un palmo, cerrado por todas partes, con pequeña boca por donde atizan el fuego, y por la parte alta, dos ó tres agujeros redondos, donde asientan las ollas." This is the kere of to-day, which is usually built by the women, and done quite rapidly, too. Whether the kere, in its present form, is still of the primitive type, is another question.

[39] Taquia is llama dung, the chief combustible in those timberless expanses.

[40] Cobo: *Historia,* etc., IV, p. 170: "Las piezas que usan en este menester son no mas que de dos ó tres maneras; ollas de barro sin vidriar, en que antiguamente pintaban diversas figuras, como tambien en los cántaros y demas vasijas; platos de calabazas secas, del tamaño de pequeñas porcelanas, barro y de madera; los de palo se dicen MECA, y los de barro PUCU; y cazuelas medianas de barro que llaman CHUAS." The chua is a bowl or a saucer.

[41] *Final Report,* I, p. 269; *Archaeological Reconnoissance,* p. 138.

[42] Cobo, *Hist. del Nuevo Mundo,* IV, p. 168: "Los mantenimientos que encierran son Maiz, Chuño y Quinua, que todas estas tres cosas les sirven de pan, aunque no todas siempre á todos. Suelen las guardar, ó dentro de sus casas en tinajas grandes, ó en algun apartadijo que para esto hacen, ó fuera dellas en unas pequeñas trojes que hacen, bien defendidas del agua." Formerly they kept their better clothing also in vessels of clay. (P. 171.) "Todo esto guardaban en tinajas, que no tuvieron otras arcas, baules ni escaparates." Hence clothing found in large clay vessels is not always an indication of ceremonial usage.

[43] *Historia del Nuevo Mundo,* IV, p. 170.

[44] *Ibid.:* "Para moler cosas pequeñas tienen otra piedra al modo de mortero, algo cóncava, y muelen en ella con otra pequeña y larguilla de la suerte que los pintores muelen los colores." Specimens of these implements are contained in the collections sent by us from the Islands and other parts of Bolivia. See plates, etc.

[45] Cobo, IV, p. 168: "No tuviéron curiosidad en hacer portadas grandes y labradas: todas eran puertas pequeñas y llanas, y las mas tan bajas y estrechas, que parescen bocas de hornos. Por donde, cuando vamos á confessar sus enfermos, no podemos entrar sino doblando el cuerpo y á casi gatas."

[46] Cieza, *Primera Parte,* etc., Cap.

xcx, p. 442: "Los dias y noches son cási iguales, y en esta comarca hace mas frio que en ninguna otra de las del Perú."

[47] Cobo, IV, p. 167: "Lo tercero, que ni casas de nobles ni de plebeyos tenian puertas fijas y asentadas para abrir y cerrar: solo usaban de unos cañizos ó zarzos con que tapaban la puerta cuando cerraban; y si iban fuera y no quedaba nadie, arrimaban al cañizo algunas piedras, y no usaban de mas cerraduras, llave ni defensa." This (aside from other testimony) shows that the door is a European introduction.

[48] *Historia*, IV, p. 171.

[49] The word "chuco" is Quichua. Fray Torres Rubio: *Arte y Vocabulario de la Lengua Quichua*, edition of 1754, fol. 155—"Chhuccu, Birrete, ó Capacete de Indios." Cieza: *Primera Parte*, Cap. III. Cobo: *Historia*, IV, p. 176. Pedro Pizarro: *Relacion*, p. 261. Ulloa Mogollon: *Relacion de la Provincia de los Collaguas*, p. 40.

[50] *Historia del Nuevo Mundo*, IV, p. 159 *et seq.* Yacolla and chuspa are both Quichua words. Torres Rubio: *Arte y Vocabulario*, fol. 106, Part I, for Yacolla, p. 85 for Huaras, and p. 82 for Chuspa or Chhuspa.

[51] The lliclla, or lliclle, is also called "aguayo" and is, at the present time, a small piece of handsomely woven cloth, like a handkerchief, or what in French is named *foulard*. The cumbi or pampacona is yet seen in Bolivia on the heads of women from south of La Paz and elsewhere. The vincha, or uincha, is worn as a headband by the women around Charassani; it is from one to two inches wide and beautiful in color and design. Finger-rings are not unfrequently found in ruins; compare the specimens from the Island figured in this monograph. The latter are of copper and of bronze. A handsome ring, of enameled bronze, was found by us on the upper slopes of Illimani in a ruined village.

[52] The ancient needle of copper or bronze is called "yauri." It is not in use at present. The large pins—topo, or tumi—are now mostly made in the shape of spoons, and are sometimes of silver or gold. The mestizo women ("cholas") of Bolivia wear ear-rings, sometimes very long and costly ones.

[53] The word calzón is, as well known, Spanish.

[54] Cobo, *Historia*, IV, p. 163: "Para obrar estos vestidos y ropas, y aun para remendarlas, no tienen necesidad de más instrumentos que de una aguja, que ellos llaman ciracuna, hecha de una espina larga medio jeme, gruesa como las nuestras colchoneras, horadada al cabo y muy puntiaguda; porque con ella y hilo de lo mismo que son los vestidos, las cosen y remiendan, porque no usan para remendar añadir parte de su paño sobre la rotura, como nosotros, sino que van zarciendo con un hilo de la misma lana lo que de la urdiembre se ha gastado." A number of such needles made of thorns or spines were sent by us to the American Museum of Natural History at this city.

[55] Yauri is also the Aymará name for copper. Bertonio, *Vocabulario*, I, p. 124.

[56] Cobo (*Historia*, IV, p. 190) does not mention agricultural implements of stone, but our numerous finds of stone hoes and clod-breakers, on the Islands, in the Cordillera, etc., prove their existence and use. He speaks only of copper and wooden tools. "Los instrumentos de sus labranzas eran pocos, y esos de palo ó cobre y de ningun artificio. El arado ó azadón era un instrumento llamado Taclla, de un palo tan grueso como la muñeca y largo poco mas de dos codos, á manera de zanco. Por donde lo asian estaba torcido como cayado, y en la punta ataban otro palo de cuatro dedos de ancho y uno de canto de otra madera mas recia; y como un palmo antes del remate della tenian asido un gancho

del largor de un jeme, donde hacian Fuerza con el pié izquierdo. Fuera desta suerte de arados tenian otro instrumento de un palo corvo, que hacia forma de hazuela de carpintero ó de almocafre, con que quebrantavan los terrones, escardaban y mulian la tierra; y estos dos instrumentos eran los principales con que labraban los campos. Para escardar los sembrados y hacer los hoyos en que enterraban el Maiz al sembrarlo, usaban de Lampas, que los Mexicanos llaman Coas, y es un instrumento como azada, salvo que el hierro era de cobre, sino llano como pala corta de horno.''

[57] Cobo, *Historia,* IV, p. 208: ''El techo y cubierta de todos estos edificios era de vigas grandes sin clavazón, más que atadas con sogas, y por tejas HICHO largo muy bien asentado.''

[58] We found much ancient rope, made of ichhu-grass, in ruined houses of the Puna. Thongs of Llama-hide and woolen ropes were also used. Today they still use rawhide in preference to hemp. What I say of the Islands concerning modern tools we subsequently noticed on the mainland also.

[59] The complaint over the uncleanliness of the Aymará is general in early sources. No quotations are required.

[60] See note 33.

[61] The pongo (from *puncu:* door, or doorway, since the ancient houses had no doors) is in reality not so much a doorkeeper (except at night) as a general drudge. There are two kinds of ''pongos'' in most houses of whites or mestizos: the ''sala-pongo,'' who is doorkeeper and waiter, and the ''cocina-pongo,'' who carries water, cleans up, washes dishes and helps the cook. The ''mit'-áni'' is usually a female cook, also a maid of all work.

[62] Simon Bolivar, *Decreto,* Cuzco, July 4, 1825, in *Coleccion oficial de Leyes, Decretos, Resoluciones, &ca, de la Republica Boliviana,* Vol. I, p. 34: ''Que la Constitucion de la Republica no conoce desigualdad entre los ciudadanos.'' This is an indirect recognition of the citizenship of the Indians, confirmed in the second decree, of same date. On December 22d of the same year Bolivar decreed (p. 101): ''Que proclamadas por la Asamblea de estas provincias su absoluta independencia, libertad, é igualdad civil, dejaron de ecsistir las clases privilegiadas.'' President Andrés Santa Cruz of Bolivia (*Decreto,* Vol. II, p. 22), speaking of the Indians, calls them ''Siendo estos ciudadanos empleados en el cultivo de las tierras,'' etc.

[63] Changes in policy in regard to Indian lands have been frequent, and I withhold from quoting authorities.

[64] The terracing of slopes for purposes of tillage, and especially the rotation in cultivated patches for the sake of letting the land recuperate, are customs that were common to the land-tilling tribes of Peru and Bolivia long previous to the conquest. Says Garcilasso de la Vega, in *Comentarios reales,* I, fol. 100: ''Y porq̃ eran tan estériles por falta de riego, no las sẽbrauan mas de vn año o dos, y luego repartiã otras, porque descansassen las primeras.'' Like Cieza, he attributes every kind of improvement, also in agriculture, to the Inca. This is not the case. The custom of rotation antedates the time of Inca raids, as well as the construction of terraces on slopes. The latter needs no further proof than the existence of such andenes in sections whither the Incas never penetrated, where they are as abundant as elsewhere, and the existence, on the Islands, of terraces attributed to the ''Chullpa'' or Aymará, and positively stated to be from times long anterior to the first visit of Incas to Titicaca. Inca terraces on the Islands can be easily recognized from their superior workmanship. In regard to periodical redistribution of lands, the Licenciado Falcon, in his *Representacion hecha en Concilio Provincial, sobre los daños y molestias*

que se hacen á los Indios, Doc. de Indias, VII, p. 465, says: "Tambien es necesario advertir que se engañan los que dicen que el Inga daba, y quitaba las tierras á quien queria, y aun los caciques, lo cual no pasa asi, sino fue en la entrada y conquista . . . y no hace al caso que en algunas tierras hasta hoy se repartan las tierras por el curaca á los indios, porque esto es por costumbre que habia en aquellas provincias de antes del tiempo del Inga y dexólos el Inga en ella." This alludes to rotation and redistribution as a custom anterior to the establishment of Inca sway. The well-known Licenciado Polo de Ondogardo, in *Relacion de los fundamentos acerca del notable daño que resulta de no guardar á los Indios sus fueros, Doc. de Indias,* XVII, p. 32, June 25, 1571, states: "Y estas tierras dividian en cada vn año e dividen hoy dia en la mayor parte del rreyno, e yo me é hallado presente á la diuision en munchos é principalmente en la provincia del Collao y en la del Chucuyto, y en este quinto presupuesto pudo entrar por regla general ynfalible que nynguno poseyo por merced del inga, la qual como esta dicho, tampoco diuidian los herederos ny podian disponer della en nynguna manera."

[65] The principal pasturages on the Island are the low grounds at Pucará (m.) and the grassy swellings of Ciriapata. The cattle of the Indians run loose all over the Island.

[66] The same system prevails nearly all over Bolivia, as I shall have occasion to show in my other work on the country.

[67] What to-day is designated by the Spanish name of "comunidades" and "estancias" are *tribes,* each composed of a number of ayllu. The word ayllu is both Aymará and Quichua.

[68] This division, about which I hope to give more data in a subsequent work, is so frequently mentioned in the early sources that no doubt can remain concerning its existence at Cuzco. At the present time it exists in Bolivia under the respective names of Aran-saya and Ma-saya. Although it is stated the Incas introduced it among the Aymará, it is far from certain. A singular statement is found in Ramos' *Historia de Copacabana,* 1860, p. 55, in connection with the finding of the cross of Carabuco (see my paper in the *American Anthropologist,* Vol. VI, No. 5): "Entre los Urinsayas, que son los naturales de un lugar, solia mandar el Inca indios de su confianza para amalgamarlos mejor en las costumbres del imperio y para velar sobre la fidelidad de los nuevos conquistados; a estos forasteros les llamaban Anansayas: dos parcialidades que se miraban con recelo y muchas veces venian a las manos, como judios y samaritanos. . . . Los Urinsayas dijeron a los Anansayas, que eran unos pobres advenedizos sin tierra ni patria propia," etc. This would indicate that the division antedated the appearance of the Inca on the eastern shores of Titicaca.

[69] Also: *Libro de Cassados que Pertenece a este Pueblo de Tiaguanaco,* 1694 to 1728, MSS.

[70] *Ibidem.* An "Inca-ayllu" is mentioned, as from several distinct localities. Even among the Inca at Cuzco there was at least one ayllu with the name of a locality, the "Ayllu Tome-Bamba" (from Tumipampa, in Ecuador), and said to have descended from Huayna Capac (Diego Fernandez: *Primera y Segunda Parte de la Historia del Perú,* 1571, reprint of 1876, at Lima, p. 358). Garcilasso de la Vega, in *Comentarios,* I, fol. 263, confirms. In the *Descripcion de la tierra del Repartimiento de los Rucanas Antamarcas,* of 1586 (*Rel. geográficas,* etc., II, p. 198), it is stated: "Primeramente, se responde al primer capítulo, que esta provincia ó repartimiento tiene por nombre RUCANAS ANTAMARCAS, de un pueblo llamado así, á donde estaban poblados en tiempo de su gentilidad un ayllo ó

parcialidad que ahora se dice asimismo Antamarcas, y están reducidos en otro pueblo que se dice La Vera Cruz de Cauana; y Puesto que en este nombre de Antamarcas Rucanas se comprehenden todos los indios deste repartimiento y provincia, hay en ella cuatro ayllos ó parcialidades, que se nombran así: Antamarca, Apcara, Omapacha, Huchucayllo. Antamarca quiere decir pueblo de cobre, y no tienen los indios noticia por qué se haya llamado así; Rucana quiere decir dedo; Apcara quiere decir fortaleza, y por ser el pueblo cercado de pared y foso se quedó con este nombre . . . ; Omapacha, que es otra parcialidad, quiere decir, en lengua antigua de los propios indios particular, tierra de aguas,'' etc. We have in this instance indications of three changes among the ayllus of the district of the Antamarcas—change in locality since the conquest; change of name, from the original Aymará to the Quichua, probably in three cases. Omapacha is half Aymará, half Quichua. The interpretation by Espada in note (a) has no basis; hence a combination of two languages in one and the same word.

At some future day I hope to be able to present more concrete data relative to the ayllu in Peru and Bolivia. Suffice it to say here, that the ayllu is the clan, modified in its features by time and contact with European elements. But I cannot refrain from quoting, on the subject of origin, a high authority, Father Pablo Joseph Arriaga, S.J.: *Extirpacion de la Ydolatria del Pirv,* Lima, 1621, Cap. VII, p. 40: ''No saben, que procedemos todos de nuestros primeros padres, y assi estan persuadidos no solo que los Españoles proceden de vn principio, y los negros de otro, sino que cada Ayllo, y parcialidad de los Yndios tiene su principio, y Pacarina, que ellos llaman particular, y la nombran, y la adoran, y ofrecen sacrificios; llamandola Camac, que es criador, y cada vno dize que tiene su Criador, vnos dizen, que tal Cerro, otros que tal fuente, otros quentan de sus Pacarinas muchas fabulas, y patrañas.'' The Quichua Pacarina is, in substance, the same as the Machula; and the Achachila of the Aymará. (Cap. II, p. 12.) ''A las Pacarinas, que es de donde ellos dicen que descienden, reverencian tambien. Que como no tienen fé, ni conocimiento de su primer origen de nuestros primeros padres Adan y Eva, tienen en este punto muchos errores, y todos especialmente las cabezas de Ayllos saben, y nombran sus Pacarinas.'' At an early day this belief in descent of the clans from localities is mentioned. I quote, for example, Juan de Betanzos: *Suma y Narracion de los Incas,* 1551, Madrid, 1880, p. 5: Cristóbal de Molina (translation by Markham in *Hackluyt Society Publications,* original at Lima): *An account of the Fables and Rites of the Incas,* pp. 4 to 9. While descent or origin of the Ayllu is placed at specific localities, it is clear that it is attributed to certain *objects,* animate or inanimate, situated at the places mentioned.

[71] The election of alcaldes about the first of January was instituted in the vice-royalty of Peru by Don Francisco de Toledo in 1575. *Ordenanzas del Perú,* Vol. I, Lib. II, fol. 125: ''Que el dia de año nuevo se junten para la eleccion.''

[72] Properly ''hilacata.'' The word alcalde is, of course, Spanish. The office is not, as represented in some sources, an ''Inca'' institution.

[73] *Carta de los principales de Sicasica á la Comunidad de Callapa,* May, 1781, *Archivo boliviano, Documentos,* p. 205; also *Informe* of Fray Matías Borda, p. 220.

[74] The alcalde is not a survival of the ''cacique.'' The latter office was abolished by decree of Bolivar, July 4, 1825. In early times, when the office of alcalde was first established among the Indians, he was in fact the chief

police commissioner of the pueblo. *Ordenanzas para los Indios,* by the viceroy Toledo (*Ordenanzas del Peru,* Lib. II, Tit. I and II, fol. 125 to 134). This implies the military command in case of war, among the Indians, so that the alcalde is in reality the war-chief of his tribe.

[75] It is hardly the place to enter into a discussion of the customs of succession and inheritance which are so decisive in regard to the question of endogamous and exogamous marriage. Evidences in favor of exogamy are numerous among older sources. Even the Cuzco Indians (the Inca) seem, as I shall establish elsewhere, to have had descent in the female line. I limit myself to quoting from the Ordinances of Toledo (*Ordenanzas del Perú,* Lib. II, Tit. IX, fol. 144): "Primeramente, porq̃ entre los indios se acostumbra que cuando la India de vn Ayllo, ó repartimiento se casa con Indio de otro repartimiento, ó Ayllo, y el marido se muere dexando hijos ó hijas, los Caciques Principales cuya era la India antes que se casase la compelen á bolver al repartimiento, y Ayllo adonde era antes, y llevar consigo los hijos que huvo del marido. ORDENO, y mando, que á India de vn repartimiento, parcialidad, y Ayllo que se casare con Indio de otro, dexen los hijos que en ella huviere havido su marido en el repartimiento, parcialidad, y Ayllo donde su padre era tributario, porque alli le han de ser ellos, y ella se passe á su repartimiento, ó Ayllo, si sus Caziques, ó Principales la pidieren dexándola estar algun tiempo con sus hijos hasta que el menor dellos sea de edad de ocho años para arriba, porque no les haga falta su ausencia al tiempo antes." The title of this section is still more conclusive: "Que los hijos sigan y reconozcan el Ayllo, y Parcialidad de su Padre y no él de la Madre." It proves that marriage was exogamous, and also, that succession in the male line was a change introduced by Spanish legislation at the end of the sixteenth century. Whenever a conquering people, by laws or decrees, explicitly either sanctions or abrogates customs of the conquered, such sanction or abrogation is the best evidence of the existence of such customs, at the time when the change was ordained.

[76] At an early day the Aymará were accused of unnatural vices. Crístoval Vaca de Castro: *Carta al Emperador,* November 24, 1542 (*Cartas de Indias,* p. 491): "En la prouincia que he dicho . . . que se llama del Collao . . . sauido como ay yndies que tienen por costunbre de vsar el pecado abominable entrellos, y andan vestidos de ábito de yndias: tengo aqui presos muchos; hazerse ha justicia é ponerse ha remedio en esto. Algunos dizen, en sus dichos, questan diputados para este abominable pecado, para los pasajeros yndios que ván por aquella prouincia, porque no entiendan con las yndias." There are several confirmations of this statement. Even Cieza, who is so decidedly partial to the Indians (especially the Inca) says (*Primera Parte de la Crónica,* Cap. CI, p. 442): "Destos se tiene que aborrecían el pecado nefando, puesto que dicen que algunos de los rústicos que andaban guardando ganado lo usaban secretamente, y los que ponian en los templos por inducimiento del demonio, como ya tengo contado." The latter refers to the coast people (Cap. LXIV, p. 416). Pizarro: *Relacion del Descubrimiento,* p. 280: "Estos indios destas provincias del Collao es gente sucia, tocan en muchos pecados abominables, andaban muchos varones en hábitos de mugeres y en muchas idolatrías." My inquiries on this point were always answered in the negative, and I never observed anything that led me to suspect that such a habit might exist at the present time. It certainly existed, thirteen years ago, among the New Mexican pueblos and was openly practised, in isolated

cases, in the sixteenth century. Compare Gaspar Perez de Villagran: *Historia de la Nueva Mexico,* 1610.

To-day there exists among the Aymará the custom of what might be named a "trial year" before marriage. That this is an ancient habit is proven by it being mentioned anterior to its prohibition by Spanish decrees. Pedro Pizarro, who wrote about 1570, asserts that, previous to marriage, indiscriminate intercourse was permitted with the girls (*Relacion,* pp. 347 and 379). The decree promulgated by Toledo is conclusive (*Ordenanzas del Perú,* fol. 128, *et seq.*): "ITEN, por quanto ay costumbre entre los Indios casi generalmente, no casarse sin primero averse conocido, tratado, ó conversado algun tiempo, y hecho vida maridable entre si, como si verdaderamente lo fuessen, y les parece, que si el marido no conoce primero á la muger, y por el contrario, que despues de casados no pueden tener pas, contento y amistad entresí." It might be, that this trial-year is preceded by some provisional ceremony, but the marriage after primitive custom takes place at the expiration of the twelve months. That the trial year is what I have called it, remains proven by the fact that, at its close, the parties may yet separate and the fact of temporary union is not binding upon either party. If they continue, however, to live together as man and wife, without having their primitive and the church ceremonials performed, they are looked upon as transgressors. The *Constituciones synodales del Arçobispado de los Reyes, en el Perv,* 1613, reprint of 1722, p. 79, Lib. IIII, Cap. VI, fol. 79, ordain: "Porque el Demonio ha introducido entre los Yndios, q̃ quando tratan de casarse con alguna India se amanceban primero con ella, viviendo en ofensa, . . . ; Mandamos: que los Curas, muy de ordinario en sus sermones, les exorten y amonesten ser abuso y grave pecado lo que hazen y que averiguen quienes son culpados en ello, y la tal averiguacion la remitan al Uicario para que los castigue." Arriaga: *Extirpacion de la Ydolatria,* etc., p. 34: "Otro abuso es muy comun entre todos los Yndios oy en dia, que antes de casarse, se an de conocer primero, y juntarse algunas vezes, y assi es caso muy raro, el casarse, sino es, primero, Tincunacuspa, como ellos dizen, y estar tan assentados en este engaño, que pidiendome en vn pueblo, por donde passava, vn Yndio, que le casase con vna Yndia con quien estava concertado de casarse, vn hermano de ella lo contradecia grandemente, y no dava otra causa, sino que nunca se auian conocido, ni juntadose, y de otro Yndio sé yo que aviendose casado no podia ver a su muger, y le dava mala vida, por que dixo que era de mala condicion, pues nadie la avia querido ni conocido antes que se casase."

[77] Arriaga: *Extirpacion,* Cap. VI, p. 32.

[78] The description of mortuary customs by Cieza (*Primera Parte,* Cap. C, p. 443) presents a distorted picture, from insufficient observation, the writer merely passing through the Collao, in 1549. The *Relacion de los Pacajes,* 1586, (*Rel. geográf.* II, p. 61): "Y al difunto le enterraban con los mejores vestidos y ofrecían mucha comida y AZUA . . ." Arriaga, *Extirpacion,* Cap. VI, p. 34: "Hechanles muy disimuladamente chicha en la sepultura, porque bevan, y muy al descubierto cuando les hazen las honras, comidas cocidas, y assadas sobre la sepultura, para que coman. . . ." The Licenciado Fernando de Santillan (*Relacion del Orígen, Descendencia, Política y Gobierno de los Incas,* date about 1565, Madrid, 1879, in *Tres Relaciones de Antigüedades peruanas,* p. 35) affirms it to have been a general custom: "Tenían y creían tambien que los muertos han de resucitar con sus cuerpos y volver á poseer lo que dejaron, y por eso lo mandaban

echar consigo en las huacas, y los ponían á los muertos todo lo mejor que tenían," etc. The broom may be a modern substitute for a weapon.

[79] Arriaga, *Extirpacion*, p. 34: "Esparcen en algunas partes harina de Maiz, o de Quinua por la casa, para ver como ellos dizen si buelve el difunto, por las pisadas, que á de dexar señaladas en la harina."

[80] *Final Report*, I, p. 208 *et seq.*

[81] This is clearly shown in the *Libro de Cassados, of Tiaguanaco* (MSS.).

[82] *Relacion de la Provincia de los Pacajes*, p. 59: "Y el dia de hoy van á Potosí y á otras partes, como son las Yungas, donde se coge la Coca y hacen otros muchos servicios que no hacian entonces." (P. 61.) "Las casas de los caciques y tambos usaron largas y cuadradas, y la madera traían de los Yungas." *Description y Relacion de la Ciudad de La Paz*, 1586 (*Rel. geográf.* II, p. 78): "Entran en los valles calientes, así donde se da maiz como coca, trigo y demás cosas que tengo referidas, y traen del ganado que tienen, que son los carneros desta tierra, y lana dellos y vestidos que desta lana hacen y la sal que hay en su tierra, y con esta compran haciendo trueque del maiz y la coca y demás cosas que en su tierra faltan."

[83] Vol. V, 1895, first quarter, p. 120.

[84] We offered quite a reasonable amount of money at Sampaya for the privilege of seeing and copying one of these pictographs drawn on sheepskin, but in vain. I. I. von Tschudi (*Reisen durch Süd-Amerika*, 1869, Vol. V, p. 314) gives a facsimile of one of these Catechisms, which he found at Copacavana, adding an explanation.

[85] And also sent two to the Museum. For the use of a knotted string (in an analogous manner as the New Mexican Indians used it in 1680 in order to inform all the pueblos of the date fixed for the uprising against the Spaniards) by the Aymará at Copocavana in 1781, see Fray Matías Borda: *Informe* (*Archivo boliviano*, p. 206). The Indian messenger from Tiquina carried a cord or string with a knot in it—"y el citado nudo, desatado que fuese, tambien significaria una especie de carta ó auto cerrado, que él solo tenia la facultad de abrir, ó desatar . . ." As soon as the knot was untied, the Indians attacked the Sanctuary (p. 211).

[86] In primitive times the two meals were quite regular. Cobo: *Historia del Nuevo Mundo*, IV, p. 174: "Comian dos vezes al dia, á las ocho ó nueve de la mañana, y á la tarde, con una ó dos horas del sol."

[87] The use of coca as medium of exchange is already mentioned in the sixteenth century. Garcilasso de la Vega: *Comentarios*, I, fol. 213: "Adelante diremos como la lleuan a Potosí, y tratan y contratan con ella." Also *Relacion de los Pacajes*, p. 63: "Y así el trato principal que hay en esta provincia entre los indios y españoles, es rescatar Coca por carneros y comida que les llevan."

[88] Bishop Vicente de Valverde: *Carta al Emperador sobre asuntos de su iglesia y otros de la gobernacion general de aquel pais*, in *Doc. de Indias*, III, p. 98: "Coca . . . , y vale en esta tierra á peso de oro y es la principal renta de los diezmos." The date of this letter is, Cuzco, March 20, 1539. The use of coca (mastication of the leaves, especially) was much more general in South and Central America than is usually believed. It extended from Nicaragua southward. Oviedo: *Historia*, Vol. I, p. 206: "De la hierva que los indios de Nicaragua llaman yaat, é en la gobernacion de Veneçuela se dice hado, y en el Perú la llaman coca, é en otras partes la nombran por otros nombres diversos, porque son las lenguas diferentes." In Colombia its use was common (*Ibidem*, II, p. 390). Lúcas Fernandez de Piedrahita: *Historia general de las Conquistas del Nvevo Reyno de Granada*, 1688, p. 20. "Porque lo mas de la noche gastaban en mascar Hayo, que es la yerva, que en el Perú

llaman Coca, y son ciertas hojas como las del Zumaque.'' Antonio Julian: *La Perla de la America*, Madrid, 1787, p. 25 *et seq.* Cieza (*Primera Parte*, p. 440), while inclining to the belief that the coca was specially reserved for the high chiefs and the worship of the Inca tribe at Cuzco, says nevertheless: ''En el Perú en todo se usó y usa traer esta coca en la boca, y desde la mañana hasta que se van á dormir la traen, sin la echar della.'' Pedro Pizarro: *Relacion*, p. 270: ''á otros hacer coger coca, que era una yerba quellos traian en la boca muy presciada y con que hacian todos sus sacrificios é idolatrias . . . Teníanla en mucho porque usaban della los Señores y á quien ellos la daban, y no comunmente . . .'' This would indicate that coca and its use were a privilege of a certain class. Its character as an object for sacrifice and its rarity at Cuzco may have given it that appearance, its use (as the above quotations show) was free and general. Santillan: *Relacion*, p. 116: ''En tiempo del inga eran muy pocas las chácaras [of coca].''

[89] I shall refer to that tradition further on.

[90] In 1781, the horrible massacres perpetrated inside of the churches, and repeated at Ayo-ayo and Mohoza in 1899, show how little, at heart, the Aymará cares for the Christian religion.

[91] *Final Report*, I, p. 222.

[92] The term Pachacamac we heard at Tiahuanaco. It is a Quichua importation and rarely used by the Aymará.

[93] These terms are post-conquistorial, but they show the Indian's ideas on these points. Arriaga (*Extirpacion*, Cap. VI, p. 33) gives an illustration of how they made use of the Apostle Santiago to incorporate him in their own circle of spiritual beings: ''En el nombre de Santiago tienen tambien supersticion y suelen dar este nombre al vno de los Chuchus [twins] como á hijos del rayo que suelen llamar Santiago. No entiendo que será por el nombre Boanerges, que les pusso al Apostol Santiago, y a su hermano S:Juan Christo nuestro Señor, llamandoles Rayos, que esto quiere dezir hijos del trueno, segun la frase Hebrea, sino ó porque se avrá estendido por acá la frasse, o conseja de los muchachos de España, que quando truena, dizen que corre cavallo de Santiago, ó porque veran, que en las guerras que tenian los Españoles, quando querian disparar los Arcabuzes, que los Yndios llaman Yllapa, o Rayo, apellidavan primero Santiago, Santiago.'' A very instructive incident is related by the same authority (Cap. XIII, p. 79): ''El octavo, de la intercession de los Santos, y adoracion de las imagenes, porque ellos dizen que son nuestras Huacas, y tienen acerca de esto algunas vezes, como en otras cosas, muchas ignorancias.—Como sucedió en vn pueblo, donde avia quatro imágenes de Santos, y muy buenas de la vocacion de quatro Cofradias, y se averiguó, que algunos no se encomendavan a aquellos Santos, ni les hazian oracion, porque dezian, que aquellos Santos, ya eran suyos, y ellos los avian comprado, y assi ivan a otro pueblo a visitar otros Santos, por las razones contrarias.''

[94] The ''Pu-tu-tu'' is also used during a lunar eclipse and, in general, as a signal of warning in any occurrence or phenomenon that inspires awe or fear to the Indian of Bolivia. We had no almanac at Challa and none could be procured far or near, so we were not aware beforehand of the lunar eclipse of March 10, 1895, and could not witness the ceremonials which the Indians may have performed, but the sound of the pututu disturbed us. Shouting and beating of drums, conch-shells and trumpets of clay and copper, etc., took the place of the cow-horn in primitive times. So in the case of eclipses. Arriaga: *Extirpacion*, Cap. VI, p. 38:

"Lo que vsavan antiguamente en los Elipses de la Luna, que llaman QUILLAMHUAÑUUN la Luna se muere, o QUILLA TUTAYAN, la Luna se escurece vsan tambien aora, açotando los perros, tocando tambores, y dando gritos por todo el pueblo, para que resucite la luna . . . tocauan trompetas, cor-*Comentarios,* fol. 48: "Al eclypse de la luna . . . tocauan trompetas, cornetas, caracoles, atabales, y atambores, y quantos instrumentos podian auer que hiziessen ruydo; atauan los perros grandes y chicos, dauanles muchos palos para que aullassen, y llamassen la luna."

Supay is a Quichua term for evil spirits collectively, but any demon or fiend is Supay also. As little as the Indians had any conception of a supreme God, as little did they have a notion of a supreme devil.

[95] I cannot find this word in Bertonio.

[96] *Zuñi Fetiches,* p. 9.

[97] It would carry me entirely too far, were I to enter into a discussion of this question. That both sun and moon were looked upon as created beings results from every tradition or so-called creation myth as reported in the sixteenth century. Compare, for instance, Cieza: *Segunda Parte de la Crónica del Perú,* Cap. v, pp. a and 6, and Cap. xxx, p. 119; Betanzos: *Suma y Narracion,* Cap. i, pp. 1 and 2; Santillan: *Relacion,* p. 13; *Relacion de las costumbres antiguas de los Naturales del Pirú,* of about 1615, and anonymous; *Tres Relaciones de Antigüedades peruanas,* p. 138; Garcilasso de la Vega: *Comentarios,* I, Lib. ii, fol. 25. It was not the orbs to which a certain worship was offered, but to the *spiritual beings that dwelt in them,* to the Achachilas, Machulas or Pacarinas believed to reside both in the sun and the moon. Sun-worship, so-called, was by no means general, but limited to the Inca of Cuzco. Neither did these look upon the sun as *the* supreme God. It was one of the fetishes most applied to, but not for everything. In this respect the list of places of worship or shrines, at Cuzco and surroundings, given by Cobo (*Historia,* IV, pp. 7 to 47) is very instructive. Arriaga (*Extirpacion,* Cap. ii, p. 11) states: "En muchas partes (especialmente de la sierra) adoran al Sol, con nombre de Punchao, que significa el dia, y tambien debajo de su propio nombre YNTI.—Y tãbien á la Luna, que es Quilla . . . El adorar estas cosas no es todos los dias, sino el tiempo señalado para hacerlas fiestas, y cuando se ven en alguna necesidad ó enfermedad, ó han de hacer algun camino, levantan las manos, y se tiran las cejas, y las soplan hacia arriba, hablando con el Sol ó con Libiac, llamandole su Hacedor, y su criador y pidiendo que le ayude." Pedro Pizarro was eye-witness of the ceremonials at Cuzco, and states that they were performed daily in the square, not only to the sun, but to the bodies of their dead chiefs (*Relacion,* p. 264).

It may not be inappropriate to add here that Pedro Gutierrez de Santa Clara (*Historia de las Guerras ciuiles del Perú,* III, Cap. lvi, p. 486) states: "En toda esta tierra, tamaño como es, que los Ingas señores auian, y todos los yndios que en ella habitauan, adorauan dos dioses, que el vno se dezia Cons y el otro Pachacama, como a dioses principales; y por acessores tenian al Sol y a la Luna (diciendo) que eran marido y muger y que estos eran multiplicadores de toda la tierra; bien es verdad que Cons y Pachacama hazian estas operaciones, mas que no los vian, y a estos dos sí, cada dia y cada noche." This might (if true) recall the "sun-father" and "moon-mother" of the New Mexico pueblos!

[98] While both sun and moon are "Achachilas," among the Aymará, the fetishes chiefly applied to were (and are) the tall peaks of the Andes. This was also the case in those sections of Peru where the snowy

mountains are of great height and striking appearance. Also in Ecuador. *Relacion hecha por mi, Fray Geronimo de Aguilar, de la Dotrina y Pueblo de Caguasqui y Quilca,* etc., 1582, in *Rel. geográficas,* III, p. 126: "Los ritos y ceremonias que tenian estos naturales y los de Quilca en el tiempo de su infidelidad, adoraban al cielo y á los cerros más altos y nevosos; hacian sacrificio de maiz blanco," etc. Fray Juan de Paz Maldonado: *Relacion del Pueblo de Sant-Andres Xunxi* (no date, but from the latter part of the sixteenth century), *Ibidem,* p. 151: "El dicho volcan del Chimborazo está deste pueblo una legua y media; salen dél tres ó cuatro arroyos de agua que llevan diferentes vías. Y alrededor dél, al pié de la nieve, hay hoy dia algunos edificios caidos, donde acudia toda la tierra alrededor á ofrecer . . . Dicen los indios que el volcan del Chimborazo, es el varon, y el de Tunguragua es la hembra, y que se comunican yendo Chimborazo á ver á su muger y la muger al marido, y que tienen sus ayuntamientos . . . En lo que adoran es en el Sol y en la Luna y en estos dichos dos volcanes." Antonio Bello Gayoso: *Relacion que enbio a mandar su Magestad se hiziese desta Ciudad de Cuenca y de toda su Provincia,* 1581, *Ibidem,* p. 179: "Adoraban al sol y la luna, y en particular algunos adoraban en las lagunas y en cerros señalados."

Similar testimony could be adduced from almost every part of Peru, but it would be too voluminous. The question is as to the Inca of Cuzco, and in this respect the writings of Cristóval de Molina (*Fables and Rites of the Incas*) are very interesting. Like Pedro Pizarro (note 96), he states that the fetishes of the sun, of thunder and lightning, were always worshiped together (pp. 16, 20, 21, 24, etc.), at least in the public square. Cieza (*Segunda Parte,* p. 40) professes to give the approximate text of an invocation, in which the head-chief was addressed as follows: "Oh Inca grande y poderoso, el Sol y la Luna, la Tierra, los montes y los árboles, las piedras y tus padres te guarden de infortunio y hagan próspero," etc. The *Relacion de las costumbres antiguas de los naturales del Pirú,* pp. 137 to 140, although not very reliable, should also be considered. Even Garcilasso de la Vega involuntarily admits that the Inca worshiped innumerable fetishes. *Comentarios* I, fol. 75: "Vno de los principales idolos q̃ los Reyes Incas y sus vasallos tuuieron, fue la Imperial ciudad el Cozco, q̃ la adorauan los Yndios como cosa sagrada." Besides the sun (to which he of course assigns the first place), he mentions (fol. 76 *et seq.*) the fetishes of the moon and of several stars, of thunder and lightning, and of the rainbow. Finally he gives an explanation of the term "huaca" that is exactly the Achachila cult as we found it among the Aymará (fols. 29 and 30). He says: "las muchas, y diuersas significaciones que tiene este nombre Huáca: el qual . . . quiere dezir ydolo, como Jupiter, Marte, Venus." It would be too long to quote the remainder of Chapter IV, Book II, in which he enumerates the manifold objects to which the name was given. The clearest and most positive statement, however, is found in Arriaga: *Extirpacion,* Cap. II, but it is also too lengthy to be incorporated here.

The fact that the Aymará of the Bolivian Puna and Lake basin regarded as their principal fetishes the summits (strongly individualized) of the Andes, repeatedly mentioned (*Descripcion y Relacion de la Ciudad de La Paz,* p. 71): "Hay otra adoracion que se llama Hillemanna [Illimani, properly Hilaumani], ques una sierra alta cubierta de nieves que perpetuamente se hacen," etc. Speaking of the Indians of Pucarani, a village situated south of the Lake and between it and La Paz, Fray Antonio

de la Calancha (*Corónica Moralizada*, I, Lib. IIII, Cap. XIII, p. 867) says: "Los Idolos que adorauan estos Indios eran los fronterizos cerros nevados, dando mas adoracion al que tenia mas alteza. En los que gastavan mas sacrificios, i estremavan el culto era en el cerro Illimani Cullcachata, i en el mas frontero del pueblo llamado Cacaaca, este por ser muy eminente i estar siempre nevado, fue muy venerado de todos los desta provincia de Omasuyo, en estos cerros les dava respuestas el Demonio, i eran continuos sus oraculos." Omasuyos is the district to which Copacavana pertained and pertains to-day, hence the statements of Calancha apply directly to the Indians of the Islands. I would also observe that on the Island we heard the name Illimani applied to the peaks of Sorata! They are certainly the most prominent points of the Cordillera as seen from Titicaca and especially from Koati, whereas Illimani is only visible at a few points and at a great distance. The Karka-Jaque (Ka-Ka-a-Ka, or Huayna Potosí) is quite prominent also, though not as much as the Hanko-Uma (Illampu) and Hilampi (Hanko-Kunu), the twin peaks of the Sorata chain. From statements by Miguel Cabello de Balboa (*Miscelánea anthartica*, 1586, MSS., at the Lenox Branch, New York Public Library) and F. Ramos Gavilan (*Historia del celebre y milagroso Santuario de la Ynsigne Ymagen de Nr̃a Sr̃a de Copacavana*, Lima, 1621, Cap. II), it might be inferred that the adoption, by the Inca, of the sun-father as a superior fetish, occurred about four or five centuries previous to the conquest. I hope to treat this matter in a special paper.

[99] Called "sullu" in current speech. The proper signification is the fetus of an abortion. Bertonio: *Vocabulario*, II, p. 327: "Abortino, mal parido." In Quichua it is clearer yet. Torres Rubio: *Arte y Vocabulario*, fol. 100: "Cosa abortada." The use of the sullu of a pig is, of course, post-conquistorial.

[100] Called "untu." A common offering in primitive times. Arriaga: *Extirpacion*, Cap. IV, p. 26; "Bira, que es sebo de los Carneros de la tierra es tambien ofrenda." "Bira," or "vira," is the Quichua term.

[101] They use the term "ahuilita," from the Spanish "abuelita." Also sometimes "ahuichu."

[102] The translation of these invocations is not literal.

[103] Ramos: *Historia*, p. 72, edition of 1860: "Era costumbre muy comun entre estas gentes el juntar á los agoreros, para que despues de tomar su chicha, coca y otras necedades, designasen el lugar y la figura de la casa ó choza que pensaban hacer. Miraban al aire, escuchaban pájaros, como aruspices, invocaban á sus lares ó al demonio, con cantares tristes, al son de tamboriles destemplados: y pronosticando el buen ó mal suceso empezaban la construccion, poniendo á veces coca mascada en el cimiento y sus asperjéos de chicha . . . Aún ahora no han acabado de perder esas abusiones al fabricar sus casitas; pues siempre auguran á su modo, echan su chicha ó aguardiente por los rincones, festejan su conclusion con regular borrachera y sus consecuencias." Arriaga, *Extirpacion*, p. 37: "En hazer sus Casas tienen como en todas las demas cosas muchas supersticiones, combidando de ordinario a los de su Ayllo, rocian con chicha los cimientos como ofreciendola, y sacrificandola para que no se caigan las paredes, y despues de hecha la casa tambien la asperjan con la misma chicha." See also: Villagomez: *Carta pastoral de Exortacion e instruccion contra las Idolatrias de los indios del Arçobispado de Lima*, 1641, fol. 47. He copies Arriaga textually.

[104] Arriaga, *Extirpacion*, Cap. II, p. 11: "A Mamapacha, que es la tierra tambien reverencian especialmente las mujeres, al tiempo, que han de sembrar, y hablan con ella diciendo que

les dé buena cosecha, y derraman por eso chicha, y maiz molido, ó por su mano, ó por medio de los hechizeros.'' Villagomez: *Exortacion,* p. 39. Fernando de Santillan: *Relacion del Orígen Descendencia,* etc., p. 31: ''El sacrificio que hacian á la tierra no era tan ordinario ni en tanta cantidad. Cuando caían malos, en aquel lugar decian que la tierra estaba enojada, y derramaban chicha y quemaban ropa para aplacarla. Tenían á la tierra por especial abogada de las mujeres que están de parto, y cuando habian de parir, le hacian sacrificios.'' Polo de Ondegardo: *Relacion de los fundamentos acerca del notable daño que resulta de no guardar á los indios sus fueros,* June 26, 1571 (*Doc. de Indias,* XVII, p. 83): ''e otros que la hiciesen al Pachamama para que justificase la tierra al tiempo que se sembrava.''

[105] Chiefly the bear. The present shape of the fetish in Bolivia—a cow or bull—is, of course, modern.

[106] This squatting posture of the Indians is well described by Cobo: *Historia del Nuevo Mundo,* IV, p. 174.

[107] *Quintal* is of course a Spanish word. The Indians use it, in their incantations, to designate any very large quantity, undetermined.

[108] The incantation took place on the night of January 27, 1895, after ten o'clock.

In times anterior to the arrival of the Spaniards it was also the custom, when the food offered to the idols was burned, for those present to remain motionless, with heads bowed, so as not to see the process believed to go on—that of eating, by the spirits. Pedro Pizarro (*Relacion del Descubrimiento,* p. 265) describes as follows the ceremonial attending the offering to a fetish which he calls that of the sun: ''un bulto pequeño tapado que decian que era et Sol.''—''Al Sol tenian puesto en mitad de la plaza un escaño pequeño, todo guarnecido de mantas de pluma muy pintadas y muy delicadas, y aqui ponian este bulto, y el un hachazo de una parte y el otro de la otra. Teniendo las hachas derechas pues, daban de comer á este Sol por la órden que tengo dicha la daban á los muertos, y de beber. Pues cuando quemaban la comida al Sol levantábase un indio y daba una voz que todos le oian; y oida la voz todos cuantos habia en la plaza y fuera de ella que la oian, se sentaban y sin hablar ni toser ni menearse estaban callados hasta que se consumia la comida, que echaban en el fuego que tenian hecho, que no tardaba mucho por ser la leña muy seca.'' This was a daily function in the square of Cuzco. Pizarro witnessed it himself, and a number of times. It is fundamentally the same as the command given to us by the shaman to retire while the Achachilas were ''eating.''

[109] The apachitas or apachetas (also written apachectas) are very common in the mountains, especially on mountain passes. Garcilasso says of them (*Comentarios,* I, fol. 29): ''y assi luego que auian subido la cuesta, se descargauan, y alçando los ojos al cielo, y baxandolos al suelo, y haziendo las mismas ostentaciones de adoracion, que atrás diximos para nõbrar al Pachacamac, repetian dos tres vezes el datiuo Apachecta, y en ofrenda se tirauan de las cejas, y que arancassen algun pelo, ó no, lo soplauan hazia el cielo, y echauan la yerua llamada Cuca que lleuauan en la boca, que ellos tanto prescian, como diziendo que le ofrescian lo mas presciado que lleuauan, y á mas no poder, ni tener otra cosa mayor, ofrescian algun palillo, ó algunas pajuelas, si las hallauan por alli cecca, y no las hallando, ofrescian algun guijarro, y donde no lo auia, echauan vn puñado de tierra, y destas ofrendas auia grandes montones en las cumbres de las cuestas.'' Arriaga: *Extirpacion,* p. 37: ''Cosa muy vsada era antiguamente, y aora no lo es menos, quando suben algunas cuestas o Cerros, o se

cansan en el camino, llegando a alguna piedra grande, que tienen ya señalada para este efecto, escupir sobre ella (y por esso llaman á esta piedra, y á esta ceremonia Tocanca) Coca, ó maiz mascado otras vezes dexan alli las vjutas, ó calçado viejo, o la Huaraca ó vnas soguillas, o manoxillos de hicho, o paxa, o ponen otras piedras pequeñas encima, y con esto dizen, que se les quita el cansancio. A estos montoncillos de piedra suelen llamar, corrompiendo el vocablo, Apachitas, y dizen algunos, que los adoran, y no son sino las piedras que an ido amontonando con esta supersticion, ofreciendoles a quien les quita el cansancio y le ayuda a llevar la carga que esso es Apacheta . . .'' The apachetas, therefore, are accumulations of prayer offerings made to a spirit supposed to reside at the place where they are raised.

[110] If I frequently allude to such analogies, it is without the slightest idea of tracing relationships. Similarity or even identity of customs is not sufficient to prove original connection.

[111] This belief, common to the Aymará of Bolivia, also existed, and probably exists to-day, among the Quichua. Garcilasso: *Comentarios* (I, fol. 77): ''Llaman al arco CUYCHU, y con tenerlo en esta veneracion, quando le veyan en el ayre, cerrauan la boca, y ponian la mano delante, porque dezian, que si le descubrian los dientes, los gastauan y empodrecian.'' Cobo: *Historia* (IV, p. 149): ''Tambien tenian por mal agüero y que era para morir ó para algun otro daño grave, cuando vian el Arco del Cielo, y á veces por buen pronóstico. Reverenciabanlo mucho y no le osaban mirar, ó ya que le miraban, no lo osaban apuntar con el dedo, entendiendo que se morirán; y á aquella parte donde les parecia que caia el pié del arco, la tenian por lugar horrendo y temeroso, entendiendo que habia allá alguna Guaca ó otra cosa digna de temor y reverencia.''

[112] The Achachilas are also the ''paccarinas'' or ancestors of ayllu and tribes. In regard to the New Mexico pueblos, compare *Final Report,* I, p. 312.

[113] The baptismal name ''Santiago'' so common in Mexico and New Mexico, is seldom met in Bolivia among Indians, whereas Diego is heard very frequently. See Arriaga: *Extirpacion,* p. 33; *Idem: Constituciones que dexa el visitador en los pueblos,* p. 130.

[114] This is a very ancient belief and connected with some of the earliest myths.

[115] *Zuñi Fetiches,* p. 9.

[116] Cobo: *Historia,* IV, p. 149: ''Cuando oían cantar Lechuzas, Buhos ú otras aves extrañas, le tenian por mal agüero y presagio de su muerte ó de la de sus hijos ó vecinos y particularmente de la de aquel en cuya casa ó lugar cantaban ó aullaban.'' About the use made of the owl to-day for certain Indian witchcraft practices, information will be imparted in a subsequent work.

[117] Cobo: *Historia,* IV, p. 149: ''Item, cuando oían cantar al Ruiseñor ó al Sirguero, lo tenian por pronóstico de que habian de reñir con algunos.''

[118] Sacrifices of guinea-pigs were common in Peru before the conquest, as is generally stated by earlier authors. Cieza: *Segunda Parte,* pp. 116, 119; *Relacion de la Religion y Ritos del Peru, hecha por los primeros Religiosos Agustinos que alli pasaron para la conversion de los naturales,* in *Doc. de Indias,* III, pp. 21, 29, 30, 34, *et seq.;* Garcilasso: *Comentarios,* I, fol. 34. Arriaga: *Extirpacion,* Cap. IV, p. 24: ''El Sacrificio ordinario es de Cuyes, de los quales se sirven mal, no solo para sacrificios, sino para adivinar por ellos, y para curar con ellos con mil embustes.'' Cap. III, p. 19: ''Hacaricuc, o Cuyricuc, es el que mira cuyes, y abriendoles con la vña adi-

vina por ellos, mirando de que parte sale sangre, o que parte se menea de las entrañas.'' I refrain from further quotations.

[119] The story of the ''carbuncle-cat'' on the Island is told by several authors, Augustine monks, from the beginning of the seventeenth century. Ramos: *Historia de Copacabana,* p. 10: ''Porque dicen los indios que en tiempos pasados se vió en la peña un gato con gran resplendor, pasandose en ella ordinariamente . . . pudiera ser que el tal gato fuese el animal llamado Carbunco, que los de Guamico dicen haber visto algunos de ellos por el resplendor que despiden de noche con la pledra carbunco ó Rubí,'' etc. Calancha (*Corónica Moralizada,* II, Lib. I, Cap. II) copies textually. Fr. Andrés de S. Nicolas (*Imágen de N:S: de Copacavana,* fol. 26) varies somewhat from Ramos by stating: ''se boluió á dexar ver en figura de gato mõtez, corriendo por él, y despidiendo fuego.'' Whether a titi or wildcat of western and northern Bolivia, such as occasionally infest the Peninsula of Copacavana, could cross the straits of Yamputata swimming I do not attempt to discuss. While the idea of a ''carbuncle'' is certainly a European modification, the story of a wildcat appearing on the Sacred Rock appears to be primitive and might have, together with the cavities on the rock resembling cats' heads, contributed to the name of the Island.

[120] This custom appears to be ancient. Arriaga: *Extirpacion,* Cap. III, p. 196: ''Pacharicuc, o Pachacatic, o Pachacuc, es otro adivino por los pies de vnas arañas, que llaman Paccha, y tambien Oroso, y son muy grandes y peludas. Quando le consultan para alguna cosa, va a buscar en los agugeros de las paredes, o debaxo de algunas piedras, vna de estas arañas, cuya especie es conocida, y poniendola sobre una manta, o en el suelo, la persigue con vn palillo, hasta que se quiebran los pies, y luego mira que pies ó manos le faltan, y por alli adiuina.'' See also Cobo: *Historia,* IV, p. 134. We saw no large spiders on the Islands, but at Atauallani, close to the upper base of Illimani, a small Mygale was, together with centipedes, not unfrequently taken out of ancient graves by my wife.

[121] In regard to rain-making it is evident that the ceremonials accompanying it are primitive, that is, pre-Columbian, with some modifications brought about by contact (and prohibition also) since the conquest. The tenacity with which the Indian clung and clings to his original rites and ceremonies induces him, when these are to be superseded by strange ones, to adapt them, within limits, to the latter. About original practices of rain-making I find so far hardly any detailed statements except in Calancha (*Corónica Moralizada,* I, p. 867), and the directions contained in Arriaga: *Extirpacion,* p. 86, for questioning sorcerers: ''Decimosexto: Que Huaca adoran para que el maiz crezca bien, y no se coma de gusano, de que lagunas traen cantaros de agua para rociar la chacara, y pedir lluvia, a que lagunas tiran piedras para que no se secan, y vengan lluvias.'' Compare also, for the practices when drouth had set in, and any Indian, male or female, was suspected of having prevented rain by committing some offense—probably evil witchcraft, as among the pueblos—Santillan: *Relacion,* etc., p. 36.

[122] And one of their own, thus far unstudied. It may prove to be some dialect.

[123] I treat more in detail of the Callahuaya in a subsequent volume on Bolivia.

[124] Muñecas is inhabited, in its southern parts, by Aymará, in the north by Quichuas. The Callahuaya live in the village of Curva near Charassani.

[125] Tschudi says it is *Felis pardalis* (the ocelot). *Die Kechua Sprache,*

Wörterbuch, p. 108. Bertonio (*Vocabulario* 1612, II, p. 383) has "VTURUNCCA, 1: VTURUNCCO.—Tigre." Hence the word has, from the Quichua of southern Peru, penetrated into the northwestern Aymará. Cobo (*Historia*, II, p. 339) calls the *tigre* (jaguar) uturuncu. Acosta (*Historia natural y moral de Indias*, edition of 1608, p. 279) calls the ant-eater "otoronco." The use of the "uturuncu" in aboriginal medicine is ancient.

[126] Villagomez (*Exortacion*, fol. 41) says: "Aunque son raros los que matan con hechizos." But Arriaga (*Extirpacion*, p. 21) describes a class of sorcerers who killed by sucking the blood of the person, at night (vampires), and says they were numerous at his time and did a great deal of harm: "Dize el Cura de vn pueblo que pocos años antes avian muerto dentro de quatro meses, mas de setenta muchachos de doze á diez y ocho años, y de estos á vna muger en vna semana quatro hijos, y q̄ aora que se avian descubierto estos maleficios sospechava, que ellos los avian muerto, por que no sabia de que enfermedad morian." Cobo (*Historia*, IV, p. 151) describes an act of malfeasance through witchcraft recalling to a certain extent the one described in the text: "Para que viniese á mal ó muriese él que aborrecían, vestian con su ropa y vestidos alguna estatua que hacian en nombre de aquella persona, y la maldecian colgandola de alto y escupiendola; y asimismo hacian estatuas pequeñas de cera ó de barro ó de masa y las ponian en el fuego, para que alli se derritiese la cera, ó se endureciese el barro y masa ó hiciese otros efectos que ellos pretendían, creyendo que por este modo quedaban vengados y hacian mal á sus enemigos."

[127] Compare sketch annexed with the one given by Salcamayhua: *Antigüedades deste Reyno del Pirú*, p. 257, plate.

[128] Intemperance *was*, and is, one of the worst vices of the Indians of the Peruvian and Bolivian mountains. It is almost superfluous to quote on the subject. I limit myself to governmental and ecclesiastic edicts issued against the abuse of intoxicating drinks (chicha especially) by the aborigines. *Ordenanzas del Perú*, Viceroy Toledo, 1575, fol. 129, Lib. II, Tit. II, Ord. xviii. *Constituciones synodales de Lima*, 1613, p. 85. Among the cases which are not to be absolved in confession by priests but are reserved for the prelate is: "De los Españoles que vendieren chicha de sora sola, ó mezclada con yuca, ó guarapo de miel de purga del primer barro ó mosto." *Constituciones synodales*, 1636, p. 15, Cap. v. In primitive times every one of the numerous festivals was a protracted orgie (as it is to-day). Arriaga: *Extirpacion*, p. 100: "Pues quitalles las boracheras, que son las que crian, fomentan, y conservan las Ydolatrias." *Idem*, *Constituciones*, etc., p. 131.

[129] The primitive dances were, so to say, weeded out in consequence of the strict investigation into idolatry in Peru, that began at an early day and culminated in the methodical work partly directed by Arriaga in the early part of the seventeenth century. One of the results was, to eliminate from public displays what seemed offensive to Christian ideas and to general propriety. This reduced some of these dances, at least, to harmless diversions in appearance. Whether, in primitive times, there were dances that were not ritualistic, is doubtful. I incline to the belief that every choreographic performance was a ceremonial. Arriaga (*Extirpacion* p. 45) is of the same opinion: "Quando les avian hazer estas fiestas todos entendian, que no avia malicia en ellas, sino que eran sus regocijos, y dançaș antiguas y quando mucho, que era vna vana supersticion, en que no avia mucho que reparar." That all the dances were accompanied by excessive

libations, which were also religious acts, is stated (p. 46): "Pero en lo que an tenido muchos mayor descuido, y remission es en consentir, y dissimular sus boracheras, y las juntas que hazen para ellas, especialmente en las mingas, que llaman para hazer sus chacaras, o casas. Porque es cosa muy vsada hazer todo lo que hazen por via de comunidad. Y la vnion de estas juntas es siempre el bever hasta caer, y de tal madre, de mas de los incestos, estrupos, y otras muchas torpecas, á procedido siempre la Ydolatria en los siglos pasados." We have not seen a single dance that was not symbolic, although probably only the medicine-men (who are always present, though not noticed by the simple spectator, since there are no exterior tokens by which they might be known) know their original signification.

[130] The use of plumage in dances is primitive; only the shape of the head-ornaments has changed. The hat, for instance, is modern. The color of the plumage is that of the Bolivian tricolor, but this is brought about also by the prevalence of the colors in the larger parrot plumes in use.

[131] Cobo (*Historia*, IV, pp. 228 and 229) gives the most detailed description of ancient musical instruments in Peru and Bolivia: "Tenian para ello muchos instrumentos músicos, los cuales nunca tocaban sino en los bailes y borracheras, y todos hacian el son poco suave, y menos artificioso, pues qualquiera que se pone á tocarlos, á la primera leccion queda maestro. El instrumento más general es el atambor, que ellos llaman Huáncar; hacianlos, grandes y pequeños, de un palo hueco tapado por ambos cabos con cuero de Llama, como pergamino delgado y seco. Los mayores son como nuestras cajas de guerra, pero mas largos y no tan bien hechos; los menores son como una cajeta pequeña de conserva, y las medianas como nuestros tamborines."

"Tocanlo con un solo palo, el cual á vecas por gala está cubierto de hilo de lana de diferentes colores y tambien suelen pintar y engalanar los atambores. Tócanlo así hombres como mujeres; y hay bailes al són de uno solo y otros en que cada uno lleva su atambor pequeño, bailando y tocando juntamente. Tambien usan cierta suerte de adufes, nombradas Huancartinya; pífano, llamado Pincollo. Antara es otro género de flauta corta y ancha. Quenaquena es una caña sola como flauta, para cantar endechas. Quepa es una suerte de trompetilla que hazen de un calabazo largo. Usan tambien en sus bailes tocar un instrumento compuesto de siete flautillas, poco más ó menos, puestas como cañones de órganos, juntas y desiguales, que la mayor será larga de un palmo y las demás van descreciendo por su orden: llaman á este instrumento Ayarichic, y tócanlo puesto sobre el labio el labio bajo y soplando en las dichas flautillas, con que hacen un sordo y poco dulce sonido. Tocan asimismo caracoles y otros instrumentos de menos cuenta." He further mentions rattles, of beans ("zacapa"), of copper and of silver ("chanrara"), and snails ("churu"). This list of musical instruments is confirmed by the archaeological finds as well as by several other earlier authors.

[132] The models for these modern "Inca" costumes are indirectly those that served to Herrera: *Historia general*, etc. (title-page to fifth decade). Herrera copied them from the four aboriginal paintings made by order of Don Francisco de Toledo and sent to the King in 1572. Hence the costumes were painted nearly forty years after the conquest! *Informaciones acerca del Señorio y Gobierno de los Incas*, published Madrid, 1882. This interesting document contains: *La Fé y Testimonio que va puesta en los cuatro paños; de la verificacion que se hizo con los Indios, de la pintura*

é historia Dellos, p. 250. "Por lo cual, todos y cada uno dellos dijeron que todo lo que está escripto y pintado en los dichos cuatro paños, asi en los bultos de los Ingas como en las medallas de sus mujeres é ayllos é historias de las cenefas, ecepto lo que no se les leyó." The pictures of Inca chiefs are, of course, largely imaginary, as well as the costumes. But they have survived and, from the fact that they were made to be verified by the Indians, undue importance is often attached to them. Silk, velvet, gold and silver lace were known to the Indians in 1572, through what they saw of Spanish dress, and it is natural that the natives should clothe the supposed portraits of their ancient chieftains in the best of—European—finery. Hence it is well to be cautious and not accept the pictures for more than what they can be. The same with the "insignia." This naturally applies to the costume as seen in the performance described in the text.

[133] Judging from the descriptions of eye-witnesses, primitive dances at the time of the Spaniards' first arrival must have been more disgusting yet. Compare, for instance, Betanzos: *Suma y Narracion,* Cap. XII, pp. 83 and 84. Cieza: *Segunda Parte,* Cap. XXX, p. 122: "Y estaban en esta fiesta de HATUN RAIMI quince ó viente dias, en los cuales se hacian grandes táquis y borracheras y otras fiestas á su usanza; lo cual pasado, daban fin al sacrificio, metiendo los bultos de los ídolos en los templos, y los de los Incas muertos en sus casas." Pedro Pizarro: *Relacion del Descubrimiento,* p. 277: "Pues diré de los vicios questos orejones tenian y maldades: eran muy dados á la lujuria y al beber: tenian acceso carnal con las hermanas y con las mugeres de sus padres, como no fuesen sus mismas madres, y aun algunos habia que con ellas mismas. . . . Emborrachábanse muy á menudo, y estando borrachos todo lo que el demonio les traía á la voluntad hacian." Also p. 347. All that occurred among the Inca. Of the Indians in the district of La Paz, the *Description,* 1586, p. 72, states: "Las costumbres de la gente deste asiento y provincia es casi como las demas deste reino, porque todos de ordinario se emborrachan con una bebida que hacen del maiz . . . el cual, aunque parece simple, beben tanta cantidad, que los emborracha. . . . Redunda destas borracheras que cometen muchos estupros I incestos con madres, hijas, hermanas, sobrinas y cuñadas, y vuelven á sus ritos y adoraciones."

[134] Compare note 129.

[135] We saw the Mimula again at La Paz, in the street, but also after dark, about ten o'clock. It was sung and danced by men.

[136] The "morenos," as I shall establish elsewhere, are a survival of theatrical plays and outdoor performances introduced by the Church with the view of gradually substituting them for objectionable Indian dances.

[137] *Rhea americana.*

[138] *Peru,* p. 306.

[139] From "pusi," "four" in Aymará, and "ppiaña," to perforate, with the possessive affixum "ni." The flute in question has, indeed, four holes.

[140] The custom is common all over the higher portions of Bolivia. If the Indians have too much rain, they expose a skull (of the Chullpas) to the air, and sometimes place between its teeth a cigarette.

[141] But they still were loath to touch the skulls themselves.

[142] Further information about the "Irpa" will be given in a subsequent work.

[143] A good example of how the Indians used, and perhaps to-day still use, church functions to shroud their ancient rites is given by Arriaga: *Extirpacion,* Cap. VIII, p. 45: "Y es cosa cierta, y averiguada, que en muchas partes con achaque de la fiesta del Corpus, hazen la fiesta de Oncoy-

mita que diximos arriba, que es por entõces. Y en la Provincia de Chinchacoha, quando se visitó, se averiguó, que llevavan en la procession del Corpus dos Corderos de la tierra vivos cada vno en sus andas, por via de fiesta y de dança, y se supo, que realmente eran ofrendas, y sacrificios ofrecidos a dos lagunas, que son Vrcococha, y Choclocoha, de donde dizen, que salieron, y tuvieron origen las Llamas.''—''Como tambien se averiguó en Huarochirí, por el doctor Francisco de Avila, que para adorar vn Ydolo en figura de muger llamado Chupixamor, y Mamayoc, hazian fiesta á vn imagen de nuestra Señora de la Asuncion, y para adorar vn Ydolo varon llamado Huay-Huay, hazian fiesta a vn Ecce Homo.'' That such primitive ceremonials may be connected with the dances performed at church festivals to-day is not unlikely. At any rate, there is little direct relation between the dances and the church ritual with which it is made to coincide.

[144] Also Prioste: *Sodalitii oeconomus.*

[145] The Lay-ka are variously alluded to by Arriaga: *Extirpacion,* p. 17: ''Estos que comunmente llamamos Hechizeros . . . con nombre general se llaman Vmu, y Laicca . . .'' Also by Villagomez: *Exortacion contra la Idolatria,* fols. 41 and 58: *Relacion anónima,* etc., p. 171, calls them ''laicas.''

The word ''Yatiri'' is found in Ramos: *Historia de Copacabana,* p. 75, and is said to have been the name of an idol invented by Huayna Capac and worshiped by him chiefly on the Island of Apinguila, near the northwestern shores of Titicaca Lake: ''Llevado de cierto espiritu innovador determinó ofrecer todos aquellos sacrificios á un solo ídolo, que llaman Yatiri, como si dijere, al que todo lo sabe, mandando que solo á ese se le invocase . . .''

[146] This is so frequently mentioned in older sources that I refrain from quoting, the more so, as it will be treated at greater length elsewhere.

[147] This has been stated to us at various places in Bolivia. It is alluded to by Cobo: *Historia del Nuevo Mundo,* IV, 149.

[148] I cannot etymologize more than a few of the names of the dances: The word ''Pusipiani'' means, as already stated, perforated four times. Kena-kena is the name of the flute played by the dancers of that name. Sicuri comes from ''Sico,'' the pan-flute of reeds—Bertonio: *Vocabulario,* II, p. 315: ''Sico—Vnas flautillas atadas como ala de organo.'' Chirihuanos derives from ''chiriri,'' or from ''chiri.'' The former, according to Bertonio, p. 84, II, signifies a talker; the latter is a word used sometimes to express darkness. As a personal name —therefore, possibly, ''Huayna,'' ''youth''(?)—it appears already in Cieza: *Segunda Parte,* Cap. IV, p. 4. After relating some ancient stories about Titicaca Island, he says: ''Chirihuana, gobernador de aquellos pueblos, que son del Emperador, me contó lo que tengo escripto.''

[149] About the manner of succession to the various ''degrees'' (if such a term is permitted) of medicine-men, the statements of older Spanish writers vary. What we learned concerning it later on will be recorded elsewhere. The *Relacion anónima,* p. 172, says: ''Los ministros mayores siempre venian por via de eleccion y suficiencia; los de la segunda y tercera diferencia alcanzaban los oficios por una de tres vias; ó por via de herencia, ó por via de eleccion, ó por haber nacido con alguna señal singular y rara, no usada en los demás hombres. como es tener seis dedos en las manos, brazos mas largos de lo ordinario, ó haber nacido en el mismo tiempo en que cayó cerca de aquel lugar algun rayo, ó haber nacido de piés, ó otros señales; aunque lo de la herencia quitóle la misma república con su rey.'' Arriaga, *Extirpacion,* Cap. III.

p. 20: "De vna de tres maneras entran en estos oficios de sacerdotes de Huacas. La primera es por sucesion, que el hijo lo hereda del padre, y si el heredero no (tiene) vso de razon, entra en su lugar el pariente mas cercano, hasta que el ligitimo heredero sea suficiente para el oficio. La segunda manera es por eleccion, quando falta el primer modo por via de herencia, o quando les parece, los otros ministros eligen el que juzgan, que será mas a proposito, con parecer de los Curacas y Caciques. Y quando acontece, que alguno herido del rayo quede vivo, aunque q̄ quede lastimado esta ya como divinamente elegido para el ministerio de las Huacas. El tercero modo es, que ellos mismos se toman el oficio, y se introducen en el, specialmente de los oficios menores de adivinos, curanderos, por sola su voluntad, y autoridad, y esto es ordinario en los viejos, y viejas, que por ganar de comer, y comer ellos dizen Viççaraycu, que es *ventris causa,* se hazen oficiales en estos ministerios." Lastly I will add the testimony of Cobo: *Historia,* IV, p. 130: "Los diputados para este oficio se elegian desta manera; si nacia en el campo algun varon en tiempo de tempestad y truenos, tenian cuenta con él, y despues que era ya viejo, le mandaban que entendiese en esto . . . Item, los que nacian de mujeres que afirmaban haber concebido y parido del Trueno, y los que nacian dos ó tres juntos de un vientre, y finalmente, aquellos en quienes la Naturaleza ponia mas de lo comun, diciendo que acáso y sin misterio los señalaba, todos estos eran consagrados por sacerdotes cuando viejos; porque todos ó los más que tenian este oficio, lo eran y no se admitían á él sino cuando llegaban á edad, que no podían ejercitar otros trabajos . . . Tambien habia otros muchos que trataban en echar suertes, á los cuales andaba el oficio de confesores y de curar supersticiosamente. Muchas veces se confundian estos oficios con el primer linaje de sacerdote, usándolos todos juntos unas mismas personas, y otros andaban divididos, atendiendo cada uno al suyo; si bien lo mas comun era lo primero, que los sacerdotes eran juntamente confesores, médicos y hechiceros" (p. 132). "El oficio de sortílegos tuvieron estos indios no solo por lícito y permitido, más tambien por útil y necesario en la república. . . . Todos cuantos entendían en esto eran gente inútil, pobre y de baja suerte, como los demas hechiceros, á los cuales elegia el Cacique de cada pueblo, despues que les faltaban las fuerzas para trabajar, precediendo á esta eleccion diversas ceremonias y ritos, que les mandaban hacer los dichos Caciques."

The statement, that the offices were sometimes hereditary means, not an *obligatory* succession from father to son, but, as among the New Mexico pueblos, adoption of a prospective successor, who *may* be the child of the incumbent if the latter sees in him special aptitude for the office. It is also interesting to note, that some of the medicine-men (shamans) embodied in their circle of knowledge that of all the other special branches, whereas the majority were limited to a lesser sphere of action. This indicates esoteric societies, as the knowledge of each group was, of necessity, kept secret, from the people as well as from other clusters, the principal shamans excepted, who, as it is said to-day in Bolivia of the Hacha Tata, "know it all."

[150] Villagomez: *Exortacion,* fol. 15: "Si en las fiestas del Corpus Christi, ó en otras fiestas de la Iglesia fingiendo los Indios que hacē fiestas de los Christianos, an adorado, ó adoran ocvltamente, á sus idoles, ó an hecho ó hacen otros ritos." This is one of the queries ordered to be made in official examinations of sorcerers and other Indians supposed to know about witchcraft and primitive ceremonials.

[151] Information about the "Chamakani" (he who owns darkness) will be given elsewhere.

[152] That Illimani is a powerful "Achachila" has already been stated (note 98).

[153] Misti and all the volcanoes in general were regarded (and are to-day in secret) as fetishes of high rank. In regard to Misti it was plainly shown during the terrible eruption of the Omate, near Moquegua (southern Peru), in 1600. When the eruption was at its height, the city of Arequipa plunged in darkness, volcanic ashes falling steadily, the earth shaking, and tremendous thunder bellowing, while a lurid light faintly illuminated the southeastern skies, the Indians, dressed in red, killed their sheep, fowl, and guinea-pigs, and began to dance, sing, and drink immoderately. Some of their wizards, after sacrificing llamas to the volcano, were said to have claimed "that they spoke to the devil, who informed them of the catastrophes that were to take place, and how the volcano of Omate had attempted to confederate with that of Arequipa to destroy the Spaniards, and that, as the one of Arequipa (Misti) replied he could not enter into the agreement since he was a Christian and named Saint Francis, the volcano of Omate undertook it alone." *Historia del Colegio de la Compañia de Jesús de Arequipa y Reventazon del Volcan de Omate,* MSS. at National Archives at Lima, 1600, Vol. XXI, fol. 24: "Mataron los carneros gallinas y conejos de la tierra que tenian y hizieron grandes vanquetes vailes y vorracheras vistiendose para esto de colorado y aún se dijo que algunos hechiceros sacrificaron carneros al Volcan porque no los hundiese y que hablaron con el demonio que les dezia las tempestades que auia de auer y como el volcan de omate se auia querido concertar con el de areq̄a para destruir á los españoles y que como el de areq̄a respondiesse quel no podia venir en ello por ser x̄pano y llamarse S:Franc̄o quel de Omate solo se esforçaua por salir con este yntento."

THE ANCIENT RUINS ON THE ISLAND OF TITICACA

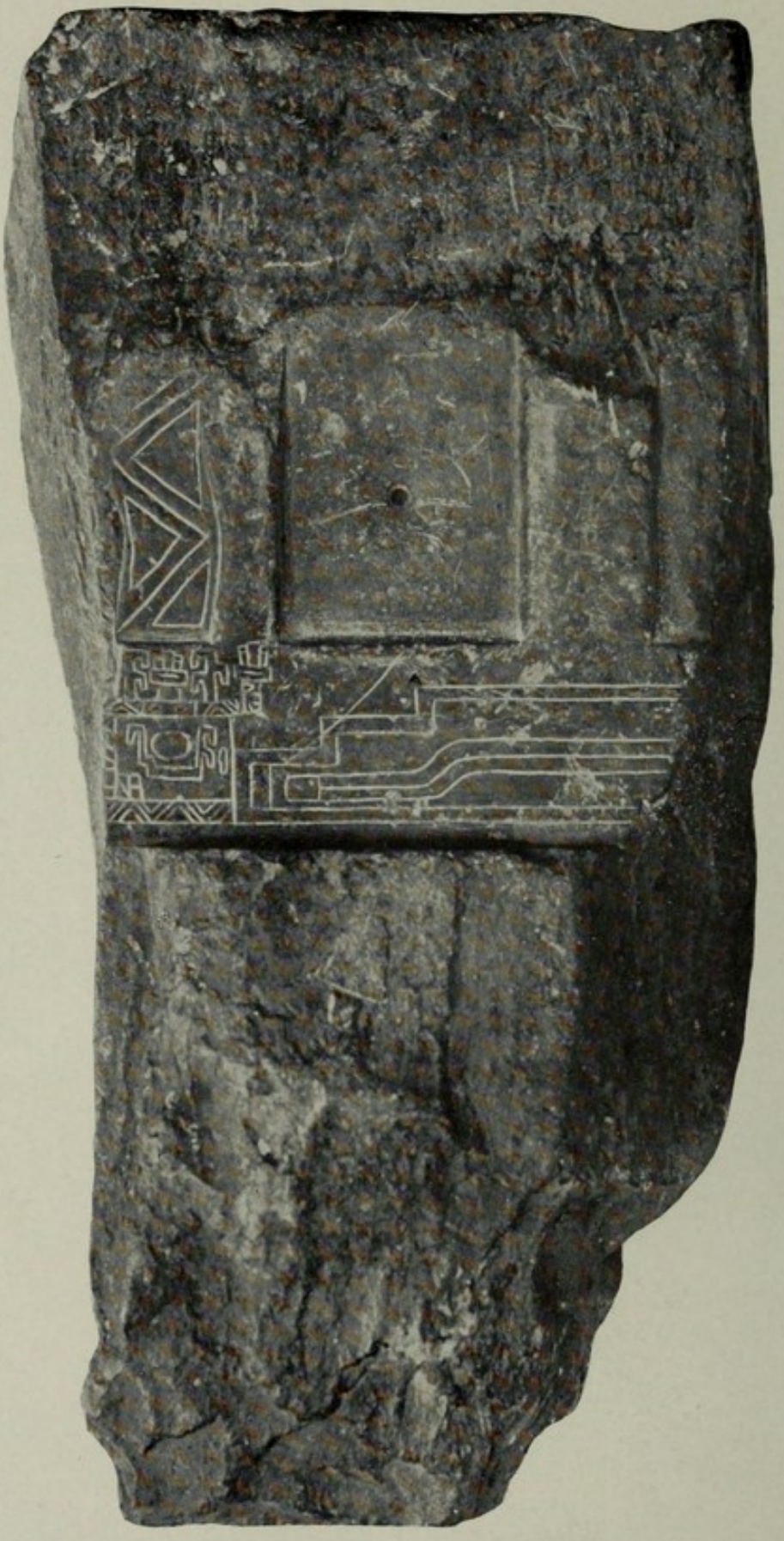


PLATE XXIX

Sculptured slab from the slopes of Ticani, but obtained at Kea-Kollu Chico

PLATE XXIX

Sculptured slab from the stone pit known as Kes-Kollu Chico

Part IV

THE ANCIENT RUINS ON THE ISLAND OF TITICACA

THE Indians who inhabit the Island divide the ruins into two classes, one of which they call *Chullpa,* and the other *Inca.* They assign to each class a different origin.

As stated in the preceding chapter, traditions preserved by writers of the sixteenth and seventeenth centuries mention two distinct stocks as occupants previous to advent of the Spaniards. Hence the classification by the Indians of to-day is not an imaginary one.

Geographical distribution of the ruins on Titicaca is best understood by means of the annexed map. The survey was made by me for the purpose of illustrating this distribution. I do not pretend, however, to have indicated *all* the ancient remains extant. There must be more, especially of the class called Chullpa, but their reduced size and utter decay render it difficult to trace them. Again the artificial terraces, or andenes (in Aymará, "pata"), are so extensively worked at present that in a great number of cases it is not possible to tell which of them are ancient. According to the Indians, small and scattered houses, of one or only a few rooms and rude workmanship, are Chullpa; the larger buildings, with fairly constructed walls, good-sized doorways and niches are, as well as the better built andenes, Inca. A safer criterion is the character of the artefacts associated with each class of ruins. It cannot be denied that there are two distinct types in pottery. One type seems to be modeled

after the well-known earthenware of ancient Cuzco. It shows chaste form, a good quality of clay, solid burning, and especially a striking and often beautiful decoration in *paint*. This is the Inca type, as the Indians on Titicaca claim. The other corresponds to the ceramics found in all the so-called Chullpas of Bolivia. It is much ruder in shape and design, the clay is not as well burnt, and the decoration more primitive. Other artefacts, such as those in metal and stone, are no longer abundant enough to permit of a strict classification, but the objects of silver and gold are regarded as belonging to the Inca type. We were unable to find textile fabrics, but through purchase of the magnificent "ponchos" contained in the collection of Don Miguel Garcés of Puno, the Museum has come in possession of five specimens that are clearly of Inca origin.[1]

Thus it seems that the classification suggested by the aborigines of the Island is borne out by: the appearance of the ruins, the testimony of tradition, and the character of some of the artefacts, hence we may adopt it in our descriptions.

The Island has many burial sites, and the majority of these belong to what the Indians call Chullpa. There are also graves which they declare to be Inca, and which are somewhat different from the former. I regret to say that we have not been fortunate enough to secure skulls from so-called Inca graves, except at the place called Kasapata, where we obtained, from seven stone cysts, fragments of children's bones, including broken skulls. At Sicuyu we hoped to have secured one skull of an adult woman, but it was only the cast, or lump of earth left after the skull had decayed. This lump fell to powder as soon as exposed to the air, and we did not even have time to take a mould of it.

In regard to the distribution of the so-called Chullpa remains I may state that artificial terraces and burials are found nearly everywhere, where the nature of the ground permitted. But in regard to the terraces, "andenes," or

"patas," it is mostly impossible to affirm that any particular group of them is *exclusively* Chullpa. In such cases I limit myself to repeat the statements of the Indians without endorsement. The southeastern extremity of the Island —that part of it belonging to the hacienda of Yumani—is thickly striated with andenes, principally on the eastern side. In and about these, burial cysts of the type called Chullpa are scattered in numbers; hence, probably, the Indian assumed that the terraces belonged to the same class. We found few vestiges of small houses, though the cause of this may be their destruction in modern times for purposes of cultivation. The Indian is not piously inclined toward the remains of his forefathers. The ruins of clearly defined Inca origin between the landing at the Puncu (28) and the foot of the promontory on which stands the hacienda edifice of Yumani (b), the numerous andenes accompanying them, and present cultivation according to ancient methods, make it impossible to assert anything more than that the so-called Chullpa remains occur in many places; chiefly in the form of burials. Between Yumani and Pucará it is uncertain whether Inca vestiges exist; hence the supposition that the terraces on Palla-kasa (11), on the little plateau of Apachinaca (q), and the northern flanks of Kurupata (r and 10) are Chullpa, is not unlikely. We made excavations at (q) and at (r) and opened stone cysts, of the type designated as Chullpa, that contained skulls (male) artificially flattened, and pottery of the coarser class. Of buildings there are but few traces, and these so damaged by the Indians that only their site can be detected. Heaps of rudely broken stones indicate small edifices, square or round, hence Chullpa pattern.[2]

The bottom of Pucára bears traces that appear of Inca origin; still, there are also vestiges of Chullpa burials. On the slope descending from the south into the grassy bottom that bears the name of *el Ahijadero* (place for raising or propagating animals, cattle or sheep, in reality a pastur-

age), are found, with Chullpa tombs, andenes of Inca type and Chullpa terraces. North of the bottom, and to the west, rise steep heights, on the tops and slopes of which the Chullpa andenes predominate, if not *exclusively* represented. These heights, which require special mention, are the prominent peak of Kea-Kollu (hill or mountain of Kea (7), and its lower companion of Little Kea-Kollu, Kea-Kollu Chico.[3] The abrupt rocky point of Like-Like (8) bears vestiges of terraced garden-beds, but it is not possible to determine to which class they belong.

Kea-Kollu (see accompanying photograph) is a dome-shaped height rising about six hundred feet above the Lake. Its lower slopes are steep and, in places toward the north and northeast, terminate in low cliffs. Andenes on the middle and upper slopes are so numerous as to make the mountain appear girded by numberless concentric belts. As will be seen by the plat of the top of Kea-Kollu, they are neither regular nor symmetric. The andenes are of varying widths and heights. Some are only two or three feet tall, others nearly twenty. They follow the sinuosities of the slope. Frequently there are short and narrow projections, like bastions; either in front of longer andenes, or connecting one terrace with another. The survey of the upper part of Kea-Kollu was therefore a very tedious work, and very much like that of the ruins near Llujo, at the foot of Illimani. The stonework on the andenes is rude. The merely broken stones are laid in mud and with little care. Some of the walls are smooth, others rough, and none have the finish of terraces attributed to the Incas, although the purpose was the same, that of making a steep slope available for cultivation. We were unable to find traces of irrigation, nor would irrigation be necessary.

Shrubbery and ichhu-grass now cover slopes and terraces wherever rocks do not protrude. The irregularly elliptic summit is rocky, yet the "kara," or Dasylirion-like plant called in Spanish *comida de oso* (bear's food), grows

PLATE XXX

Objects from various parts of Titicaca Island.

1. Bola-stone (Likini) of hematite. 2. Bola-stone (Likini), unusual shape.
3. Head of warclub of stone. 4. Bronze head of warclub with hatchet

Plate XXX

Objects from various parts of Titicaca Island

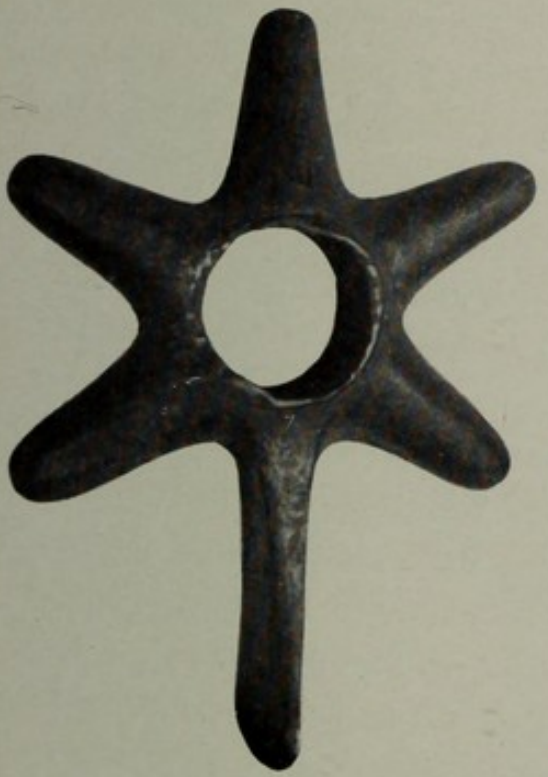
1. Bola-stone (Lliui) of hematite.
2. Bola-stone (Lliui), unusual shape.
3. Head of warclub of stone.
4. Bronze head of warclub with hatchet



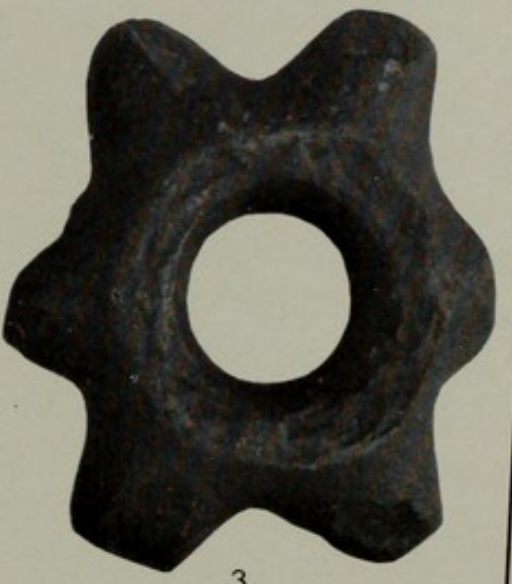
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abundantly among the rocks. On the northern slope the andenes gradually disappear; but on the other sides they continue down in many places as far as the base. Cultivation having taken hold of the lower slopes lately, there may be many *recent* patas among those near the base, toward the pass of Kea and on swellings in the west and northwest. The upper half of the mountain is one irregularly terraced height, and as bushes grow on the edge of each anden, these hundreds of terraces appear from a distance like horizontal stripes of darker green.

Beside andenes, Kea-Kollu has buildings and graves. The buildings (see plans) are small and quadrangular, with walls varying in thickness from one to two feet. The stones are laid in mud, but not in regular courses. The rooms were, to all appearance, not communicating. In those buildings that are not built against the rock there are from three to five rooms and probably more. Shrubbery has played great havoc with the structures, so that details are mostly undistinguishable. The rubbish shows that the houses were all one-storied. The larger ones stand on the rim of platforms, affording good lookouts. Excavations proved useless, as they have long ago been rifled of everything by the Indians. The sites of these buildings are indicated on the general plan.

Other structures are small houses, built against the slope, with seldom more than three rooms. We examined closely whether it was indeed the rock that formed the rear wall, and not the walled front of a higher anden, and invariably found it to be the former. Not even its sinuosities had been corrected, as will be seen on the plans. The rooms in this class of buildings are usually somewhat smaller than in the others, and the walls thinner. The longest of these rock-houses measures thirty-three feet, whereas the longest of the others, built on a projecting point, is as long as forty-nine. The width was probably between seven and ten feet.

At the places marked on the plan of the top of Kea-Kollu

are buried houses that seem to contain but a single room each. One of these, of which the entrance had been made accessible, showed very good workmanship. It was made of approximate parallelopipeds of andesite laid in courses, and superior in appearance to the walls of neighboring edifices. The Indians declared it to be Inca. Shrubbery had so completely overgrown the place that it would have required several days to clear it. We had made arrangements to explore the site thoroughly, when my wife was attacked by severe influenza. For several weeks previous, our own supply of provisions had almost given out; tea, without sugar, and potatoes were our only food. The Indian dwelling which we occupied on the middle flanks of Kea-Kollu afforded slight shelter against the nightly recurring rain. To return to the hacienda of Challa was impracticable, since the family of the owners was expected to take refuge there from political persecution in Peru. Still I could not expose my wife's health and life in the cold and moist hut afforded to us by the Indians, and so we removed to Yumani, breaking off work at Kea-Kollu. It was not even possible to obtain laborers. Influenza had also broken out among our hands, and they attributed it to the bones of the dead which we were removing. So we had to abandon the interesting relic to later visitors. To all appearances, this little building is like the one still standing on the slopes of Ciriapata, also declared by the Indians to be Inca, and of which I shall treat hereafter.

Graves are very irregularly distributed over the upper parts of Kea-Kollu. There are some on the summit, in soft ground between bare rock, also on the artificial terraces, or andenes. They are like those in other parts of the Island. The stone covering them is usually one to two feet below the surface; the cysts are lined with rude masonry, and they were mostly *empty!* What we found in a few of them were skulls, the male ones with flattened forehead, the females with much less or no deformity at all. Sometimes we found

but one skull and skeleton, again two, in the same cyst. The bodies had all been folded, but lay mostly on the side, and it was easy to notice that the hands had been joined across the chest. Of artefacts, only a little pottery of the coarser kind was found. The Indians have rifled all these sites, first only in view of obtaining precious metal; lately, with the advent of foreign visitors, also for the sake of finding pottery, for which they have sometimes received exorbitant prices. Hence we obtained only leavings, and abandoned Kea-Kollu after completing its survey, in order to begin at Kea-Kollu Chico, or Little Kea-Kollu, where, according to the Indians, a richer yield might be expected. As I stated before, it was our intention to return and open up the small building mentioned, in order to study its architectural features. Upon our subsequent return to the Island excavations became impossible through the behavior of our Bolivian servant.

Judging from existing remains, and from what we were told of similar ones formerly extant on its slopes, but now completely obliterated, the colony on Kea-Kollu may have contained about two hundred inhabitants. They dwelt in scattered houses and cultivated the terraces. These terraces recall to some extent the *banquitos* of Sonora and of northwestern Chihuahua,[4] with the difference that in Mexico the ground was mostly redeemed from the beds of mountain torrents, as the slopes are either rocky or covered with high timber, whereas on the Island there is no growth of vegetation strong enough to impede Indians from clearing; and the cherty deposits so common in Sonora do not occur.

In none of the older sources at my command have I found any reference to Kea-Kollu and surroundings, hence no evidence that it was ever occupied by the Incas. The more singular, therefore, is the accumulation of ancient artefacts and human remains which we found on the low eminence called Little Kea-Kollu, west of south of the main height,

and south of the pass leading from the settlement of Kea to Pucara. It is much lower than Kea-Kollu proper (see photograph) and forms part of an arc encompassing the bottom of Pucará on the west and north. On the slopes of this pass, toward Pucara, stand andenes, some of them so well made that the Indians say they are Inca; and there are remains designated as Chullpa (andenes and burials) about the heights of Santa Bárbara (12) and at Titin-Uayani, near Kea (29). At the latter place we excavated a number of graves, obtaining skulls, pottery of the coarser kind, and one skull trephined on the forehead.

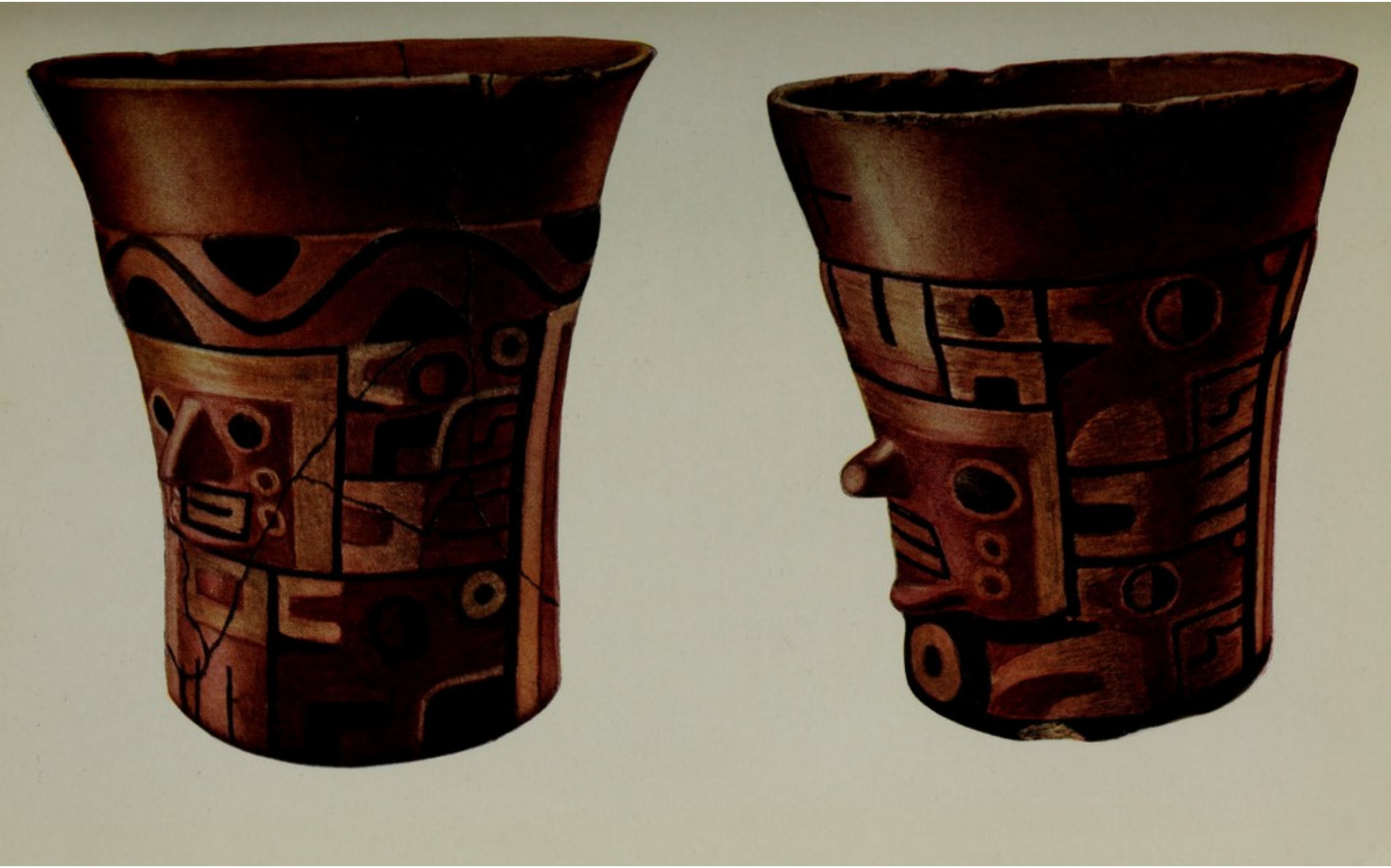
The hill of Little Kea-Kollu bears some low shrubbery along the rim of its summit. This summit is a triangular level, sixty-four feet in its greatest width, and seventy-four in greatest length. A few rocks crop out on the surface, and the soil is thin. In its southwest corner the remains of a wall, about ten feet long, were dug up by us. Near it, a disturbed cyst appeared. On the southern slope, another, partly rifled, cyst was opened. It is nearly round, and its diameter twenty-one inches. The sod over it was fifteen inches thick, beneath was clumsy masonry in three courses of large blocks, rudely broken and superposed, forming a pit thirty-four inches in depth, so that the bottom of the cyst lay forty-nine inches below the surface. In this cyst was found a flattened male skull, with decaying bones, and fragments of coarse pottery. On the opposite corner and on the northern slope two more cysts were discovered, one of which is represented on plate XX. Its form was trapezoidal, and the casing consisted of five rough slabs set vertically into the ground. It was sixteen inches below the surface and the bottom eighteen inches lower. The greatest length was thirty-six inches, greatest width twenty-one inches, least ten inches. In this grave we found a deformed skull and a golden bangle. Thus there were, in all, five graves and part of a wall, on or near the top of Kea-Kollu Chico. The *upper slopes* of this hill, however, are covered

PLATE XXXI

Spearthrower (also used formerly for drinking purposes) from Ujitsara Island

PLATE XXXI

Sacrificial cups (also used merely for drinking purposes) from Titicaca Island



with from one to three feet of loam, and in it there was an accumulation of human remains, especially in the south-eastern corner. The skeletons were so near each other that it was not possible to determine what belonged to each skull. They had been packed as closely as possible, all bent and lying mostly on the side, with hands folded across the chest. There were male and female skeletons, but no bones of children. Among these remains and a short distance from them, always inside of the zone indicated on the plan, were found artefacts of almost every description, weapons and textures excepted. We obtained pottery, copper implements, stone hammers for breaking clods, pins ("tumis," or "topos"), a few tiny specimens of gold, among them a bangle, fragments of sculptured slabs, hoes ("chonta") of stone, etc. Beside perfect specimens of earthenware, many sherds were exhumed. The pottery was mostly of the coarser type, but we obtained several gaudily painted specimens with plastic decoration recalling some previously secured at Tiahuanaco. Here also was dug up a spoon of bone, beautifully carved, used for taking lime or chalk with coca. What, however, appeared to us most valuable were a number of *male* skulls with *circular trephining*. One of these had two orifices close to each other, and the bone was scraped so as to form a common basin for both. We were unable to secure the slightest information, from the Indians, in regard to this locality. Nobody remembered any ruins on it except those we had discovered, there was no name for the place other than the current one of Kea-Kollu Chico, and nobody recalled, or wanted to recall, any tradition, legend, or lore connected with the site. Our first impression was that the bodies had been thrown together after some massacre, but we could not discover any marks of lesions, with the exception of one skull that had an incision near the occiput, as if the party had been struck from behind with the sharp end of a topo. In short, no clue to the cause or purpose of this strange gathering of human skeletons

and artefacts could be obtained. As to the "trephined" skulls, not one of our men professed to know how or for what purpose the operation had been performed. What they insisted upon was, that the place and its contents were Chullpa. The golden bangles, however, seem to be Inca. I merely add, that the male skulls are deformed like those taken from the stone cysts, said to be Chullpa. Among the stone objects were mortars, grinders and crushers. Whorls were found and bone implements for weaving, but not a single weapon! Turquoise beads came out of cyst No. 1. Other cylindrical beads were dug up in the loose earth, as well as a natural concretion, resembling a crouching llama, which the Indians eyed so longingly that we suspected it to be "Mullu," that is, a fetish of some kind.

I may be permitted here to state what we succeeded in learning about trephining among the Indians of the Sierra in Peru and Bolivia. My researches among printed or manuscript sources of early times have been fruitless up to date. But we have been assured, by parties not unworthy of credit, that the practice of trephining, and afterward closing the orifices with a *piece of gourd,* is still in vigor among the Indians of high Peru. We were told that the operation is and was performed by persons without any instruction in surgery, and in order to remove splinters from broken skulls. In regard to the instruments used, our informants knew nothing, but they declared to have seen individuals who survived the operation for many years, with a piece of *mate* (gourd or squash) in their skulls, over which the skin had been stitched together. A friend of mine, Don Antonio de Ocampo, told me that in one of his rambles at Ancon, on the Peruvian coast, he stumbled over something that proved to be a skull which protruded from the soil. Picking it up, he saw that a foreign substance was inserted into the bone. It turned out to be a thin disk of *mate* closing an orifice.[5] The skulls we found at Kea-Kollu Chico differ from many other trephined ones in that

PLATE XXXII

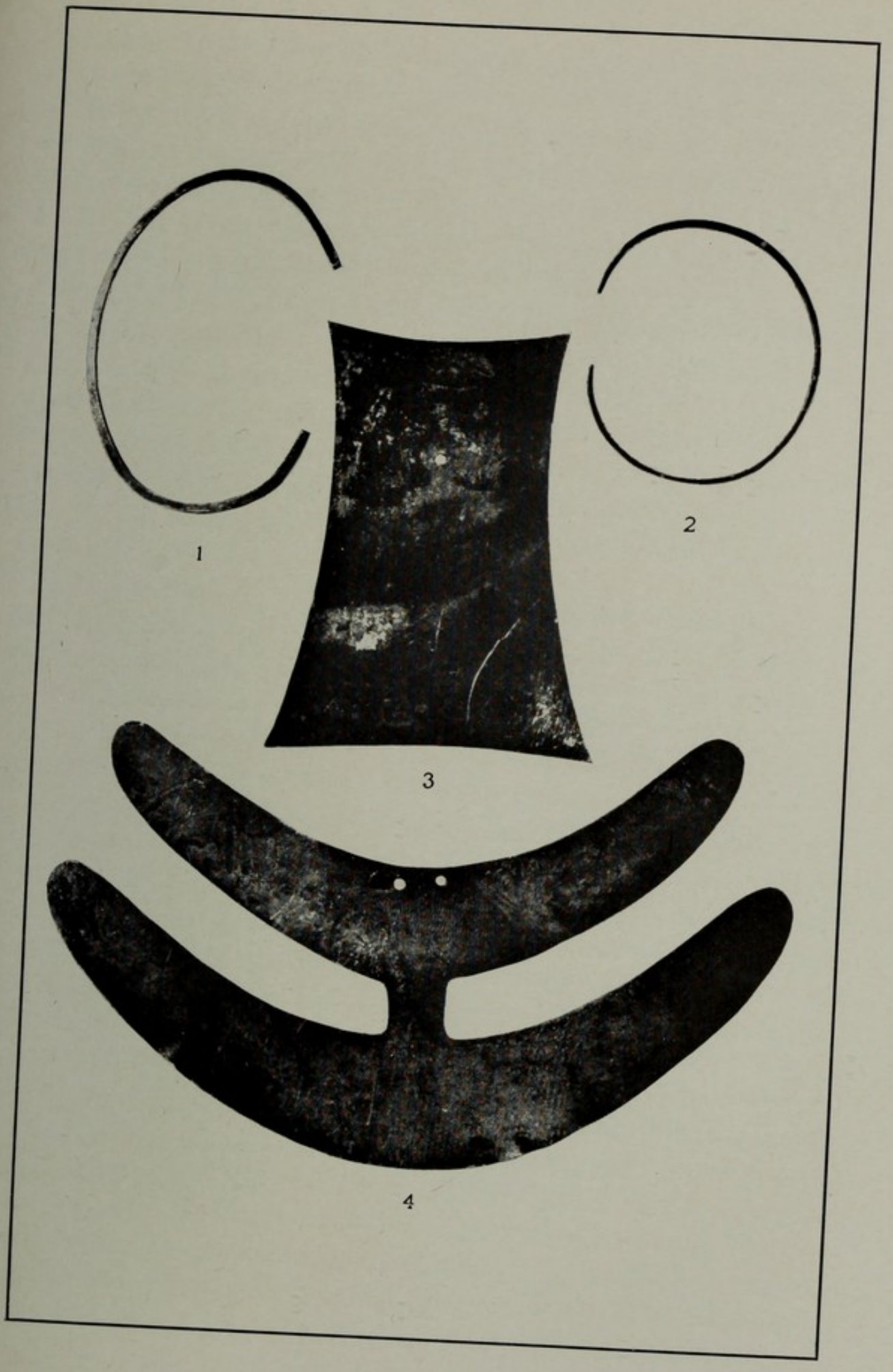
Metallic objects of personal decoration from Titicaca Island

1, 2. Wrist bands. 3 Gorget. 4. Breast-pendant

PLATE XXXII

Metallic objects of personal decoration from Titicaca Island

1, 2. Wrist bands. 3 Gorget. 4. Breast-pendant


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the opening is *circular* and surrounded by a *depression*. This depression seems to indicate the insertion of a thin plate, as mentioned in the account given us of the operation, as well as in Señor Ocampo's description of the specimen from Ancon. It might be objected that the skulls of Kea-Kollu are perhaps not ancient. The misshaping of skulls was rigidly prohibited by the Viceroy Don Francisco de Toledo in 1575.[6] Later decrees, and a stringent search for idolatrous practices in the first half of the seventeenth century, finally abolished the custom. Hence the crania from Kea-Kollu Chico must be, if not of the period before the conquest, at least quite old. Trephining is a very ancient practice, and the artefacts that accompany skulls are, nearly all, of the type which the Indians declared to be pre-Incaic.

The process of artificial *deformation of skulls* so generally found all over the Puna and on the Island, among the so-called Chullpa remains, is described by older authors. It was noticed, at the very earliest times of Spanish occupation, among the Indians of the so-called Collao, to which region the islands of the Lake belonged.

Cieza writes of the "long heads and without occiput," of the "Collas," as produced by artificial shaping from "childhood on."[7] A detailed description of the process we find in the work of Cobo: "The Collas shaped the head long and pointed, to such an extreme as to cause astonishment at seeing the old people whom I yet saw with this custom from the days of paganism. They did this because they wore woolen bonnets called Chucos, like mortars or hats without brims, very high and pointed, and in order that these should fit better they shaped the head after the mold of the head-gear and not the latter after the head; and in order to give this shape to the heads of children they tied and bound them tight with bands, keeping them thus tied until they were four or five years of age, after which the heads had become hard and had taken the form required for the head-dress,

that is, long, flat, and without occiput. They said that they formed the heads in this way in order to make them healthier and better adapted to work, and the first bonnet was manufactured with many ceremonies and superstitions, as well at the spinning of the wool as at the weaving.''[8]

The shores between Kea and the sandy Peninsula of Challa (a), and the slopes descending to that shore from the backbone of the Island, contain Chullpa vestiges. But this slope is broken; the little bays of Coyani (25) and Chumpa-Uaya (20) are bordered by strips of tillable ground, divided by steep rocks, so that the vestiges, of which many have disappeared through cultivation, are few and limited, as far as we could see, to terraces and scattered graves. The main crest of the Island, between Santa Bárbara (12) in the southeast, and Muro-Kato (3), show but few traces of ancient remains. The range of bald heights extending northwest of Challa, from Iñak-Uyu to Challa-Pata and the Calvario (6, 5, and 4), is said to have supported ruins that are no longer visible.

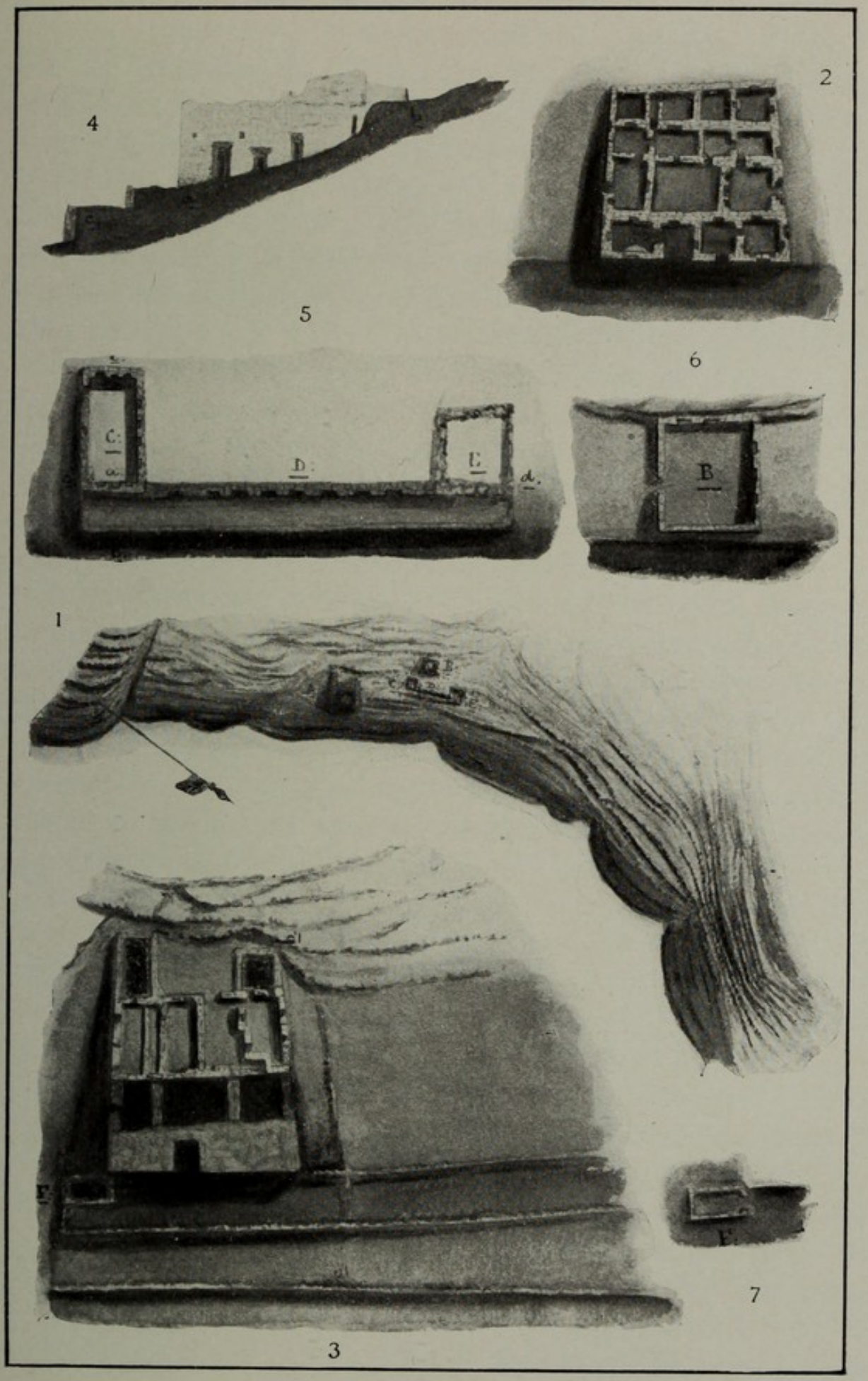
''Challa'' means sand,[9] and the isthmus fully deserves the name. It is a narrow strip of white sand. On the north, it abuts against a low rocky butte called ''Collca-Pata,'' beyond which a long peninsula, shaped like a foot, extends eastward. Collcapata (h) is the gateway to the grassy and fertile swellings of Ciriapata (g) and Marcuni (19), which run out in the point of Uajran-Kala (18). It is at Ciriapata and Collcapata, that we found the greatest number of burial sites declared by the Indians to be Chullpa. On Collcapata are a number of stone cysts of which we opened twenty-three, finding only four intact ones. With little difference, a few inches in extension and depth, they are like those described from Kea-Kollu Chico. Most of them had been rifled by the Indians long ago, and the positions of such skulls as are left leads to the suspicion of reburial. Artefacts were limited to pottery of the coarser kind and some stone implements. Large snails, called

PLATE XXXIII

1. General plan of the ruins of Pileo-Kárma. 2. Plan of ground floor of building. 3. Plan of upper story. 4. Side view of northern front. 5. Outhouses with platform. 6, 7. Plans of outhouses

Plate XXXIII

1. General plan of the ruins of Pilco-Kayma. 2. Plan of ground floor of building. 3. Plan of upper story. 4. Side view of northern front. 5. Outhouses with platform. 6, 7. Plans of outhouses


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"churi," were also found in some.[10] The four well-preserved cysts had no covers, and the grave proper—the pit walled in with rude blocks and slabs—began at a depth varying between sixteen and eighteen inches, whereas the depth of the cysts ranged from eighteen to thirty-two. Three shapeless stone heaps indicated as many "Chullpa" buildings, and the declivities toward the Lake are naturally graded, but supported by artificial walls transforming them into andenes. A wall of stone, nearly three feet in thickness, crossing the summit of the hill, was uncovered. We followed it for a length of fifty-eight feet. It showed better workmanship than that of the walls at Kea-Kollu, still the Indians insisted upon it being "Chullpa." Aside from the three stone-heaps, the long wall, the andenes and graves, Collcapata presented nothing of interest.

A narrow neck, nearly at the level of the Lake, connects Collcapata with Ciriapata. This peninsula has some of the best pasturages and most fertile lands on the Island. Hence the Indians have cultivated it and cultivate it to-day. Its gentle slopes to the south and east are striated by ancient andenes as tortuous as any on Kea-Kollu. Their height varies so much that no average can be given. Only one of the face walls exceeds ten feet in elevation and the majority of the rest are lower than six feet. On one of the first steps ascending from the direction of Collcapata stands a ruined edifice, small and rude. Beneath slabs left of the floor we found a quantity of human bones. Higher up on the slope is a well-made building which the Indians say is "Inca." Its workmanship would confirm their statements. The higher plane of Ciriapata formerly supported a cluster of stone buildings. Twenty can still be traced, of which eighteen are almost obliterated. Two of the buildings appear to have been dome-shaped. They also were broken into and rifled, years ago, but enough is left to establish their form. The interior having been disturbed, it is filled with rubbish to such an extent as to render it impossible to measure the

inside elevation. From the top of the opening of "a" to the rubbish below is an interval of three feet; at "b" it is thirty-four inches only. Interior diameters are: "a," five feet nine inches; "b," twelve and a half feet. The mound formed by each being from six and a half to eight feet in height, it is presumable that the room inside was about six feet high. The dome shape of both results from successive overlapping of stones. Each structure has its doorway with a rude lintel; in "a" the lintel is twenty-six inches long and eight inches thick; in "b" thirty-one inches by six. The entrance to "a" is tapering, measuring eighteen inches below and sixteen above, its present height twenty inches. In "b" the opening is quadrangular, twenty-one inches in width and seventeen inches in height. We excavated these Chullpas to a depth of several feet, without result. They had been thoroughly cleaned out, but the Indians denied any knowledge of "finds" made in them.

Remains of walls connecting rubbish heaps are visible besides. But since the Indians have torn up andenes, destroyed buildings, and built enclosures and new andenes, it is impossible to form an idea of how the cluster appeared when it was intact. In many instances we could not even distinguish the new from the old. Nevertheless I believe that the plan indicates nearly, if not all, the ancient remains yet extant. It is possible that I have included walls and andenes that are recent or at least not pre-Spanish. I believe it safe to state, in regard to this settlement, that it consisted of dispersed small houses, of one room each, connected with stone enclosures and terraces. Ciriapata was the largest Chullpa settlement on Titicaca, and I would, under my present impression, place the maximum of its former population at five hundred souls.

There is a spring on the plateau, but it is hardly used at present. There are much more abundant sources of water of a superior quality on the Isthmus of Challa, at the foot of Challapata. The advantages afforded at Ciriapata to agri-

PLATE XXXIV

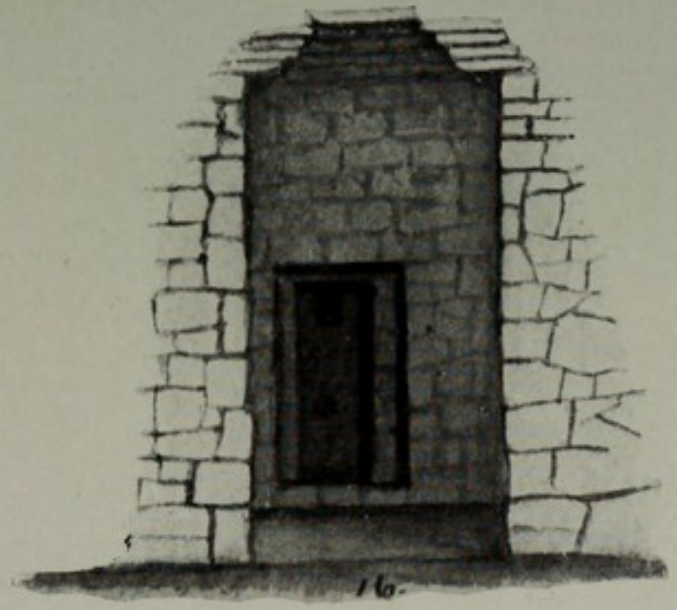
Details of ruins of Pilo-Kayma

1. Part of eastern front. 2. Section of eastern room with niche. 3. Ceiling of room, seen from below.
4. Transverse section of niche. 5. Specimens of niche

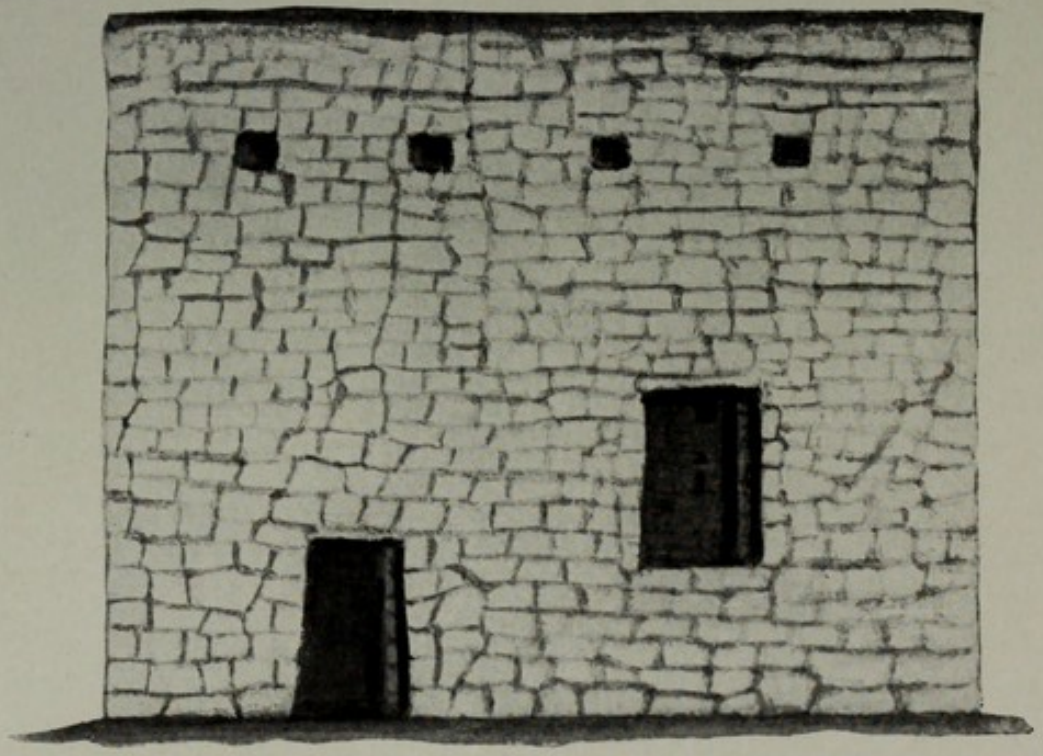
PLATE XXXIV

Details of ruins of Pilco-Kayma

1. Part of eastern front. 2. Section of eastern room with niche. 3. Ceiling of room, seen from below. 4. Transverse section of niche. 5. Specimens of niches

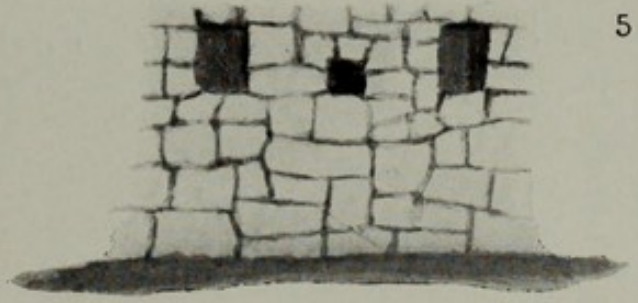


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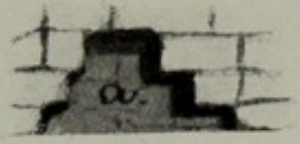


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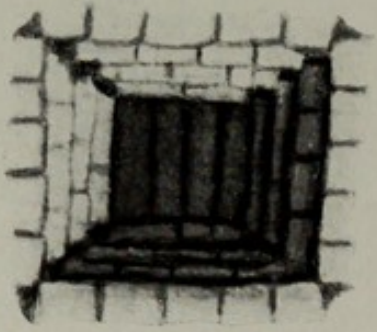




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3

cultural Indians are sufficient fertile soil, eastern exposition, hence sunshine and warmth, and good lookouts. On the south shores of Ciriapata the totora grows large enough for the construction of balsas, and here indeed is the only point on the Island where balsas *can be* manufactured. Also, if the ancient dwellers on Ciriapata had llamas, there could be no better grazing ground for these animals, and to-day the sheep of Challa are mostly herded on this peninsula. With the exception of north and northwest, the range of view is extensive. It would not be surprising, therefore, if the most populous settlement, on Titicaca, of Indians who were *not Inca,* had been established on this peninsula.

The condition of the remains just described led to expect that undisturbed graves might yet be found. We were strengthened in our hopes by the Indians, although they invariably added that the site had been overhauled "long ago." We made excavations at four places. The result of our work was the opening, emptying, and measuring of eighty-five stone cysts: seventeen in one place; six in another; two in another; and a fourth group, of sixty. It is needless to describe each grave. The accompanying plates give an idea of their size, appearance and distribution. Some of the cysts had covers, consisting of a large slab always covered by sod. There were seldom any surface indications, we had to test the ground everywhere, in order to find graves. Their distribution is irregular; they lie at unequal distances from each other, and children's tombs are scattered among those of adults. Their depths vary between fifteen inches (child) and fifty (adult), including a layer of soil from six to fourteen inches in thickness. The cluster is in an open quadrangle formed by a ruined wall, which is mostly modern, though its foundations appeared to be ancient. Many of the graves were empty, still we obtained pieces of coarse pottery and one Llivi, Ayllu, or grooved stone, for *bolas.*[11] The yield on the whole was unimportant, only two of the cysts containing tall red and

black clay cups, which the Indians call kero. The cluster of six graves lay close to a bench of rocks overgrown with bushes, and forming the face of an anden. This rock overlapped the rear wall of three cysts. The soil under the rock was about nine inches deep, and the side of the cyst descended two feet more. It will be seen that some of these graves are approximately round or oval, and that their sides are encased sometimes by vertical plates, mostly, however, by from two to four courses of uncut blocks, with or without a thin seam of mud between them. The covers were gone, and the yield was broken and decayed skulls, a little coarse pottery, and a bit of gray obsidian. In one, three skeletons with skulls were disinterred at a depth of eight inches, and still lower three more skeletons so completely decayed that hardly anything could be saved. Enough was left, however, to show that the bodies had been folded and the arms pressed against the chest. Near these graves, a hoe (chonta) of stone and a fragment of another stone implement were taken out of loose earth.

On a narrow terrace, two very small cysts were opened that contained nothing. Their depth below the surface was only six and eight inches respectively. At site 2, on an ancient anden facing the south, and within an area bounded north and west by old stone walls, fifty-eight graves were found; and two more close by. Of these fifty-eight graves, forty-seven clustered on a space covering not quite thirty-seven hundred square feet, near to a small ruined structure on the edge of the anden. Of these sixty cysts, five were of children. The cysts had been partly opened and disturbed; hence, while it is likely that they all originally had stone covers, not all of these were in place, and a number of the cysts were empty or partly rifled. The depth of the covers below the surface varied between nine and fifteen inches. The stone-work on the cysts is mostly like that of the others, but there are in this group some well-laid and fairly rectangular casings. Here the yield was better, consisting

PLATE XXXV

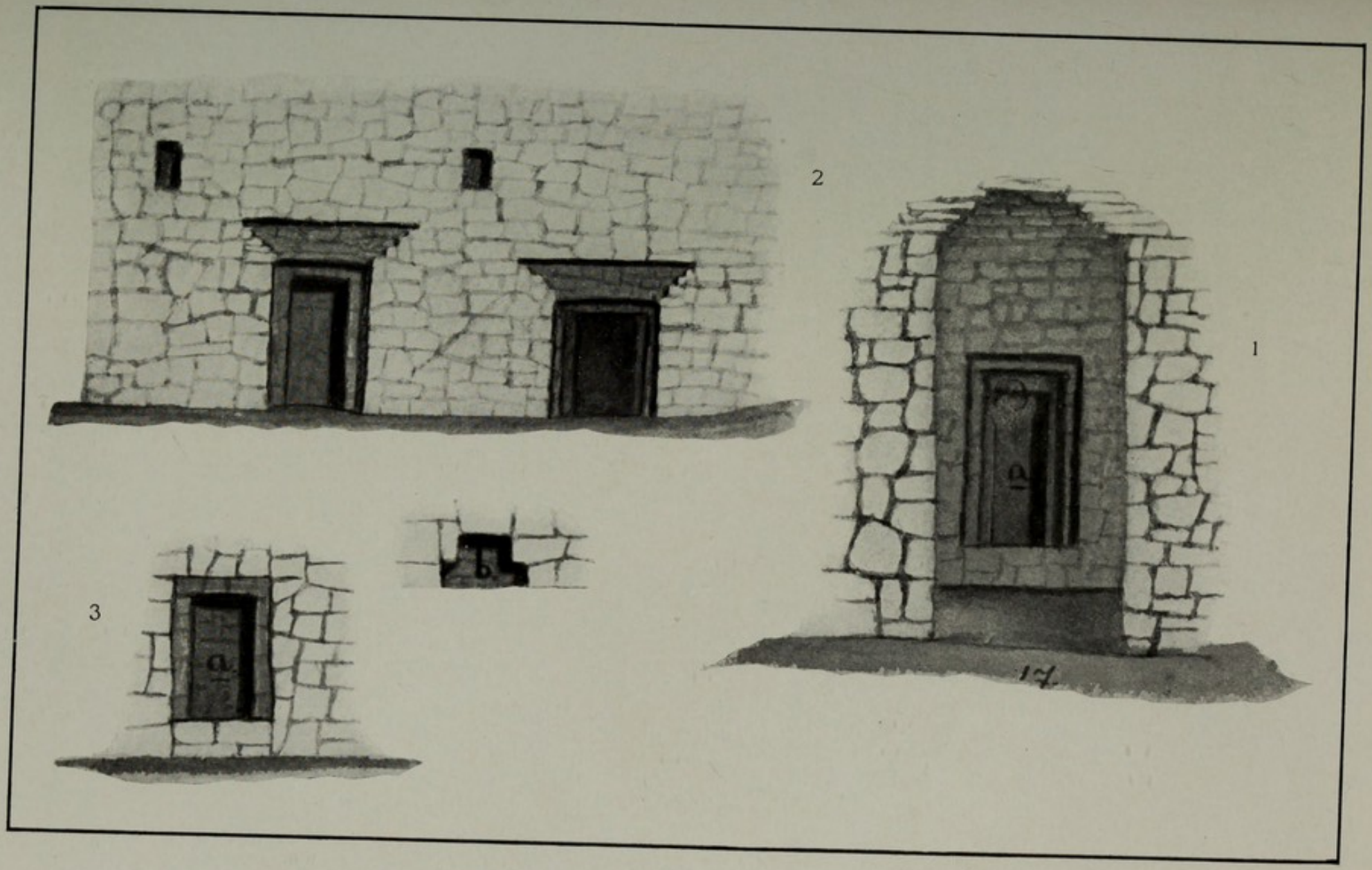
Details of ruins of Pipe-Kayas

1. Section of room with niche in eastern front. 2, 3. Doorways and niches

PLATE XXXV

Details of ruins of Pilco-Kayma

1. Section of room with niche in eastern front. 2, 3. Doorways and niches


2
1
3
a
b
a
17

of skulls (the skeletons had disintegrated), earthenware and other objects. In some we found only ceramics, in others a skeleton, with from one to seven pieces of pottery, all of the ruder kind. From one cyst, a skull, a stone-mortar, and a pot were taken out at a depth of twenty inches. In a cyst ten inches beneath the surface, and twenty-four inches deep, a vessel of clay in the shape of a duck lay three feet under the surface. There was rarely a grave without something in it. The best constructed one, a rectangle twenty-four by seventeen inches, its wall laid in courses, was empty to a depth of forty inches, then only a few bones and the bottom of a vessel, charred, came to light. A polygonal cyst, twenty-four by twenty-one inches, inside measures, twelve inches below the ground and twenty-four inches deep, yielded a painted pitcher, a painted bowl, the bottom of a larger bowl filled with charcoal and blackened by fire, but no human remains. Another contained fragments of one male and one female skeleton, at a depth of thirty-two inches; and twelve inches lower, seven pieces of coarse reddish toy-pottery, a tiny piece of silver, one turquoise bead, two copper rattles, and four topos, or tumis, two of which were of silver. On the top of all this, and *with the decayed skulls,* lay a well-made circular grinding slab. Charcoal was found in nearly all the cysts, and fragments of pottery blackened by fire. The greatest number of skulls in one grave was three. The male skulls are artificially flattened, female skulls showing no, or hardly any, deformity. I must note also that flint flakes were found in one cyst, and in another the upper part of the skull of some animal, which, however, was lost through carelessness of our servant. In one pit there were five skulls, but it afterward turned out that these had been taken out elsewhere and reburied.

There is a ruined "Chullpa" in close proximity to this cluster of graves. We could only make out its approximate size and probably circular shape. At or near the surface

we obtained in loose earth, a few implements or fragments of implements of stone, mostly agricultural; also the half of a handsome stone-mortar that may have been dropped by accident. Here also the Indians' ruthless ransacking has made research difficult and conclusions doubtful. Re-burial has certainly taken place, and as careless as could be, when done by barbarians who upturned the ground only in search of metal and striking pieces of pottery. Destruction of ruins on Titicaca is mostly due to the cupidity of its *Indian* inhabitants.

There are more burial sites at Ciriapata, and we investigated several other points but only to find that they had been rifled long ago, just as the Indians told us. The same is probably the case with the remainder of the peninsula. On the eminence called Marcuni (19) traces of andenes exist, but there, as well as further to the east, toward the point of Uajran-Kala (18), the ground was either cultivated or used as pasturage and we could not think of disturbing it. It seems that this peninsula was more or less covered with scattered habitations of the Chullpa type, making it probable that Collcapata, Ciriapata, Marcuni, and Uajran-Kala, together, harbored the largest "Chullpa" population of any part of the Island.

One small building consists of two (approximate) rectangles, one larger and one smaller. It is not the size of the building that attracts attention but the neatness of the stone work. The total length of its front is nine feet four inches; its greatest width, six feet nine, and its height above the ground (it is partly buried) five feet. The doorway is eighteen inches wide, and only one foot of the elevation is open. The lintel (of well cut stone) measures five inches in thickness and thirty inches in length. The walls, eighteen inches thick, are well built, the corners sharp, though not squared, and the facing quite smooth. It recalls the best specimens of Inca work on the Island. Its presence in a cluster of much ruder buildings attracts attention. Un-

PLATE XXXVI

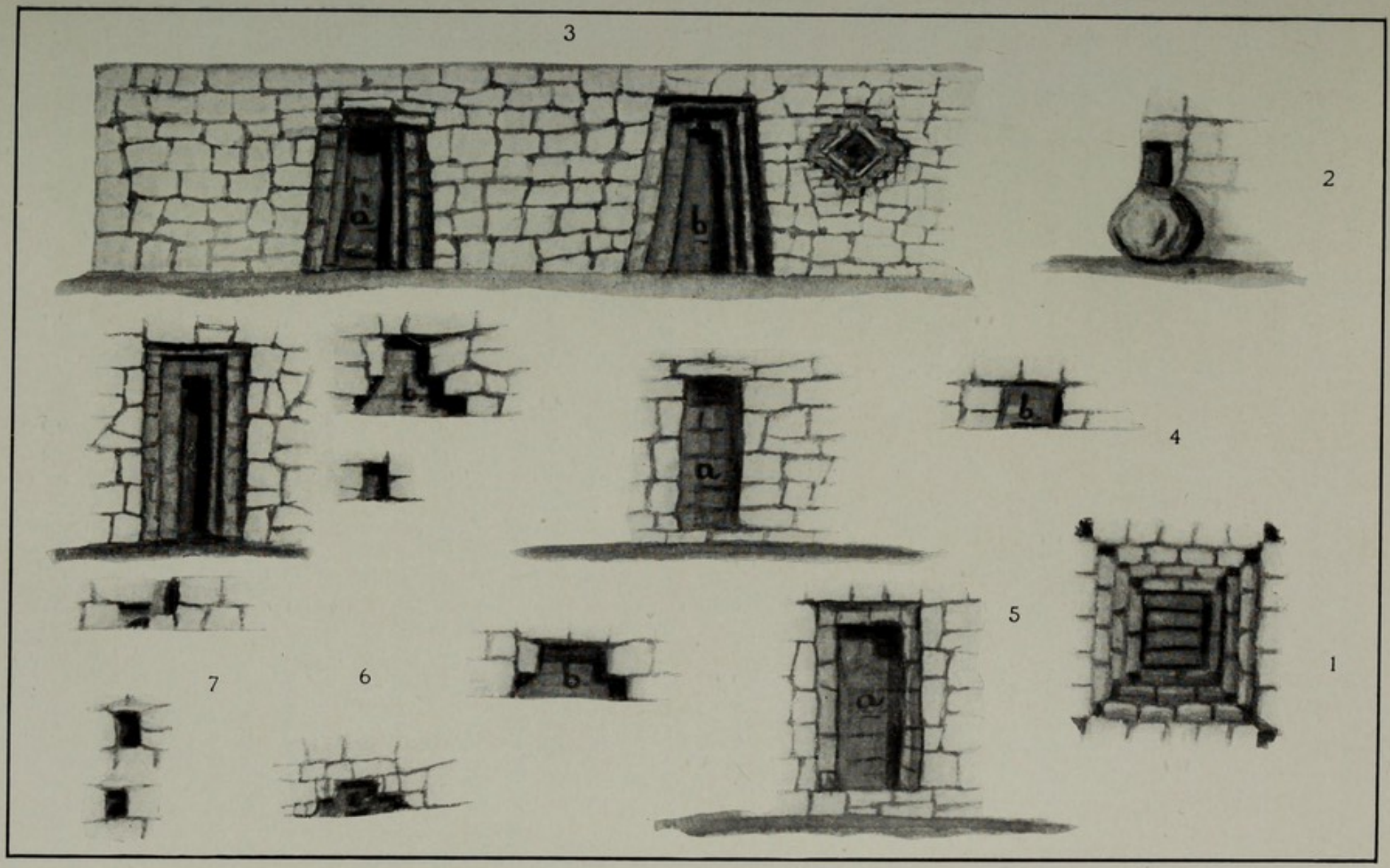
Details of ruins of Delphi-Kastro

1. Ceiling of room in tile casteum front, seen from above. 2. Roman relief in wall. 3, 4, 5, 6, 7. Specimens of mortar

PLATE XXXVI

Details of ruins of Pilco-Kayma

1. Ceiling of room in the eastern front, seen from below. 2. Boulder inclosed in wall. 3, 4, 5, 6, 7. Specimens of niches


3
a
b
2
4
b
a
7
6
b
5
a
1

fortunately, the Indians penetrated into it from above, causing the roof to fall in, as well as through the door. It is probably rifled of everything, and ravaged, through caving-in as well as by vegetation, which has converted the neat little structure into a blooming bush with ugly thorns. We saw that it would be unprofitable to excavate there, and limited ourselves to measurements. The Indians, as already stated, affirm that the building is "Inca." We could not learn of any other structure of the kind in that vicinity.

Returning to Challa and proceeding northwestward along the Lake to the garden of Challa with its terraces of Inca origin, thence to Kasapata past the ruined andenes of Santa Maria, we find no clear vestiges of the Chullpa on our path. In continuation of the isthmus on which the Inca ruins of Kasapata stand, rises, as its northerly prolongation, the height of Llaq'-aylli (f) which terminates in the sharp point of Yé-Jachi (17). The top of Llaq'-aylli is about four hundred feet above the Lake, and its northern point is somewhat lower. Both bear considerable shrubbery, and on them also lines of bushes indicate numerous ancient andenes. We were unable to determine to what class these andenes belong. We found no structures, although the top of Llaq'-aylli recalls some features of Ciriapata. We were repeatedly told there was nothing on Yéjachi, and indeed saw no traces. Hence I am inclined to believe that the Chullpa remains do not extend further than Kasapata. Beyond that point the fertile soil thins out, slopes are rocky, and the graves on the extreme northwestern point of the Island, the low promontory of Sicuyu (3), differ from those described as Chullpa. The southwestern wing of the Island, the bottoms of Kona and the long ridges of Kakayo-Kena (19) are covered with ancient terraced garden-beds, but we have seen no traces of other structures, notwithstanding that in those sections the modern Indian did less damage. The andenes *may* be partly Chullpa, but there is a wide and fair trail or road—Quivini (3a)—lead-

ing up to the Kakayo-kena from the bottom of Kona. Hence I believe that, while Chullpa remains may yet be found, in the shape of burials, in these sections, they were not *inhabited* to any extent comparable with sites above described.

We find the distribution of Chullpa remains on Titicaca to be as follows: They occupy chiefly, if not exclusively, the southern three-fourths of the Island, and the principal settlements seem to have been Ciriapata, the upper slopes of Kea-Kollu, the crest at Apachinaca and along Kurupata and, possibly, the southern parts of the present hacienda of Yumani. The latter I infer from what we saw of antiquities and what could be observed in spite of modern cultivation.

The settlements were not compact. They consisted of scattered houses of small size, and mostly of one room only. On Kea-Kollu the dwellings are partly built against the rock, and have more than one apartment, sometimes as many as six. We found no trace of fortifications, but the fact that the clusters occupy points of observation might indicate that the inhabitants did not always feel secure. The smaller houses, with one room only, recall the Chullpas on the Bolivian mainland near Chililaya,[12] and the many-roomed buildings resemble the dwellings on the slopes of Illimani near the perpetual snow-line.[13]

The great number of andenes with which the dwellings are connected, and the implements found at Kea-Kollu Chico and elsewhere show that the people were land-tillers; but the presence, in graves even, of the stones called "llivi," or "ayllu," which were used after the manner of the Argentine bolas, indicates that they hunted, not only water-fowl, but probably also quadrupeds on the mainland. The llivi were also their main implements of warfare.

Their pottery is ruder and coarser, in material as well as in decoration, than that of the so-called Inca type.

PLATE XXXVII

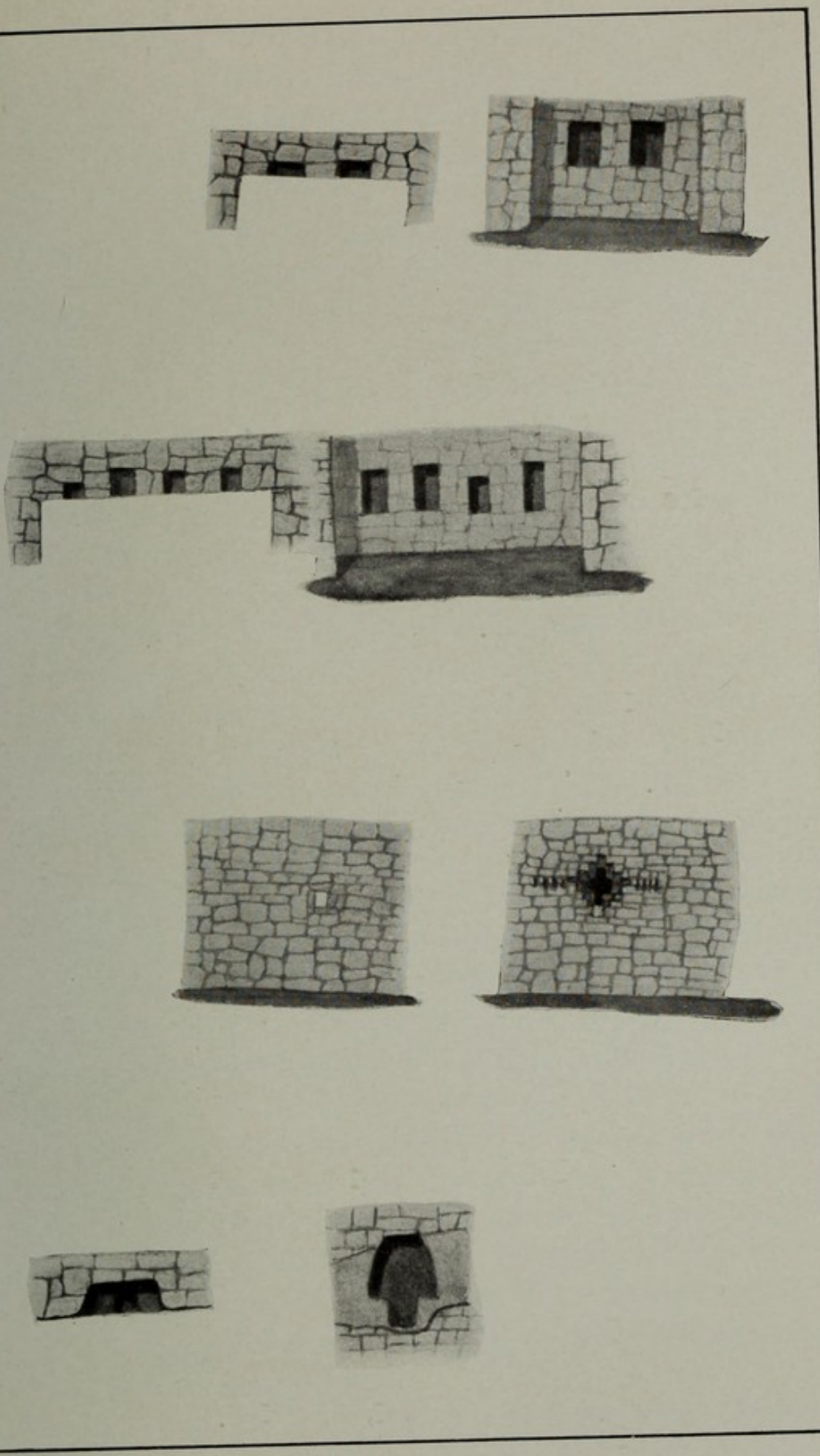
Details of ruins of Pileo-Kayma

Specimens of niches

PLATE XXXVII

Details of ruins of Pilco-Kayma

Specimens of niches



Plastic decoration, often crudely painted, prevails. Among the most striking vessels are certainly the black and red cups or goblets called kero, found abundantly in the stone cysts of Chullpa burials. Of these we know that they were drinking cups, and used in ceremonials. It is even stated that they served, under Inca sway, as accessories to *human* sacrifice, and were buried with the bodies of victims.[14] The same was the case with the keros of *wood,* of which at least *three* were found in rents of rocks above Santa Maria (i). Whether these wooden goblets are to be classed as Chullpa I am not able to decide. I know, however, that they are met with at Tiahuanaco and other places on the Bolivian mainland, both north and south of the Lake, and that their shape is distinct from that of the usual drinking vessels from Cuzco.[15] If the black wooden kero from Santa Maria, sent by us to the Museum, is Chullpa, then, since the carving on it represents a man spearing a large fish, it would indicate that the Chullpa also engaged in fishing, and that they used a harpoon-like instrument, beside others, perhaps, of which we may have no knowledge as yet.[16] The keros of clay are often decorated with human faces in relief, but these are, with rare exceptions, angular and rude, and cannot compare with the beautiful heads from the Peruvian coast. Otherwise plastic art, judging from what we were able to collect, limited itself to fairly made vessels in the shape of ducks and to a few carvings in stone.

While excavating at Kea-Kollu Chico, an Indian from the small settlement of Kea brought us a slab of black stone, which he had found on the slopes of Ticani (2), one of the faces of which was covered with carvings. These carvings represent intricate figures. The origin of the stone we could not ascertain, beyond what I have stated. It may be ancient, or it may be of more recent date and belong to the class of pictographs now used by the Indians to represent church rituals graphically.

Of textile fabrics from the Chullpa we were unable to

secure any. Moisture has destroyed everything of that kind. But the Indians claimed to be able to assure us that the Chullpa dressed in clothes made of llama wool. As we obtained, at Kea-Kollu Chico, instruments for weaving made of bone, there is nothing improbable in this statement.[17]

That the people called Chullpa on the Island worked metal, is shown by the pins found in one of the graves at Ciriapata. These pins were of copper and of silver. The scarcity of metallic objects in the burials is no evidence that they were *originally* rare, since the eagerness of the modern Indian to obtain ancient objects of metal is very great, and, as I have repeatedly stated, the majority of the graves have been, if not completely rifled, at least searched long previous to our coming.

Of household articles, we found the grinding slab or *batán* at various places, and its crusher or grinder. Mortars were also found, and they are of the same type as those of Cuzco, though not as elaborately carved.

It is also worthy of note that the artefacts in general ascribed to the Chullpa on the Island are identical with those of the Chullpa on the Bolivian mainland as far as we know. I refer to the vicinity of Chililaya and Huarina, and the sections of Llujo, Coána and Coni, near the snows of Illimani.[18]

The word Chullpa is often applied, on the shores of the Lake and in the Puna in general, to tower-like structures, some of the handsomest of which are those of Sillustani, of Acora[19] and of the Peninsula of Huata. Elsewhere I have shown that the Sillustani edifices were *not* burial towers, which is also likely in the case of Huata.[20] The mode of burial which Cieza de Leon describes as general in the Collao and on the southern shores of Lake Titicaca[21] is not found on the Island. All the graves seen by us—and we saw upward of three hundred—are *in* the ground, and stone cysts mostly, with a rude slab or block as cover. This

PLATE XXXVIII

So-called "Fountain of the Inca." A large portion of these

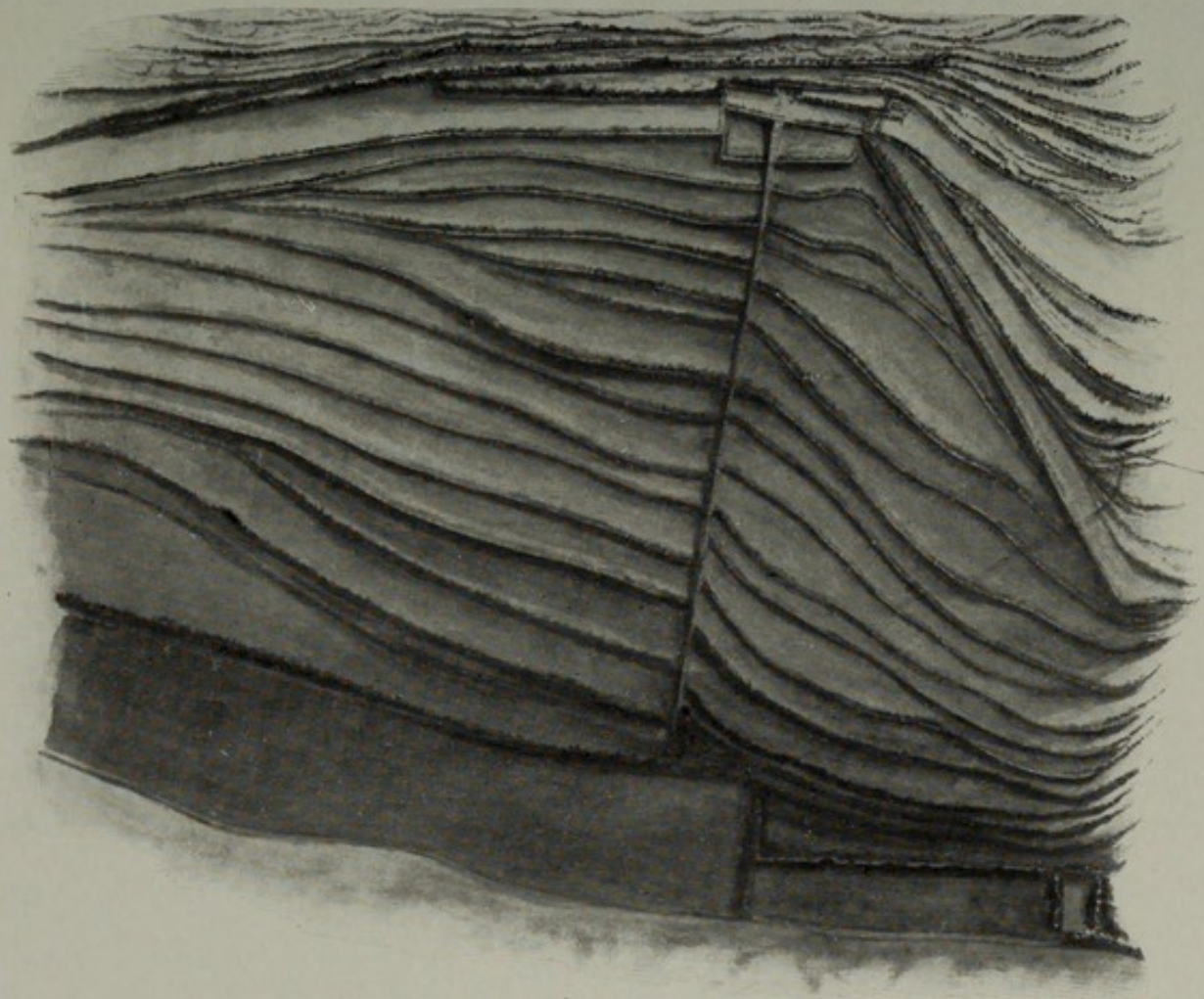
1. 2. Ground-plan and section of the system of "Fountain of the Inca" called terraces of mistaya

improvements date from colonial times

Plate XXXVIII

So-called "Fountain of the Inca"

1, 2. Ground-plan and section of the system of terraces called "Fountain of the Inca." A large portion of these improvements date from colonial times



1



2

mode of burial is like that observed by us at Chililaya, on the Island of Cojata and on the Illimani slopes. The number of graves on Titicaca is large, but does not indicate a so-called Chullpa population in excess of the number of present inhabitants.[22]

The artificial deformity of the heads being the same as was found in practice among all Aymará-speaking tribes at the time of the conquest, it also supports the assertions of early chroniclers, that the Island of Titicaca was originally inhabited by a branch of the *Aymará* tribe.

From the size and disposition of structures that were probably dwellings we may conclude that the homes of these people were dingy and calculated for shelter and warmth almost exclusively. In the absence of combustibles, crowding and exclusion of air had to protect from the prevailing cold. Not enough is left of these structures to enable us to decide whether their inmates used chimneys, but there is at least no trace of them, nor of flues. The Indians emphatically stated that in none of the Chullpas had they ever seen contrivances of the kind. This agrees with what we noticed on the mainland, among the ruins scattered over the Puna.

But the Island of Titicaca contains ruins of a different character, which the Indians ascribe to the Inca. By this word, only the *Inca tribe of Cuzco,* in Peru, can be meant.

The distribution of these so-called Inca ruins differs from that of the former class in that they are limited to fewer localities. They may be said to constitute four groups: The southeastern, composed of, first, almost obliterated structures near the landing of Puncu (26), the buildings and terraces at Pilco-Kayma (a), and the so-called fountain of the Inca, with andenes, at the foot of the promontory on which the hacienda buildings of Yumani have been erected; together, probably, with andenes on that promontory; second, the ruins at Pucára and the "Ahijadero"; third, the cluster of ruins at Kasapata and at the foot of

Llaq'-aylli; and fourth, the ruins on the northwestern end of the Island, embracing Muro-Kato (3), the Sacred Rock and annexes (a), the ruin called Chincana (b), the almost obliterated vestiges at Chucaripu-pata (c), the andenes of Chucaripu (d), and the promontory of Sicuyu (3), with whatever faint traces may exist between that point and the Sacred Rock, and on the flanks of the conical height of Ticani.

There are also Inca remains in the southern bottom of Kona (p), but these, together with the andenes in the grassy basins north and south, and those on the slopes of Kakayo-kena, also the road called Qui-vini (30), attract less attention from the fact that no buildings have as yet been found among them.

All the other groups show traces of edifices. The first three are mostly built on or surrounded by fertile soil; the fourth group lies on partly sterile ground. All are provided with good water, and in connection with each we find systems of terraced garden-beds, superior in construction to the Chullpa patas. The first group affords a good view of the eastern shore of Copacavana, the straits of Tiquina, and the Island of Koati. The second lies in a well-sheltered bottom. The third embraces a magnificent range of view toward the east, north, and northwest. The fourth commands the north, part of the northwest, southwest, and portions of the south. It may be said that the first group *commanded* the eastern shore of the Peninsula of Copacavana and the Peninsula of Huata; the third the line of the eastern Bolivian mainland and the main Lake; and the fourth the Peruvian coast from Puno to Yunguyu; so that, from these sites, the shores of Lake Titicaca could be watched in sections.

Nothing indicates, however, that the possibility of surprise or ambush was dreaded by the Inca. Landings might be effected, under cover of darkness, at points out of sight of any of these Inca settlements. Either the people who selected the sites had no grounds for fear, or nocturnal at-

XXXIX. Part

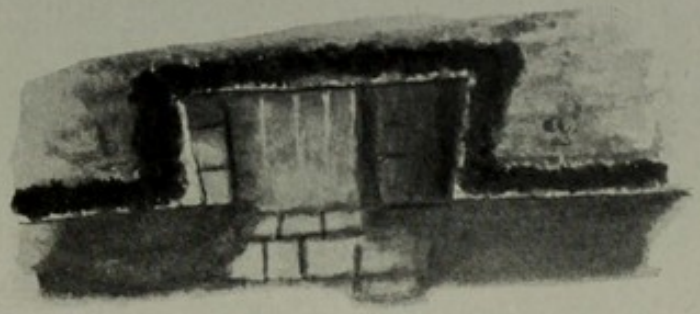
"Lord of the Dance"

1. Grumpy-bjørn to nisse and fun elgin to nisse. 2. Reindeer to nisse and fun elgin to nisse. 3. Stage fright grow with two ugly nisse. 4. Nisse in nisse and fun take part in the show. 5. Nisse to reindeer

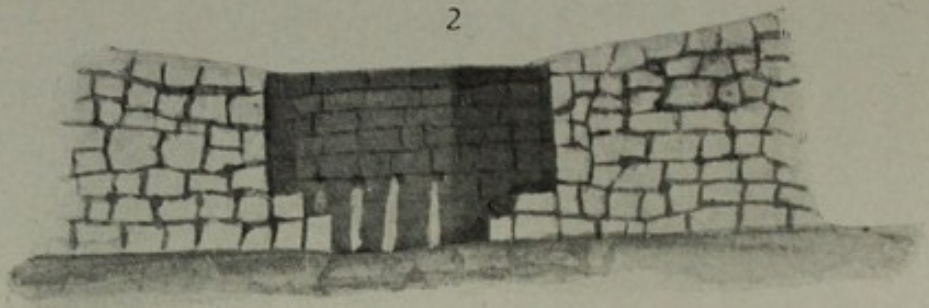
Plate XXXIX

"Fountain of the Inca"

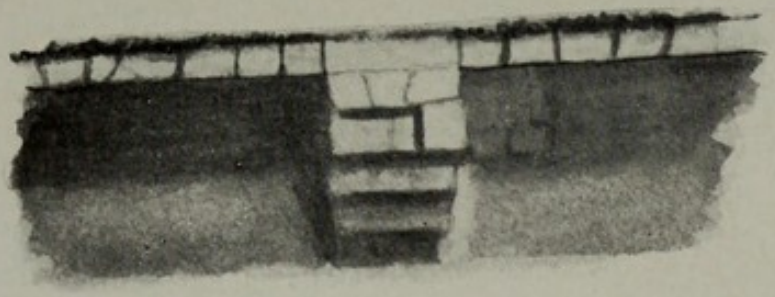
1. Ground-plan of niche and basin. 2. Section of niche and basin. 3. Steps leading down from the basin. 4. Niche in corner of basin. 5. Niches on the lake front, in wall



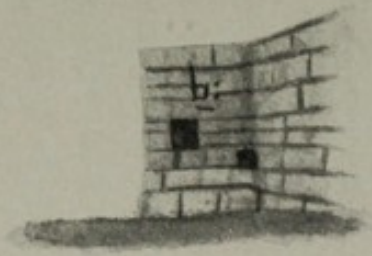
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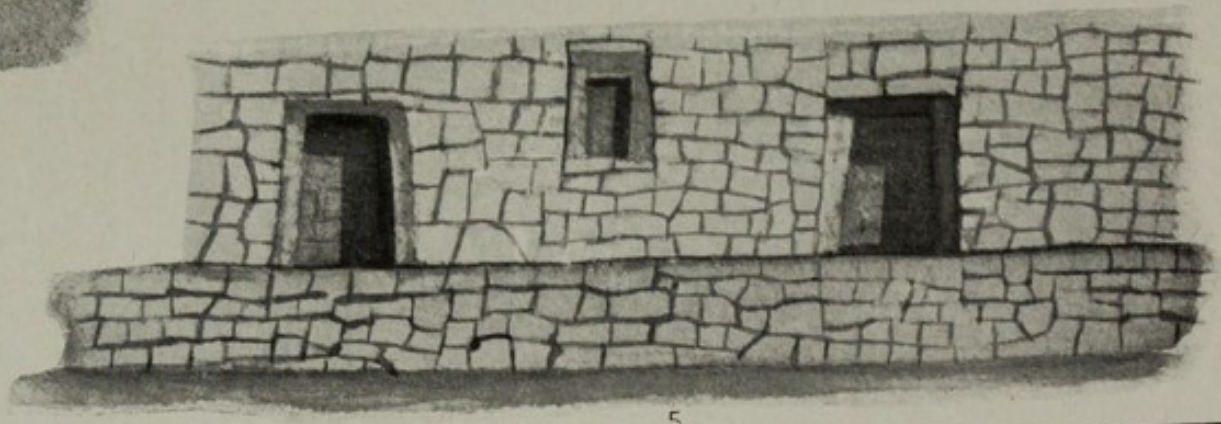
2



3



4



5

tacks were, by the Indians of Bolivia and Peru, not usually made.[23] For creeping up and hiding in close proximity to the buildings until dawn, there were ample opportunities. This indicates that the Island was not exposed to danger while under Inca sway.

A distinctive feature of the settlements called Inca, aside from superior construction and finish, is the lesser number and greater size of the buildings. From one to three larger edifices and not over five or six smaller ones compose each cluster. The main buildings, while far from being *very* large, are still superior in size to anything of Chullpa type.

Another feature is the traces of wide trails that connect the several establishments with each other. We must not fancy, however, that these were highways such as we find in civilized countries. For the greater part of their length they are simply well-trodden *trails;* such, for instance, as those leading up to the "Cerro de Montezuma" near Casas Grandes in Chihuahua, northern Mexico.[24] The section of the ancient road called Quivini—Chullun-Kayani (15)—is from seven to ten feet wide on the slope, but it is impossible to detect how much of that width belongs to the road and how much to the terraces along which it ascends. It connected the summit of Kakayo-kena with the cluster about the Sacred Rock, but the main portion of it, across the undulating slopes between the northern bottom of Kona to the Sacred Rock, and Chucaripu, seems to have been an Indian trail simply worn out by frequent travel. So it is the case with the road from Pucára to the northwestern end of the Island, and with the trails that connected the southern (first) group with Pucára. The latter was probably along the line of that which now leads to Challa, but deviated from it to follow the ridge instead of descending to the Challa Isthmus. Mr. Squier saw some of this ancient road, but included in the description of it features that are *not* artificial.[25] Besides Quivini, the best preserved specimens are the fragments of the road descending

from Muro-Kato toward ruins called Mama-Ojlia. On the heights, however, all traces vanish.

Another distinctive feature of Inca ruins on the Island are particularly well constructed andenes, with artificial drainage of the slopes in two places. The water was gathered in troughs behind the anden, which troughs emptied through narrow conduits into an artificial basin, whence it is led by stone channels down the slope into the Lake. Such is the case at the "Fountain of the Inca" of Yumani (*n*) and at the garden of Challa (23). At the Chincana (*b*) something analogous *may* have existed, although there is at present merely a spring surrounded by a stone enclosure. Such contrivances indicate considerable advance, but we must not exaggerate by fancying these places to have been improved artistically. They are *naturally* picturesque, as many others on the Island, and the *superabundance of water* compelled the Indians to resort to drainage. The gardens themselves, with a number of *imported* shade and other trees, flowers—dahlias, forget-me-nots, pinks, roses, etc.—and strawberries, are from *colonial times,* and *they* have given to the sites their main charm. If we divest the garden of Challa of these originally Spanish beautifying elements, the view remains: clusters of indigenous stunted keñua-trees, and monotonous andenes as the only work performed by the Incas. The same is the case at Yumani. Only the utilitarian point of view—not landscape gardening as fabled—determined the Indian's choice, and the reverence which the Peruvian aborigine, like all Indians, paid to springs and groves was a part of their Huaca, Paccarina, or Machula worship.[26]

The works above described, and attributed to the Inca, appear greatly superior to the achievements of the so-called Chullpa. It remains to investigate how far this superiority is upheld in other lines, and we must therefore attempt a description of the main ruins and cast a glance at the artefacts found in connection with them.

Mr. Squier has given a plan of the ruins at the Puncu, a short distance above the landing. As these vestiges have almost disappeared, I refer to his description, plan, and picture.[27] These small structures overlooked approach to the Island from the Peninsula of Copacavana. The path which now leads up to the backbone of the Island (see map), rises, as already stated, continuously, though not steeply. Soon the traveler sees below him on the right the ruins known as Pilco-Kayma.

The Pilco-Kayma is a quadrangular structure of stone connected with a system of handsomely constructed andenes that skirt the abrupt shores of the Lake and extend in curves 400 feet to the south-southeast, and, by airline, 800 feet to the north. From the level on which the main ruin stands, terraced garden-beds rise irregularly, running in undulating lines as far as the extreme northern end of the whole system of terraces. Above that end, other handsome andenes rise, forming eleven nearly parallel gradients, altogether little more than a hundred feet deep, while their front toward the Lake is not over two hundred feet in length. Beyond these andenes follow others, out of sight from the main ruin, which extend northward toward Yumani. Most of these are under cultivation, and they may even be partly modern.

In the rear of the Kayma, the ground rises rapidly and rocks bulge out in irregular steps, bearing patches of soil which were also cultivated. The andenes in front of the building are well made, and overlook the waters of the Lake from a height of about sixty feet. Descent is abrupt and the beach very narrow.

A little over one hundred feet north-northwest of the Kayma stands a small building, seventeen feet long by thirty in depth, on the southern corner of a terrace densely overgrown by shrubbery. The length of this terrace is one hundred and twelve feet, and its northern end bears another small edifice, more ruined than the former

and of about equal dimensions. The rear wall of the anden on which these two structures stand is of very fair construction and has eight trapezoidal niches. It will be seen that, while the dimensions of the niches are nearly (not absolutely) equal, there are differences in detail of form or design. Thus, one has a lintel, and tiny recess, which the others have not. Between every two of the large niches is a smaller one in the shape of a lozenge, the deep middle recess of which is lined by four thin plates of stone set on edge, and as many small pebbles forming the corners. This wall presents, therefore, quite an ornamental appearance. Its height is eight feet. The masonry of the buildings is equally well made, and one has a number of small interior niches.

Below this upper tier runs an esplanade four feet wide and three feet high, faced with stones and fairly leveled. All these structures are now overgrown with shrubbery that plays sad havoc with them. The purpose of the two buildings and of the terraces connected is conjectural. Mr. Squier offers no explanation. The interior would be perfectly plain except for the niches, to which a *practical,* not an ornamental, purpose must be ascribed. These side-buildings, and another, which I yet have to describe, appear like outhouses or isolated store-rooms, rather than dwellings or structures of a ceremonial or military character.

About twenty feet to the west, and higher up the slope, stands a larger building which is better preserved. In places its walls are as tall as eight feet, and three feet thick, with two interior niches in the western and three in the northern wall. The doorway is thirty inches wide and its stone frame well made, but it has no lintel. There is as little left of the roof as in any of the others. In front of this structure lies a ruined platform about six feet wide.

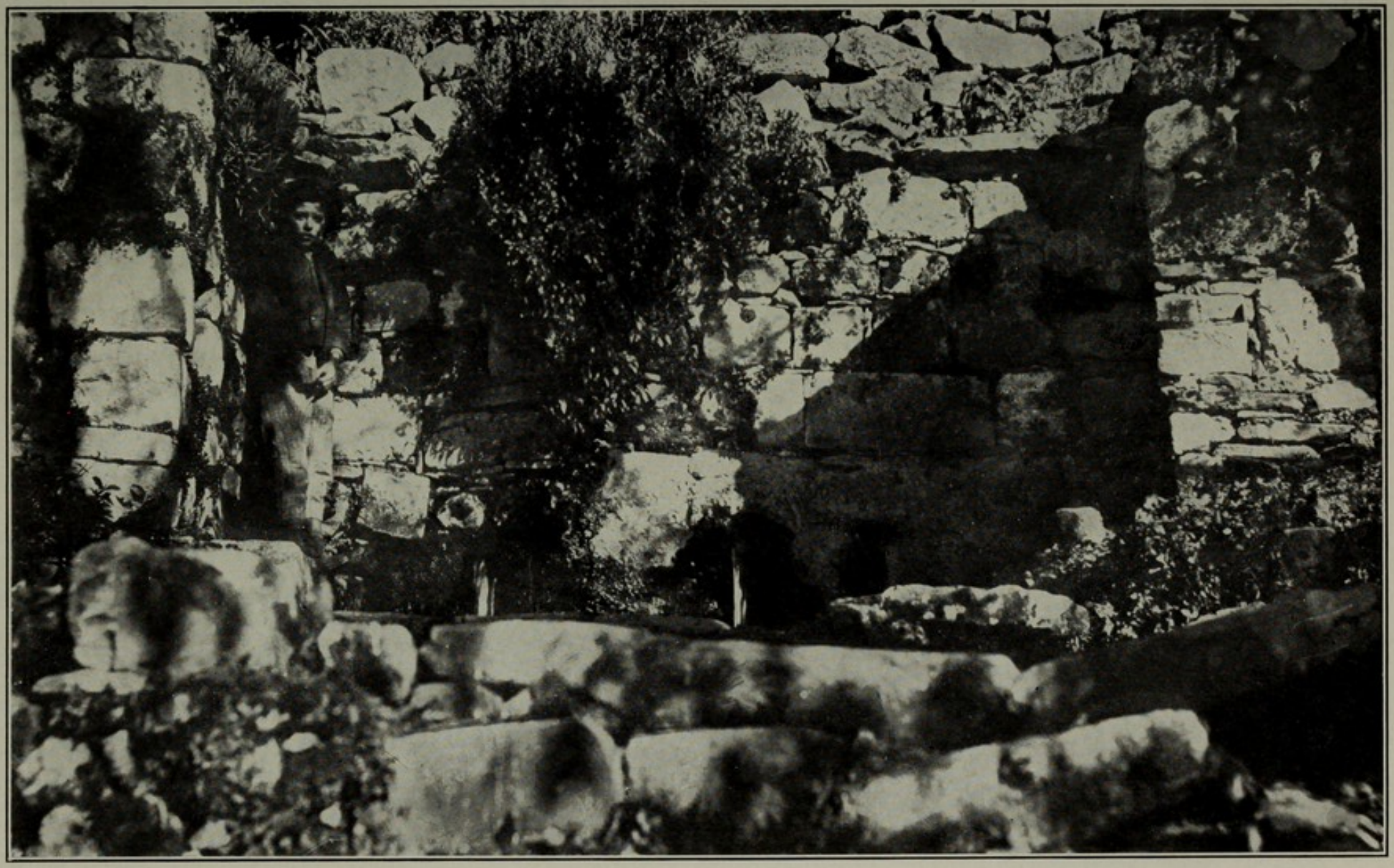
This edifice stands on higher ground than the Pilco-Kayma proper, and it leans against the same rocky rise as that building. It will be seen that the Kayma is not sym-

PLATE XI.

Front view of tresse and basin of "Fountain of the Lion"

PLATE XL

Front view of recess and basin of "Fountain of the Inca"



metrically built. It forms a quadrangle with sides of unequal length. The north wall, without its two additions, measures forty-nine feet; the western wall, forty-four; the southern, forty-five; and the eastern or Lake-front, fifty. The cause of these irregularities lies partly in the nature of the ground which slants considerably to the eastward. It is another evidence that the builders, notwithstanding certain advances, could not *remove* serious natural obstacles, hence, as in New Mexico and at Mitla, in Mexico,[28] adapted their buildings to the ground, instead of leveling the ground for the building.

The walls, exterior as well as interior, of the Pilco-Kayma, vary in thickness between eighteen and forty-two inches, and at small distances from each other. The masonry is fair, the stones are laid in irregular courses, sometimes breaking joints, and the blocks are of every imaginable size, merely broken, not cut or hewn. Thin seams of mud form their binding; hence their appearance is not as prepossessing as, for instance, the stone walls at Cacha, nearer to Cuzco, or the so-called "house of Atahualpa" at Cajamarca. But since there is every reason to believe that over these rough walls there has been a coating of clay, painted besides, we may consider the present appearance of the building as merely the skeleton of its original state.

The lower story, as we may call it, is divided into eleven apartments, three interior courts, and one space on the Lake-front, in regard to which, there being no roof and only a considerable amount of rubbish left, I do not venture to decide whether it was a room, or an open passage, or small court. The western end, surmounted by a part of what is an upper story, is completely dark and very little detail can be observed. The three middle courts, as will be seen at a glance by comparing the plan of the upper story with that of the lower, are small, filled with thorny shrubbery, and they have niches as well as doorways leading into rooms on the west. Both the northern and southern courts

open to the outside. The middle court communicates with one single room to the west of it. (I refer to the plan for dimensions and details.) The height of the rooms decreases from east to west. Those on the Lake-front measure from fifteen to fifteen and a half feet to the top of the ceiling. The exterior height of the building along that front is nearly twenty-two feet, leaving seven feet for the thickness of the roof, which is of slabs, mud and stones. It is not certain that its present thickness was the original one, and it would seem to have been less rather than more. At the northern doorway, the total elevation of the structure is reduced to about eighteen feet, and at the western end of the northern wall to eight. Still the height of the apartments, while less in western rooms, does not keep step with the decrease in exterior elevation.

The three rooms along the eastern front that are still intact have the same kind of ceilings. They consist each of four tiers of successively overlapping stones to a height of fifty-eight inches. The uppermost tier supports four large slabs forming the apex of this primitive vault. We could not measure exactly the surface of this apex, hence the figures, so far as dimensions are concerned, are not absolutely accurate. The masonry inside is not much better than that outside, and it is plain that it was plastered over and painted. The ceilings of the western rooms, so far as we could see, correspond to the description given by Mr. Squier: "Their ceiling is formed by flat overlapping stones"; but the "great regularity" with which they are said to be laid we were unable to find. The plates forming the apex are far from equal in size and seem to have been picked out rather than shaped. Doorways with niches and rude cornices, and larger and smaller niches, give to the *outer* walls a clumsily ornate appearance. The northern doorways appear to have been the main entrances to the lower story, being on the most convenient side. Niches are plentiful, and those in the rooms on the Lake-front are

taller and more elaborate. Further in, they become small and plain. There are no fireplaces, chimneys, or flues; not even a smoke escape, which is strange enough in a cold climate. Some of the doors and larger niches taper toward the top; the others are fairly rectangular.

In two of the rooms (see plan of lower story), a heavy boulder, resting on the floor, is imbedded and has been included in the wall. Above one of these boulders is a niche. The boulders are so large that it would have required several men to remove them; still it is strange that people who were able to move incomparably more ponderous masses, as shown at Sillustani and Cuzco, should have left smaller blocks *in situ*, building over and around them. The purpose of making a rude mass an integral part of the side of a room is not clear to me. The work of carrying the boulder to the spot, would have been much greater than that of laying the wall. The boulders show no trace of workmanship. They may have been *placed there* for some purpose, but it strikes me as more rational that they were *found there originally* and included in the masonry.

The whole of the lower story has, so far as we could find, only two airholes aside from doorways, and to these tiny openings the name of window can not be given. They are so constructed as to permit the admission of a thin stream of air, but of very little light, as the opening is not straight, but in one forms an angle, in the other almost a "T." Both are in the rooms toward the Lake, hence in those that are lighted and ventilated by tall doorways. None of the other apartments in the rear have anything but low doorways to illuminate them; they are dark, dingy *caverns*.

The little outhouse resembles the other smaller buildings, only it is not as large and has no niches. It is a continuation of the southern wall of the Kayma, and has the handsomest masonry of the whole group. The doorway in particular is very carefully made.

In regard to the upper tier, which is much more in ruins than the lower, I refer to the plan. It will be seen that it covers but one half of the ground floor. On the northern side are portions of walls as tall as nine feet, the others are lower, and the eastern front is much deteriorated; hence architectural details offer less interest. The two rectangular additions in the rear are about on a level with the floor of the upper story; they are in ruins and filled with shrubbery. Immediately behind them rise the rocky steps of the slope, some of which have been used as andenes, wherever the ledge was capped by a sufficient thickness of soil.

The site itself, on which the Pilco-Kayma forms the central structure, is fairly picturesque. The terraces and slopes afforded ample space and soil for cultivation. Water is near at hand. It receives the greatest amount of sunshine obtainable, being open to the east and northeast, and protected against cold blasts from both north and west. It is, for these great altitudes, comparatively rich in natural advantages.

The magnificent view from the Pilco-Kayma, the unparalleled beauty of the Sorata group of the Andes, which nowhere else on the Island appears so grand and majestic, inspires almost reverential admiration. Every one of our visits to this site was a source of new and deep-felt pleasure, aside from archaeological interest. How far this impressed and impresses the Indian, whether Aymará or Quichua, Colla or Lupaca or Inca, may be judged from his character and primitive beliefs. If the scenery affected his mind at all, it was through the appalling nearness of the gigantic peaks, each of which was to him the home of some powerful spirit, and not a "sense of nature's beauty," of which there is no trace in his character, either in ancient or modern times.

It is clear from the size of the edifices that the number of their former inhabitants cannot have been great. The Pilco-Kayma, admitting that *all* the rooms were occupied,

PLATE XLI

Artefacts of Bronze (Inca make) from the Island of Titicaca

1. Bar or lever of bronze. 2. Chisel or engraving tool of bronze. 3. Bronze needle or Yauri. 4. Engraver's tool (?) of bronze. 5. Celt or chisel of bronze. 6. Ax of bronze. 7. Bronze knife

PLATE XLI

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could shelter at most a hundred people by dint of crowding. The outhouses might have lodged as many more. What the original purpose of the building may have been is difficult to imagine.[29]

The sinuous slopes between the Pilco-Kayma and Yumani are covered, as already stated, by andenes showing ancient and recent cultivation. I have mentioned the fact that the number and extent of these garden-beds does not indicate a correspondingly large agricultural population. The system of rotation in lands requires a very large surface in comparison with the number of the people. We find no traces of Inca buildings until we reach the lower slopes of the promontory of Yumani, where, not far from the water's edge, shapeless rubbish designates the spot on which, according to the present owners of Yumani, "another Kayma" formerly stood. Not even the approximate size of the structure can be determined, so completely have treasure-seekers overthrown its remains. On the southern slope of the Yumani height, however, stand, in fair state of preservation, the vestiges called "Fountain of the Inca," improved and beautified after the seventeenth century through the addition of trees and plants not indigenous to South America. What renders the Fountain and its numerous and well constructed andenes attractive is *not* due to Indians.

From the plan it will be seen that the water, gathered in the rear of the upper andenes, finds its egress into a wide niche with a small basin, and through four openings left purposely between the blocks out of which the rear wall of the niche is built. The term "spouts" is therefore inappropriate, as there are no conduits cut in the stone, still less spouts that protrude. The stones are fairly laid in mud, and the openings are at unequal distances. A coating of whitish concrete formerly covered the wall from which the water issues. Traces of this coating still exist, and to it must be attributed the statement that *conduits* are *cut* in the stone.

The basin in front is not deep, and from it the water, which is beautifully clear and of excellent quality, finds egress, through a covered channel, to the lower level of the next anden, and thence down the slope in a narrow canal of stones forming on the way little falls of from one to two feet. The height of the slope, from the beach to the Fountain, is 110 feet, and the horizontal distance nearly 300 feet. All along the inclined channel, steps, made of rude and very unequal stone plates three feet wide at the top, but only two feet further down, lead to the narrow and sandy beach. On both sides of this path numerous andenes extend in curves, those on one side not being always on the level of those on the other. The facing of these terraces is well made, and superior to any on Ciriapata and similar sites. Below, where the water issues on the beach, the anden is high. Stone steps lead up to it at more than one place, and tall and well made niches, not exactly equal in size, adorn the front, both right and left of the channel. We saw no trace of buildings. The whole is a system of terraced garden-beds combined with a well-planned arrangement for drainage. The basin is too small for a bath. In the wall to the left of it, are two niches of small size, capable of holding a pitcher. Terraces, niches, basin and steps, have been repaired by the owners of Yumani at various times. Some details may not be original; the main features certainly are. The water is not from a spring. It is the drainage of the steep slopes of a crest, extending from Pallakasa to Keñuani (13), of part of the latter peak, and of the southern declivities of Yumani. The crest and tops mentioned are bare, and the grade is steep, hence the waters rush down the slopes. Some years ago the owners of Yumani had to open the rear of the anden in which the fountain is constructed, because the latter stopped running. They found an ancient wooden channel, partly decayed, the decay obstructing the outflow. This channel is said to extend nearly as far as the Pilco-Kayma, hence it receives the

Kniha st. Prosts

Prose XVII

PLATE XLII

Ruins at Pucara



waters of a considerable length and height of slope and *drains* it, insuring stability to the ground. Were it not for this drain, the soil would turn into mire and eventually be washed away. The Fountain of the Inca is therefore simply an arrangement for draining the declivity in its rear. The channel through the garden and to the Lake, if primitive, was not intended for irrigation, as the water in it flows at a *lower* level than the andenes on both sides, and it cannot be turned onto any of the terraces.

Beyond Yumani, except the almost undistinguishable remains at the northern base of its promontory, Inca ruins, if they ever existed, have disappeared. I hold it to be likely, that Pucara, on the margin of the grassy pasturage called "Ahijadero," at the base of Kea-Kollu, is the next site of Inca remains, on our way from Yumani to the northwestern extremity of the Island.

Pucara (m) is sadly wrecked. What remains does not even allow suggestions of a reconstruction. The bottom of the "Ahijadero" is in many places marshy and traversed by dykes dividing it into irregular sections. The elevation of these causeways above the ground is from a few inches to six feet, one side being nearly always higher than the other. Their width varies also, five and thirteen feet being the extremes noticed by us. The rims or borders are lined with rows of stones in single file, and in the case of the widest of these causeways, another row divides it longitudinally also (see diagrams). The dykes are built of earth and gravel, with some stones, so as to make them harder than the surrounding level.

The Indians could give us no information in regard to these causeways, neither could the owners of the Island, nor anybody else familiar with Titicaca. They had escaped attention thus far, as their appearance is not striking. Our first impression was that they were ancient irrigating canals. But it soon became apparent that this was not the case. The "Ahijadero" is a marshy pasturage, its north-

western section, at the foot of Kea-Kollu, a swamp. The central and southern parts are drier because higher. The dykes in question cannot have had anything to do with cultivation, for the bottom was not anciently cultivated. These contrivances seem therefore to have been made in order to enable *circulation.* It is the only suggestion I can offer. There are two groups of them, one of which touches Inca andenes on the slope of Little Kea-Kollu, the other traverses nearly the whole length of the bottom, from a deep ravine on the flanks of Santa Bárbara to the beach. Up that ravine, the Indians say, an ancient trail or road leads to the Sacred Rock. The ravine is so much eroded that we cannot affirm having seen vestiges of the trail, and higher up so many trodden paths cross the slopes that it is impossible to distinguish the old from the new. The lower end of the longest dyke tapers out almost in front of Pucara. Hence it is possible that the causeways were built for the purpose of facilitating intercourse between Pucara and the northwestern end of the Island, the bottom of the "Ahijadero" being formerly more swampy than it is to-day, and water covered perhaps the entire expanse as far as the base of Kurupata (*r*). Similar causeways are found in the southern bottom of Kona, of which mention will be made further on.

The ruins proper consist of what at first sight appears as a long and solid wall forming an "L," the eastern wing of which is taller but much shorter than the southern. Its thickness is not easy to determine, as it has been changed by removal as well as through additions, but it seems to vary between four and a half and six feet. The masonry is fairly laid and superior to Chullpa work. The southern wing is still standing, partly, on a length of four hundred feet; there are traces of its former extension westward for quite a distance along the base of Kurupata. Its height varies between four and eight feet. In it are a number of large niches, a tall one alternating with a smaller, the

PLATE XLIII

General plan of the bottom of Abijadero with ruins of Pucara

PLATE XLIII

General plan of the bottom of Ahijadero with ruins of Pucara



former going down to the ground. There are two openings that may have been gateways, but they might also be due to removal. Yet I believe that at least the smaller one was an entrance. The eastern wing seems to have been part of a building. Its length is ninety-eight feet from the corner to a doorway, through which stone steps lead up to a higher plane on the slope of Uacuyu. In this wall are two tall and quite elaborate niches, and two openings the largest of which measures four feet in height, twenty-six inches at the base and twenty-four at the top, whereas the other is smaller and not tapering. Both have stone lintels. The greatest elevation of this wing is nearly thirteen feet, the tallest niche measuring eight and a half feet in height. Both openings stand five feet above the ground. Here destruction has been very great. Enclosures for cattle and swine have been built out of the material by the Indians, and the space in front is so completely converted into pigsties, and the like, that it is useless to conjecture what might have stood there formerly. As, furthermore, we could not obtain any information about the place, I can only conjecture that there stood at Pucara "once upon a time" a structure, one wall of which was about a hundred feet in length and had two openings like windows, to the east. Why these openings were made on the side where the slope crowds the walls, is strange, unless they were doorways to facilitate access from the rear.

Tall andenes with tall niches line the slope of Kurupata in the rear of the southern wing, and on the lowest declivity of Uacuyu, 160 feet from the eastern wall or building, lies an *anden* (d), with at least five ruined niches, while its front is otherwise in a fair state of preservation. From the anden a wall, partly in ruins, advances to the edge of a lower terrace, shutting it off on the south. This anden also is well constructed. On the southern side a little chamber has been built with two doorways, one below and the other above, and with stone steps of which

only traces remain, from the lower to the upper. Both doorways are carefully made and do not taper like the niches. The face of the lower anden has recesses and farther south stands a similar structure on the same level. We could only glance at the latter. Higher up on the slope of Kurupata stand more andenes declared to be Inca by the natives, as well as those on Little Kea-Kollu. It is probable that cultivation was limited to these points, in addition to what is said to be Chullpa, of which there are numerous vestiges. This mixture of Inca, Chullpa, and modern terraces, and consequent changes, renders discrimination very difficult.

Among the artefacts from Pucara, articles in copper and bronze predominate. From here we obtained through purchase (excavations being impossible as the slopes were covered with ripening crops) the finest specimens of knives. Among them is one with a handle terminating in a well modeled hand. This implement was cast, not hammered. We also obtained heavy bars made of bronze, said to be agricultural implements, and the only star-headed weapon (one side terminating in an axe-blade) that we saw or heard of on the Island. It is singular, that none of the older sources at my command mentions the ruins at Pucara or any ruin resembling it. It is true that Pucara lies away from the line of travel from the southern to the northwestern end of the Island, and this may be the reason also why Mr. Squier makes no mention of the place; but the missionaries of the seventeenth century might be expected to have at least *heard* of Pucara! Nevertheless, neither Ramos, nor Cobo, nor Calancha, all of whom visited the Island, allude to the site, whereas on other ruins they are very explicit.[30] What the object of the constructions at Pucara might have been is, therefore, a matter of speculation. The elaborateness displayed in several of the andenes indicates that some importance was placed upon that establishment, an indication supported also by the existence of ancient trails and dykes. It evidently stood in

Plate XIV

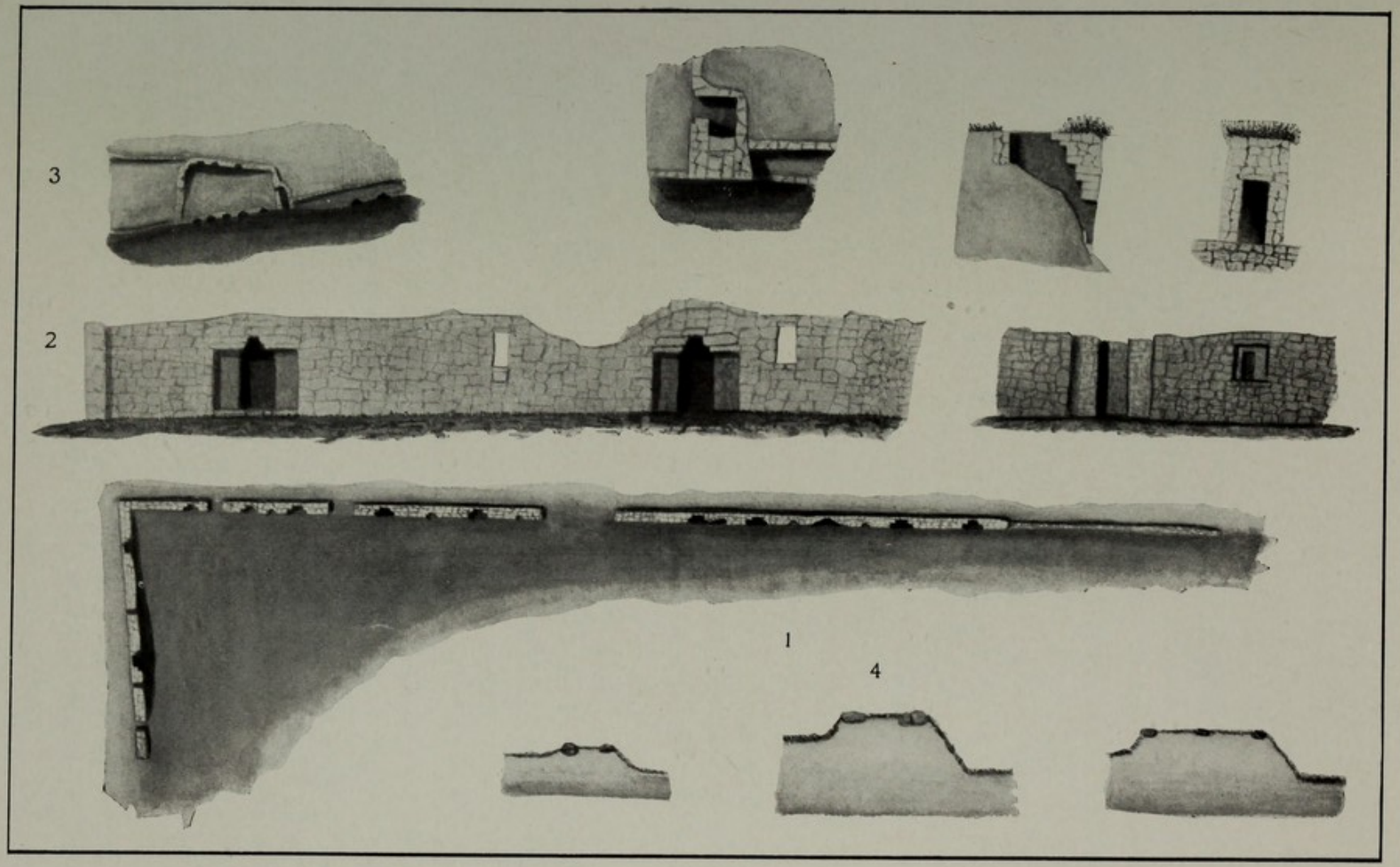
Brains of Dipsas

1. General plan. 2. From view of right side. 3. Sagittal section of right side to show relations of thalamus to septum and pallium. 4. Section of right side to show relations of the ventricles to septum and pallium.

Plate XLIV

Ruins of Pucara

1. General plan. 2. Front view of niches. 3. Specimens of niches and recesses on the slope of Uacuyu in the rear of Pucara. 4. Sections of dykes or causeways in the bottom of the Ahijadero


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direct relation to the northwestern clusters of Inca buildings, and was probably occupied at the same time.

On the way to the Inca ruins at Kasapata, the garden of Challa (23) attracts attention. It is, on a smaller scale, a second Fountain of the Inca. The few andenes, traversed by a channel filled with limpid water as at Yumani, are even better built than those of the Fountain. There is at the Challa garden a greater number of keñua trees; and above the garden, on the slope, stands quite a grove of these bulky plants. Most of them must be quite old, especially the one in the garden of which a photograph is appended. In the grove are remains similar to those at Yumani. Except a channel and most of the andenes, all improvements were made *since the conquest* and probably during the eighteenth century. Of buildings there are no traces. The same is true of the site called Santa Maria (i), where ruined terraces yielded to us potsherds of the so-called Inca type. Still higher up, on the northern declivities of the Calvario (4), black goblets of wood were found in crevices of the rock.

Kasapata (e) stands near an isthmus, at the foot of the promontory of Llaq'-aylli. Mr. Squier made a plan of part of these ruins,[31] the importance of which plan consists in giving lines of structures south of what is called "Temple of the Sun." To-day no traces of them remain beyond one well preserved anden and vestiges of others. I am not sure, however, that these terraces are ancient, as the whole is under cultivation, hence I have not indicated them on the general plan of Kasapata. The most prominent building is the one to which the Indians give the name of "Temple of the Sun." It appears to have contained but a single large hall. Its outside length is 166 feet, its width on the west thirty-six, on the east forty. The walls, which are fairly built and laid in mud, are three feet thick, and rise not over six feet above the ground in their present condition. Three doorways, slightly tapering, stand close to each other in

the western half of the northern front. They are of unequal size. Inside, the western and eastern walls have each four small niches, and the southern side has two. Otherwise the interior, as well as the exterior, is plain. It may be that there was a doorway to the south, as indicated on Mr. Squier's plan, but we could not find the two eastern doorways on the northern front marked in his diagram. We found five window-like openings elevated from the ground four and one half feet and of about the width of those at Pucara, but not as tall, possibly because the upper part of the wall is destroyed. The northern front has stepping-stones for scaling the walls. Whether this indicates the former existence of an upper story we could not ascertain. There is no trace of a superstructure, still less of the roof. Why this building should be called a "temple" I cannot imagine. Some of the historians of the seventeenth century, who saw the edifice in a better state of preservation, assign to it an entirely different purpose.

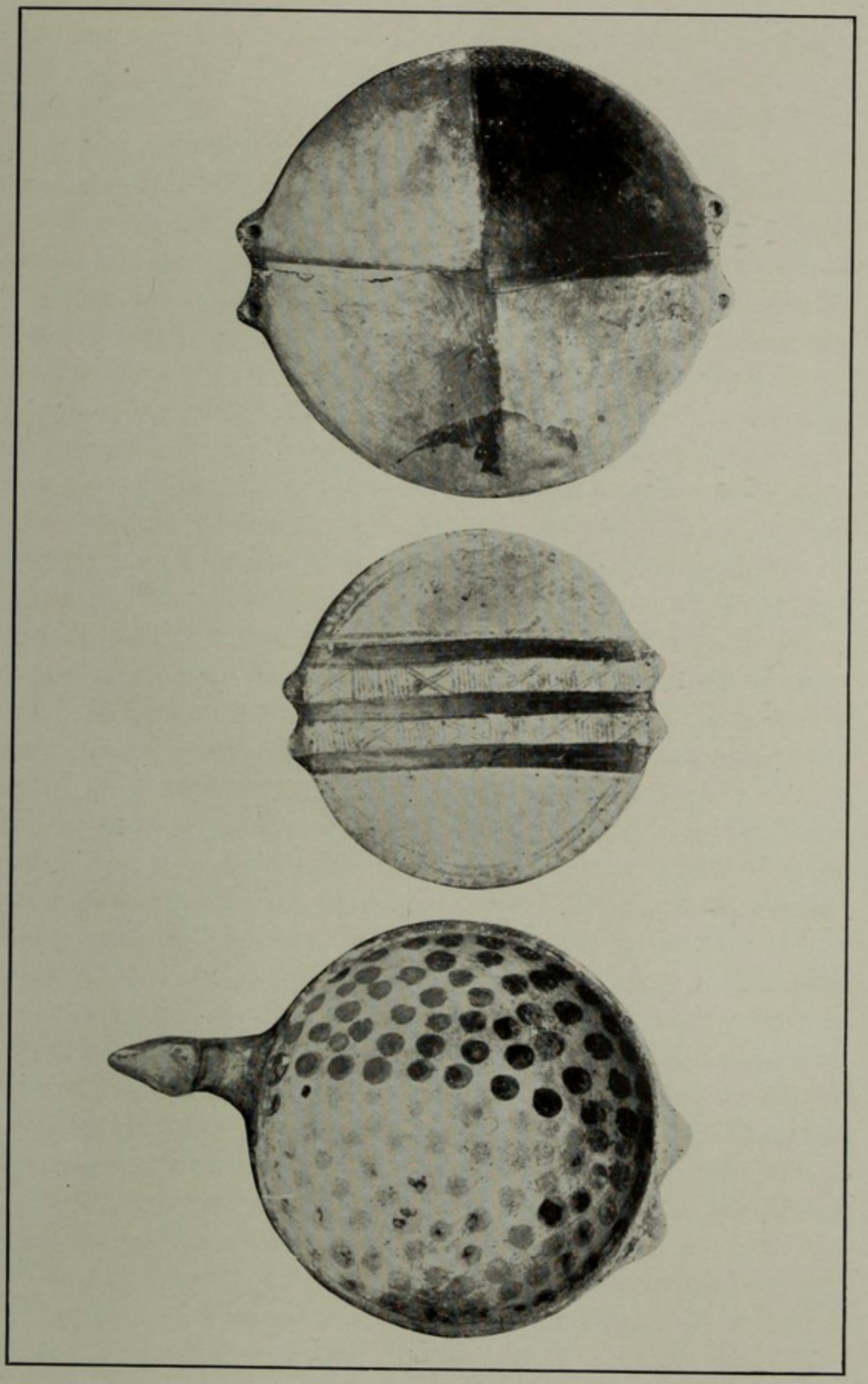
It stands on a plateau, or esplanade, 250 feet wide, occupying the highest place close to the isthmus on the west, and terminating abruptly both east and west. Farther down, the declivity on each side shows traces of ancient andenes. One hundred and sixty feet to the north of the "temple" an ancient wall, partly rebuilt of late, traverses the isthmus from east to west. North of it the plateau extends in slightly varying width for another 160 feet to the base of Llaq'-aylli; so that this ancient wall divides the neck into two equal sections. The base of Llaq'-aylli is formed by a handsome anden 224 feet long, part of which shows traces of former buildings which the Indians boast of having destroyed for the sake of treasure-hunting. Of these buildings there remain part of the foundations—two sides only, so that no accurate idea can be gathered of size—and an interesting doorway, very well made. The details of this doorway, which opens on andenes of the slope of Llaq'-aylli, are given on this plan.

Tafel XLV.

Tuba bottata (right) von Kaabsta

PLATE XLV

Inca pottery (trays) from Kasapata



The masonry is far handsomer than any at Pilco-Kayma or Pucara, and the lintel, consisting of a single thin slab, is particularly well cut. It is a gateway rather than a door, its walls measuring at least five feet in thickness. In Mr. Squier's time, already, the northern part of the esplanade was a greensward, nearly in the midst of which lies a huge block, rudely chipped.[32] The Indians call it a block of sacrifice, and say that its lower side is elaborately carved. We did our utmost to induce them to overturn the stone, but in vain. So that, while the upper surface indeed shows traces of artificial changes, we cannot affirm the same of the lower. At the base of Llaq'-aylli is another large stone resembling a seat, the back of which has a groove. This is believed to have been a sacrificial block also. The groove is artificial, and there is no doubt about human sacrifices on Titicaca. The description which Ramos gives of them may lead to the surmise that the block first described served such a purpose. He states: "They placed them on a large slab, the face turned up to heaven, and pulling them by the neck placed over it a slab (?) or smooth stone somewhat broad, and with another stone they pounded on it so hard, that within a short time they took their life away from them."[33] Elsewhere he remarks that the victims were sometimes smothered, by stuffing their mouths with ground coca; and again that they were killed by cutting their throats.[34] The fact of human sacrifices seems established by nearly all the older sources,[35] yet it is not safe so far to assert that the blocks at Kasapata were sacrificial stones.

Of the andenes covering the slopes of Llaq'-aylli I have already spoken. I have also mentioned that at Kasapata we initiated our excavations on the Island. These excavations having revealed interesting features, I shall devote some space to an account of them.

The first work was done at a spot determined by the indications of Manuel Mamani the wizard, and in order to humor him; but we soon found that he either had little

knowledge of the ruins, or that he desired us to waste our time, profitably for himself and other Indians, but with little result for ourselves. We found that we had struck only a ruined anden that yielded broken pottery, whorls, and especially animal bones partly boiled and gnawed. Some copper also was found. We abandoned the place, after making a trench eighteen feet long, five feet wide, and eight deep at the upper side, and probing the sod all around, without result. We then moved on to the opposite slope of the isthmus and there very soon brought to light the foundations of some building. The eastern end of it was gone, the stones having been removed to make room for cultivation, but the end abutting against the eastern edge of the plateau was intact. Here we discovered three rooms, the middle one being forty feet long and at least eighteen feet wide. The rooms to the right and left of it had been so disturbed that no idea could be obtained of their size. The northern one was separated from the middle by an alley about twenty inches wide, and the thickness of the walls was three and four feet, respectively. On the south of the central apartment were two parallel alleys not over eighteen inches in width, the wall separating them being four and a half feet thick, while the side of the southern room, or remainder of a room, was only three feet thick. Of these two alleys one runs clear through to the base of the plateau, the other makes an angle, so as to encompass the central hall on two sides, without communicating with the alley that separates the northern apartment from the esplanade. The foundations were set in the ground, not over four feet and mostly only two. The masonry was fairly done, and though the angles are not *absolutely* correct, yet they are approximately so. No floor of any kind could be detected.

Inside of the rooms thus uncovered the amount of artefacts was comparatively small, but the narrow alleys and the space south, where all traces of walls had been obliterated, were densely packed with potsherds. This pot-

PLATE XLVI

General view of Kasaba

PLATE XLVI

General view of Kasapata



tery is mostly decorated with intricate designs in vivid colors, far superior to those on the so-called Chullpa pottery. Wherever shapes could be recognized they showed more attractive forms. The clay and burning find their equals only in red and black goblets taken out of Chullpa cysts, whereas the decoration is much more artistic. It was clear that we had before us a higher development of ceramic art, completely distinct from that on the coast, and corresponding in every way to what may be called the Cuzco or Inca type of pottery. Ruder specimens were also found alongside of necks of jars and fragments of huge urns painted in brilliant hues with very elaborate, mostly geometrical designs. Of plastic ornaments, the cat's head placed on urns and pitchers as knobs, heads of water-fowl as handles to flat saucers, were quite common. Some of the plain vessels or sherds were covered with soot, and charcoal was taken out here and there. Bones of animals, among which the Indians at once recognized the indigenous deer, the vicuña and the llama, were found with the sherds, also copper implements, mostly topos, and one of silver. Such pieces were usually buried at a level lower than the foundations. The majority of objects came from the alleys which were packed with what appeared to be refuse from the buildings. It might be that when the ground at Kasapata was first tilled again, broken pottery and rubbish were heaped up in the narrow alleys; but this is scarcely probable, as, if the cultivators wished to get rid of such obstacles, they had the easier way of throwing them into the Lake, instead of reburying them where they would remain in the way of the hoe or plow. Hence we concluded that, while we had brought to light at least three rooms of an ancient structure, or perhaps three ancient houses, we had also uncovered the place whither refuse was thrown. Among the animal bones many had been boiled or cooked. Of stone implements few were taken out, and, while the presence of charred and smoked pottery as well as of animal remains

indicates cooking, not a household article of stone, like the grinding slab or mortar, was met with. This may be due to the Indian custom of securing such articles for present use. Of human remains there was not a trace.

After probing, without result, the whole length of the slightly inclined plane on which the excavation had been made, and thus confirming the statements of the Indians that this locality had been thoroughly ransacked a long time ago, we moved on to the Esplanade. The part of it fronting the "temple" did not seem promising, as it appeared either to have been excavated long before or to contain nothing. The latter proved to be the case. An old Indian living on the site told us that faint traces of walls were seen formerly on the part of the plateau adjoining the transverse wall in front of the "temple." We accordingly began there, and soon had the pleasure of bringing to light vestiges of three buildings not indicated on the plan of Mr. Squier. Hence they must have been destroyed, their foundations covered up, and forgotten long ago. Even these foundations are partly obliterated.

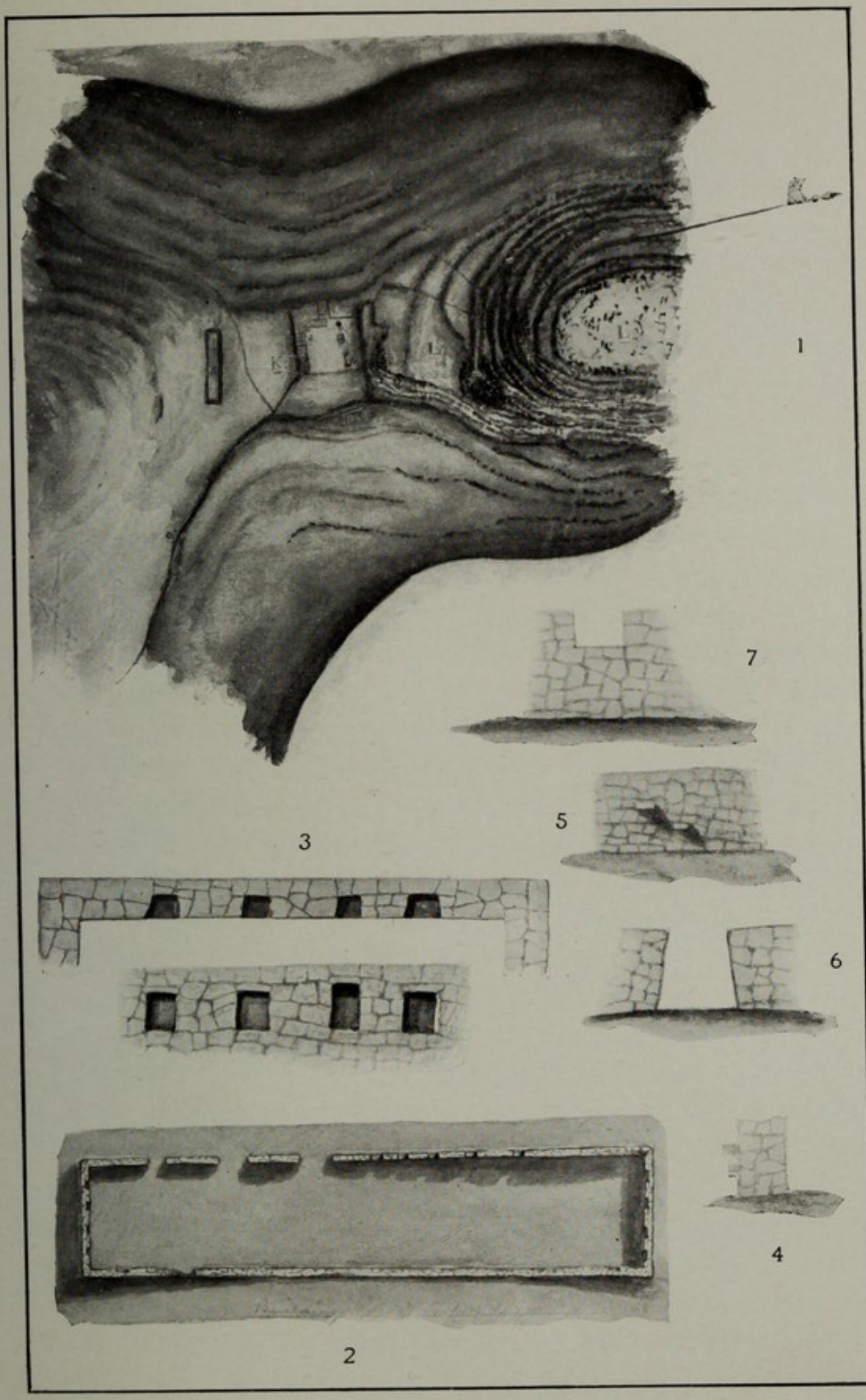
Contiguous to the transverse wall we found a building of four compartments. The two middle ones are narrower than the eastern (a), and the western seems to have been a court. The western wall of the latter is almost destroyed. The length of the first three, which probably formed the building proper, is sixty-four feet, that of the annex, thirty. Width on the eastern end is eighteen, on the western sixteen, and there is a trace of a continuation of the former along the edge of the terrace. The second or middle room has a recess. We excavated this quadrangle thoroughly to a depth of four feet at least, so as to reach the hard yellowish marl with chert and pebbles, called "chillu," that forms the usual substratum. No human vestiges of any kind may be expected in this very compact formation. We found handsome fragments, among them necks of very large jars, but there was, on the whole, less pottery than in

PLATE XLVII

1. Ground-plan of Kasapata and Liad'-ayllí. 2. Tambo or so-called temple of Kasapata. 3. Niches in wall of Tambo. 4, 5. Stepping-stones in wall of Tambo. 6. Doorway in Tambo.
7. Window or upper entrance in Tambo

Plate XLVII

1. Ground-plan of Kasapata and Llaq'-aylli. 2. Tambo or so-called temple of Kasapata. 3. Niches in wall of Tambo. 4, 5. Stepping-stones in wall of Tambo. 6. Doorway in Tambo. 7. Window or upper entrance in Tambo


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the previous excavation. In the two western rooms five hollow cylinders, quite thick, of clay, of different sizes, were found. The perforation is like a funnel, flaring at the top and with a comparatively small orifice at the bottom. Their original position is indicated on the plan. Our first impression was that they were hearths, but we soon recognized them as bases, or stands, for large jugs and jars, the bottoms of which are conical, in which the Indians preserved chicha, and underneath which a fire was sometimes kindled in order to accelerate fermentation.[36] Necks of such jars were found close by. These bases, or stands, were all placed against the walls, either main or transverse. In room 2 of the same building were two grinding slabs with their grinders. A part of the room was paved with slabs; the first artificial floor we met in the ruins. A copper knife and some beads of azurite were also obtained here.

No human remains of any kind were found in the first three apartments, but in the last eight stone cysts came to light. One was that of an adult, while the other seven were of children. This feature, and the fact that hardly any artefacts occurred in this compartment, led us to infer, that it was probably an annex, or enclosure, and not a room proper. The depth of the children's graves beneath the surface varied between seven and eighteen inches. The larger cyst, manifestly the grave of an adult, was a foot under ground; counting, in every case, to the cover of the cyst. The six small graves were different from any of those called Chullpa. They were chests made of stone plates set on edge, rather neatly fitted, and from six to ten inches high. The covers were thin slabs. In each of these graves was the *skeleton of a child* unaccompanied by artefacts. We could preserve very few of the vestiges and these only in a broken state. Skulls lay invariably on the west side, the feet on the east, and the hands had been folded across the breast. From the dimensions of the cysts it is apparent that the seven bodies were about of the same size, hence the

children more or less of the same age. Within the same court or annex we found, in loose earth, but blackened by fire, a handsome spoon or ladle of clay, a handsomely painted sherd, and a spinning-whorl.

The larger cyst contained the remains of at least one adult. Fragments of human bones and one molar was all we found, and these at nineteen inches below the cover. The cyst, while nearly circular and resembling many of the Chullpa burials, was constructed with greater care. The existence of this grave so close to those of the children might lead to the inference that a family had been buried there; but the nearly equal size of the seven smaller skeletons and the proximity of the stones represented as "sacrificial" by the Indians, together with the statements of chroniclers that for human sacrifices children were taken in preference, favor a supposition that the seven little graves were those of as many victims. Possibly an examination of the few fragments of bones and skulls which we could transmit to the Museum may lead to some clue. These eight graves the Indians emphatically declared to be Inca.[37]

We continued examining the plateau, and found the foundations of another group. Two rooms or halls came to light, one of which may have been originally connected with the western annex, and the other is an approximate rectangle measuring forty-seven by twenty feet, with walls of unequal thickness. This apartment, or building, stands on the western rim of the esplanade and is connected with the terrace north of it by a wall forty-eight feet long and about two feet thick. Here we found two more grinding slabs and potsherds with handsome designs, but not as many as in the previous excavations.

The most diligent probing and digging on the esplanade did not reveal more until we came to the northeastern corner. There a wall was uncovered which may have originally run along the whole eastern border of the plateau. Potsherds, some with beautiful designs, were scattered through

PLATE XLVIII

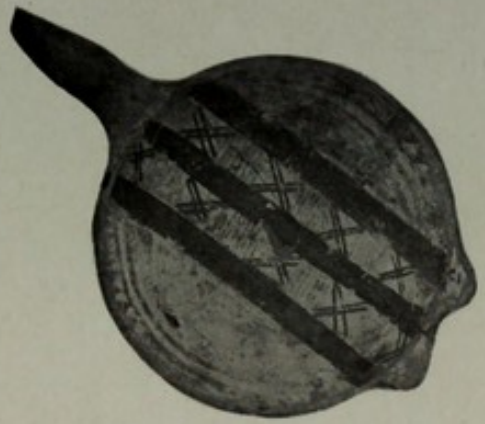
Tree (pine) small from Kassbate

1, 2, 4. Cones of different sizes. 3. Tree with figures of leaf pasted on (A).

PLATE XLVIII

Trays (Inca pottery) from Kasapata

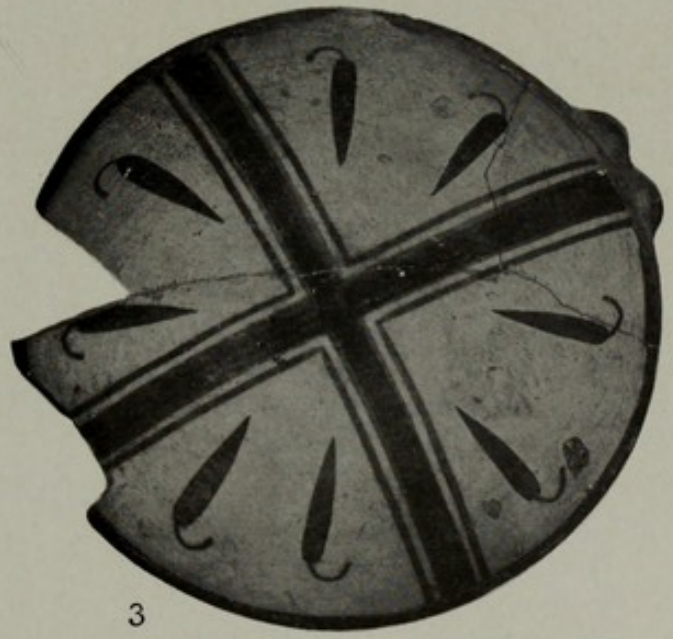
1, 2, 4. Geometrical decoration. 3. Tray with figures of red pepper (Aji).



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the soil. Thirty-six feet south of the rocks which terminate the lowest terrace of Llaq'-aylli (4) our men found what seemed to be another grave. Its upper rim was struck at a depth of twenty-one inches, and over it was a rude slab thirty-four by eighteen inches, and four inches thick. Underneath this cover was earth containing two large bones, then a mixture of earth and stone, more bones, and coarse sherds. Further digging proved that it was not a grave, but a *tank,* suggestive of a bath. We laid open a rectangular sink, twenty-one inches beneath the surface, from thirty-six to forty inches deep, eight feet long inside, two feet wide at the northern and nineteen inches at the southern end, lined with a well built wall of stone one foot in average thickness. On the eastern side there protruded from this wall, at two feet below its rim, two stepping-stones. The floor was of stone-flags, a foot thick on an average, and beneath them nothing but soil. What seemed to indicate a bath was a channel, made of smaller stones and emptying into the southern end of the tank. This channel was from four to six inches wide, and thirteen and a half feet long. Its depth to the bottom paved with plates of stone nicely joined was six inches below the level of the ground. The sides were about four inches thick. It issued from a circular space three feet in diameter, one foot deep, also paved. Further investigations revealed nothing.

We were naturally led to the supposition that we had before us an ancient bath, with its channel, through which the water entered the tank, and the stepping-stones to facilitate going in and out of it. I must call attention to the proximity of this contrivance to the so-called block of sacrifice, the circular depression or head of the channel lying twenty-four feet from it, *between* it and the tank. Without expressing any opinion, I note this coincidence, calling attention to the custom of human sacrifices, and to the objection that for filling the tank the channel was unnecessary, since the water had to be brought from the Lake, there

being no trace of a reservoir or spring, and the Indians disclaiming any knowledge of one or the other. Around this place nothing more was discovered except loose stones buried in the sod, and potsherds, but the Indians asserted that many rocks had been removed by them from all over the surface.

The group of ruins described is, of all the so-called Inca remains on the Island, the most extensive cluster of some compactness, the only one which might be called a small ancient village. At least the northern half of the esplanade and the lower terrace of Llaq'-aylli were at one time covered with buildings. What we found in our excavations justifies the opinion that the buildings were occupied by *households,* as well as the structures on the eastern declivity. What the building was to which the name of "Temple of the Sun" has been given, is the question. We know little of the Inca edifices called "temples."[38] But it is not to be overlooked that Ramos, Calancha, and Cobo place the "Temple of the Sun" *close to the Sacred Rock, not* at Kasapata! In regard to the latter site, Cobo, who visited the Island previous to 1619, says, after locating the Temple of the Sun about a mile from Kasapata by air line, that Tupac Yupanqui, the Inca chieftain to whom he attributes the occupation of the Island, formed, for the Mitimaes, who in their greater number were Incas, a middle-sized pueblo half a league in advance of the temple, and in it he had a dwelling erected for himself.[39] Ramos, who wrote about the same time, completely independent of Cobo, states: "Copacabana once regulated, the same monarch established another middle-sized village on the Island, about half a league from the Sacred Rock; and there constructed his royal palace, *the ruins of which are probably those that are seen in front of the Temple of the Sun on a hill toward the east.*"[40] The italicized part is from the pen of the modern editor, Father Sans, because Calancha, who made abundant use of the work of Ramos, omits it, stating: "Tupac Ynga

PLATE XLIX

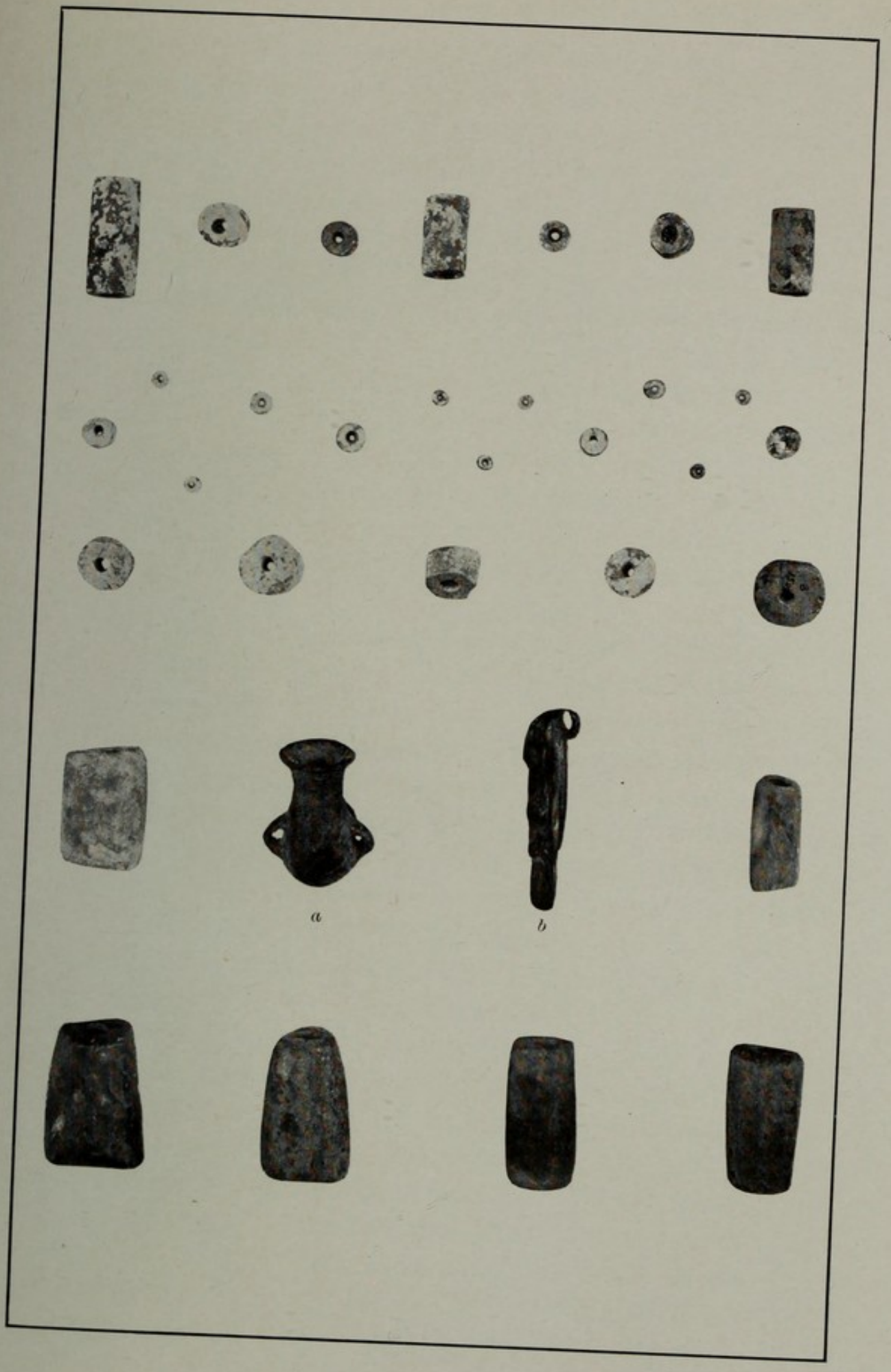
Personal ornaments from various parts of Titicaca Island,
chiefly from Kasapata

Thirty-one Beads of stone, shell, turquoise, and lazulite (also possibly nephrite). *a*. Toy pitcher. *b*. Bronze figurine (pendant) originally from Tiahuanaco

Plate XLIX

Personal ornaments from various parts of Titicaca Island, chiefly from Kasapata

Thirty-one Beads of stone, shell, turquoise, and lazulite (also possibly nephrite). *a*. Toy pitcher. *b*. Bronze figurine (pendant) originally from Tiahuanaco


a
b

founded a middle-sized pueblo, almost half a league previous to coming to the rock, and in it reared his royal palace, poor in its architecture, but very rich in the treasure of its income."[41] The distance agrees with the position of Kasapata, and if the large house there was the edifice designated by these authors as a "palace," it deserves Calancha's epithet of "poor" in architecture. It was a public edifice of some kind, and I venture the suggestion that it was a "tambo" or place for quartering visitors, also military escorts such as an important war chief would have with him. The edifice has nothing "palatial," and for a place of worship its interior lacks the essential feature of tall and elaborate niches.[42] To-day it is a long hall, capable of accommodating a number of people that would crowd together at night, as Indians are wont to do.

The belief that the houses at Kasapata were those of an *Inca settlement* is supported by the nature of the artefacts found; especially by the pottery. Cuzco ceramics are characteristic and easily recognized. Isolated specimens, widely scattered, are not sufficient evidence of former occupation of the site by their makers; but at Kasapata nearly all the pottery bears the same specific type, that of Cuzco, and we may with reasonable safety admit that a settlement of Cuzco Indians existed in sufficient numbers to manufacture the ware on the site. In the case of the Island, the evidence from Spanish sources is conclusive that its occupation by the Inca took place during the term of office of the third last war chief, counting back from the first Spanish landing and from Huascar as the last. Hence the settlement at Kasapata must have taken place within less than a hundred years previous to 1531, and probably within less than seventy years, that is, in the *last quarter* of the *fifteenth* century.[43] It is not likely that in such a short lapse of time the type of ceramics could have undergone as radical a change as that from Chullpa pottery to Inca; hence it is

likely that the settlement at Kasapata was mainly one of Indians who came to the Island from Cuzco, not long previous to the Spanish conquest.

Proceeding northwestward from Kasapata, we reach that group of Indian ruins to which clings most of the legendary lore of Titicaca. The northwestern end of the Island is its bleakest part. On the trail from Kasapata to Muro-kato, where vestiges of aboriginal occupation are again met, the slopes, while not utterly devoid of verdure, are mostly rocky. Seams of coal crop out in places, and curious erosions attract attention. The "kara" predominates among plants, and its fleshy, serrated leaves, and the black trunks of decaying specimens, cast a somber hue. The grand chain of the Bolivian Andes has dropped out of sight, and the eastern shore, dark and monotonous, bounds the horizon. On very clear days distant peaks belonging to the snowy range of Charassani, and in the far north the Nevados of Kunu-rona and Vilcanota in Peru loom up in faint outline. The general impression is one of chilling monotony. The narrow path gradually rises from Kasapata to about three hundred and seventy feet above the Lake. To the left are the bald crests of the Calvario. Animal life seems to remain behind us and finally to disappear.

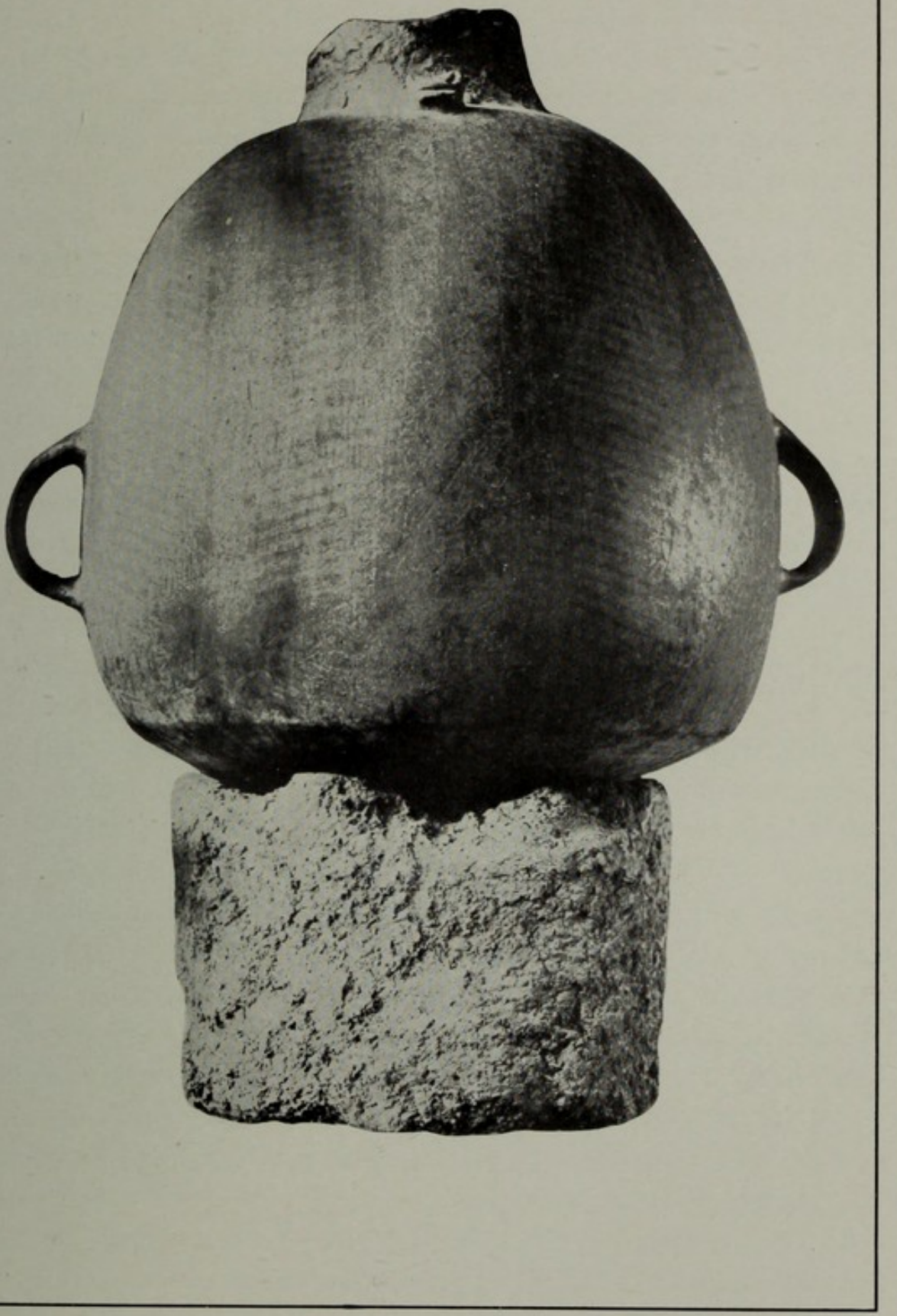
Half an hour's slow walking brings us in sight of the so-called Sacred Rock, or Titi-kala—literally: *rock of the wildcat,* for "titi" is the Aymará name for that feline in the Lake district. The point from which the rock is first seen lies on the eastern slope of Muro-kato (3). Titi-kala, though not as tall as ridges south and north of it, is peculiarly situated. It is the highest point on the neck of land, and from it both the eastern and western shores of the Lake can be scanned for quite a distance. Tradition recorded in the seventeenth century and repeated at this day, says that Titi-kala was formerly covered with plates of silver and gold in order that, when the sun rose, the rock

PLATE I.

Inca vessel of clay with stand of unburnt clay from Kasapata

PLATE L

Inca vessel of clay with stand of unburnt clay from Kasapata



might, from both shores, appear as in a blaze of light which should be a signal to the Indians along the Lake to bow in worship.[44] This pleasing romance is not confirmed by the report of the first Spanish visitors (July 15, 1534). They merely say of the rock: "They go to make their offerings and perform their sacrifices on a large stone that is on the Island, called Thichicasa, which, either because the devil conceals himself there and speaks to them, or because it is an ancient custom . . . , or for some other reason which may never be found out, they of the whole province hold in great esteem and offer to it gold and silver. There are [on this Island] more than six hundred Indian attendants of this place, and more than a thousand women, who manufacture Chicca (chicha) to throw it on this rock. . . ."[45] It is likely that, if the sacred cliff had had such a valuable coating as later chroniclers report from hearsay, the first Spaniards would either have seen it or heard of it, and they would not have failed to make mention of it upon their return to Cuzco. The face of Titi-kala is turned to the west, and the sun does not strike it at sunrise; the gentle slope of it descends to the east, and the rock has in fact nothing striking at first sight.

At that point (10) our attention was arrested by a ruined wall. What is left of it does not suggest good workmanship. Piles of rude stones and pillars of uncut rock form a line of débris to the crest of Muro-kato. They indicate that Itan-pata, as this wall is called to-day, was not intended for defense. It rises for a length of 546 feet, then crosses thirty-five feet of level, and descends steeply 384 feet more to the west over beetling rocks and thorny shrubbery, terminating at the edge of a group of very handsome andenes. The wall therefore, together with the andenes of Chucaripu, as they are called (d), divided this end of the Island from the rest. On the crest, outside of the wall, are faint vestiges of two quadrangular structures. They are like guardhouses to an entrance, built after the manner of

those on the coast of Peru and in the north, that is, a narrow passage forming an elbow.

Descending from (10), the remains of an ancient road, called Incan-taqui or Inca-road, are soon encountered. This road, where measurable, has a width not exceeding ten feet. It is lined with small curbstones, and has steps built of fairly smoothed slabs. The width of the steps varies. On a length of forty feet and a vertical fall of ten we counted twelve. The bottom, which the Indians call Mama-ojlia (we also heard the name Iñak-uyu), lies east of the plateau on which the Sacred Rock stands and slopes gently to the Lake. It is mostly terraced and bears the vestiges of at least four small buildings. Three of them stand west of the trail, the largest one is on the east and somewhat lower (6). To this last building the name Mama-ojlia is more particularly given. The structure measures sixty by twenty-nine feet; its walls are about thirty inches thick, and it is in fact a rectangular platform raised four feet above the surrounding level with about a foot of walls above its surface, which is of clay or earth. This wall encloses three sides only, as on the south the platform joins a higher terrace. It presents the appearance either of an esplanade with a low parapet, or of a hall without niches, doorways, or windows. Popular lore makes of it the ruins of a "house of nuns," or cloister, whereas it recalls the large building at Kasapata, and, with its three smaller companions, also the outhouses at Pilco-kayma. Others have told us that these buildings were the dwellings of people guarding the approaches to the Sacred Rock. Beyond them the trail winds along the rocky slopes of Muro-kato for a short distance, and here again are a few well made stone steps, sometimes called by the Indians Kenti-puncu, and said to have been one of the gateways through which the enclosure of the Sacred Rock was entered.[46] In the bottom, previous to reaching the little houses, the road or trail crosses a fillet of clear water run-

PLATE II

Fragments of Late bottle-shaped Kylikes

1. Sparta, with figures of the Gigantes, Athena, and Victory.

2. Rhodes, with figures of Zeus and Athena. (See text).

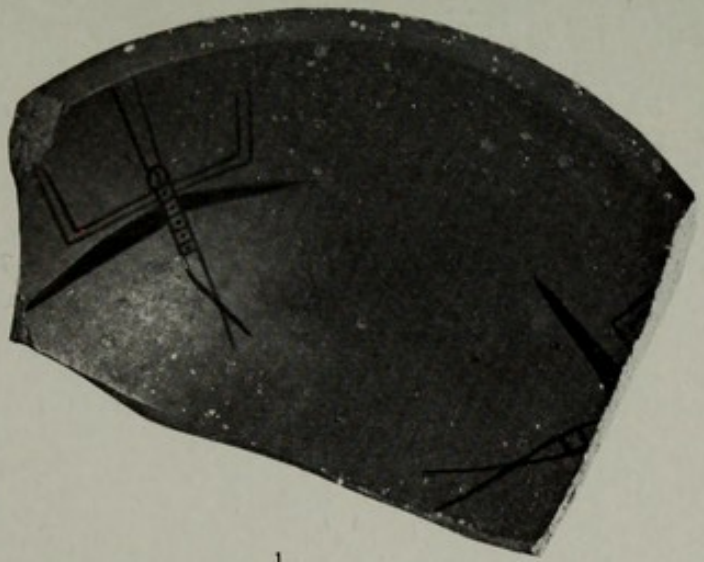
3. Sparta, with figures of Zeus and Athena. (See text).

4. Melos, with figures of the Dioscuri, Leda, and Helen.

PLATE LI

Fragments of Inca pottery from Kasapata

1, 2. Sherds with figures of insects. 3. Sherd with figures of the Guanaco, Llama, Vicuña, and of the Kara, or "Comida de Oso" (see text).



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ning in a well made channel of stone. Above Kenti-puncu large nodules of limonite appear, two of which, each about three feet long, have the outline of huge mocassins. These marks are called "Tracks of the Sun," or of sun *and* moon, the largest being those of the moon, according to some Indians. They existed in the seventeenth century, and Father Cobo, who recognizes them as natural, says the Indians ascribe to them supernatural origin.[47] Hence the tradition may antedate the conquest. A short distance above them the trail, which here is simply worn out by travel, lands on the terraced edge of the greensward in front of the Sacred Rock.

This area covers an approximate surface of two hundred and fifty by one hundred and eighty feet. From it we again obtain a view to the west. We overlook the northern Bay of Kona, darkened by the tall ridge of Kakayo-kena and the green bottom below. The long and narrow Island of Kochi lies athwart the bay. In the northwest the slopes of Ticani appear, almost precipitous, but still green. The summit of Ticani is bald, beyond it the vertical rocks of Turi-turini shut off the view.

The impression created by the dreary Bolivian shores in the east, and the monotonous coast line of Peru in the west is almost dismal. It is the least accessible part of Titicaca, the one most distant from the mainland. Its western slopes are partly tillable, and good water is plentiful. Close to the Sacred Rock is a handsome spring; there is another at the Chincana, one at the andenes of Chucaripu, besides several others near by.

The level in front of the rock has been disturbed by desultory excavating. From the statements of Ramos, and of Cobo, I gather that this level was a free space, with, perhaps, a wall of enclosure.[48] There are stone heaps on it, as well as on the slope of Muro-kato. They look like rubbish from former diggings rather than remains of edifices that, under any circumstances, could only have been very small.

TITI-KALA is an outcrop running approximately from northwest to southeast for a distance of one hundred and ninety feet, then one hundred and thirty feet from west-northwest to east-southeast. Its greatest elevation above the sward is not over twenty-five feet. The material is *reddish* carboniferous sandstone, the strata being tilted at a considerable angle.[49] Hence the eastern slope of the rock is a slide, whereas its western face is cut off sharply and contains a number of natural cavities. One of these, the largest one, may, by dint of imagination, be thought to resemble a crown. Above it are smaller cavities, like rudely carved cats' heads. From these, it is said, the *Island* and finally the *Lake* obtained their name, "kaka" (rock) having been substituted for "kala" (stone). Another etymology derives the word Titikaka from the Quichua term "titi," lead, and "kaka," which signifies rock in that idiom also. Still another interpretation considers Titicaca to be a corruption of "Inticaca": "Rock of the Sun."[50] On the level in front are some prismatic stones of andesite—a rock not *in situ* on the Island—that are very well cut and seem to have formed parts of some wall. Similar blocks exist at Yampupata, on the Copacavana Peninsula, on which andesite is found in abundance. Whether the first mentioned blocks belonged to some edifice that faced the Sacred Rock or to remains still extant on the northwestern end of the level, is unknown.

The latter ruins are very much destroyed. They form a quadrangle, the southeastern corner of which is occupied by a hump nearly as tall as Titi-kala and over sixty feet in length. The low and niched wall connecting the eastern corner of this outcrop with the face of Titi-kala is ninety feet long, to which length must be added ten feet built against an entering angle of the latter. There the cliff of Titi-kala shuts off the level on a length of sixty-four feet. Then follows a wall forty-eight feet long, because the rock recedes to the east. The space between is filled by rubbish

PART III

Details of trains to Kessgate

Table 3, 4, 5. Valley-line sections and sections of combined stations to Kessgate

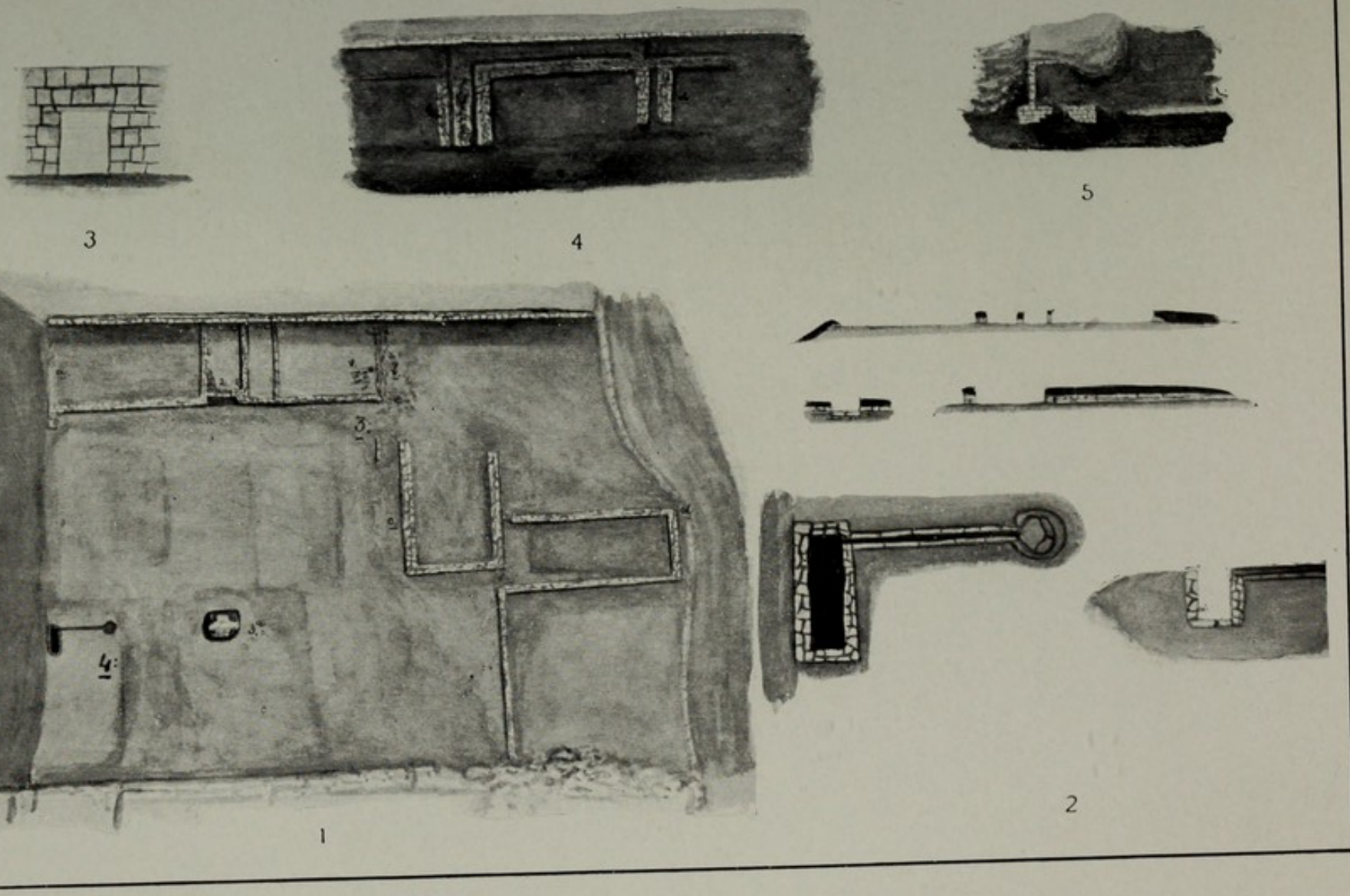
Table 6. Upper Dell-valley line (see text).

Table 7. Upper Dell-valley line from Kessgate to Hallowgate (see text).

PLATE LII

Details of ruins of Kasapata

1. General plan of excavations at Kasapata (see text). 2. Plan of tank, section, and sections of conducts. 3, 4, 5. Architectural details from Llaq′-aylli (see text).


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and shrubbery, rendering it difficult to distinguish details.

By removing as far as possible a mass of building material in the shape of fairly broken blocks of stone, an alley two feet in width was discovered running between walls three feet high, the outer of which was two and the inner not quite four feet thick. We could not follow this alley to its western end, rubbish and shrubbery rendering it impossible. But we saw that the wall (or walls) terminated in what appeared to be a large niche or room with a front of at least fourteen feet, the southern side of which was flanked by foundations. This front was in line with the western margin of the area, and that margin showed traces of either a rim of masonry or of a number of compartments like those of the wing of some building. Sixteen feet further west and at a lower level were similar traces that seemed to indicate a long building with a number of cells or rooms. The whole was so disturbed that this was all we could detect. On the west side of the area are also traces of a wall running from the edge of the big western outcrop to the southwestern corner, so that the whole may have been either an enclosure or a building with a court in the middle, or an L-shaped structure occupying the north and west sides of a court. The last seems most probable. The Indians asserted that they knew of the existence of a building on this spot and had seen traces of cells on the northern side.[51]

The situation of these ruins fairly agrees with the statements about the position of the so-called "Temple of the Sun" by Ramos. It is stated by Cobo that the structure stood "on the east side, and forty paces from the rock."[52] Ramos says: "On the side of a level, about thirty paces from the rock, are the houses of the sun, of thunder and lightning, which the Indians greatly respected. Further on, in the ravine that faces the road from Juli to Pomata, was the store-house of the sun . . . vulgarly called Chingana,

which is to say, 'a place where people lose themselves.' "[53] The Chincana stands northwest of the ruins which I have just described, hence it is not unlikely that *these are the remains of the Temple of the Sun!* In that case the edifice, or cluster of edifices, cannot have extended beyond the enclosed area just described, and this area measures 100 feet by 112. The entrance on one side is suggestive of a court and not of a building, so that the "temple" probably consisted of two wings, one on the southwest and another on the northwest.[54] It may be that the well cut blocks of Andesite mentioned above came from these structures.

The suggestion that the "temple" occupied, with its annexes, one or two sides of the quadrangular space in front of the rock, and now turned into a greensward, is supported by the evidence of the first two Spanish visitors to the Island. They report: "In the center of the lake are two small islands, in one of which is a mosque temple, and house of the sun which is held in great veneration and *in it* [!] they go to present their offerings and perform their sacrifices *on a large stone* that is on the island, called *Thichicasa,* where," etc.[55] (Italics are mine.) The stone, which is the same as the Sacred Rock, could not be inside of the "temple," but was connected with the buildings. Hence the level in front of the rock was an open square, one side of which was occupied by the hallowed cliff, and possibly two sides by the Temple of the Sun and accessories.

The surroundings of Titi-kala have long ago been searched and rifled. The Garcés collection, now at the Museum, contains gold and silver figurines from this vicinity. The concurrent testimony of the former owners of the collection, as well as of Indians from the Island who excavated for these owners, is that most of the figures of llamas, if not all, came from this neighborhood, as also the small pins of gold and of silver. The latter were probably with textile fabrics burnt in sacrifice, the *pins* showing traces of fire.[56]

In this connection I must refer to a discovery made on

PLATE LIII

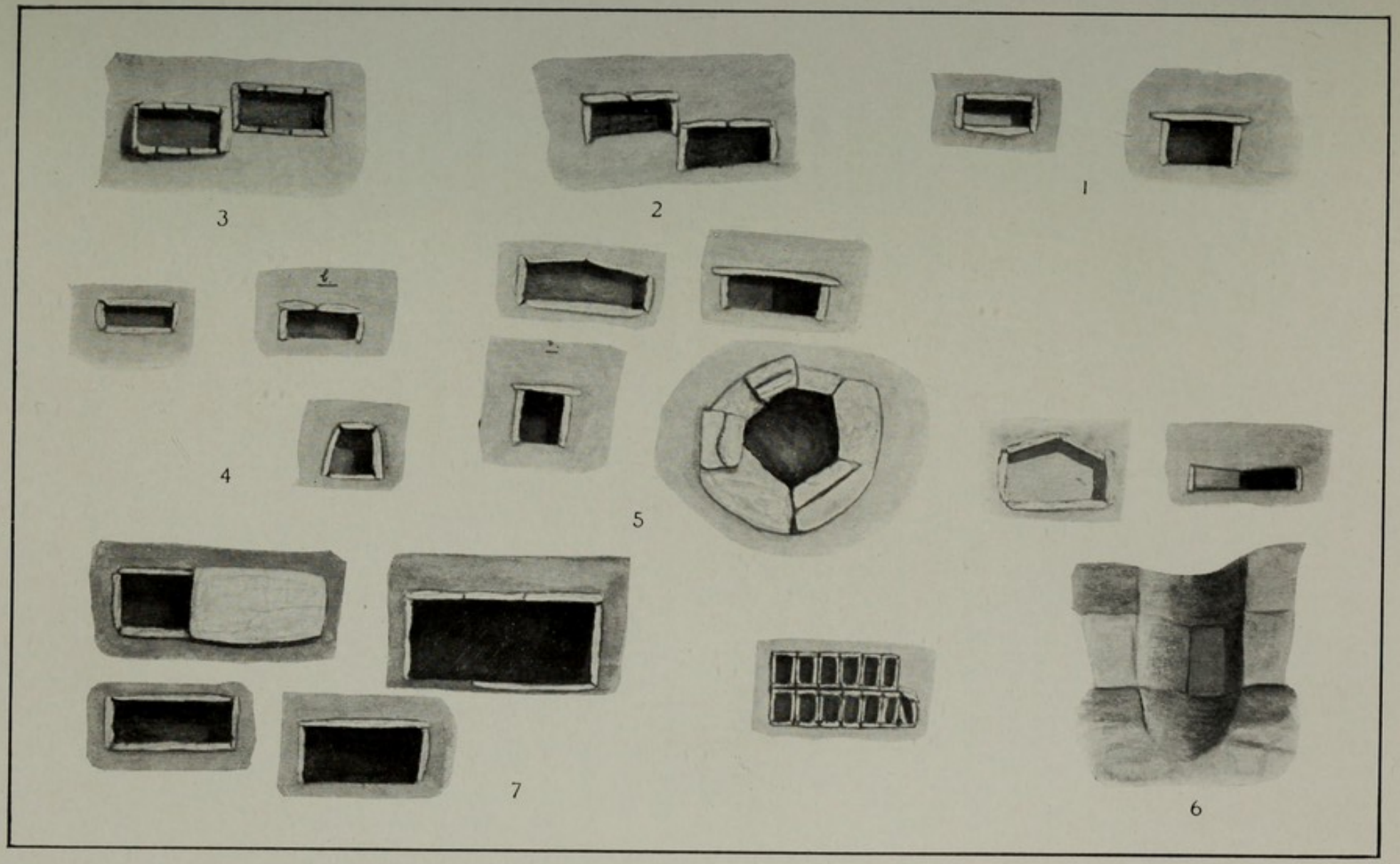
Details of arms of Kaempfer and sketch

1, 2, 3, 4, 5, 6. Crests of Kaempfer. 7. Iron Range at Pisgah

PLATE LIII

Details of ruins of Kasapata and Sicuyu

1, 2, 3, 4, 5, 6. Graves of Kasapata. 7. Inca graves at Sicuyu


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the southern slope of Muro-kato, near "Chucaripu-pata." A few inches below the surface was found a stone chest, now at the Museum, which contained a most remarkably beautiful poncho. Somewhere in that neighborhood another chest was exhumed that still remains on the Island, and also contained a poncho. In fact, five of the six handsome tissues of the Garcés collection were obtained from this end of Titicaca, but three of them were dug up so long ago that the exact locality cannot be ascertained.

I do not place great reliance on local names given by the Indians of the Island. Hence I simply record, without any guarantee, the name of Tican-aychi stated to us as that of the ruins connected with the Sacred Rock, and of T'ana for those lying north of Muro-kato in general. The latter name would thus apply collectively to Titi-kala, to the bottom of Mama-ojlia, and to the promontory of Sicuyu.

About four hundred and fifty feet northwest of the Sacred Rock, on the upper western declivity, lies the complicated structure which already in the beginning of the seventeenth century was known as Chincana, or "place where people lose themselves." To-day it is called the "palace"; whereas Ramos and Cobo declare it was a *dispensa,* or store-house.[57] It consists of two wings built on a rapid slope descending to the Lake, from the shores of which its lowest walls are about three hundred and fifty feet distant. It will be seen that its southern wing stands on higher ground than the northern, that that wing has at least two, and probably three, open courts, and that several of the passages are still covered, whereas one at least was originally without roof. The thickness of the walls of this wing varies greatly, the extremes being two and six feet, and similar variations occur from one room to another, in places. The walls are still of an average height of six to eight feet, showing that comparatively little deterioration has taken place, although there is shrubbery around it and in nearly every corner.

At first sight it seems as if this wing had been two-storied, but on closer examination we notice that the western rooms, south of the uncovered passage way, simply stand on lower ground than the eastern. The western rooms have an elevation of more than twelve feet (see accompanying plans), and what remains of the roof shows that it was, like that of the tallest apartments of the Pilco-kayma, made of successively projecting slabs so as to form a primitive vault. Other roofs show the same kind of ceilings. In long covered gangways and narrow chambers the ceilings are flat, as in the inner rooms of the Pilco-kayma. The irregular angles of the edifice result from the inability of its builders to accommodate the ground to the structure. This also explains the variations in thickness of walls. It looks as if the building had been erected at different periods, additions being made as required. The stone-work is like that of the Pilco-kayma, of Pucara, and of Kasapata; that is, superior to the Chullpa type, but inferior to that of handsomely built andenes. Lintels are formed by a single slab. One of these is six feet long and one foot thick. Some lintels are rough, others but slightly chipped on the edges. The doorways vary in width between two and (in a single instance—the entrance to an open court) eight feet. Some taper, others have vertical sides. One doorway terminates in a primitive arch. The true arch is nowhere found. Niches are plentiful but neither as tall nor as elaborate as at the Kayma or at Pucara. The whole complex structure has but *one small air-hole,* to which the name of window cannot in justice be given. The Chincana must, therefore, have been a very uncomfortable abode. Among the niches there is one quite tall, which terminates in a primitive arch. In this niche are still traces of a clay coating painted red and yellow, like the ruins of Tambo Colorado, near Pisco, on the coast. In general, the Chincana reminds one of that ruin in size and arrangement.

A wall runs from the northwestern corner of the southern

PLATE VII

Fragments of late portrait-vases from Kasalba

1. Portrait-head of an elderly man with deep furrows and indigenous type of head-dress

2. Portrait-head with thin face

PLATE LIV

Fragments of Inca pottery from Kasapata

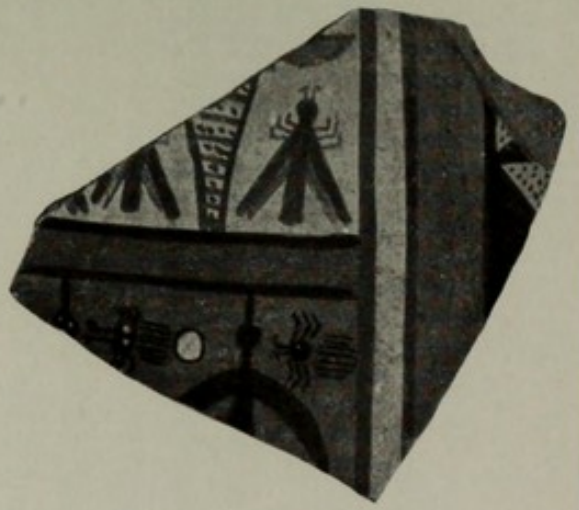
1. Pot-sherd with heads of indigenous deer. 2. Pot-sherd with diurnal butterfly and crepuscular moth.
3. Pot-sherd with flies



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wing in a northerly direction, making an angle to the west. This wall is the highest part of the ruin; it is four feet thick and has a succession of niches on both sides. Its length is seventy-two feet. From the northwestern corner it descends to the west fifteen feet, to meet the northeastern corner of the northern wing.

The latter is smaller than the southern, but wherever its walls are not reduced to rubbish heaps they appear more substantial. The rooms are more regular in shape, their angles being truer. It stands lower than the other wing, and the second tier of rooms is about eight feet lower than the first. It is built on a rather steep incline, and at the lower end reduced to shapeless heaps of débris. Clearly defined, however, is a long alley leading from the western end of the ruin to the two upper exits, one of which is into the sunken part of the edifice, and the other into a space between both wings. This passage has on one side a well-built wall eight feet high and four feet thick. The ascent is partly on an inclined plane, partly on short steps of stone. The peculiarity of this passage consists in that it presents the same features as many gangways found in ruins on the Peruvian coast, namely, at irregular distances short walls project alternately from one side and the other, as if for interception and protection in case of assault from the side of the Lake. It is one of the few traces of defensive contrivances noticed by us on the Island. There are two lower exits from this lane. One is an open sally upon the edge of a terrace, the other a graded way, now in ruins, turning to the south and passing between the lowest compartments and a tall rectangular structure on the extreme corner of the wing. This structure is, unfortunately, in ruins, but it suggests a watchtower or guardhouse overlooking approach from the Lake. The only air-hole or window, in the northern wing, opens toward the Lake-side.

The area between the two wings is sloping and considerably broken. Immediately below the niched wall connecting

them are a few ruined andenes. Then follows an open space containing a spring enclosed by walls that, apparently, have never been much higher than three or four feet. Close by this spring is a seat of stone. Further down, traces of walls extend northward, from the southern wing, toward the middle of the slope. A sluice has formed at the base of the northern wing, which may be recent, but it is also possible that its formation is ancient. This is suggested by a low wall running out some distance from the southeastern corner of the southern wing, and by two slabs of rock, one of which is still in place, while the other has been moved. The one still in place is four feet tall, its length five feet two inches, thickness fifteen inches. The other measures four feet seven inches, by four feet, and is twelve inches thick. They appear like parts of a gateway. There is also, east of these slabs, a piece of wall indicating that the ravine was originally lined with stones. Of the space between the two wings of the Chincana Ramos says: "In its center it had an orchard of rows of *alisos* (*Alnus acuminata*), the constant freshness of which maintained a perpetual spring issuing there. In the shade of these trees the Inca constructed curious baths for the sun and its worship."[58] Cobo expresses himself in nearly the same terms.[59] It may be, therefore, that the ravine was a drainage-channel from the spring to the Lake. At present, the surroundings of the spring are wet, but not enough to moisten more than the small enclosure around the basin. Beyond the southern wing are vestiges of andenes. North of the Chincana the rock crops out, and the flanks of Ticani are but scantily overgrown. That height descends to the Lake in steep declivities, on which excavations by the owners have disclosed well-built andenes.

To-day the Chincana is called "Palace of the Inca." It looks like a communal dwelling of moderate size. One hundred and fifty Indians might have found room in it for shelter. But *only for shelter!* The apartments are so dark,

so ill-ventilated, that they offered not as much comfort as an agglomeration of Indian huts to-day. The plan shows how much space is occupied by courts, passages and gangways, in proportion to rooms or cells.

About eight hundred feet southeast of the Chincana, separated from it by undulations of the ground on a steep incline, with a few scattered andenes of small extent, lies the plateau called Chucaripu-pata, an irregular quadrangle, originally level, now completely overturned through excavations. This quadrangle appears to have been a platform lined by walls and surrounded by lower terraces on three sides, whereas in the northeast it abuts against a higher plane on the flanks of Muro-kato. The northeastern side of this platform measures at present 182 feet, the northwestern 258, the southwestern 192, and the southeastern only 188; but these are not original dimensions. Very few traces of buildings remain on this plateau, which overlooks the Lake and the Peruvian coast, dominating, so to speak, the whole northern Bay of Kona. On the east corner is an entrance twenty feet wide, and there are traces of an alley along the northwestern side of the platform. But its actual condition is such that I do not venture to state more than that it is a terrace or esplanade *said* to have been occupied by buildings of which I could not obtain any description.

It is the more to be regretted that so little is left on this site, as most, if not all, the pottery contained in the Garcés collection, some of the silver figurines, and most of the objects in gold, were found at Chucaripu-pata or between it and the Sacred Rock, and always, according to the Indians, quite near the surface. I have mentioned the magnificent poncho found near Chucaripu-pata in a stone chest. A silver mask was disinterred higher up, on the slope of Muro-kato and on the same side. With it was found a human jaw, which hints at the possibility of it having been a mortuary mask. The pottery is, like the fragments exhumed at Kasapata, of Cuzco type, very handsome in colors

and in design. From the same place we obtained, through purchase, a golden topo, or tumi, and several small articles of copper or bronze.[60]

More than an approximate plan would be not only useless but perhaps misleading, as the wreck of ancient walls is complete and their material has been used for modern enclosures, so mixed with old ones that it is impossible to distinguish the ancient from the new.

The distance of Chucaripu-pata from the Sacred Rock is a little over five hundred feet. In order to find a mention of the former in Spanish sources, we must therefore search for references to some structure, or cluster of structures, distant about five hundred feet southwest of the latter. I have so far failed to find any such references.

From this point, the view on the dark green bottom of northern Kona, overshadowed partly by the ridge of Kakayo-kena, has a somber cast. The waters of the bay are quiet, because sheltered, and of a dark blue tint. The Island of Kochi has nothing soft in its contours. It is a sharp ridge, like Kakayo-kena, of which it seems to be a northwestern continuation. From the margin of the promontory of Chucaripu-pata we see the reëntering curve described by the slope of Muro-kato and descry on that slope the handsome andenes of Chucaripu, 800 feet south of east of Chucaripu-pata. They are the most regular system of terraces on the Island.

The facing of these andenes, the elevation of which varies between two and thirteen feet, is exceedingly well done. The stones are so carefully broken that they might pass for a modern wall, laid in adobe mud in place of mortar. Ascent from one anden to the other is effected in places by stone steps built along the fronts of terraces, or by stepping-stones, or on inclined planes. The stepping-stones are like those at Kasapata. The terraces are level, and shrubbery grows along edges and sides, so that from a distance its appearance is striking, from the regularity of dark green lines.

PART VI

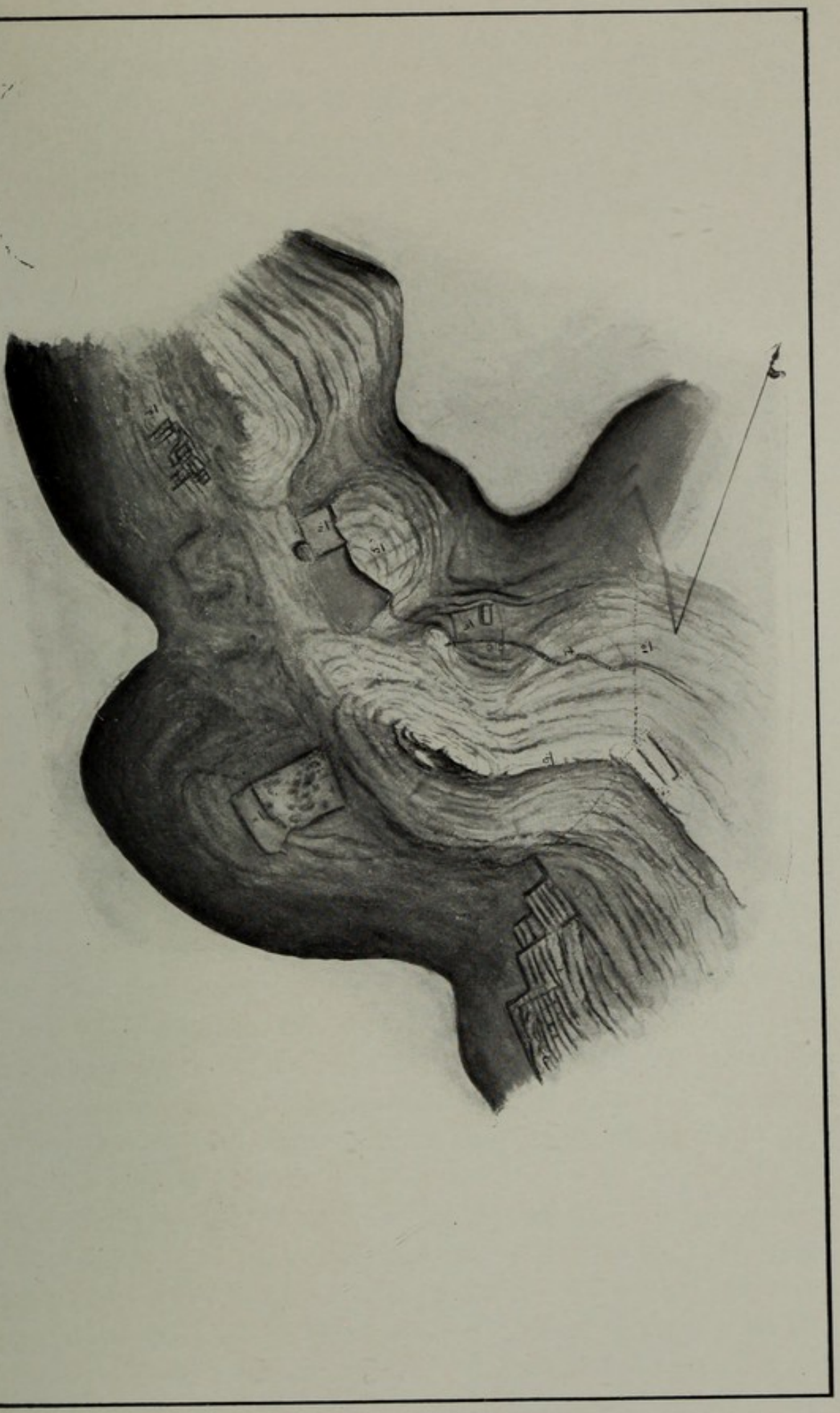
Groups left to find their way around the Sacred Rock

1. Arjuna and Chitrangada. 2. Ekalavya bringing to Dronacharya's feet "Kauli-flower." 3. Crest and tail of "Mako-Kato." 4. Rock called "Mama-Office." 5. Carved bath "Dama-Tadai." 6. Sacred Rock. 7. Hollow called "Mama's-pigeon-hole." 8. Chitrangada called also "the heiress." 9. Stone steps called "Tiger-Path" to "Lift-Path." 10. Wall of circumvallation "Iron-Gate."

PLATE LV

General plan of Inca ruins around the Sacred Rock

1. Andenes of Chucaripu. 2. Excavated plateau of Chucaripu-pata. 3. Chincana, called also "the palace." 4. Inclosure called "Tican-Aychi." 5. Titi-Kala, or "Sacred Rock." 6. House called "Mama-Ojlia." 7. Graded path "Incan-Taqui." 8. Stone steps, called "Keuti-puncu." 9. Crest and ruins of "Muro-Kato." 10. Wall of circumvallation "Itan-Pata"



On many of these terraces a layer of black soil, from three to six inches thick, and entirely different from the soil of its surroundings or of the Island in general, is noticed. It is a rich loam. The story goes that the Incas had it *brought from the transandine regions of Yungas* in order to grow *coca* on Titicaca. As Cobo remarks, the attempt failed on account of the climate. But his description of the site where that trial is said to have been made does not agree with Chucaripu, so that there is little foundation for the story, whether told in the seventeenth century[61] or in the nineteenth. It *may be* that an attempt was made to raise coca on the Island, previous to the conquest, but it would only show that those who made it had not the least idea of the influence of climate and altitude upon vegetation.

Artificial objects, such as topos and tumis, some of precious metal, have been found on these andenes, but we heard neither of buildings nor burials. In the northwest corner is a ruined enclosure with a spring, and the ground in the northwest and southwest is constantly moist. Of channels for irrigation we saw no trace, atmospheric humidity and natural drainage from the rocks above supplying ample moisture. This group of terraced garden-beds, connected with the ruined wall that crosses the crest of Muro-kato as already described, are the last ancient remains in this part of the Island. But the northern extremity of Titicaca, the low promontory of Sicuyu (*s*), bears some vestiges which, though disturbed by treasure-hunters, deserve a passing notice. On that promontory some of the golden figurines in the Garcés collection are said to have been found.

The northern slopes of the conical height of Ticani are rather bare, there is low shrubbery and grass, but rocks, ledges, and steps appear everywhere. The little Bay of Arcu-puncu (16) is encased by low cliffs. Cultivation has been possible on these slopes by forming andenes, and while

some of these seem to be modern, others are undoubtedly ancient. Sicuyu is a low promontory, covered with shrubbery and the rubbish of structures of some kind. We spent there a whole afternoon and later on two days, excavating, but could not discover anything capable of giving an idea of the edifices, so thoroughly had they been torn down by the Indians. These Indians assured us that they had torn down walls of buildings, which they believed were reared by the Incas, among them one that seemed to be a storehouse. What our investigations revealed was that nearly the entire promontory, on its upper plane, which stands twenty feet above the Lake, contains stone cysts, mostly in parallel rows and differing from the cysts of Chullpa type, whereas they closely resembled the seven graves of children discovered at Kasapata! In the first place, they are all quadrangular; then they are encased by thin slabs set upright in the ground, and most of them had covers. They are much more regular in size, form and arrangement, than "Chullpa" burials. But our search for human remains was fruitless. Only from one grave the mould of a skull was obtained, the bones having completely disappeared with the exception of the right temporal, and even that crumbled very soon. As to the cranial mould, as soon as the earth of which it consisted began to dry it fell to pieces. We do not know how many individuals were buried together in a cyst, and as to artefacts, not even a potsherd was found in or about the graves. But the resemblance of the cysts to those at Kasapata gives color to the statement that they were Inca burials. It is a lonely site. The view on the Bolivian shore is extensive and dismal. The Island of Apingüila, on which Inca remains are said to exist, and its neighbor, Pampiti, where, it is alleged, Huayna Capac, the last of the Inca head chiefs, previous to Atahualpa and Huascar, performed fearful human sacrifices,[62] are seen from Sicuyu in a line with the longitudinal axis of Titicaca; and somebody told us that here Huayna Capac had taken the balsas

PLATE LVI

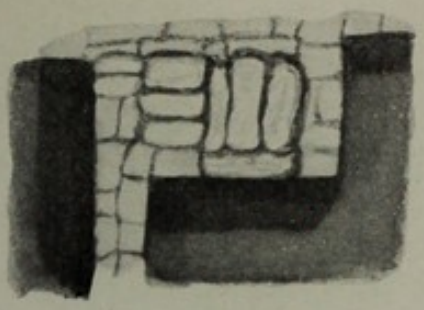
Architectural details from the Chincana

1. Stone steps on Incan-Tapui, or Inca path. 1, 2, 3. Doorways. 4. Small window. 5, 6. Stone ceilings over room and passageway (see text)

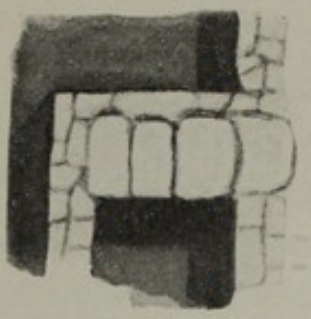
PLATE LVI

Architectural details from the Chincana

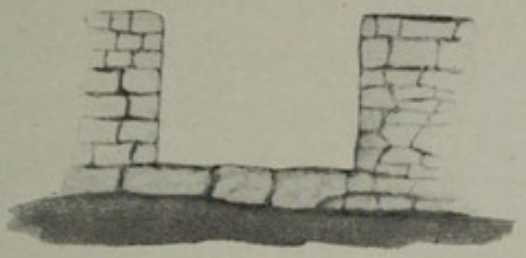
1. Stone steps on Incan-Taqui, or Inca path. 1, 2, 3. Doorways. 4. Small window. 5, 6. Stone ceilings over room and passageway (see text)



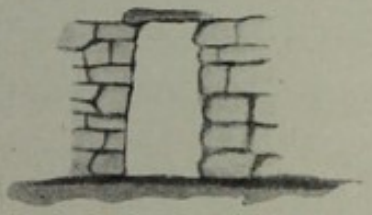
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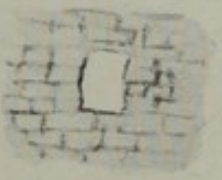
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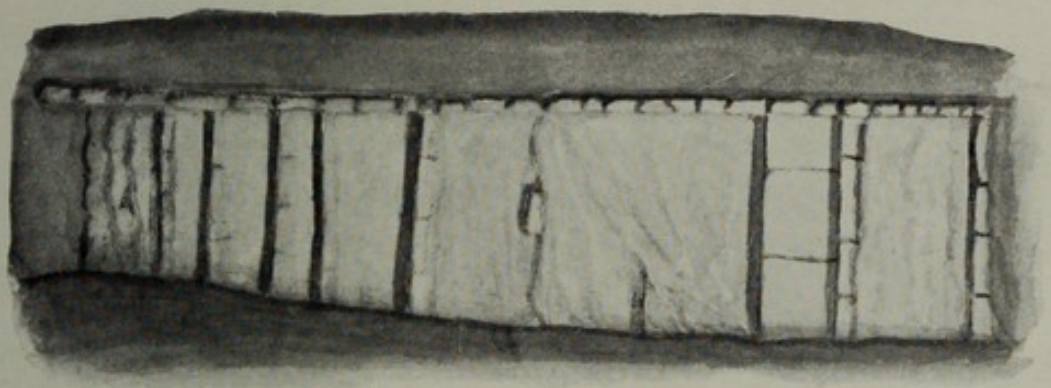
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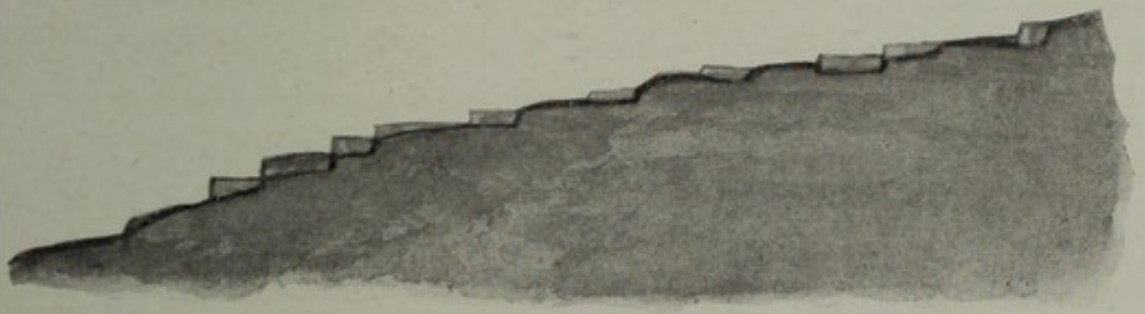


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to carry him over to Apingüila and Pampiti.[63] *"Se non é vero,"* etc.

If now we cast a retrospective glance at the cluster which the wall of Muro-kato and the andenes of Chucaripu divide from the remainder of the Island, we observe that it contained a greater number of single buildings than any of the others attributed to the Inca, and also, probably, the most extensive ones. I may be permitted to recapitulate the principal points contained in the foregoing description. From some point on the eastern side of Muro-kato a well-made road, or wide path, with steps, descended into a bottom at the southern base of the Sacred Rock, passing close by a group of small buildings, each of one apartment only. The road then ascends to a level, on the eastern margin of which the Sacred Rock stands. This level seems to have been surrounded by a wall outlining a terrace. Many ancient votive offerings were disinterred here, and in front of the Sacred Rock are vestiges of foundations.

The rock has a natural concavity and other marks that must have forcibly struck the Indian mind. These marks bear resemblance to the head of the indigenous cat, and the name of the rock is derived from the Aymará name of this animal. In close proximity are traces of former edifices. A few blocks of andesite of good workmanship are lying near by. Andesite is not on the Island, but on the Peninsula of Copacavana! The Sacred Rock is so situated as to afford an excellent view of both shores, east and west. On this site the Indian to-day is still impressed with superstitious awe. This was noticed by Mr. Squier.[64] It is asserted that no bird of any kind passes beyond the wall of Muro-kato; the reason for it lies probably in the scantiness of vegetation.[65] On the western slope, and not far from the Sacred Rock, is a fairly preserved edifice, which tradition describes as a residence and again as a storehouse. This edifice is so built as to surround a copious spring of water, and the slope on that side is covered with vegetation. On the same

side a quadrangular platform, commanding an extensive view, bears faint traces of ancient buildings. Excavations have brought to light, besides pottery similar to that of Cuzco, figures of gold and silver such as the older authors assert were used as offerings in pre-Columbian times. Near by, tissues of exceptional beauty in texture, design, and color have been found; and at least two of these were buried in well made chests of andesite. On the last promontory of the Island are graves different from Chullpa graves. Shapeless ruins of buildings are also found there. Add to these features the andenes of Chucaripu, and the whole northwestern group of ruins on Titicaca Island presents every condition essential to Indian residence, while at the same time tradition designates it as having been a place of aboriginal *worship*.

The wall of Muro-kato does not seem to have been erected for defense. Neither are there any traces of other purely military constructions. The only building showing some defensive features is the Chincana. I have already stated that some authors from the early part of the seventeenth century mention the Chincana as a "storehouse," whereas to-day it is called a "palace." It is certainly *not* a palatial building. On the contrary, with its dingy cells, narrow and tortuous passages, it is more unfit for abode than the Pilco-kayma, and has, furthermore, the notable disadvantage of fronting away from the sun. Still there is one feature that might suggest an abode or, perhaps, that portions of it were used as a place of worship. One of the smaller cells, to which, when intact, light and air had access only through the doorway, had the *floor paved* with rough mosaic-work made of small and bright pebbles. Such pebbles are found on the beach below Ciriapata, on the east side. The mosaic was, of course, torn up by the Indians, who kept some of the pebbles and left the rest. We sent a number of them to the Museum. It is doubtful if the Indian would take the trouble of decorating the floor of a store-room! An indica-

tion that the Chincana was also used, partly at least, as a residence is the proximity of a *spring*. Chroniclers state that a bath for the *sun* had been constructed there. But the spring is simply an enclosed pool, too narrow for bathing purposes, and there are no vestiges of tanks or sinks.

I again call attention to the precautions taken against hostile approach from the Lake-side. Such precautions would not have been used unless the building contained something valuable or sacred. For the alimentation of the inmates of all the buildings around the Sacred Rock, a storehouse of more modest proportions was ample. Nevertheless, it is possible that the Chincana may have been a magazine as well as a dwelling. There is still another possibility: Statements in regard to the location of special places of worship are too positive to admit of much doubt that they stood in the *immediate* proximity of the Sacred Rock; but the same is not the case with another structure, inhabited by *female* attendants of the shrine,[66] women who lived in seclusion, like nuns, with the difference that chastity was *not* obligatory upon them, sexual intercourse being allowed under special conditions and only with men from the *Inca tribe*.[67] Hence such places were kept under vigilance to avoid intrusion. The occupations of these women consisted in the manufacture of objects used in worship, such as ceremonial dresses, and in brewing chicha.[68] Such a house *existed on Titicaca,* and of all the ancient structures still discernible on the Island, the Chincana is the only one suggesting it.[69] In that case, it served for residence, as well as for storing valuable objects destined as offerings, and this justified some precautionary measures against eventual attempts at spoliation. It is true that the Indians state that the house occupied by these women was the one which they call Mama-ojlia; but neither its size nor its arrangement, which shows no divisions into apartments, favor that opinion, whereas the Chincana contained at least twenty rooms. It has a number of courts,

large and small, that afforded room for spinning, weaving, cooking, and other work for which the dingy cells were inadequate; and shows features suggestive of protection against illicit access.

I regret to be unable to offer more data than those presented. The report on the first visit to the Island mentions the secluded women on the Island, giving their number at the much exaggerated figure of more than a thousand, whereas there is not, in all the Inca structures on the Island put together, room for such a number of people of *both sexes*. They state that the occupation of these women was to brew chicha and asperge with it the Sacred Rock.[70] But no mention is made of the abodes wherein the women dwelt. Other Spanish authors who give accounts of the ancient structures from actual observation are of the seventeenth century. Hence these writers obtained their information about the *original* condition and purpose of the edifices at second or third hand. Some old Indian may have been able to give them data from direct recollections, but it is doubtful whether, after three quarters of a century, such recollections were sufficiently clear. At the same time it is evident that Ramos, Calancha, Father Andrés de San Nicolas, as well as the Jesuits Cobo and Oliva, visited Titicaca but occasionally and saw only certain portions of it. Else how could they be silent in regard to such ruins as the Pilco-kayma and Pucara?

I beg to return once more to the suggestion that the Chincana may have been an abode for women living in compulsory retirement. Of the six beautiful ponchos acquired by the Museum with the Garcés collection, five were found buried in the vicinity of Chucaripu-pata and Titikala. The tissues are of extraordinary beauty and solidity, patterns as well as colors are exceptionally fine. Concurrent testimony of the Spanish chroniclers is to the effect that such work was mostly performed by women living in seclusion and that it was part of their duties.[71]

PLATE LVII

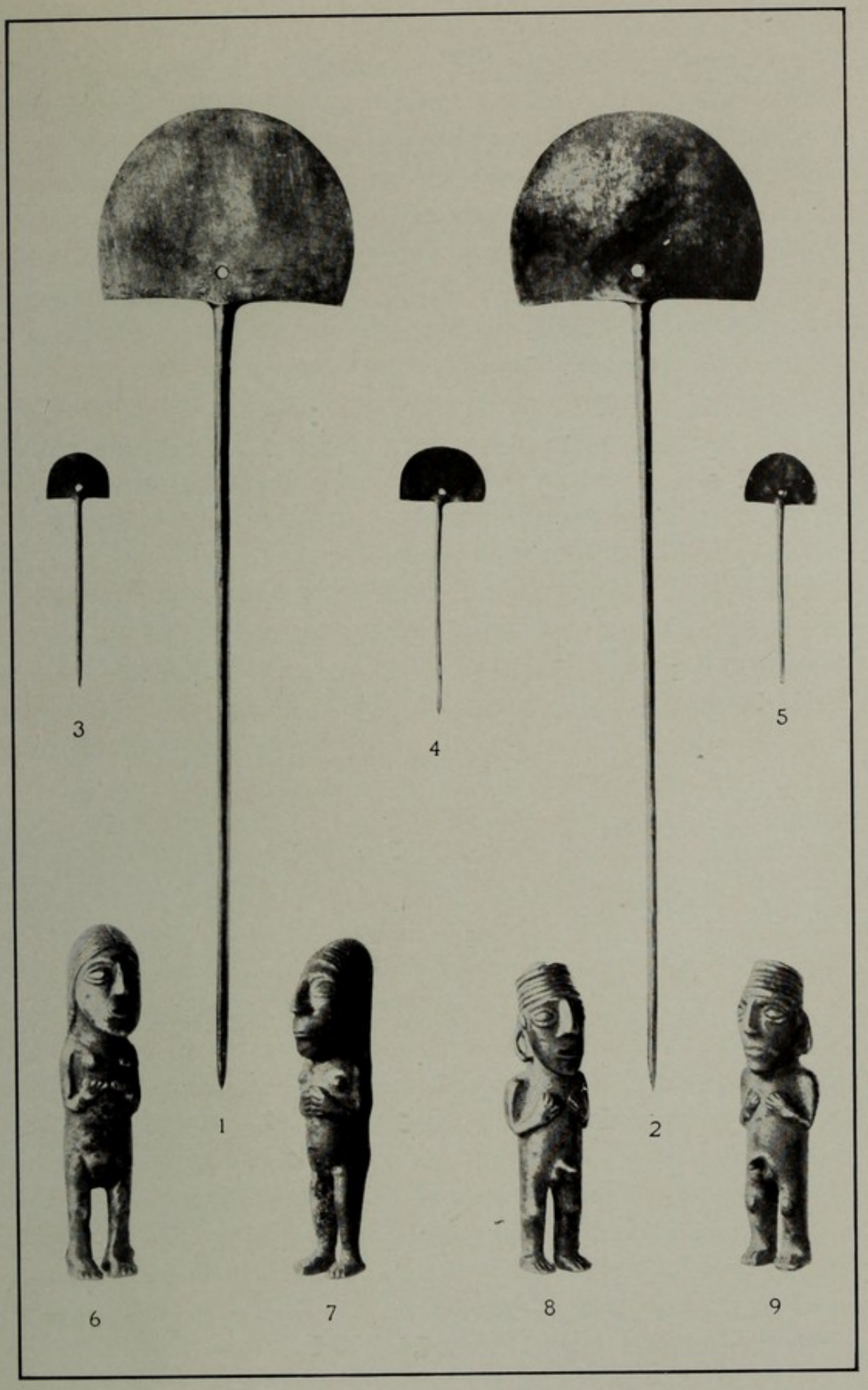
Objects in silver found in vicinity of Sacred Rock

1, 2. Topos or Tumis of silver. 3, 4, 5. Silver pins. 6, 7. Female figures.
8, 9. Male figures of silver, used as offerings

PLATE LVII

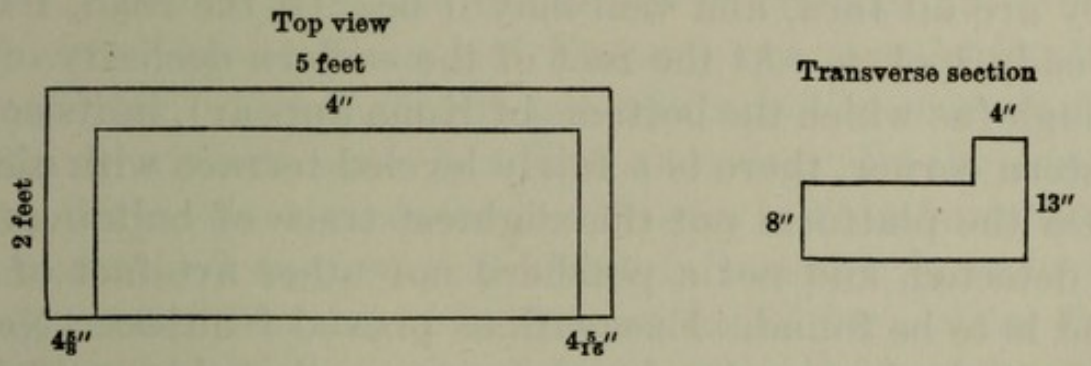
Objects in silver found in vicinity of Sacred Rock

1, 2. Topos or Tumis of silver. 3, 4, 5. Silver pins. 6, 7. Female figures.
8, 9. Male figures of silver, used as offerings


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Hence it is not improbable that the five ponchos in question were woven on the Island of Titicaca unless one or the other was brought thither from Cuzco. It is also likely that their age is not much greater than four centuries.[72] The loom actually in use among the Aymará is primitive and consists of four stakes planted in the ground, and at this the woman, kneeling and squatting, weaves with implements like those found in Chullpa ruins.[73] In the case of the large ancient ponchos, it is distinctly stated that each required a larger frame placed upright, and great length of time. The colors were given to the wool before it was spun, and the thread twirled by hand, men sometimes assisting the women in this work.[74]

I still have to allude to several large stones, all of andesite, one of which is to-day at the hacienda of Challa, in the courtyard of its buildings, and the others are found at the garden of the same hacienda. The former measures five feet in length by two in width. Its least thickness is eight, its greatest thirteen inches. The shape is best understood from the sketch.



The other three are prismatic slabs of various length, ranging from five to eight feet. These slabs were brought from Kasapata by the Indians, with the aid of only a few ropes and rollers of wood, over narrow and sometimes quite steep and rocky paths, distances of a quarter and half a mile respectively. This is instructive for the manner in which, at other places, much larger blocks may have been moved in ancient times. Authors from the seventeenth

century state that admission to the particularly sacred sections on Titicaca Island was obtained through three gateways called, respectively: Pumapuncu, Kentipuncu, and Pillcopuncu, or "door of the puma," "door of the humming-bird," and "door of hope." Such is the information given by Ramos. Cobo speaks of a single gate, which he calls Intipuncu, or "gate of the sun." The former says that the three gates were twenty paces distant from each other. Cobo places the gateway of Intipuncu somewhere on the crest of Muro-kato.[75] It has been suggested that the large block and slabs above alluded to are from some such gateway; but their being found at Kasapata does not favor the assumption.

It remains to cast a glance at the vestiges in the southwestern portion of the Island, in the two bottoms of Kona, north and south, and on the flanks of the tall ridge of Kakayo-kena. These remains consist, so far as we could observe, of terraces, or andenes, and of the road, called Quivini (30), that leads to the summit of Chullun-kayani. Of the andenes little is to be said. The Indians affirm that they are all Inca, and well may it be. Of the road, I have already spoken. At the foot of the eastern declivity of the trough (as which the bottoms of Kona appear), in its southeastern corner, there is a fairly leveled terrace with niches.

On the platform not the slightest trace of buildings can be detected, and not a potsherd nor other artefact of any kind is to be found. Excavations proved fruitless. Nevertheless, the impression becomes strong that this artificially encased rise, with the remains of a descent on the eastern side, may have been leveled for the purpose of erecting on it some edifice. The outline of the terrace is not regular and shows the customary adaptation to natural features, but the walls are well constructed and the two niches (of unequal size) very fairly made. Each of these niches has a ceiling composed of slabs, like some at the Chincana and Pilco-kayma. From the corners on the west project walls

that appear like continuations of the northern and southern sides of the platform. In some of the ravines that run parallel with those between which the platform stands are similar facings, but much damaged. West of the ruin, the slopes of Kakayo-kena are covered with terraces, and the marshy bottom is traversed by causeways similar to those at Pucara.

The niches so common on the Island in ruins of Inca type, inside of buildings as well as in outer walls, deserve some attention. In the interior of buildings the small niche evidently served the same purpose as in Indian houses of today, being a substitute for our closets, cupboards, and wardrobes. In them articles of household use were kept,[76] and in many of the *large* niches also. But at the Pilcokayma, for instance, the niches of the eastern apartments are so tall and ornamental that it seems probable they were either seats or destined to contain objects of worship. We know from descriptions that taller idols were sometimes kept in such recesses.[77] None of them are long or deep enough to suggest they might have served as sleeping platforms. The large niches in facings of terraces or walls of enclosures (as at Kona and Pucara) are more difficult to account for. The Indian is too utilitarian to manufacture anything without some practical purpose. In the case of Kona, for instance, recesses do not seem to have been merely ornamental. I suggest that niches tall enough for a human being to stand in might have been made for *shelter* from the showers which are most frequent in the months when the Indian is engaged in his field-work. They may have not only served as shelter for human beings, but also for harvested crops, against drenching rains. This does not exclude the possibility of fetishes having been kept in such niches also, fetishes destined to protect and foster the crops, although, so far as we know, such Huacas were of small size.[78]

How many of the andenes on the slopes of Kakayo-kena

are due to the Incas is impossible to determine. We saw, when on the summit of the great ridge of that name (Chullun-Kayani in particular) traces of what might have been remains of small edifices similar to watch-towers, but our Indians pretended not to know anything about them, hence we are unable to say if these vestiges are ancient or recent. The existence of watch-towers, on so excellent a lookout as this crest, would not seem improbable. The watch-tower is common in ancient architecture of the North American southwest, and it served for military purposes as well as for simply guarding the crops.

It is superfluous to enter into more detail about Inca ruins on Titicaca Island. They indicate a degree of culture so superior to what we have become acquainted with under the name of Chullpa, and the artefacts accompanying them show a type so closely corresponding to that from the valley of Cuzco, that the belief expressed by the Indians of to-day, ascribing them to the Incas, amounts to a certainty. I beg to observe, however, that while the buildings were erected for and under the direction of Incas, they do not show the nice work displayed in remains at and around Cuzco, Cacha, Cajamarca and other places of the Peruvian Sierra. Some blocks which were brought over from the Peninsula of Copacavana indicate that in some instances the same perfection was reached, but the majority of walls are of a ruder make. It may be, therefore, that while the nicer work was done by men of the Inca tribe of Cuzco, the main labor was performed by hands who were not as skilful, and this is partly corroborated by tradition.

The earliest descriptions of Titicaca Island, subsequent to the report of 1534, the one by Cieza of Leon, and the other by Oviedo, the latter from the testimony of conquerors, are short and vague. The former says: "The great lagune of the Collao bears the name of Titicaca, from the temple that was constructed in the same lagune, about which the natives held a very vain opinion. These Indians

say that their ancestors affirmed as certain, as they also did of other fables of which they speak, that light failed them for many days, and that, while all were in darkness and obscurity, the sun came out (rose) from this Island of Titicaca with great splendor, for which reason they held the island to be sacred and the Ingas made in it the temple of which I have spoken, that was much esteemed and venerated among them, in honor of their sun, placing in it virgin women and priests with great treasures; of which, although the Spaniards at various times have obtained a great deal, it is still believed that the most is there yet."[79] I note that, as this was written in 1550, it indicates that previous to that year the Island had been *repeatedly visited* by Spaniards. Oviedo tells us: "That country of Collao is very well situated and has a good disposition. In it there is a lagune that has forty leagues of circumference and is sweet and . . . and in an islet within, the people have their principal house of worship and idolatry, and it is held in great veneration among them, and from distant lands they go thither in pilgrimage." This was written previous to 1547.[80]

The concurrent testimony of all the sources from the sixteenth century, at my command, is to the effect that Titicaca was a shrine, sacred to the Incas of Cuzco as well as to the Indians on the shores of the Lake. This is also clearly expressed by authors from the century following, hence more remote from the time of the conquest.

The object of particular worship on the Island is stated as having been *Titikala,* or the *Sacred Rock,* and that worship is said to have been due to some connection of the rock with the *sun,* nay, that the *sun* was the deity to which the main adoration was directed. Hence to-day Titicaca is often called "Island of the *Sun,*" and Koati, its smaller neighbor, the "Island of the Moon." The Temple of the Sun, as we have seen, stood close by the Sacred Rock, and with it other chapels, dedicated to thunder and lightning.

Nevertheless *that rock,* and *not* the sun, was the *principal fetish of the Island.* It is stated that "pilgrims" were not allowed to touch the face of the cliff, but only to gaze at it from the margin of the little plane in front of Titikala. Inca chieftains and those officiating as attendants to the shrine alone could approach closer. It is also asserted that the face of the rock was decorated with plates of precious metals and rich tissues, and that an altar was placed inside of its main natural recess. It is further stated that the "pilgrims" were subject to penance and confession, repeatedly even, before they were admitted to the margin of the sacred enclosure. The elaborateness of this cult is so far enhanced as to claim that the Peninsula of Copacavana was occupied by the Incas for the *sole* purpose of sanctifying and controlling access to the Island, checking those who would attempt to tread its soil unprepared or in an unworthy condition.[81]

To deny *a priori* the truth of such reports would not be critical research, but to accept them *unconditionally* is another question. All these reports suffer from the failings of their time, that is, from lack of means of comparison with other peoples and countries, and an inclination to accept without reserve all that was told. I believe we may safely apply to these descriptions the testimony of the ruins themselves. The terms "gorgeous," "splendid," "sumptuous," so lavishly bestowed upon the monuments on Titicaca, appear as great exaggerations. The same was the case with ceremonials. Barbaric display, dazzling in color, and striking through the weirdness peculiar to Indian performances, cannot have but powerfully impressed European spectators.[82]

The central object of this worship was, as stated, not the sun, but the Sacred Rock. Hence it was *Achachila* cult of the Aymará, with notable Inca display, introduced not a century before the conquest. As accessories to the principal shrine, there existed chapels dedicated to other fetishes.

PLATE LVIII

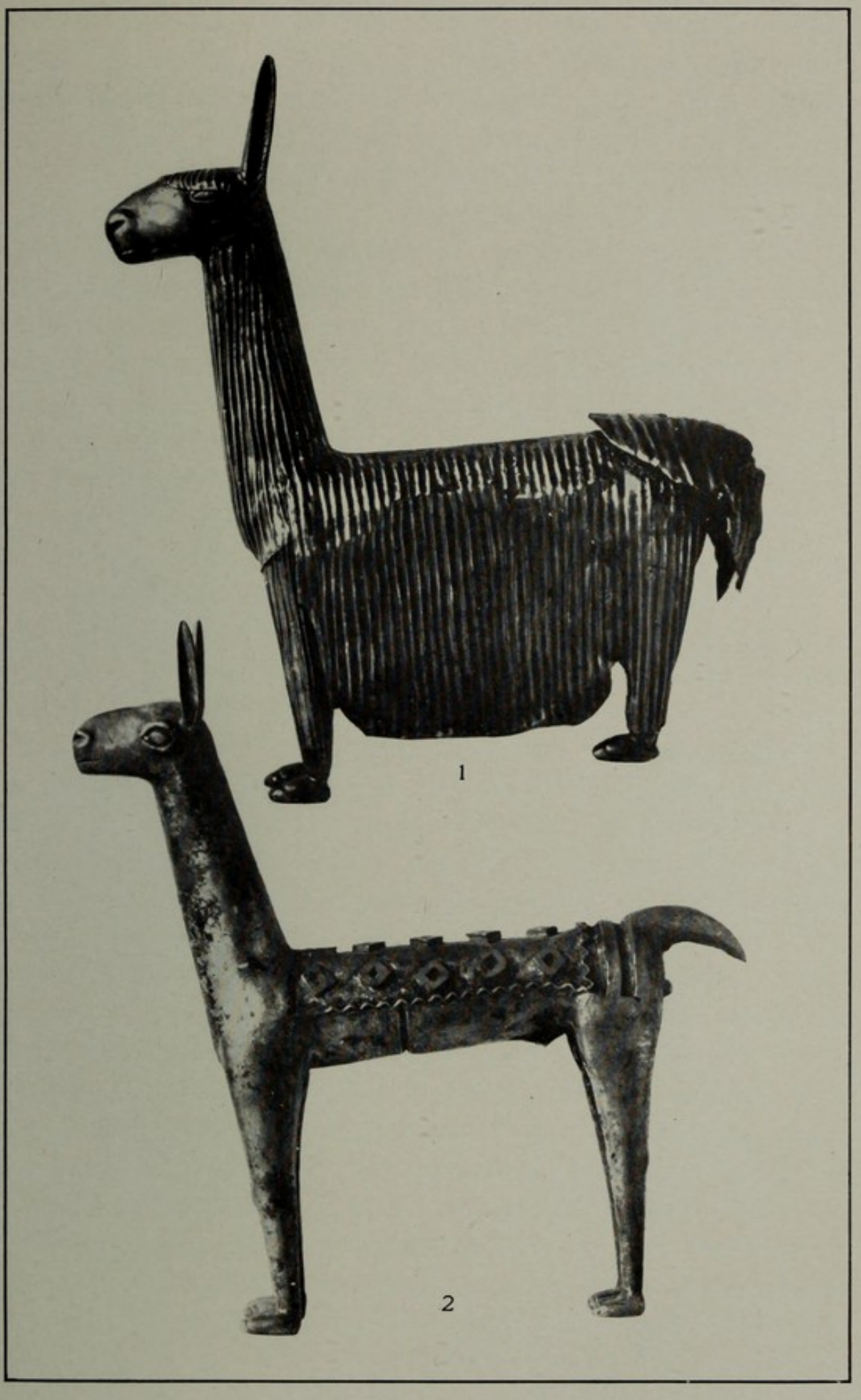
Size reduced

1. Alpaca of silver. 2. Llama of silver with caparison and nails of gold

Plate LVIII

Size reduced

1. Alpaca of silver. 2. Llama of silver with caparison and nails of gold



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Ramos mentions three statues on Titicaca called, respectively, Apu-ynti, Chusip-ynti, and Yntipguanqui, which words he translates as the Sun-chieftain, Sun-son, and the Brother-sun. Of this Trinity he states that it was "only one God."[83] Cobo describes a statue, half gold, half silver, of the size of a woman, of which he was told that it represented the *moon* and stood on the Island of Koati. But he adds: "Although others will have it that this figure and statue was called Titicaca, and they say it represented the mother of the Incas."[84] In regard to such ceremonial objects the most complete disagreement exists between the chroniclers, whereas they agree in that the *Sacred Rock* was the center of attraction and at the same time the seat of oracular utterances.[85] This worship at the "Rock of the Cat" and the consequent fame of the Island of Titicaca among the Indians, was of great antiquity in Bolivia, Titicaca being a noted shrine of the *Aymará long before* the Incas took possession of it. In this connection I have to add a word of caution.

It seems certain that when the Incas took possession of the Island, in the latter part of the fifteenth century, they found it inhabited by *Aymará*-speaking aborigines, to which the name "Chullpa" is given by the present generation. It is furthermore asserted, that these Aymará Indians were mostly removed by the Incas to the mainland. But upon the arrival of the Spaniards in the basin of Lake Titicaca the shrine was abandoned by the Inca and the Island gradually reoccupied by Indians of Aymará stock, who lived there for at least a century after the manner of their forefathers. Hence *not all* of what is included under the head of "Chullpa" is *pre-conquistorial.* Even the artificial deformation of the head, so frequently alluded to in these pages, was practised as late as the seventeenth century. A number of antiquities from Titicaca may be of later date than the time of the conquest, and more *recent* than the *Inca* remains. Nevertheless, even when posterior

to the sixteenth century, they are of an *ancient type,* and fair representatives of the art and industry of the people in their *primitive* condition, prior, not only to the advent of the Spaniards, but also to that of the Incas and their occupation of Titicaca Island.

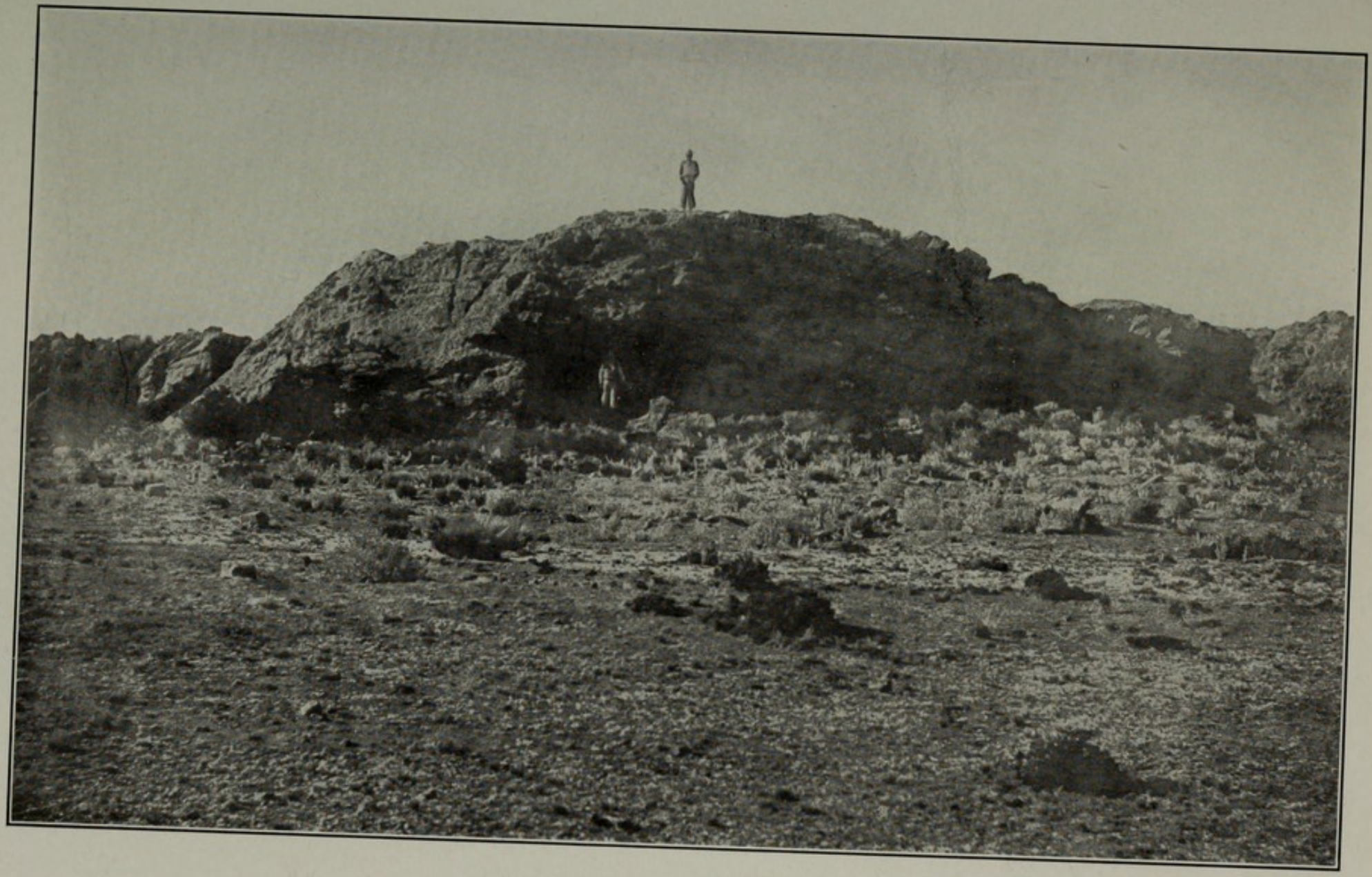
I now turn to the Island of Koati, Titicaca's smaller neighbor, and to its ruins. Whereas there is good evidence that Titicaca enjoyed a certain reputation as a shrine previous to the time when the Incas established themselves on its soil, Koati rose into prominence only through the establishments which the *Incas founded there.*

PLATE XLV

Flint-Knife of Carved Rock

PLATE LIX

Titi-Kala or Sacred Rock



NOTES

THE ANCIENT RUINS ON THE ISLAND OF TITICACA

PART IV

[1] The word "Chullpa" signifies the bag, or sack, made of ichhu grass of the mountain-regions, in which the dead were placed. See Bertonio: *Vocabulario,* II, p. 92: "Chullpa:—Entierro o serron donde metian sus difuntos." I, p. 430: "Sepultura,—o seron como isanga donde ponian el difunto: Chullpa, vel Asanco." From the bag, or sack, the name was gradually transferred, popularly, to the buildings in which they were found and finally to the people who once occupied them. The Indian wizard on Titicaca, to whose statements I referred so freely in Part III, told us the "Chullpa" dressed in textures of llama wool. Pedro Pizarro (*Relación,* p. 281) says the inhabitants of the Collao "visten de ropa de lana basta."

[2] *Relatione per Sva Maesta,* 1534, (Ramusio, II, Ramusio III: 1565, fol. 413): "le sue terre sono di mediocre grandezza, & le case picciole, le mure di pietra & terra insieme, coperte di paglia." *Relacion de la Provincia de los Pacajes,* p. 62: "La forma y manera de las casas son redondas, de quince pies de redondo, pequeñas . . . y una puerta pequeña hacia la parte de donde sale el sol, sin tener ninguna casa con aposento doblado."

[3] Meaning "Little (the Spanish *chico*) Kea-Kollu." "Kea" is the name of a plant, but I would not venture to assert it to be related to the name of the height.

[4] See the interesting and valuable work of my friend Dr. Charles Lumholtz, *Unknown Mexico,* and my *Final Report,* II, Part XIII, pp. 502, 504 *et seq.;* Part XIV, p. 564.

[5] In the book of S. S. Hill: *Travels in Peru and Mexico,* 1860, on page 241, he mentions a collection of Peruvian antiquities at Cuzco in which were "innumerable weapons of war. . . . One of them consisted of a piece of metal with prominent knobs around it, and a hole in the middle which seemed designed for the handle. The Doctor [Bennett] had examined many skulls of embalmed bodies which seemed to have been broken by this instrument, and were *actually repaired with calabash.*" (Italics are mine.) If the statement is reliable, it recalls closing of the trephined orifice with a piece of gourd or *mate.*

[6] *Ordenanzas del Perú,* Lib. II, Tit. IX, Ord. VIII, fol. 145.

[7] *Primera Parte de la Crónica del Perú,* Cap. C, p. 443: "En las cabezas traen puestos unos bonetes á manera de morteros, hechos de su lana, que

nombran Chucos; y tienenlos todos muy largas y sin colodrillo, porque desde niños se las quebrantan y ponen como quieren.'' Villagomez: *Exortacion contra la Idolatria,* etc., fol. 58, Edicto: ''Si algunos an amoldado ó amoldan las cabeças de sus muchachos á la forma que los Indios llaman Cantuma, ó Palta Vmu?''

[8] *Historia del Nuevo Mundo,* IV, p. 175; also, *Relacion de la Provincia de los Collaguas,* p. 40; and Salcamayhua: *Relacion de Antigüedades deste Reyno del Pirú,* p. 253.

[9] Properly Cchalla (see Bertonio: *Vocabulario,* I, p. 67), modernized to Challa. *Vocabulario de las voces usuales de Aymara al Castellano y Quechua,* La Paz, 1894, p. 4: ''Challa —Arena.''

[10] One of the numerous species of *bulima,* found on trees in the eastern sections (Amazonian basin and eastern slopes of the Andes) of South America, where they live on trees.

[11] The bola was in general use among the Indians of the Peruvian mountains, although more in the sections which now constitute Bolivia. Francisco de Xeréz (*Verdadera Relacion de la conquista del Perv,* p. 99) gives an interesting list of the weapons used by the people of Atauhuallpa at Cajamarca, but he only mentions stones shaped like eggs and hurled by slings. The anonymous document, *Sucesos ocurridos en la conquista del Perú antes de la llegada del Lycenciado La Gasca, Doc. de Indias,* XLII, p. 381, has an excellent description of the bolas, as used by the Indians at Cuzco in 1536: ''que le echaban los yndios peleando unas sogas de Niervos de ovejas echas tres ramales que sola la soga en cada ramal una piedra atada y con aquella manera los mas de los caballos que no abia quien pelease e a los caballeros les ansí mismo los liaban con aquellas sogas quellos llaman aillos, que no eran señores de riendas ni espadas ni lanza ni señores de si aquel dia fyzieron mucho fruto los peones que con las espadas cortaban de aquellas sogas con gran trabaxo, que apenas podian por ser de veruxos i muy oliadas.'' This statement is by an eye-witness and participant in the so-called siege of Cuzco by the Indians in 1536, and as good a description as could be desired. The bolas themselves were, then, attached or connected by tendons of llamas. Also: *Poblacion y conquista del Pirú, Documentos inéditos de Chile.* The name ''ayllo'' is Quichua. Torres Rubio: *Arte y Vocabulario,* fol. 150: ''Ayllu ó livi,— Cierto instrumento para trabar los pies, y cazar animales.'' Among the Aymará ''lliui'' is in use. In the short vocabulary appended to the work of Arriaga, *Extirpacion de la Idolatria,* etc., fol. 134, he defines Aillo, o Libis, as follows: ''Vn cordel con tres ramales, y al cabo de cada vno vna bolilla de plomo sirve para caçar pajaros, o animales enredandoles.'' After these descriptions I merely refer, for confirmation and minor details, to Calancha: *Corónica Moralizada,* II, fol. 2; and Cobo: *Historia del Nuevo Mundo,* IV, p. 196.

[12] And on the Puna in general, also on the eastern slopes, about Pelechuco and Charassani.

[13] Also on the Peninsula of Huata, and in the broken country.

[14] Ramos (*Historia de Copocabana,* edition of 1860, p. 45), in connection with sacrifices of children, states: ''Muchas veces solian sacrificar estas tiernas víctimas ahogándolas, despues de haberles dado bien de comer y beber, llenándolas la boca de coca molida y deteniéndoles el resuello; despues las enterraban con ciertos visajes y ceremonias. Otras veces las degollaban, y con su sangre se teñian el rostro: enterraban con ellos los vasos en que antes les hacian beber, y por eso en las sepulturas se suelen hallar muchos, que cuando son de madera llaman Quero, y á los de plata Aquillas.'' Torres Rubio has (*Arte,*

fol. 98): "Quheru—Vaso de madera en que vevian la Chicha"; fol. 75: "Aquilla—Vaso de plata." Bertonio: *Vocabulario,* II, p. 24: "Aquilla —Vaso de plata para beuer, que tambien llaman Quero, y si es a manera de taça, Vichu." *Idem,* p. 290.

[15] There are, at the American Museum of Natural History (New York) two wooden keros, purported to have come from Cuzco, with inlaid figures, painted, and partly very well decorated. In regard to these drinking goblets it is stated by Cobo, *Historia del Nuevo Mundo,* IV, p. 169: "Los mas comunes son de madera, de hechura de nuestros cubiletes de vidrio, mas anchos de arriba que de abajo, que hacen un cuartillo de vino. Pintanlos por de fuera con cierto barníz muy reluciente de varios colores, con diferentes labores y pinturas; y á estos vasos de palo llaman Queros." The two specimens mentioned recall the above description. They also have bits of tin incrustated with the figures. Bertonio, in *Vocabulario,* II, p. 290, gives various names in Aymará for varieties of keros, among them: "Chaantacata Quero—Vaso que en los estremos tiene encaxado estaño."

[16] Cobo, in *Historia,* IV, p. 227, describes a way of fishing with a "fisga," which is a (three-pronged) harpoon or a fishing spear. He says: "Indios hay que en los rios mansos y hondos se echan á nada con una fisga en la mano derecha, nadando sólo con la izquierda con gran ligereza, y zabullendo tras el pescado, lo siguen hasta alcanzarlo, y clavándolo con la fisga, lo sacan atravesado á la orilla." He fails to indicate the region where this was practised. Swimming in Lake Titicaca is by no means safe and could hardly be sustained for longer than ten or at most twenty minutes.

[17] The so-called Chullpa people, being nothing else than the primitive Aymará, and it being well established that the latter wore clothing—a fact also established by our own finds elsewhere in Bolivia—there is no need of special reference to authorities.

[18] And to various other sections of Bolivia which we explored.

[19] Squier: *Peru,* pp. 352 and 353, picture of Chullpas at Acora.

[20] See the *American Anthropologist,* January–March, 1905: *The aboriginal Ruins at Sillustani, Peru.* The towers at Kalaki, on the shores of Huata, fronting the Peninsula of Copacavana were, like those of Sillustani, probably store-houses.

[21] *Primera Parte de la Crónica,* Cap. C, p. 443.

[22] Furthermore, not all of these graves are pre-Spanish. As shown in Part III, the Island continued to be inhabited by Aymará, who, for a century after the conquest, at least, lived on it after the fashion of primitive times.

[23] Most of the engagements between the first Spaniards in Peru and the Indians were fought in the daytime, even when the latter were the aggressors.

[24] *Final Report,* II, pp. 566 and 568.

[25] *Peru,* p. 335: "The path skirts the flanks of the abrupt hills forming the island, apparently on the line of an ancient road supported by terraces of large stones, at an elevation of between two and three hundred feet above the lake, the shores of which are precipitous." There is no trace of such terraces, but there are ledges of natural rock cropping out here and there. Andenes are plentiful, but they are low and bear no relation to the path, whether ancient or modern. The Inca remains at the Puncu are not mentioned by any of the early authors at my command.

[26] Arriaga: *Extirpacion,* p. 11: "A los Puquios, que son los manantiales, y fuentes hemos hallado que adoran de la misma manera, especialmente donde tienen falta de agua, pidiendoles que no se sequen."

[27] *Peru,* p. 333.

[28] *Archaeological Reconnoissance into Mexico,* chapter on Mitla.

[29] None of the descriptions of the Island of the seventeenth century at my command mentions the Pilco-Kayma. "Pilco" seems to be a corruption of "Pirca"—wall, in Quichua as well as in Aymará. Bertonio, in *Vocabulario,* II, p. 49, says of "Kayma" that it means "corrompido," decayed—and is applied to food and drink. The silence of the Augustines and Jesuits who visited the Island in the second decade of the seventeenth century, about the Pilco-Kayma, is a matter of surprise to me, since it is one of the best preserved and most striking ruins on Titicaca.

[30] See note above.

[31] *Peru,* p. 368. In assigning to the promontory of Llaq'-aylli an elevation of 2000 feet, the distinguished explorer has been mistaken. No point of the Island rises more than 800 feet above the Lake.

[32] Squier: *Peru,* p. 368. Rock (a) on the diagram on the page quoted is manifestly the one designated to us as a sacrificial stone. Of other blocks alluded to by Mr. Squier and which he calls "Inti-Huatana" there is only the one that looks like an arm-chair.

[33] *Historia de Copacabana,* p. 44: "El órden que guardaban los sacerdotes en sacrificarlos era este. Poníanlos sobre una gran losa, echados los rostros al cielo, vueltos al sol, y tirandoles del cuello poníanles sobre él una teja ó piedra lisa algo ancha y con otra les daban encima tales golpes que en breve les quitaban la vida; y asi muertos los dejaban dentro de la misma guaca . . ."

[34] *Ibidem,* p. 45. It seems also, that human sacrifices continued to be made after the conquest, in secret. On page 26 he mentions that, in 1598, and between Sicasica and Oruro, a girl, ten years old, had been rescued from a tomb where she had been buried by the Curacas of Sicasica. This manner of sacrifice is still in vigor to-day, and it is made at places where "treasure" has been unearthed. Cobo: *Historia,* etc., IV, p. 64: "Los sacrificios que en este adoratorio se hacian eran muy frequentes y costosos, derramando tanta sangre de inocentes y ofreciendo tan grandes tesoros." He mentions four modes of sacrificing people: Strangulation, cutting of the throat, burying alive, and tearing out the heart. The latter statement is suspicious, as Cobo was for a number of years in Mexico. Fray Andrés de S. Nicolas, in *Imágen de N:S: de Copacavana,* fol. 30, states that the victims were mostly adults, and describes the sacrifices as follows: "Ponian á los muchachos sobre una losa grande, allí dispuesta; y auiéndoles dado á beber su breuaje hecho de maiz, que llaman chicha, los priuauan de sentido, y luego les llenauan la boca de yerba, que por nombre de la Coca es conocido (cuyo vso vn Concilio Limense justamente ha condenado) y poniendoles mirando al Sol, apretauan sus gargantas con vna piedra lisa, y algo ancha, y con otra les dauan tales golpes, que dentro de poco los priuauan de la vida." Calancha, in *Corónica,* II, fol. 18 *et seq.,* repeats Ramos in the main, but he is positive that adult girls were sacrificed on the Island, though he insists that the majority of victims were children.

When Hernando and Gonzalo Pizarro made their raid into Bolivia in 1538 or 1539, they lost one of their men who, as they afterward learned, had been sacrificed in a shrine on the Desaguadero. *Relacion del sitio del Cuzco,* p. 179: "Y de los que prendieron se supo como el Cristiano tomado á manos le habian sacrificado en un adoratorio que tenian en pasando el desaguadero."

[35] It is not true, as Garcilasso de la Vega and the author of the anonymous *Relacion* assert, that the Inca did not practice human sacrifices. Even Cieza admits it: *Segunda Parte,* Cap. XXV, p. 100: "No digo yo que no

sacrificaban y que no mataban hombres y niños en los tales sacrificios; pero no era lo que se dice ni con mucho.'' (Also Cap. XXVIII, pp. 113, 169, *et seq.*) Juan de Betanzos: *Suma y Narracion*, Cap. XI, p. 66: ''Y esto hecho, mandó Inca Yupanqui á los señores del Cuzco que, para de allí á diez dias, tuviesen aparejado mucho proveimiento de maiz, ovejas y corderos, y ansimismo mucha ropa fina, y cierta suma de niños y niñas, que ellos llaman Capacoha, todo lo cual era para hacer sacrificio al sol. Y siendo los diez dias cumplidos y ésto ya todo junto, Inca Yupanqui mandó hacer un gran fuego, en el cual fuego mandó, despues de haber hecho degollar las ovejas y corderos, que fuesen echados en él, y las demas ropas y maíz, ofreciéndolo todo al sol; y los niños y niñas que ansí habian juntado, estando bien vestidos y aderezados, mandóles enterrar vivos en aquella casa . . .'' Cristóval de Molina: *Fables and Rites of the Incas*, p. 54: ''The Ccapaccocha was instituted by Pachacutec Ynca Yupanqui, and was as follows: The provinces of Collasuyu, Chincha-suyu, Anti-suyu, and Cunti-suyu brought to this city from each lineage or tribe one or two male and female children aged about ten years. . . . The children and the other sacrifices walked around the statues of the Creator, the Sun, the Thunder, and the Moon, which were placed in the square, taking two turns. . . . So the children were strangled and buried with the silver figures of sheep,'' etc. (p. 55). ''After this prayer they strangled the children, first giving them to eat and drink, that they might not enter the presence of the Creator discontented and hungry. From others they took out the hearts while yet alive, and offered them to the Huacas while yet palpitating,'' etc. The Indian Salcamayhua, in *Relacion de Antigüedades*, etc., p. 359, attributes the introduction of the sacrifices of children above described to one of the earliest head-chiefs mentioned by him: ''Dizen que en tiempo deste (Mayta Capac) los imbentaron el sacrificio de Capac Hucha Cocuy, enterrandoles á los muchachos sin mancha y conoro y plata, y lo mismo an embentado el Arpar con sangre humana como con corderos blancos,'' etc.

[36] That there was constant manufacturing of chicha going on on Titicaca is already asserted by the first two Spaniards who visited it in December, 1533: *Relatione per Sva Maesta*, 1534, Ramusio, II, fol. 413: ''Vi sono megli di secento Indiani al seruitio di questo luogo, & piu di mille donne, che fanno Chicca per gettarla sopra quella pietra Thichicasa.''

[37] Victims sacrificed together were also buried close to each other.

[38] The *Relatione per Sva Maesta*, fol. 413, states: ''due picciole Isolette, nell'vna delle quali é vna moschea, & casa del Sole, la quale é tenuta in gran veneratione, & in essa vanno a fare le loro offerte & sacrificij *in vna gran pietra* che é nell'Isola che la chiamano Thichicasa.'' (Italics mine.) This statement by persons who saw the ceremonials on the Island in primitive condition indicates, as I shall still further develop, that the ''mosque, and house of the sun'' included what is called the Sacred Rock to-day, hence the ''temple of the sun'' cannot have been at Kasapata.

[39] *Historia del Nuevo Mundo*, IV, p. 58: ''De los Mitimaes, que la mayor parte eran de la sangre y linaje de los Incas, formó un moderado pueblo media legua antes del templo, y en él mandó labrar casa de su habitacion.''

[40] *Historia de Copacabana*, 1860, p. 16: ''Arreglado yá Copacabana, el mismo monarca formó otro pueblo moderado en la isla, como á media legua de la peña sagrada; y alli labró su real palacio.'' So far Ramos, but his editor, Father Sans, adds: ''cuyas

ruinas son probablemente las que se ven frente del Templo del Sol en una Colina al lado de Oriente.'' Sans shares the impression that the edifice at Kasapata was the ''temple of the sun.''

[41] *Corónica Moralizada,* II, fol. 6: ''Tupac ynga fundó un moderado pueblo cási media legua antes de llegar á la peña, i en él labró su real palacio, pobre en la arquitectura de su edificio, pero riquísimo en el tesoro de su erario.''

[42] This is corroborated by Cobo: *Historia,* etc., IV, p. 55: ''Y un cuarto de legua antes de llegar al templo, un grandioso Tambo ó meson para hospedaje de peregrinos . . .'' Although Cobo places that tambo at only a quarter of a league from the Sacred Rock, it is plain that the site of Kasapata is meant by him. ''Muro Kato,'' where the cluster of edifices connected with the shrine begins in the south or southeast, is only a short distance away, and shows no traces of an edifice large enough for accommodating any number of lodgers, even transient ones as ''pilgrims'' would be.

[43] That Tupac Yupanqui was the Inca chief who first visited the Island is stated by the majority of authors. Cieza: *Segunda Parte,* p. 199: ''Pasando adelante Inca Yupanqui cuentan que visitó los más pueblos que confinan con la gran laguna de Titicaca . . . Entró en la gran laguna de Titicaca y miró las islas que en ella se hacen, mandando hacer en la mayor de ellas templo del sol y palacios para él y sus descendientes.'' *Relacion de la Provincia de los Pacajes,* p. 58. Ramos: *Historia,* Cap. III, IV, VII, etc. Cobo: *Historia,* IV, Lib. XIII. Andrés de S. Nicolas, *Imágen,* etc., f. 25. Anello Oliva: *Historia del Perv,* etc., 1631, p. 51, attributes the first visit to the Island to Topa or Viracocha Inca, but he is himself in doubt as to the authenticity of the information, and it looks as if he had interpolated two supposed war-chiefs in his catalogue.

To my knowledge, Mr. Squier has been the first and, thus far, only one to allude to the comparatively modern origin of the Inca buildings on Titicaca and Koati. *Peru,* p. 371: ''Assuming the truth of these traditions, most, if not all, the edifices on the island were built some time between 1425 and 1470, which was the period when Tupac Yupanqui reigned.'' Tupac Yupanqui was—and nearly all the early sources agree in this—the third last Inca war-chief, taking Huascar as the last one previous to the conquest; Atauhuallpa was the latter's contemporary and an intruder from the North. Hence Tupac Yupanqui must have been in office between 1450 and 1500, and the visit to Titicaca took place within these limits of time. The extraordinary longevity attributed to some of these chiefs cannot be accepted as a basis for determining the length of a term. Even allowing for a generation as much as forty years, the beginning of the term of Tupac Yupanqui would be about the middle of the fifteenth century only. With him traditions of the Inca assume a more positive shape.

[44] The rock, unfortunately for these statements, is so situated that it receives no light at sunrise and very little direct sunlight during the remainder of the day.

[45] *Relatione per Sva Maesta,* fol. 413.

[46] Cobo, in *Historia del Nuevo Mundo,* IV, p. 62, calls that entrance ''Kenti puncu,'' says it was ''doscientos pasos distante de la peña,'' and adds: ''A un lado de la puerta sobredicha se ven ciertos edificios viejos, que, segun los indios cuentan, eran aposentos de los ministros y sirvientes del templo; y al otro lado hay señales de un gran edificio, que era el recogimiento de las MAMACONAS, mujeres consagradas al Sol, las cuales servian de hacer los brevajes y telas de curiosidad que en aquel ministerio

del adoratorio se gastaban.'' Ramos, in *Historia de Copacabana*, pp. 10 and 11, mentions three gateways, the nearest of which he places 200 steps from the rock, and calls the first or most distant of these entrances ''Pumapuncu,'' the middle one ''Kentipuncu,'' and the last ''Pillcopuncu.'' He says the three were at twenty paces from each other. Fray San Nicolas (*Imágen*, etc., fol. 23) agrees with Cobo. Admission to the cluster of buildings surrounding the rock was to be preceded by a ''confession.'' That a certain confession was in practice among the Peruvian aborigines seems certain, also that it resulted in expurgation and absolution. On this point Arriaga (*Extirpacion*, Cap. III, p. 18) is positive and detailed: ''Aucachic, que en el Cuzco llaman Ichuris, es el Confesor, este oficio no anda solo sino que siempre es annexo, al Villac, o al Macsa sobre dicho. Confiesa a todos los de su Ayllo, aunque sea su muger, y hijo. Estas confesiones son siempre en las fiestas de sus Huacas, y quando an de yr camino largo. Y son tan cuidadosos en su oficio, que é topado yo algunos muchachos que nunca se avian confesado con Sacerdote alguno de Dios nuestro Señor, y se avian confesado ya tres ó quatro vezes con estos ministros del Demonio . . .'' (P. 28, Cap. v.) ''Durante el ayuno se confiessan todos Yndios y Yndias con los que tienen este oficio, sentados en el suelo el que oye, y el que se confiessa en lugares que suelen tener en el campo diputados para este efecto.—No confiessan pecados interiores, sino de haver hurtado, de aver mal tratado a otros, y de tener mas que vna muger (porque tener vna aunque sea estando amancebado, no lo tienen por pecado) acusanse tambien de los adulterios, pero la simple fornicacion de ninguna manera la tienen por pecado, acusanse de auer acudido a reverenciar el Dios de los Españoles, y de no auer acudido a las Huacas el Hechizero les dize que se emiende,'' etc.—''Y ponen sobre vna piedra llana de los polvos de ofrendas, y haze que los sople, y con vna piedreçuela que llaman Pasca, que quiere dezir perdon, que la lleva el Yndio, o la tiene el que confiessa le refriega la cabeça, con maiz blanco molido, y con agua le lavan la cabeça en algun arroyo ó donde se juntan los rios, que llaman Tincuna.—Tiene por gran pecado el esconder los pecados, quando se confiessan, y haze grandes diligencias, para averiguallo el Confessor.—Y para esto en diversas partes tienen diversas ceremonias. En vnas en llegando el Yndio al confessor dize oydme los Cerros de al derredor, las llanadas, los Condores que bolays, los Buhos y Lechuças, que quiero confessar mis pecados. Y todo esto dize teniendo vna quentecilla de mullu metida en vna espina con dos dedos de la mano derecha, levantando la espina hazia arriba, dize sus pecados, y en acabando la dá al confessor, y el la toma y hincando la espina en la manta la aprieta hasta que se quiebre la quenta, y mira en quantas partes se quebró, y si se quebró en tres á sido buena la confesion y si se quiebra en dos, no á sido buena la confession, y dize que torne a confessar sus pecados.''

''En otras partes para verificar esto mismo toman vn manojillo de hicho de a donde se derivó el nombre de Ichuri, que es el que coje pajas, y lo divide el confessor en dos partes, y vá sacando vna paja de vna parte, y otra de otra, hasta ver si quedan pares, que entonces es buena la confession, y si no es mala.—En otras lo devinan por la sangre de los cuyes, y en vn pueblo cerca de aqui atandole las manos atras al penitente, quando acaba de confessar, y apretandoselas con vn cordel le hazia el confesor dezir la verdad.—Oy dixo delante de mi vn Yndio al Visitador, que dandole el confessor con vn palo le apretava a que confessase todos sus pecados, y otro que dandole con vna soga. Dales por penitencia

los ayunos sobredichos de no comer sal, ni agi, ni dormir con sus mugeres, y vno dixo que le avian dado este ayuno por seys meses.''

''Fuera de las fiestas, vsan tambien el confessarse, quando estan enfermos,'' etc. I have been thus prolix in quoting Arriaga because he is more detailed on the subject than any other author, and because he made it a matter of minute investigation.

This custom of ''confession'' among the Peruvian Indians was not ''discovered'' in consequence of the official search into the rites and ceremonials of that people instituted in the beginning of the seventeenth century. Fully sixty years previous, about 1560, the Augustine monks who established missions in the region of Huamachuco, noticed the rites of confession. Says the *Relacion de la Religion y ritos del Perú, Doc. de Indias,* III, p. 44: ''Cosa es de espanto, que estos indios tambien tenian confesion vocal y se confesaban, la cual se descubrió desta manera: andando un padre por una xalca ó tierra de mucha nieve, vido que entre la nieve estaba un indio asentado, y llamó á sus yanaconas y criados y mandóles que truxesen aquel indio, y comenzóle á suadir que le dijese que qué hacia en aquella sierra ó xalca, que así la llaman en la lengua del Perú . . . y dixo que algun ídolo ó guaca habia por allí, pues que estaba así, que debia de adorar ó mochar, y atrayéndole con algunas amenazas, dixo que él diria por qué estaba allí, y que era por penitencia que le habia dado el alco, ques el hechicero; y preguntóle que por qué era aquella penitencia, y dixo que confesándose, y así dixo quien era el alco ó sacerdote, y llamólo, que era un indio viejo, y de aqui se descubrieron muchos. Y la manera de su confesion era que decian sus OCHAS, que en la lengua quieren decir culpas, y confesaban si habian hurtado algo ó reñido, sino habian servido bien á su principal ó cacique, sino tenido acatamiento al Zupai y demonio y á la guaca ó ídolo, cumplido con lo que le mandaba el demonio.''—Father Cristóbal Molina: *Fables and Rites of the Yncas,* p. 15: ''According to the accounts they give, all the people of the land confessed to the sorcerers who had charge of the huacas.'' Molina obtained his information at Cuzco, about fifty years prior to Arriaga.

[47] *Historia del Nuevo Mundo,* IV, p. 62: ''Entre esta puerta y los edificios dichos estaba una peña viva, por la cual pasa el camino que va al santuario, y en ella están ciertas señales que parecen del calzado de los indios, grandísimas, las cuales creían los indios viejos ser pisadas milagrosas que allí quedaron de aquellos mas que tenebrosos tiempos de su gentilidad, siendo como son aguajes de la misma peña.'' Squier: *Peru,* p. 339: ''They are formed in outline, by hard, ferruginous veins, around which the rock has been worn away, leaving them in relief.''

[48] *Historia de Copacabana,* p. 8: ''Al lado de una planicie, como á treinta pasos de la peña,'' etc. Cobo: *Historia,* IV, p. 61: ''La peña tan venerada estaba descubierta, y junto á ella el templo, con tal disposicion, que venia á caer la dicha peña como en su cimenterio, ó por mejor decir, en la capilla mayor dél, aunque descubierta, pues era el lugar de mas veneracion.'' This is already stated in the *Relatione per Sva Maesta,* 1534, fol. 413, which statement I regard as conclusive.

[49] Compare the description by Cobo: *Historia,* IV, p. 61: ''El convexo es de peña viva, cuyas vertientes llegan á comunicarse con el agua en una ensenada que la laguna hace.'' But Cobo makes the mistake of placing the face (*frente*) of the rock to the north instead of to the west. That face, or cliff, looks to the Peruvian or western shore of the Lake.

[50] *Relacion anónima,* p. 164. In regard to a derivation from the Qui-

chua "Titi"—tin, I would remark that the name is Aymará, and not Quichua; (2) that there is neither tin nor lead nor antimony on the Island, and (3) that the rock is reddish-brown and has not the slightest resemblance in color with any of these metals.

[51] Ramos: *Historia de Copacabana,* p. 8: "Al lado de una planicie, como á treinta pasos de la peña, estan las *calas*(!) del sol, del trueno y del relámpago, a quienes los indios respetaban mucho." I italicize the word "calas." It may be a misprint from "casas." Should it, however, be "calas," it may indicate excavations, or diggings.

[52] See above. Cobo, while otherwise careful in his descriptions, confounds the directions of the compass. On the side toward Bolivia (the north and east) the Sacred Rock presents an almost uninterrupted slope on which absolutely no trace of ruins is seen. Neither is there any appropriate site for a building.

[53] *Historia,* p. 8.

[54] See plans.

[55] *Relatione per Sva Maesta,* fol. 413.

[56] Ramos: *Historia,* p. 8: "En la llanada de esta isla se han hallado muchos idolillos de oro, y curiosos vasos de barro; vense aun las catas o rastros de excavaciones que se han hecho para buscar los tesoros que en sus sepulcros enterraban los antiguos. Ahora todo está cubierto de pajonal y maleza." There is no ichhu grass on the level immediately in front of the rock and the description would rather apply to the site called Chucaripupata, contiguous almost to the level in question. Calancha: *Corónica,* etc., II, fol. 4: "Tiene de tierra una gran panpa, ó llanada que sirvió de cementerio es de tierra facil . . . En aquesta panpa, ó llanada, se an allado muchos idolos de oro y vasos curiosos de barro con otras menudencias del tiempo antiguo. Vense las catas que se an dado por buscar los tesoros, que en sus sepulcros enterravan los Yndios," etc. Calancha manifestly copied from Ramos. Cobo (*Historia,* etc., IV, p. 61) is one of those who state that the Sacred Rock was covered with handsome pieces of cloth, and adds: "Delante de la dicha peña y altar se ve una piedra redonda al modo de bacín, admirablemente labrada, del tamaño de una piedra de molino mediana, con su orificio, que ahora sirve al pié de una cruz, en que echaban la chicha para que el Sol bebiese." Of this stone, circular in form, we did not hear. The sacrifice or offering of chicha is mentioned already in 1534 (*Relatione per Sva Maesta,* fol. 413): "che fanno Chicca per gettarla sopra quella pietra Thichicasa." Cobo (*Historia,* etc., p. 61) says the rock was "cubierta con una cortina de *cumbi,* el mas sutil y delicado que jamás se vió, y todo el cóncavo della cubierto de láminas de oro." About the word "cumbi" Torres Rubio (*Arte,* etc., fol. 78) has "Ccompi o cumpi—ropa preciosa." That such handsome textures were used for sacrifice is frequently stated. (Garcilasso: *Comentarios,* I, fol. 34.) Treating of the objects offered to the sun, he asserts: "y ropa de vestir de la muy fina, todo lo cual quemauã en lugar de encienso, y lo ofrecian en hazimiento de gracias." Betanzos: *Suma y Narracion,* Cap. xv, p. 103: "La cual fiesta mandó que se hiciese en la plaza do agora es el espital, en la ciudad del Cuzco . . . en la cual fiesta mandó que se hiciesen grandes sacrificios á los Idolos, do se les quemase é sacrificase muchos ganados é comidas é ropa, y en las tales guacas fuesen ofrecidos muchas joyas de oro y plata." This was in the month of May, according to the author. (Also p. 105.) Molina: *Fables and Rites,* etc., p. 34: "They burn in sacrifice a sheep, and a vast quantity of clothes of many colours." Also

pp. 45, 46, *et seq.* *Informacion de las Idolatrias de los Incas é Indios y de como se enterraban*, 1571, *Doc. de Indias*, XXIV, pp. 133, 140, 154. Arriaga: *Extirpacion de la Ydolatria*, Cap. VIII, p. 44: "Tambien no se a reparado hasta aora, en que tuviessen las camisetas antiguas de cumbi, que ofrecian á sus Huacas, o vestian a sus Malquis, o que se ponian, para solas fiestas y sacrificios de las Huacas." Ramos: *Copacabana*, p. 16. Cobo: *Historia del Nuevo Mundo*, IV, p. 84.

As to the gold and silver figurines of men, women, and llamas that were (and still are, though in a lesser quantity) dug up on the level of Tican-aychi in front of the Sacred Rock and at Chucaripu-pata, they were votive offerings, and what the Aymará to-day call, if it represents a man, "Kollke-jaque" (silver man); if a woman, "Kollke-huarmi" (silver woman). When the figurines are of gold, "Kuri" or "Curi" (gold) is substituted for "Kollke" (silver). Enough is contained in quotations preceding to establish that they were found at an early day on the Island and on the sites above mentioned. Already the *Relatione per Sva Maesta*, fol. 413, states: "& gli offeriscono oro & argento, & altre cose." These offerings were made to the Rock—"in vna gran pietra che é nell' Isola che la chiamano Thichicasa." Garcilasso: *Comentarios*, I, fol. 80: "Ofrecian cada año mucho oro, y plata." Ramos: *Historia de Copacabana*, p. 11. The same author mentions that Huayna Capac, who died when the first Spaniards reached the coast of Ecuador, went to the island of Apingüila to make offerings to a new fetish called "Yatiri" (this is probably a misunderstanding, since "Yatiri" is the title of a class of shamans); he was dissuaded from it and went to the neighboring island of Pampiti: "Obstinado sin embargo, en su capricho creyó oir un oráculo de sus ídolos que le mandaban llevase a otra parte los sacrificios de oro y plata, llamas, cosas preciosas, y aun de niños; pero no allí sino en Paapiti, otra isla inmediata." It is rumored that figures like those dug up on Titicaca exist buried either on Apingüila or its smaller neighbor Pampiti, or Paapiti. The figures were not idols or fetishes, but substitutes for live beings, men or animals, that should have been sacrificed. Since the Indians continued to perform primitive ceremonials on the Islands for about a century after the conquest, it is not impossible that a part of these offerings are post-conquistorial, although after primitive models.

[57] *Historia de Copacabana*, p. 12: "En la barranca que está al frente del camino entre Julí y Pomata, estuvo la despensa del sol . . . llamada vulgarmente Chingana, que quiere dezir lugar donde se pierden." Cobo: *Historia*, etc., IV, p. 62: "Y cerca del templo se ven ruinas de la despensa del Sol, cuyos retretes imitan al laberinto de Creta."

[58] Ramos: *Historia*, etc., p. 6: "Lo que se tiene por cierto es, que él mismo hizo plantar unas estacas de molles y alisos." Tree-planting by the Indians in primitive times is very doubtful. As often as I have been shown such groves I found them to be of natural growth. The Spaniards, however, had trees (for shade and fruit) planted in Peru at an early date. Cutting down of indigenous fruit-trees was prohibited at Lima by ordinance of the first town-council, January 30, 1535, under heavy penalties; also February 6, 1535 (*Libro primero de cabildos de Lima*, Lima, 1888, pp. 18 and 19). On October 29th of the same year it was ordained that every resident of Lima who owned land should plant at once from fifty to three hundred trees on his property (*Idem*, p. 44); the penalty for not doing so was one mark in gold. Among the Ordinances of Toledo from 1574 there are two, in one of which it

is ordained that the alcaldes of Indian communities have trees planted: "ITEN, tendrán los Alcaldes cuydado de mandar, que en las partes, y lugares que huviere temple para ello en las quebradas, y rayces de las ezequias, ó Rios, se planten arboles alisos, y sauzes, ó frutales de castilla, pues es negocio de que se les sigue, y recrece tanto provecho á los naturales deste Reyno." And in the ordinance following, the cutting of trees at the foot is prohibited to the Indians (*Ordenanzas del Perú*, Lib. II, Titulo IX, fol. 146, Ord. XIV and XV). Also, for Cuzco: *TestimȲO de los Autos hechos Por el Juez de Nles sobre la Planta de las Arboledas en el Trno de la Parroquia de San SebastN por comision del Ysigne Cauildo de la Dhā Ciudad*, 1590, MSS. in possession of Don Carlos A. Romero at Lima, fol. 34.

[59] *Historia*, etc., IV, p. 62.

[60] It might be (this is merely a suggestion of mine) that Chucaripu-pata was a burial site for those who died in attendance of worship on the Island. This might explain the absence of vestiges of buildings. Something like it is insinuated by Ramos *Historia*, etc., p. 11: "Vense aún las catas ó rastros de excavaciones que se an hecho para buscar los tesoros que en sus sepulcros enterraban los antiguos." Calancha: *Corónica*, II, fol. 4: "Vense las catas que se an dado por buscar los tesoros, que en sus sepulcros enterravan los Yndios."

[61] Cobo: *Historia*, etc., IV, p. 58. Ramos: *Copacabana*, p. 6.

[62] Apingüila is to-day sometimes called the "island of the devil." From Titicaca it is plainly visible, as a low truncated cone surmounted by a column or pillar. Pampiti (or Paapiti) is close to it on the south, and is low and flat. As far as I know, the episode of the voyage of Huayna Capac to Apingüila is only mentioned by three authors, all Augustines: Ramos: Cap. XXIII; Calancha: *Corónica*, II, Cap. III, and Fray S. Nicolas: *Imágen*, Cap. IV, fol. 27. While the latter has been guided, in writing his book, by Ramos and Calancha, he has enhanced on both in the following passage relative to Apingüila: "Multiplicó Guaina Capac otro Templo en Apinguela, Isla no menos bien cercana á la dicha Titicaca, y dedicole al Idolo Iatiri, quitando en impuros sacrificios tantas vidas á los suyos, que perdiendo por esso el primer nombre, se halló con aquel de Vilacota, que significa Lago, ó mar de sangre, en la lengua natural de aquella tierra." "Uilacota" means "lake of blood," or bloody lake, in Aymará. Neither Ramos nor Calancha mention the erection of a "temple" on Apingüila, and the latter only applies the name "Vilacota" to portions of the Lake around the two islands. The whole story appears to me suspicious.

[63] The voyage, although long and tedious, could be performed in balsas. The Indians sometimes make longer ones, though involuntarily, when easterly or northerly storms prevail on the Lake.

[64] *Peru*, p. 336: "At almost the very northern end of the Island, at its most repulsive and unpromising part, where there is neither inhabitant nor trace of culture, where the soil is rocky and bare, and the cliffs ragged and broken . . . is the spot most celebrated and most sacred in Peru."

[65] The only bird we saw, during the time of our investigations about the Sacred Rock was the alkamari (called in Peru "chinalinda"), a handsome buzzard, always stalking and flying about in pairs.

[66] *Relatione per Sva Maesta*, fol. 413: "& piu di mille donne, che fanno Chicca per gettarla sopra quella pietra Thichĩcasa." The number is, of course, either exaggerated, or it may be that the Spaniards were followed to the Island by a large con-

course from the mainland, which was often the case, elsewhere, when white men appeared for the first time and in small numbers.

[67] The title of "virgins of the sun," frequently given to these cloistered, or rather *recluse*, females is not appropriate, and it may not be amiss to enter here into a preliminary discussion of the nature of the custom. When, in 1532, the Spaniards moved upon Cajamarca, they met the first one of the houses occupied by women in the Sierra at Caxas. The anonymous folio printed at Sevilla in 1534, and entitled, *La Conquista del Peru llamada la Nueua Castilla*, has the following: "Llegaron al pueblo q̄ era grāde: y en unas casas muy altas hallarō mucho mayz: y calçado, otras estauā llenas de lana y mas de quinientas mugeres q̄ no haziā otra cosa sino ropas y vino de mayz para la gente de guerra: en aquellas casas hauia mucho de aquel vino." Francisco Xerez (*Verdadera Relacion de la Conquista del Perv*, pp. 52 *et seq.*) is more detailed: "y que se halló en aquel pueblo de Caxas una casa grande, fuerte y cercada de tapias, con sus puertas, en la cual estaban muchas mujeres hilando y tejiendo ropas para la hueste de Atabalipa, sin tener varones, más de los porteros que las guardaban, y que á la entrada del pueblo habia ciertos indios ahorcados de los piés; y supo deste principal que Atabalipa los mandó matar porque uno dellos entró en la casa de las mujeres á dormir con una; al cual, y á todos los porteros que consintieron, ahorcó." Of Cajamarca, the *Conquista* (fol. 2) says: "En el pueblo auia muy poca gēte/ q̄ seriā quatrocētos o quiniētos indios, q̄ guardauan las puertas de las casas del cacique Atabalipa/q̄ estauā llenas de mugeres q̄ hazian chicha para el real de Atabalipa." Xerez: *Verdadera Relacion*, p. 79: "Entre la sierra y esta plaza grande está otra plaza más pequeña; cercada toda de aposentos; y en ellos habia muchas mujeres para el servicio de aqueste Atabalipa." In his report on the journey to Pachacamac, written November, 1533, Hernando Pizarro speaks as follows of the recluse women (*Carta á la Audiencia de Santo Domingo, Biblioteca de Autores españoles*, Vol. XIX, *Obras de Quintana*, p. 497): "En todos estos pueblos hay casas de mujeres encerradas, tienen guardas á las puertas, guardan castidad; si algun indio tiene parte en alguna de ellas, muere por ello; estas casas son unas para el sacrificio del sol, otras del Cuzco viejo, padre de Atabaliva: el sacrificio que hacen es de ovejas, é hacen chicha para verter por el suelo: hay otras casas de mujeres en cada pueblo de estos principales, asimismo guardadas, que están recogidas de los caciques comarcanos, para cuando pasa el señor de la tierra sacan de allí las mejores para presentárselas, é sacadas aquellas, meten otras tantas: tambien tienen cargo de hacer chicha para cuando pasa la gente de guerra: de estas casas sacaban indias que nos presentaban." Of the coast Pizarro states (p. 497): "Asimismo tienen casas de mujeres." Miguel de Estete (*La Relacion del Viaje que hizo el Señor Capitan Hernando Pizarro*, etc., in Xerez, pp. 121–149) makes no mention of the women, but Oviedo (*Historia general*, IV, p. 213) records a criticism on the statements of Pizarro by Diego de Molina, who came to Santo Domingo in 1533, having been a participant in the conquest. Molina told him: "Decia que aquellas mugeres castas que dice la carta es burla, que no son castas; pero ques verdad que las guardan hombres castrados." To these statements from the earliest days of the conquest, that of Pedro Pizarro must be added. He also was one of the first conquerors, although he wrote in 1571. He states (*Relacion*, p. 266): "En este buhío donde digo estaba el

Sol, dormían cotidiano mas de docientas mugeres hijas de indios principales: dormian en el suelo, y al bulto del Sol tenian puesto un escaño alto muy rico de mucha plumería de tornasol, y fingian ellas dormir allí y que el Sol se ayuntaba con ellas.''

''Trataré ahora de lo que son estas mamaconas, y este nombre que tienen de mamaconas era costumbre entre este linage destos orejones que eran mucha gente y tenidos entre ellos por caballeros, en especial los que andaban trasquilados, porque otros habia que traian el cabello largo corriente sin cortarlo jamás, aunque decian que eran parientes los unos de los otros, siendo. el principio de ellos dos hermanos y que el uno habia tomado traje de andar trasquilado y el otro con el cabello largo: de la generacion de los que se trasquilaban eran los señores de este reino y en mas tenidos los hijos é hijas de estos.—Tenían libertad desque eran de edad, de escoger á quien era su voluntad á llegarse para lo servir y nombrarse á su apellido, y dende chicos sus padres los señalaban y dedicaban ó para el Sol ó al Señor que á la sazon reinaba, ó para alguno de los muertos que tengo dicho, señalabanlos á su servicio; y los que eran para el Sol, estaban en sus casas, que eran muy grandes y muy cercadas, ocupándose las mugeres en hacer chicha, que era una manera de brebaje que hacian del maiz que bebian como nosotros el vino, y en guisar de comer ansí para el Sol como para los que le servian: habian de estar recogidas de noche todas sin salir fuera destos cercados y casas, que tenian muchos porteros que las guardaban y una sola puerta que en estas casas y cercado ví yo: no habia de dormir ni quedar de noche ningun varon so pena de la vida porque si se supiera (ví la órden que era como tengo dicho) el que todo lo dispensaba y mandaba en sus ritos los hiciera matar, porque á este obedescian y temian en sus ceremonias y ritos. De dia podian salir estas mugeres, y estas se llamaban mamaconas: las que eran para el servicio estaban ansí como tengo dicho, en otros lugares muy cercados teniendo puertas y porteros que las guardaban: ocupábanse ansimesmo en lo mesmo que tengo dicho hacian las del Sol, y en servir á las hermanas de los Ingas. Las que estaban con los muertos tenian mas libertad, porque aunque estaban encerradas en sus casas no estaban tan opremidas como las demas ya dichas. En todo este reino del Pirú habia esta órden de mamaconas en provincias, juntándose en la mayor provincia y cabeza que ellos tenian señalada, trayendo allí todas las hijas de los indios principales; y en sus mismos pueblos, aunque fuesen pequeños tenian casas de recogimiento para recoger las hijas que nacian de todos los indios: en siendo de edad de diez años estas se ocupaban en ayudar á hacer las sementeras del Sol y del Inga y en hacer ropa delgada para los señores, digo en hilar lana porque el tejella varones no querian. Asi mismo estas se ocupaban en hacer chicha para los indios que cultivaban las tierras del Sol y del Inga, y para si pasaban guarniciones de gente de guerra por su tierra dalles de comer y desta chicha. La órden que tenian para dar mugeres á los indios y renovar estas mamaconas, era que de año á año el gobernador que gobernaba las provincias que el Inga tenia puestos, que eran orejones . . . este cada año juntaba todas estas mamaconas en la plaza y las que eran ya mayores para casar les decia escogiesen los maridos que querian de su pueblo, y llamados á los indios les preguntaban que con qué indias se querian casar de aquellas, y por esta órden cada año iba casando, sacando las mayores y metiendo otras de edad de diez años como tengo dicho. Si acaso habia alguna india destas que fuese muy hermosa, la enviaban al Señor. Estas se llamaban mama-

conas: esto era muy comun en todo este reino del Pirú.''

Thus far statements of parties who saw Indian society in Peru while in its primitive condition. It shows that the mamaconas (literally, mothers, from ''mama''—mother—and the plural ''cuna'') were in fact *a tribute in women exacted by the Cuzco tribe,* and, secondly, that chastity on their part was only relative, not absolute. The buildings in which such women were kept under guard were neither more nor less than storehouses sheltering a tribute in women.

Juan de Betanzos *may* have come to Peru with Pizarro, but it is more prudent to suppose that he came to Peru at an early day, and certainly prior to 1542. In his *Suma y Narracion,* Cap. XIII, p. 85, he mentions that women and men of the settlements around Cuzco in the fifteenth century were required to manufacture clothing for the Cuzco tribe: ''Mandaron que luego en sus tierras fuesen juntas muchas mujeres, é puestas en casas y corrales les fuese repartida mucha lana fina é de diversos colores, y que ansimesmo fuesen puestos y armados muchos telares, é que ansí hombres como mujeres, con toda la más brevedad que fuese posible, hiciesen la ropa que les habia cabido . . . Y esta ropa ansí hecha é acabada, fué traida á la ciudad del Cuzco.'' While (p. 127) he uses the term ''mamaconas'' to designate women destined to attend certain idols or fetishes, he does not mention any forcible or voluntary reclusion on their part. But what we possess thus far of the work of Betanzos is unfortunately a fragment.

Cieza, who came to Peru at least eight years later than Betanzos, is perhaps the most uncritical panegyrist of so-called Inca ''civilization'' of the sixteenth century. In *Segunda Parte de la Crónica,* p. 106, he treats of the recluse women in the following manner: ''A las puertas destas casas estaban puestos porteros que tenian cargo de mirar por las vírgenes, que eran muchas hijas de señores principales, las más hermosas y apuestas que se podian hallar; y estaban en el templo hasta ser viejas; y si alguna tenia conocimiento con varon, la mataban ó la enterraban viva, y lo mismo hacian á él. Estas mujeres eran llamadas mamaconas; no entendian en mas de tejer y pintar ropa de lana para servicio del templo y en hacer chicha,'' etc. Previously (p. 68), among the tribute exacted by the Inca, he enumerates: ''y de mugeres y muchachos; los cuales se sacaban del pueblo sin ninguna pesadumbre, porque si un hombre tenia un solo hijo ó hija, este tal no le tomaban, pero si tenia tres ó cuatro, tomábales para pagar el servicio.'' Still previous (p. 33) we find the following statement: ''No habia ninguno dellos que no tuviese más de setecientas mugeres para servicio de su casa y para su pasatiempo; y así, todos ellos tuvieron muchos hijos que habian en éstas que tenian por mugeres ó mancebas, y eran bien tratadas por él y estimadas de los indios naturales; y aposentado el rey en su palacio, ó por donde quier que iba, eran miradas y guardadas todas por los porteros y camayos, ques nombre de guardianes; y si alguna usaba con varon, era castigada con pena de muerte, dándole á él la misma pena.'' It should not be overlooked that Cieza, out of ignorance of the rules of Indian relationship in Peru, also asserts that the chiefs invariably married their sisters; also that in one of the foregoing paragraphs he uses the term ''virgins'' quite *a priori.* Garcilasso de la Vega (*Comentarios,* I, fol. 78) denies there were any women inside of the houses of worship at Cuzco, thus contradicting Cieza. While his work is much posterior to that of Cieza, he was at Cuzco when the latter made a comparatively short visit to that (then already Spanish) town. He asserts

(*Comentarios,* I, fol. 78): "Tampoco entrauã mugeres en ella, aunq̃ fuessen las hijas y mugeres del mismo Rey." Further on: "saluo q̃ en la casa del Sol no auia seruicio de mugeres." In Book IV, Cap. I and II, fol. 81 and 82, he treats at length of the "virgins," making the significant remark: "Porque auiendo de tener hijos el Sol como ellos imaginauan, no era razõ q̃ fueran bastardos, mezclados de sãgre diuina y humana. Por tãto auian de ser legitimas de la sangre Real q̃ era la misma del Sol." When Garcilasso states the "virgins" *had to have children,* it is not meant figuratively. Pedro Pizarro, while stating: "Eneste buhío donde digo estaba el Sol, dormian cotidiano mas de docientas mugeres hijas de indios principales," adds: "y fingian ellas dormir allí y que el Sol se ayuntaba con ellas." For the present I limit myself to these indications gathered from earliest sources. They seem to establish, as already observed, that the mamaconas, including those on Titicaca Island, were not vestals, and that the institution was a part of the Inca system of tribute. It may be that, as some of the recluse women were occasionally sacrificed, they were kept virgins for that purpose, as is indicated by Ramos: *Historia,* etc., p. 12 *et seq.:* "Sabido es que á semejanza de las Vestales de Roma, tuvo el Perú virjenes dedicadas al sol, habiendo muchas casas de ellas en el imperio, y por lo menos una en cada provincia; en que habia dos clases de doncellas, unas llamadas así, y otros Mamaconas, que eran las maestras de novicias: estas eran admitidas a los ocho años y se criaban en recojimiento hasta los quince o diez y seis. En esa edad las sacaban para desposarlas con el Inca o con sus capitanes favoritos, aunque esto se hacia rara vez en las fiestas mui principales y con órden espreso del soberano. Cuando despues se ensangrentó el culto, algunas tambien las sacrificaban al sol."—"Cuando despues en las fiestas principales sacaban algunas para ofrecerlas en sacrificio al sol, esas mas infelíces Ifijenias eran degolladas." (P. 15.) "Cuando estas niñas dedicadas al sol llegaban a edad florida deblan guardar perpetua virjinidad, *mientras el Inca no las escojese, pues era el intérprete soberano y el representante vivo del sol."* (Italics mine.)

[68] In addition to the testimony presented, I refer to Ramos, p. 13.

[69] The Chincana is the only building, of Inca origin, on the Island capable of accommodating a larger number of people; the ruin at Kasapata excepted, which, as shown, was a "tambo." The house of the women had to be close to the places of worship or shrines, and there is no vestige of any edifice in that vicinity that could have been suitable for the purpose.

[70] *Relatione per Sva Maesta,* fol. 413.

[71] See foregoing notes.

[72] I believe to have shown that the first occupation of the Island by Incas occurred between 1450 and 1500, hence the constructions date from that period, if it is true they were made during the term of office of Tupac Yupanqui.

[73] See annexed photograph.

[74] Cobo: *Historia,* etc., IV, p. 202: "La tinta dan á la lana y algodon en pelo, antes de hilarlo, y despues de sacada del Telar la pieza no usan darle ninguna."

[75] *Historia,* etc., IV, pp. 57 and 62. Ramos, p. 10.

[76] Cobo: *Historia,* etc., IV, p. 169.

[77] Pedro Pizarro: *Relacion del Descubrimiento,* p. 266; Garcilasso: *Comentarios,* I, fol. 76; and others.

[78] Arriaga: *Extirpacion,* Cap. II.

[79] *Primera Parte de la Crónica del Perú,* Cap. CIII, p. 443.

[80] *Historia general,* IV, p. 261.

[81] The *Relatione,* etc., of 1534, fol. 413, already states the sacrifices

were made "in vna gran pietra." Cieza: *Primera Parte,* p. 445; Garcilasso: *Comentarios,* I, fol. 80; Ramos: *Historia,* p. 4 *et seq.;* Cobo: *Historia,* IV, p. 56. The latter states: "Como quiera que haya sido el Principio y origen deste santuario, él tenia muy grande antigüedad y siempre fué muy venerado de las gentes del COLLAO, antes que fueran sujetados por los Reyes Incas." Also, p. 57.

[82] Aside from the descriptions of the ceremonials by authors who saw them after the conquest, like Cieza (*Segunda Parte,* Cap. XXIX and XXX), eye-witnesses like Pedro Pizarro (*Relacion,* p. 276) give a fair picture of the impressions made upon them by the ceremonials when seen for the first time.

[83] *Historia,* p. 63. This statement should be taken with reserve.

[84] *Ibidem,* p. 59.

[85] *Relatione per Sva Maesta,* fol. 413; Pedro Pizarro: *Relacion,* p. 260. Later authorities concur. Already Cieza mentions a number of places where oracles were expected and believed in, by the Indians—*Primera Parte,* p. 421, Pachacamac; p. 426, Cajamarca; p. 432, Jauja, and others; *Segunda Parte,* p. 109, near Cuzco; p. 110, Vilcanota; p. 111, Ancocagua; p. 112, Koropuna. *Relacion y declaracion del modo que este valle de Chincha y sus comarcanos se gobernaban,* etc., *Doc. de España,* Vol. L, p. 221: "Los Yungas no adoraban al Sol sino á Guacas, y no á todas sino aquellas que daban respuesta, y no siempre, sino cuando las habian menester." This report, which bears date February 22, 1558, is by the Dominican Fray Cristóbal de Castro; the *Relacion de la Religion y Ritos del Peru,* about 1560, by Augustine monks: (*Doc. de Indias,* III, pp. 16, 18, 19, 21, 25, 27, 28, *et seq.* This document treats, as already stated, of Huamachuco; also, about Pachacamac, Xerez: *Verdadera Relacion,* and Hernando Pizarro: *Carta.* It is not necessary to quote authors of a later date.

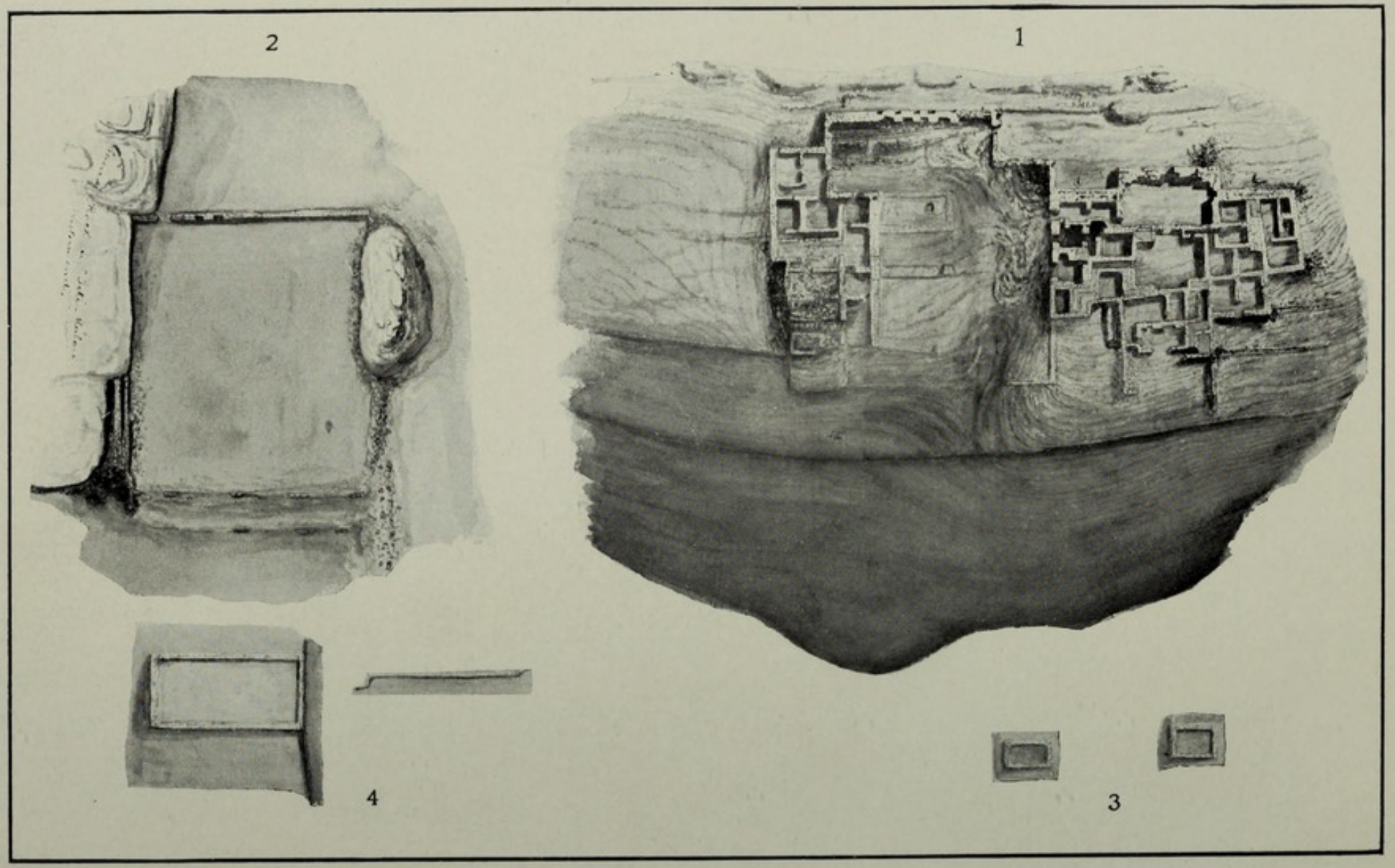

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Plate LX

1. Ground-plan of the Chincana. 2. Plat of the Sacred Rock with level in front and surrounding vestiges. 3, 4. Small houses at Mama-Ojlia (see text)

PLATE LX

1. Ground-plan of the Chincoan. 2. Flat of the Sacred Rock with level in front and surrounding vestiges. 3, 4. Small houses at Mama-Ollie (see text)

THE RUINS ON THE ISLAND OF KOATI

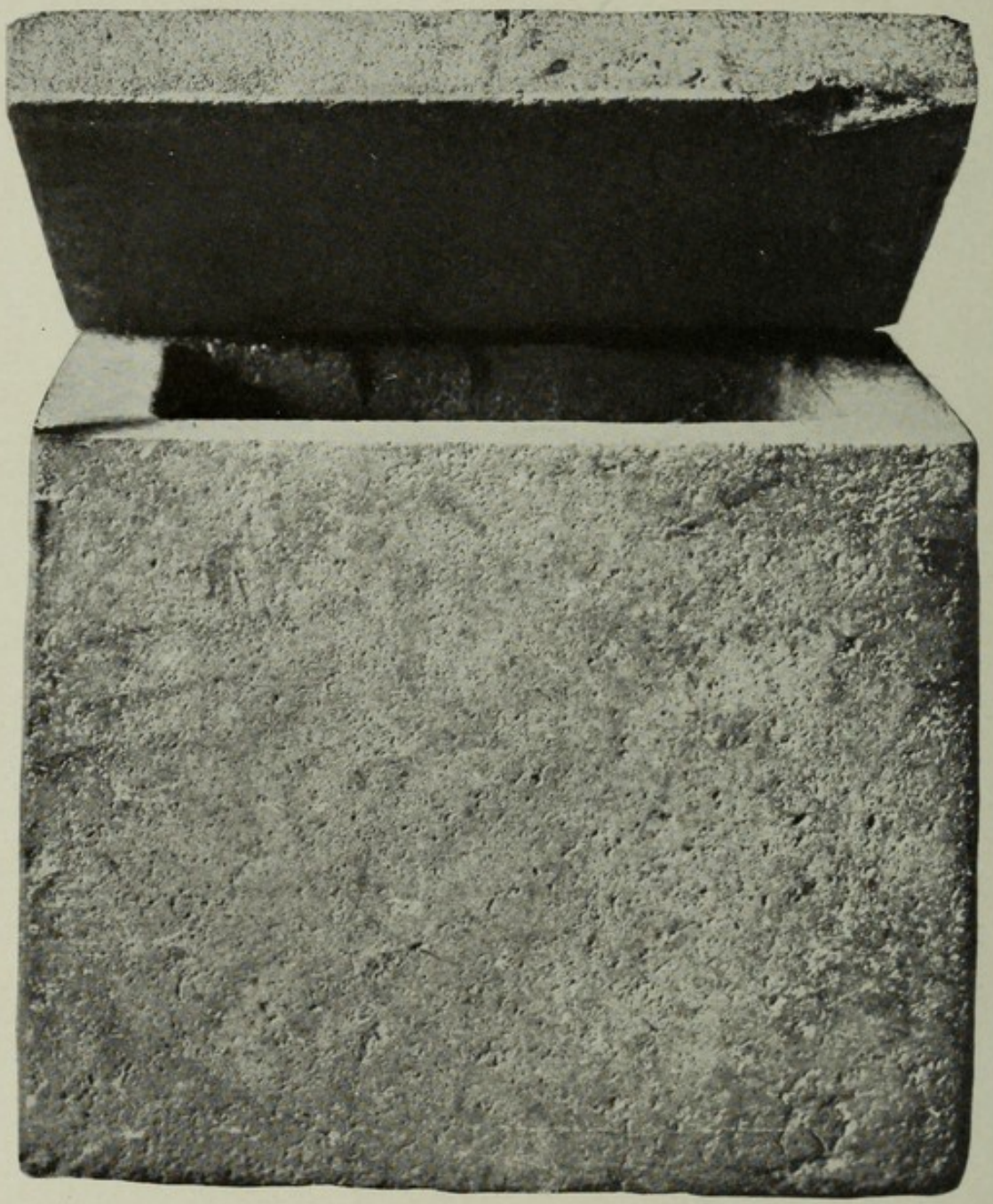


PLATE LXI

Casket of andesite with cover which contained ancient poncho (see text)
from the vicinity of Muro-Kato

PLATE LXI

Casket of andesite with cover which contained ancient poncho (see text)
from the vicinity of Muro-Kato

Part V

THE RUINS ON THE ISLAND OF KOATI

AND A GLANCE AT ANTIQUITIES OF COPACAVANA

THE longitudinal axes of Titicaca and Koati are approximately parallel, and there are analogies between the two Islands that bear upon the distribution of aboriginal establishments on their surface. The northwestern extremity of each Island is narrow and rocky, especially that of Koati. Uila-Peki, the "Red Head" of Koati (see map of the Island, *f*), is a sheer cliff of red sandstone, and, seen from the Lake, it is very conspicuous.[1] On the southeastern end of Koati there are cliffs also but they are not as striking as the bold promontory in the northwest. The two main groups of Inca ruins, still extant on Koati, are found at Iñak-Uyu (house of women) on the northern slope, and on the crest called "Red Head." The former ruin (a) recalls, in situation, the Pilco-Kayma on Titicaca; the other (b) Kasapata.

So-called Chullpa remains are few on Koati. What we were able to discover were burial cysts. A few of them differ from those on Titicaca in that they are double; that is, two graves superposed and separated by a cover consisting of at least two slabs. They are of a somewhat better make than those at Ciriapata and elsewhere. Most of them had been searched previously, so that the yield was poor, and the pottery as well as the few skulls secured were of Chullpa type. We found these graves on, or close to, the crest of the Island. This crest bears, along the whole line,

the vestiges of a wall of varying width, that seems to have been mostly constructed out of rocky debris that formerly covered the slopes. From this wall, others descend like ribs, chiefly on the east side. Andenes, ancient and modern, run along the flanks of Koati, but it is chiefly the northeastern slope, the one exposed to the sun, that bears marks of cultivation. The southwestern declivity is so much in the shade as to be notably colder than the other. Hence Inca structures lie, either on the crest, like those near Uila-Peki, or on the eastern slope, as Iñak-Uyu. Of Chullpa *buildings* we saw no traces.

In connection with the wall on the crest we noticed vestiges of a quadrangular building.[2] The foundations indicate a structure measuring thirty-six by thirty feet, and the only side wall still defined is about four feet thick. Another ruin stands at *c*. Three rooms, divided from each other by (now ruined) partitions two feet in thickness, occupy the southern end of a fairly made anden (c). Their aggregate length is fifty-eight feet, their width nineteen. We could not obtain any information concerning these structures; the Indians did not even have a name for the sites. All they said was, that they were *Inca*. Not a potsherd was found about them and excavations proved fruitless. Indians from the Island and from Sampaya had long ago rifled both localities, although they claimed to know nothing about them.

The ruin which has attracted the attention of visitors to Koati is the one called *Iñak-Uyu* (map, a). Squier calls it "Palace of the Virgins of the Sun,"[3] but believes that it was a "Temple of the Moon." Wiener does not seem to have visited the Island, else he could not have written: "The monuments of the Island of Koati are in a state of complete destruction."[4] Iñak-Uyu is, on the contrary, one of the best preserved ancient buildings on the two Islands. Certain portions are torn down, but the lines of walls can everywhere be traced, and the façades bear, in

PAGE LXII

Vacuum homogeneous, free from water vapour and odorous impurities

PLATE LXII

Ancient poncho, Inca make from vicinity of Sacred Rock





places, a thick coating of plaster, made of mud with ichhu-grass, that gave to the walls an appearance of neatness and finish which the rough stonework now exposed is lacking. Father Sans, following Ramos, calls Iñak-Uyu a "Temple of the Moon." Cobo, agreeing with Ramos and Calancha, states (speaking of the deeds of Tupac Yupanqui): "But, not satisfied with what had been done for the adornment and lustre of this sanctuary (Titicaca), thinking yet that he was not complying fully with his obligations and was not attending with sufficient care to the worship of the sun if he did not assign to it a woman, and even women, for its use and service, he determined upon doing it. While in this frame of mind he found a good opportunity which was the Island of Coata or Coyata, so called after Coya which is the same as queen, and he constructed on it a sumptuous temple, in which he placed the statue of a woman, from the belt upwards of gold, and from the belt down of silver, which was of the size of a woman and represented as being the image of the moon. So that besides the live women that on Titicaca were dedicated to the sun for its service, this idol was dedicated to it also under the name of its spouse, in representation of the moon, although others claim that this figure and statue was called Titicaca, and say that it represented the mother of the Incas. Be it one or the other, the statue was carried to the city of Cuzco by the Marquis D. Francisco Pizarro, who sent three Spaniards for it. In presence of this diversity of opinions it is difficult to arrive at any conclusion."[5]

The situation of Iñak-Uyu is very handsome. Standing on the slope of the Island, it gets the full benefit of whatever light and heat the sun affords in these altitudes. The view is not as extensive as from many points on Titicaca, but the peaks of Sorata are seen to much greater advantage. The building occupies part of the highest one of four terraces, carefully leveled, and these terraces descend towards the Lake in regular steps, each faced by a wall of very good

workmanship. The platforms are respectively from seven to nine feet in height and irregularly quadrangular, for as they take up the whole ravine they adapt themselves to its sinuosities. Their aggregate depth, from the southern wall of Iñak-Uyu to the northern margin of the fourth platform, is 340 feet, and the total elevation, thirty-four. From the base of the lowest platform to the Lake shore, the distance is about 100 feet more and the difference in level, sixty-three; so that the rear wall of the ruin stands ninety-seven feet above the lake and is horizontally 440 feet distant from it. On both sides of the ravine slopes are covered with ancient andenes, in the same manner as near Yumani and the Pilco-Kayma. The Indians call the first platform and the buildings on it Iñak-Uyu, the one next following Kalich-Pata. The wall of the latter is the best specimen of ancient masonry found either on Titicaca or on Koati, and many of its well cut blocks (which are fitted without any binding or mortar) are said to have been carried to *Juli* for the construction of one of its churches. At the foot of the same wall (which is provided, besides, with good steps leading up to the terrace) stand two buildings of smaller size, one in each corner, that recall the outhouses at the Pilco-Kayma. They are reduced to low walls, so that only size and outline can be ascertained. From the face of the fourth terrace, descent to the beach is by steps also, but the andenes are less regular, much narrower, and considerably higher.

The main edifice occupies the approximate north, south, and west sides of the uppermost platform. The western or central part has a front of 178 feet, and its width is twenty-four. It is divided into thirteen compartments, most of which would have to be freed from rubbish in order to discover details, a work of long time and considerable expense which it is hardly worth while to undertake. Among these thirteen subdivisions are a number of narrow ones similar to gangways, and one of these, at the southern end, is so

PLATE LXIII

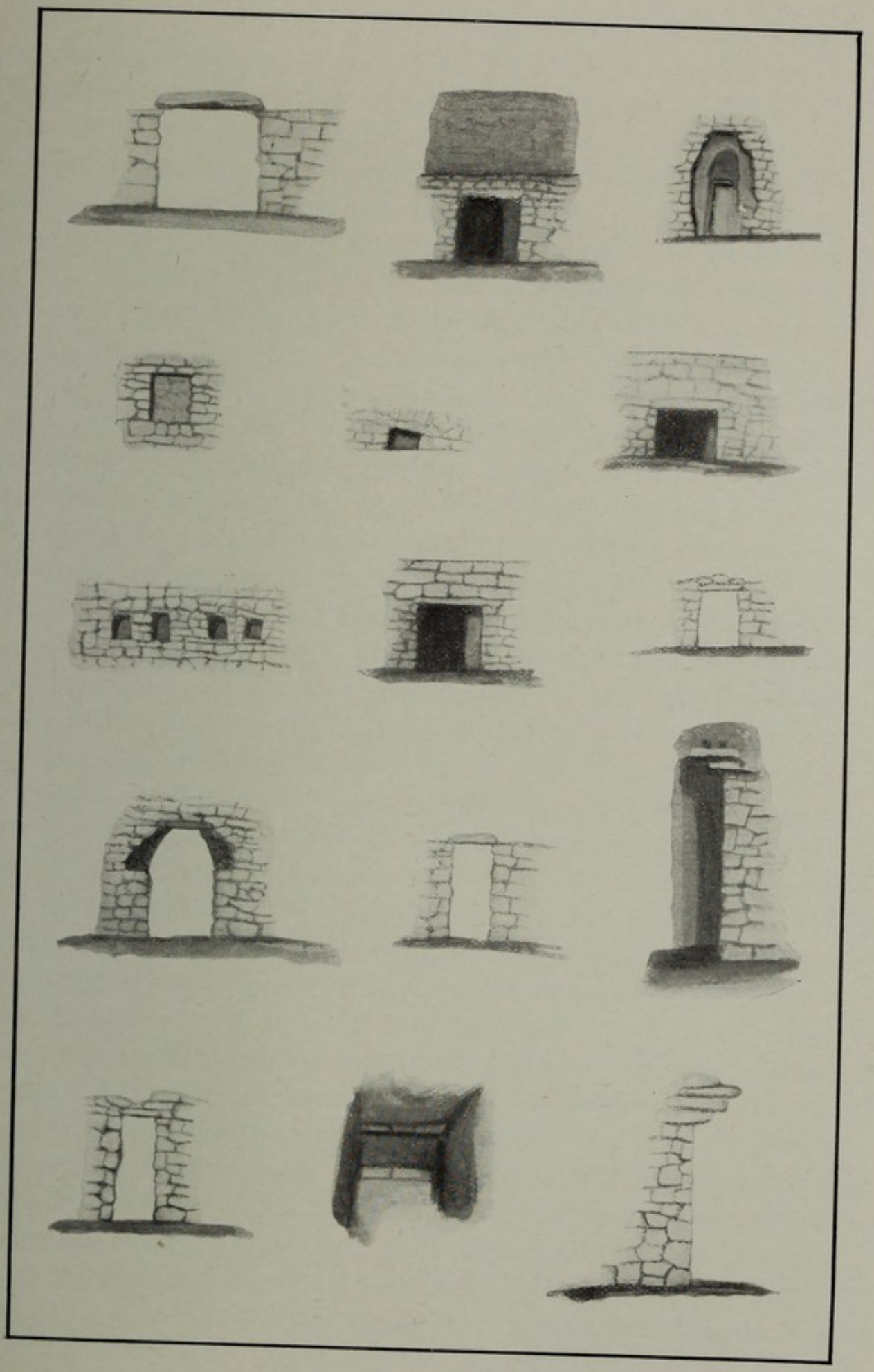
Architectural details from the Chinoana

Doorways and niches, etc. (see text)

PLATE LXIII

Architectural details from the Chincana

Doorways and niches, etc. (see text)



much lower than the roof of the room adjoining that it appears almost subterraneous. The two central rooms are best preserved. A hall or passage, to which we could find no entrance, separates them. These rooms are the most striking features of the edifice. The doorways by which they are entered are each thirteen feet and four inches wide, and in the rear wall are very elaborate niches, the finest on either island. They are still partly plastered, and their greatest widths are respectively twelve and a fourth and twelve and a half feet, their greatest height being fourteen. They are, therefore, exceptionally symmetrical, in general dimensions, whereas in detail they differ. Their depth is six feet in one and six feet three inches in the other. The innermost recesses are respectively three and a half and four feet deep. Besides these very prominent niches, each of the two rooms has four smaller ones, two on the south and two on the north side. The other compartments of this part of the building are in a state of dilapidation, although the walls stand to a considerable height. The roofs are gone, and while it seems as if the building had had two stories, it is impossible to determine their elevation. It appears to-day as if the two large doorways were the only entrances to this section from the front, but the plan given by Mr. Squier, and made when the structure was in a better state of preservation, shows entrances to each of the southern rooms and also communicating doors, of which, at present, nothing is seen. He also marks several flights of steps that are either destroyed or covered by rubbish. A comparison of his plan with ours is therefore indispensable, as well as with the plan given by Rivero and Tschudi. With the exception of discrepancies in dimensions (almost inevitable in measurements made by different parties) and the error, common to all older surveys, of assuming right angles, whereas Indian ruins are rarely rectangular, the three plans will be found to agree fairly well, and the two diagrams anterior to ours restore many details no longer found. The

same can be said about the two wings of the building. Our plan gives the same subdivisions, the same interior arrangement, as those of our predecessor, but we found them in a far more advanced stage of decay. Each of these wings has a niched doorway in the middle (about) of its front, flanked by two large niches, one on each side. The southern wing resembles the main body, inasmuch as it has a series of rooms; the northern is divided by a curiously irregular court, one wall of which forms almost a curve. That court occupies the corner of the terrace on the north. The south wing has an annex, part of which stands on the platform of Kalich-Pata, hence on a lower level. On our plan we have indicated thirty-nine compartments of every description, including rooms, halls, passages, and low gangways covered with roofs, besides the irregular court of which the people rightly say that it has "eleven corners."

The rooms are not large, the largest one measuring twenty-two by fourteen feet. Small niches are found everywhere, but only the two middle apartments of the central section have tall and ornate recesses. These two apartments must, therefore, have served for some special purpose. The walls are of very unequal thickness, varying between two and eight feet. Their height also is unequal *now,* owing to decay, still we found cornices at an elevation of thirteen feet. The cornice consists of three slabs successively overlapping or projecting, and together two and a half feet thick. In another place, a lower story, eleven and a half feet high, is crowned by a wall of six feet, making the total elevation seventeen and a half feet. It looks as if most, though probably not all, of the building had been two stories, thus making Iñak-Uyu the largest single building on either of the two Islands, as far as can be seen.

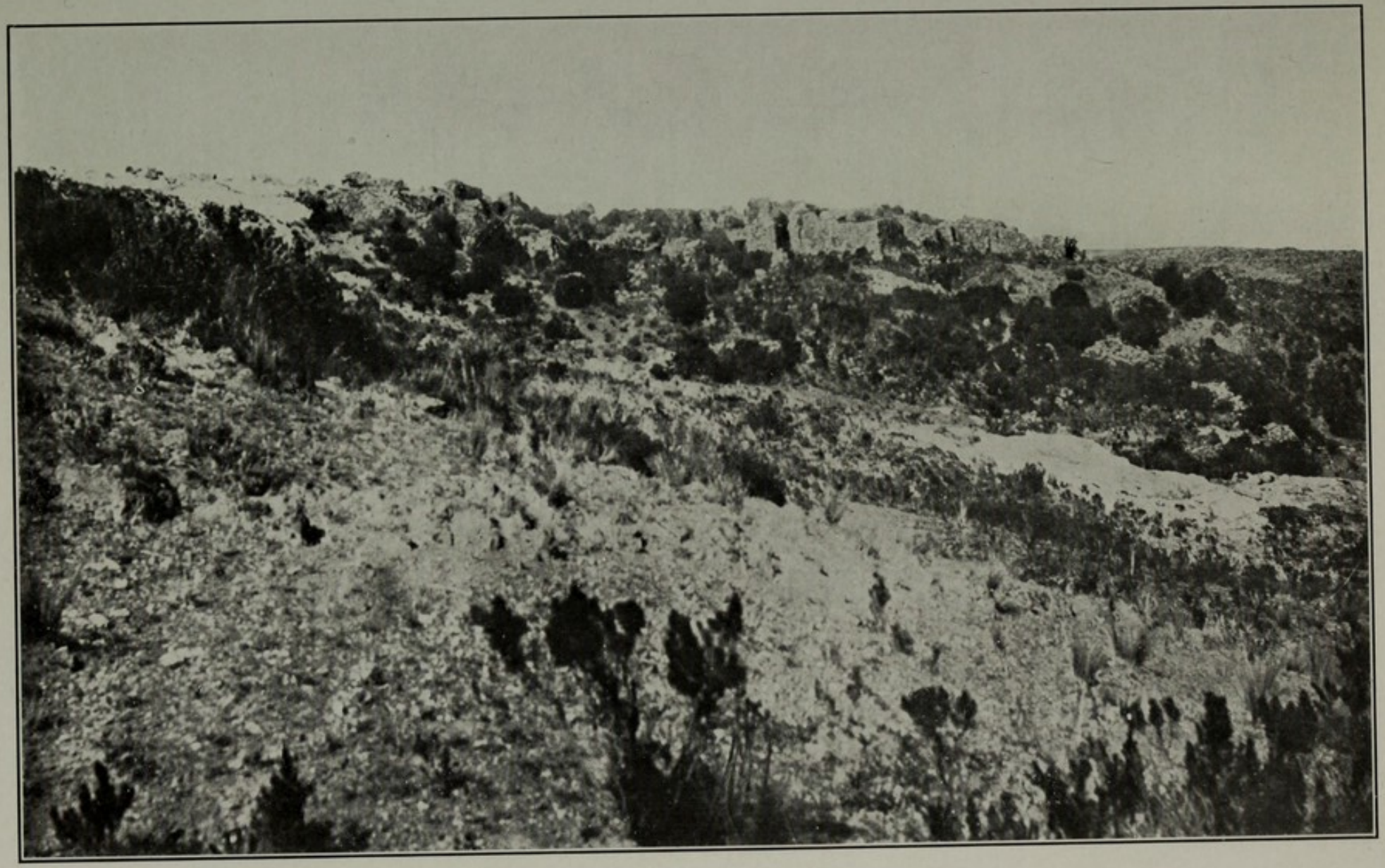
In the whole structure we noticed a single tiny airhole, and that was connected with a very elaborate niche in the shape of a lozenge, similar to the niches near the Pilco-

Дізнатися про Єдність

ЄДНІСТЬ ГУРТА

PLATE LXIV

View of the Chincana



Kayma. Lozenge-shaped recesses are in all three façades of Iñak-Uyu, and they increase the ornamental effect. Unless there were openings in the upper story, of which there is now no trace, the rooms of Iñak-Uyu (except the two front ones) must have been as dark as any on Titicaca. We found no communication of any kind from the lower story to the upper. Adjoining a corner of the central part, there is a small structure on a lower level, descent to which is by a flight of four steps three and a half feet deep. West of it are walls indicating either rooms or small enclosures. The former seems more probable, and it is also possible that a portion of the space between the rear wall and the anden was built over. At least we noticed a row of slabs set in the wall at five and one half feet above the ground, and at one end of them a beam protruded. The slabs project about six inches, and between every two of them is inserted a smaller stone or pebble. Whether this indicates a ceiling or some contrivance for ascent it is not possible to decide.

Only on the narrow and almost underground passages are roofs still extant. These consist of flat stones laid alongside of each other; as at the Kayma and at the Chincana. I would call special attention to the passage ways of Iñak-Uyu. They are lower than the floor of adjacent apartments and yet not really subterraneous. They are surprisingly narrow. One of them is only two feet wide, the others nowhere exceed four feet. They seem long recesses rather than corridors. There are at least four diagonally opposite each other.[6] I also call attention to a curious niche in one of the rooms, which has the form of a crescent-shaped ancient knife with a short handle. Of the W-shaped windows mentioned by Mr. Squier there is as little left as of pointed gables.[7] We cannot affirm, still less deny, their former existence.

Although the southeastern corner is considerably ruined, it is clear that the three wings of the edifice were connected.

The dimensions are, therefore, on the side towards the terrace: southern wing, seventy-seven feet, central part, 178 feet, northern wing, retreating part, fifty-six feet, to which succeeds a room advancing twenty feet to the east and with a façade twenty-two feet in width, so that the northern side of the structure is nearly symmetrical with the southern. The distance between the corners of outhouses along the edge of the platform is 134 feet. Adding to these twenty-two feet for the length of the northern, and twenty-eight for that of the southern projection, we find that the southern and northern wings are six feet wider apart on the eastern end of the terrace than on the western. Hence, while there is a certain symmetry, the building still shows the usual imperfections of "rule of thumb."

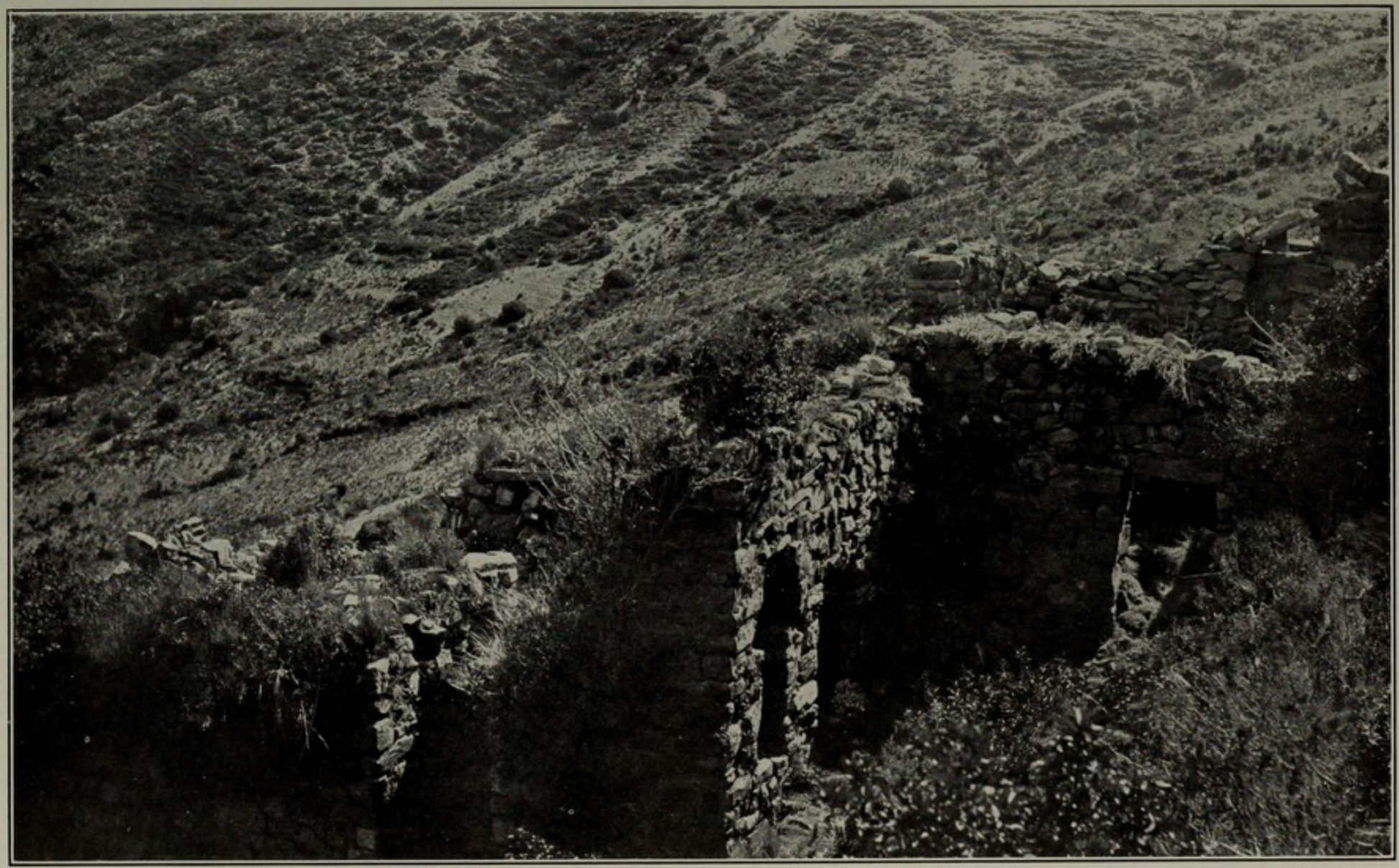
Koati has been, as well as Titicaca, the seat of desultory excavations. It does not appear that the Island was visited in 1533, although alluded to in the report of July, 1534.[8] Statements concerning a possible visit to Koati in 1538, by order of Francisco Pizarro, are vague and contradicted by documents that purport to be from the time, Father Cobo states. He says: "He [the Inca chieftain Tupac Yupanqui] found a good occasion [place] to carry out his intention, which was the Island of Coati or Coyatá, thus called from Coya which is the same as queen. And he erected (worked) in it a sumptuous temple where he placed the statue of a woman, of gold from the waist up and from the waist down of silver, which (statue) was of the size of a woman and represented the image of the moon. . . . Some say that this figure and statue was called Titicaca, and also that it represented the mother of the Incas. Whichever may be, the statue was carried to the city of Cuzco by the Marquis D. Francisco Pizarro, who sent three Spaniards for it."[9] Ramos says the idol at Koati was "after the shape of a Coya" and of gold, but he makes no mention of its translation to Cuzco by the conquerors. In the voluminous set of documents embodying the accusation of Almagro

PLATE LXV

Part of the ruins of the Chinese

PLATE LXV

Part of the ruins of the Chincana



the younger against Pizarro, Hernando Pizarro is accused of attempting to "rob the gold and silver that was in the lagune of Titaca [Titicaca]," and that in consequence of it ten Spaniards were drowned. No mention is made of the metallic treasure being *on an island.*[10] That an attempt of some sort was made, is as good as proven by other sources from the time, also that it occurred in 1539.[11]

If the documents collected and published in abstracts by J. M. Vizcarra in 1900 are not spurious, we may conclude that no attempt was made by the Spaniards to reach Koati in the year 1539 even. The reason why is given as follows: "And when there came to the peninsula the captains Alzures and the Illescas with the Franciscan Fathers, although they intended it in 1536, they could not get to it by reason of lack of time and because they thought it was, like that of the sun, deserted and abandoned."[12] The date of 1536 is, as I have already shown, doubtful, to say the least. I hold (until otherwise informed) the year to be 1539.[13]

As far as the sources at my command go,[14] an official search of the Island, or rather of the Peninsula of Copacavana and insular dependencies, took place in 1617. The object seems to have been the gathering of buried metallic wealth, to be employed in the construction of a basilica at the sanctuary of Our Lady of Copacavana. It is not devoid of interest to note the results of this search. According to inventory, Titicaca Island yielded thirty-three "plates" in gold weighing nine pounds and ten ounces, Koati 180 objects representing a total weight of eleven pounds fifteen ounces three grains, and the Peninsula of Copacavana eighty-four objects weighing eleven pounds fifteen ounces. To these were added 367 in silver, weighing 419 marks and seven ounces. The silver was, in part, obtained from other islands also. The total value of these objects in gold and silver did not exceed 12,000 pesos and 70 maravedis.[15]

The report on the visit to Koati is stated as bearing the date of June 3, 1618, and having been executed and signed

on the Island.[16] It is certified to by Fray Baltasar de Salas, author of the strange chronicle of Copacavana mentioned in the third part of this monograph. It contains a fanciful description of the main ruins on Koati (rendered worse by changes and additions from the pen of Vizcarra) and the report on some few diggings made by direction of the ecclesiastic visitors.

The first indication of some value which we meet is that in 1610 Koati was inhabited by "three or four families of from ten to twelve younger souls." Hence the Island was occupied in the first decade of the seventeenth century. The dwellings of these Indians stood on one of the terraces below Iñak-Uyu. The description of the ruins alludes to three doorways "antemural of the temple," and says that the "castle of the virgins" was to accommodate "two hundred souls consecrated to the sun; (and had) fourteen compartments of lower and upper stories, with as many turrets of house idols, on a platform 300 ells long by 200 in width." A temple of "the moon" is also mentioned. There are a few vague indications of features visible at the present day.[17]

The diggings brought to light a stone chest apparently similar to the chests found on Titicaca and which contained human remains supposed to be those of a female. It was accompanied by "various amulets, kippos and coins of gold and silver." The latter were manifestly bangles.[18]

There is no doubt that the official investigation of 1618 really occurred, but statements about details are so involved in fanciful rhetoric and modern addition and interpretation that little more than the fact of the visit can be relied upon. It should not be overlooked, that Father Cobo was at and near Copacavana in 1617, but makes no allusion to the pretended visit of 1618, although it was already being organized. Also that neither Ramos nor Calancha nor S. Nicolas have a word to say concerning Fray Baltasar de Salas.[19] This does not, however, justify denial of the visit.[20]

PLATE LXVI

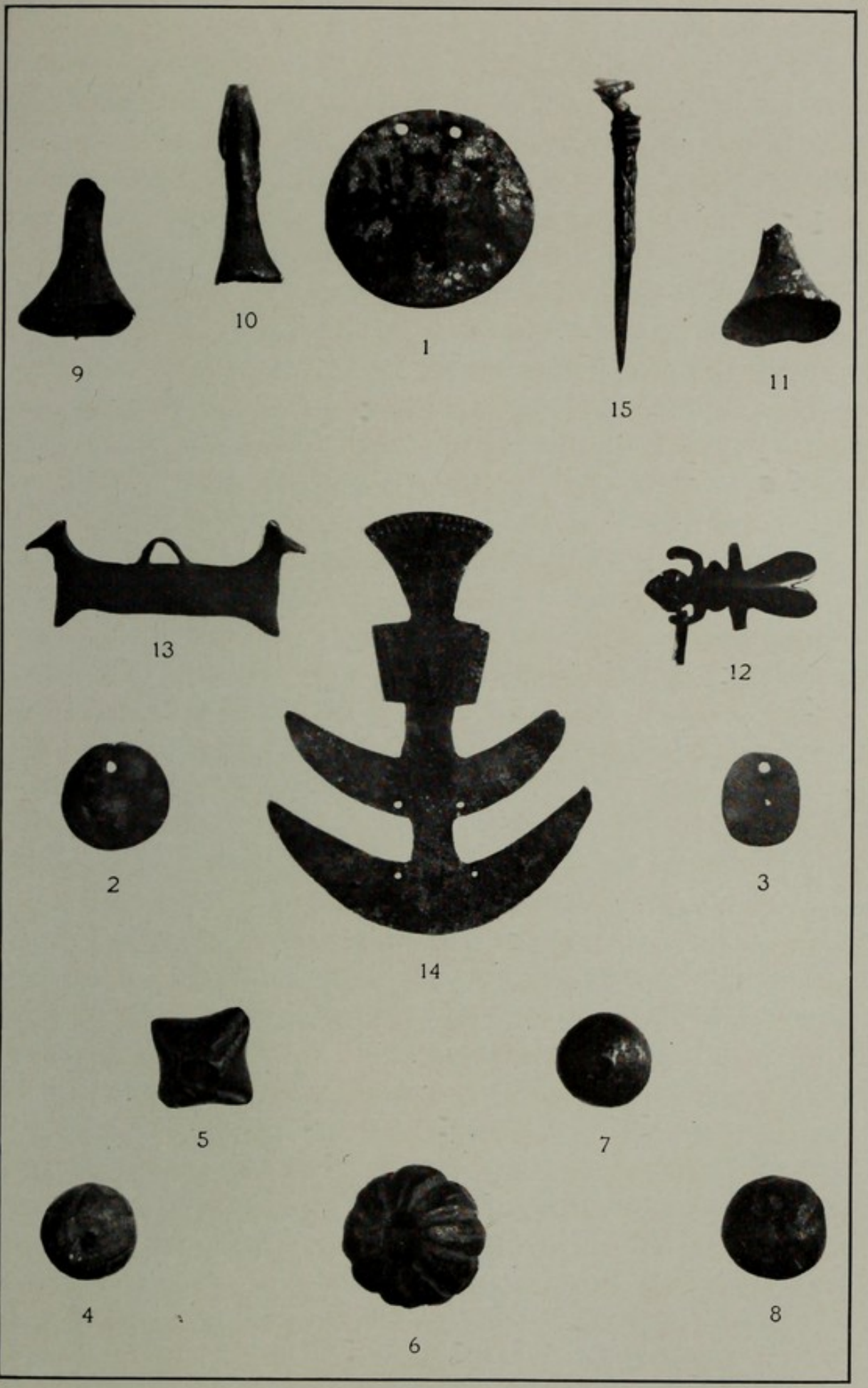
Objects in copper or bronze from Titicaca Island

1, 2, 3. Copper bangles. 4, 5, 6, 7, 8. Beads. 9, 10, 11. Rattles.
12. Finger-ring of bronze. 13, 14. Pendants.
15. Bronze implement, possibly awl

PLATE LXVI

Objects in copper or bronze from Titicaca Island

1, 2 ,3. Copper bangles. 4, 5, 6, 7, 8. Beads. 9, 10, 11. Rattles.
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15. Bronze implement, possibly awl


9
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Yet, Cobo alludes to an attempt to search Koati for treasure made in 1617: "The report I heard while being in this province in the year one thousand and six hundred and seventeen is, that there are great riches (wealth) on the island of *Coatá,* whither at the time certain Spaniards went in a bark (boat) and could not find anything."[21]

In modern times, Koati and its ruins have been and are overturned and ravaged at intervals. The Indians from the village of Sampaya on the mainland and two former occupants of the isle,[22] have done much damage to the ruins and we were advised not to excavate the interior of Iñak-Uyu, or of any other building in general, since they were completely ransacked, a statement supported by appearances. The terraces in front of the buildings were said to have suffered less, but of these platforms only one was available—Kalich-pata. The others were covered with ripening maize and could not be disturbed. After probing the soil on the flanks of the ravine at various places we moved on to that terrace.

The first diggings disclosed two stone cysts both of which were very well made. Only one of them contained something, the other was empty. The first was rectangular, measuring thirty-six inches by twenty-one, inside. It had no cover and was found forty inches below the surface. Its depth being twenty-seven inches, the bottom lay more than five and a half feet beneath the surface. The sides consisted each of five regularly laid courses of prismatic stones, breaking joints, and the best work we have seen in any cyst with the exception of the grave Ciriapata, on Titicaca, conspicuous for its rectangular shape. From the cyst on Koati five clay vessels of Chullpa type were obtained. The other was forty-two inches below the ground and thirty-two inches deep, polygonal, and measured thirty-three and thirty inches across. The Indians declare that these cysts are Chullpa; and their great depth beneath the sod indicates that they were made at an earlier date than the platforms.

These were the only burials on Kalich-Pata. Excavations were then continued on the uppermost terrace. The ground was opened to a depth of two feet, on an area of about 200 square feet. Lower down nothing was found. But in that space of 200 feet square a surprising number of objects were brought to light. They had been thrown together without order, as at Kea-Kollu-Chico on Titicaca, but there were no human remains among them, and the objects were all declared by the Indians to be Inca. Prominent among them were two bowls, most beautifully decorated in paint, and with handles representing each a puma with open mouth and the body of a snake. The heads of the animals with teeth, tongue, and palate, are very well executed. These bowls are the handsomest specimens of Inca ceramics which we have seen so far, and they are alike in size and decoration. Several other fine specimens of pottery were exhumed, together with six hollow silver figurines, representing women, which the Indians call "Collque-Huarmi," or silver women; and three figures of a non-descript animal, of thick beaten gold (not gold-leaf) with finely executed incisions bearing a remote resemblance to some of the carvings on the great gateway of Tiahuanaco.[23] A large number of stones and stone implements, fetishes, etc., of all shapes and sizes, were taken out, among which the following deserve particular mention:

A human head of andesite, which rock is found only on the Peninsula, and not on the Islands; this head appears to have been without body.[24]

Several *toads* of stone. Of such toads Ramos states: "Also they placed on the rocks some small idols of toads and other filthy animals, believing that by this they would obtain water."[25] The quotation shows that they were "intercessors for rain," like similar figures used for that purpose by the pueblo Indians of New Mexico.[26]

Two objects that appear at first sight to be smoking-pipes. What these pipe-like articles were used for, except

PLATE LXVII

Image area from Chromatin-Plate

PLATE LXVII

Inca vase from Chucaripu-Pata



for smoking, I am unable to surmise. In regard to smoking among the aborigines before the conquest, I find the following in the edition of the work of Ramos arranged by Father Sans: "It is true that the Incas were very fond of agriculture, and at Airaguanca, a village of Omasuyos, an old Indian showed me a plant called Topasaire, the leaves of which the Indians use like tobacco, assuring me that the Incas had caused it to be brought from a great distance." This passage, however, may be from the pen of the editor, hence modern,[27] as Calancha has no reference to it. The topasaire is a species of wild tobacco, for tobacco in Quichua is "sayri," and was known in Peru before the conquest as a medicinal plant.[28] Sayri was taken in the form of powder (snuff) "to free the head."[29] Peru has at least three varieties of indigenous tobacco, according to Raimondi,[30] but all three grow in warmer climates. Of smoking I find no trace as yet, and still the stone objects found in this "cache" on Koati can hardly have been anything else but *pipes*.

A great number of minerals, fossils, probably used as fetishes. Among the minerals are beautiful pieces of mamillary chalcedony, among the fossils, trilobites, etc.

Coiled snakes of stone, that is, concretions which seem to have been, with a few slight artificial touches, converted into shapes recalling the coiled snakes of stone from Mexico.

Fragments of silver leaf were found in considerable abundance. As stated, these objects were heaped together in the soil, without order or regularity, just as the deposits of human remains and artefacts at Kea-Kollu-Chico. Of many of them it may safely be assumed that they were votive offerings. In regard to others it is not easy to surmise why they were buried there.[31] Hardly had we made these discoveries when the Indians of the Island gathered on the spot and began to dig at random all around, with a greed that beggars description. We had found silver, gold,

and handsome pottery, and that was sufficient for them to take hold of the premises and oust us if possible. They forthwith sent runners to Copacavana informing the owner of our find, at the same time exaggerating its importance. He prohibited further diggings by them, but we saw that there was nothing more to do, as the cupidity of the aborigines and their jealousy would leave us no peace, and eventually provoke a conflict with the owner himself. So we abandoned further work, with the deepest regret. The Indians confessed afterward to Dr. del Carpio, the proprietor of Koati, that they found more gold and silver, among it a number of what they called *rayos* or thunderbolts. These, according to description, must be slices of metallic leaf cut in the form of snakes.[32] I recall here the snake-like additions to crosses on housetops, described in Part III. Dr. Carpio writes to me from Copacavana, that he caused further excavations to be made on Kalich-Pata, and that a few articles of gold and silver were found similar to those which we obtained, also pottery and stones, but in no considerable quantities.

The finds on this platform of Kalich-Pata seem to indicate that Iñak-Uyu was a shrine where sacrifices took place like those performed before the Sacred Rock on Titicaca.

Of textures no considerable piece was found on Koati,[33] for the same reason as on Titicaca, namely, excessive moisture. On the crest, a female figurine of massive silver was found by us in a stone cyst, and a few shreds of rather coarse cloth were attached to the feet of that figurine. It hints at the probability that this "silver woman" had originally been wrapped in cloth. This recalls the custom, mentioned by Cobo, of dressing or clothing fetishes or idols, at certain times and on certain occasions.[34]

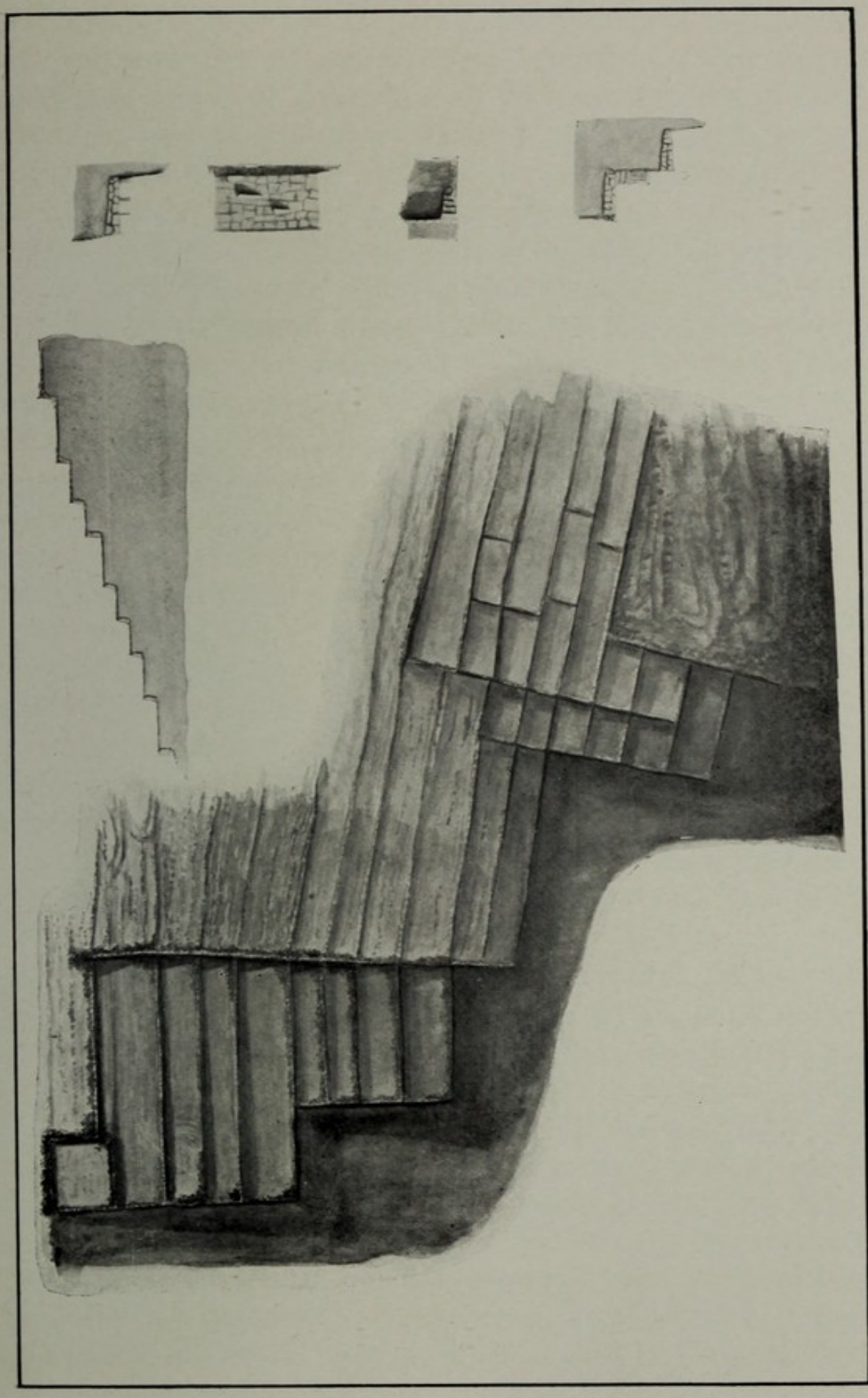
The other ruin of importance on Koati stands, as already mentioned, on the neck immediately in the rear of the extreme northwestern point of the Island; the bold promontory of Uila-Peki, or Red Head. The neck is a plateau,

PLATE LXVIII

Inca sandenes and details of Chincaripa

PLATE LXVIII

Inca andenes and details of Chucaripu



not quite three hundred feet long, from south to north, and not over seventy feet across. The declivity on the west is very steep, and even sheer toward the end. On the eastern side the slope is not as rapid, and terraces go down to almost the water's edge. These terraces sweep around to the northward, abutting against precipitous cliffs. Seen from the height of Chicherία Pata (*a*), the tall and well built andenes present a striking appearance. The big wall along the whole length of the crest of the Island terminates against the southern end of these ruins. The Red Head itself bears some andenes, but its top is quite small, and we saw no traces of buildings on it. What this northwestern extremity of Koati had in the shape of buildings, seems to be confined to the remains now called "La Chicherία," a Spanish term of the country, used to designate a place for raising and enclosing goats and sheep.

Father Sans, the editor of Ramos, regards these ruins as those of a house for secluded women, calling it "Acclaguasi," or "house of the selected."[35] Neither Calancha nor Cobo makes any mention of the place, hence the designation may or may not be appropriate. The ruins are partly obliterated, much more so than the cluster at Iñak-Uyu, the Pilco-Kayma, and the Chincana. If I were to compare them with any ruins on Titicaca I would select the Kasapata cluster, to which they bear considerable resemblance.

The analogy in location between these two ruins, the Chicherία of Koati and Kasapata on Titicaca, is noteworthy. A glance at the general plans must satisfy any one of the truth of this remark. Both occupy the highest plane of a neck of land, both are divided into two groups separated by a level, and even the size and arrangement of what is left of the buildings display much similarity. The northern group of the Chicherία recalls the eastern of Kasapata, and the southern the western, with the so-called "temple." The long rectangular edifice adjoining the court called to-day "*Canchón de los Bailes de los Incas*"[36]

(enclosed area of the dances of the Incas), on the west is, on a smaller scale, a copy of the "temple," or, as we should call it, the tambo, of Kasapata. The proportions of length to width are nearly the same (about one to five). They are, unlike all the other edifices, long, narrow, and devoid of ornamental niches. If we compare the plan of the buildings uncovered by excavation at Kasapata with the northern group of the Chicherία, we find more analogies yet. In short it seems as if the two clusters had been constructed for the same purpose. In that case the Chicherία would have been, on Koati, a small Inca settlement and this seems very likely. Its situation is such as to command an extensive view and it is *the* spot on that Island that lies nearest to Titicaca. It is probable that it was the original *landing-place,* where visitors to Koati found quarters during their stay.

Excavations at the Chicherία yielded as good as nothing. The Indians had cleaned it out completely. On the western slope were a few graves with pottery and skulls of Chullpa type. The walls of the ruin have been sadly wrecked, and the southern part especially transformed as much as possible into lots for goats and sheep. Hence it may be that I have left out on the plan vestiges which are ancient, because I regarded them as modern on account of transformation. Of ornamentation nothing remains, if it ever existed. There is one small niche, perhaps two, and two doorways, both in the same building. At the edge of the middle level stands a small rectangular structure recalling the well-made small houses of Ciriapata, Kea-Kollu, and the one in the bottom of Mama-Ojlia, close to the Sacred Rock. The masonry of the Chicherία, as far as seen, is like that of Kasapata, and the walls have about the same thickness.

From what precedes it becomes apparent that on Koati we find the same architectural features of Inca origin as on Titicaca. But at Iñak-Uyu, not only are details better preserved, but there is greater elaborateness and decoration.[37]

PLATE LXIX

Ancient pueblo, Inge work from Tiffege Island (vicinity of Seaved Rock)

PLATE LXIX

Ancient poncho, Inca work from Titicaca Island (vicinity of Sacred Rock)





Iñak-Uyu was probably the largest and most handsome edifice which the Incas caused to be reared on either Island. Tradition has it that it is also more *recent* than most, if not all, of the structures on Titicaca. It is stated that after the Incas had established an elaborate ceremonial on Titicaca they caused the buildings at Iñak-Uyu to be constructed as accessories to the former.[38] Our investigations have shown that so-called Chullpa remains on the Island of Koati are limited to a few scattered burial sites. The reason for this may have been the distance from the mainland, absence of good water, for Koati has only one spring (on the south or shady side) and that spring is insufficient even for a small family. Of Chullpa *buildings* there is no trace, for the two smallest ruins have scarcely any resemblance to Chullpa structures. It is therefore probable that the Aymará paid little attention to this Island previous to the coming of the Incas, and that only the latter made of it a shrine. But that shrine was an *accessory* to the principal one at the Sacred Rock.

In the preceding chapter I have suggested that the date of the Inca establishments on Titicaca was approximately 1475. In regard to Koati a still later date must be adopted, and it is therefore doubtful whether the ancient buildings on that Island had in 1533 been in existence fifty years.[39]

I have called attention to a certain resemblance between the buildings at Iñak-Uyu, their location and surroundings, and the cluster of the Pilco-Kayma on Titicaca. Both ruins stand near the eastern shores, and both occupy about the same position in relation to the peaks of Sorata. Both edifices face directly *not* sunrise, but the *Nevados* mentioned. The two principal apartments in each ruin (with the most elaborate entrances and the tall and prominent niches, such as no other ancient building on either Island contains) open toward these peaks, *not* to the east! From the Kayma it is distant Illimani, the extreme southern pillar of the Andes, behind which both sun and moon first appear above

the horizon. From Koati, sunrise lies south of the Sorata group. The fact that both buildings are provided with exceptional niches shows that certain sections of them served for some kind of worship, whereas the remainder may have been reserved for attendants, male or female. The Pilco-Kayma was *not* the adoratory of the sun; so much appears certain. Neither do the old chroniclers mention any adoratory of the moon on the Island of Titicaca.[40] The agreement, in position and disposition, between the only apartments of each ruin that bear marks of having been destined to religious purposes is significant, and if the Pilco-Kayma, as appears likely, was *not* a "temple of the moon," the same was the case with Iñak-Uyu. I venture to suggest that both buildings were constructed for the same purpose, selection of the sites being governed by their position with regard to the most prominent and awe-inspiring object of nature within view, far and near, the majestic "Crown of the Andes." The "Royal Cordillera," as the Bolivian Andes are sometimes called, has three specially prominent landmarks, prominent through elevation, striking form, and massiveness. These are, in the north the Sorata group, in the center the Ka-Ka-a-Ka ("Karka-Jaque"), and in the south Illimani. Intermediate summits, while bold, are less imposing. Of these three pillars of the chain we know that Illimani was the object of special worship on the part of the inhabitants of its surroundings; Hila-uma-ni (as its true name seems to be) being regarded as the most powerful fetish by the Indians around La Paz.[41] At the base of Ka-Ka-a-Ka, the tribes of *Pucaráni* had their special shrine with a large stone idol.[42] To the Indians of the shores of Lake Titicaca (especially of the two Islands) Illampu and its twin brother are as impressive as the two first-named are for *their* vicinity. Therefore it is not impossible that among the people on the Lake the Sorata peaks were the most prominent fetishes together with Titikala, and that the Incas, who already had adopted the Acha-

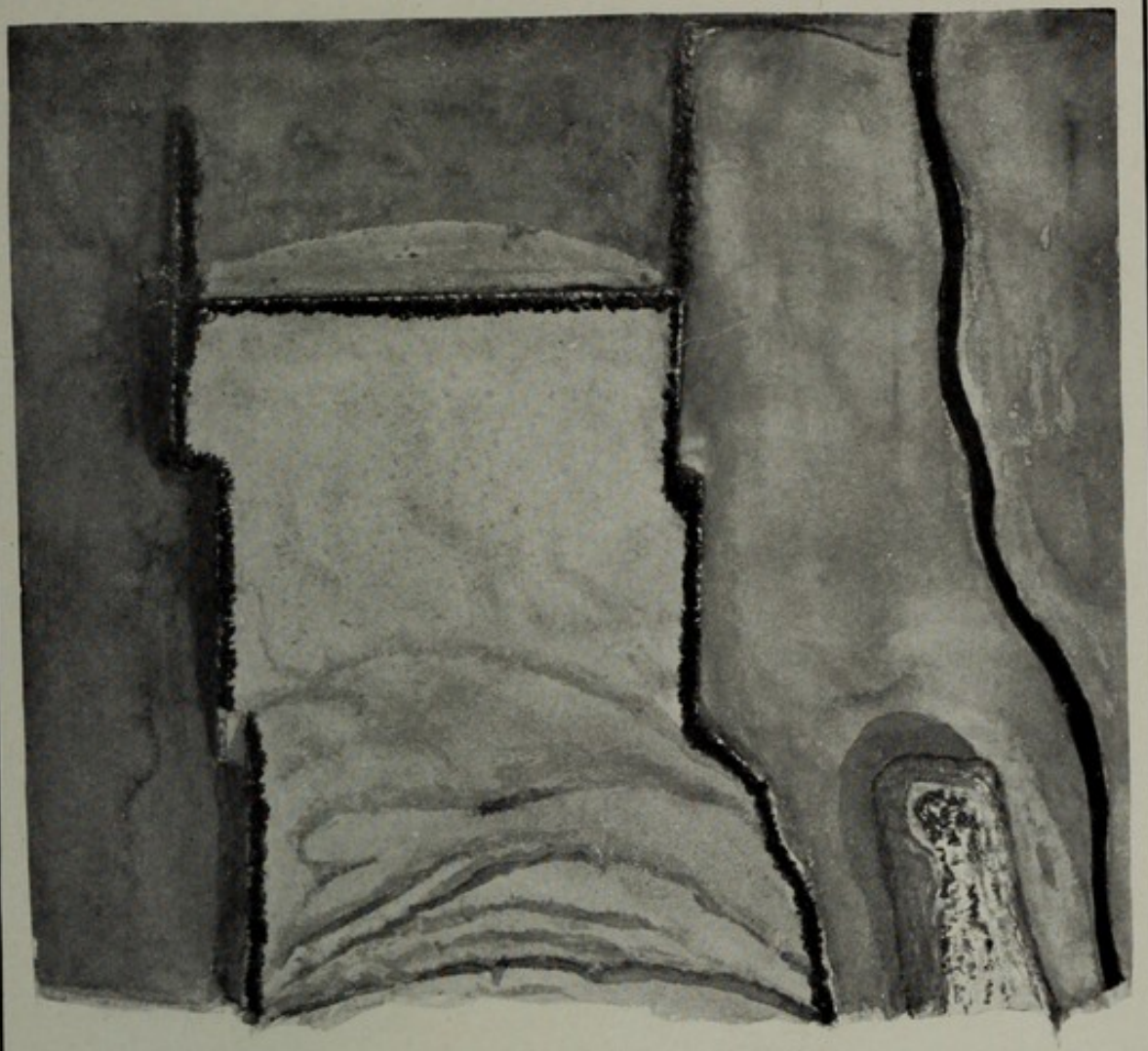
PLATE LXX

1. Ground-plan of ruins in the bottom of southern Kona. 2. Niches.
3. Ceilings of niches

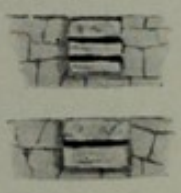
PLATE LXX

1. Ground-plan of ruins in the bottom of southern Kona. 2. Niches. 3. Ceilings of niches

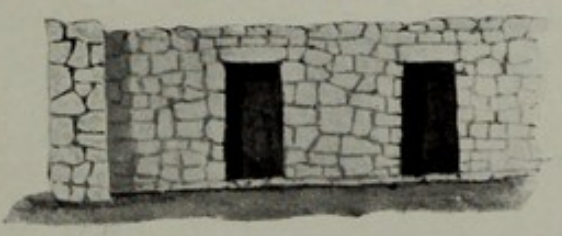
1



2



3



chila cult of the Sacred Rock, still further yielded in regard to those mountains, by establishing shrines where they are seen to greatest advantage.[43] These points are certainly *Pilco-Kayma and Iñak-Uyu!*

This suggestion by no means conflicts with the statements that at Iñak-Uyu a colony of female attendants to worship had been established. On the contrary, the situation of Koati and its comparative inaccessibility render it very probable. Such females were, as we have seen, *not* exclusively dedicated to the sun, neither were they consecrated to the moon. Every place of worship of importance, every prominent settlement, had a house of such women. Thus, for example, they were established at Irma (known as Pachacamac), on the coast, where the principal shrine was *not* dedicated to the sun, but to some particular oracle of that valley.[44] The Incas did not, as often alleged, "enforce" sun-worship wherever they extended their sway, they merely *added* to already existing shrines of great importance places of worship dedicated to their own tribal cult.[45]

In the preceding chapter I have stated that Titicaca is frequently called "Island of the Sun," and Koati "Island of the Moon." It is abundantly proved that the Incas did not worship the sun as *sun,* nor the moon as *moon.* They considered both to be material and created objects. But it appears also that they conceived each orb to be the *residence* or *abode* of some spiritual being, and there are indications that the sun was looked upon as *Father* and the moon as *Mother,* one being the husband and the other the wife.[46] This is exactly the primitive belief of the pueblo Indians of New Mexico. Hence we find, in descriptions of Inca idols, a certain contradiction. Sometimes it is stated that the figure of the sun was a circular or elliptical plate, again that it was a human figure, just according as the *sun* or the *sun-father* is meant.

It is very likely that on Titicaca a chapel existed, in

which stood an effigy of the sun-father, and on Koati one containing a statue of the moon-mother. The circumspect remark of Cobo that some say the latter was the "mother of the Incas"[47] is significant. The reverence paid to both was, on Titicaca and on Koati, a specific *Inca* ceremonial. Hence Sans states that on the Island the "great temple of six doorways" was closed to all Indians that were not Incas, and to the Collas especially.[48] But there are indications that to the Sacred Rock on Titicaca, even the idols of the Incas were made to give special tokens of respect. Father Sans, the editor of Ramos, describes a ceremony performed on Titicaca which, if his statements are accurate, is a very good illustration of what I have suggested in regard to the worship paid to the spirits inhabiting sun and moon. He says, "when celebrating the solar feasts, particularly those of Caparaime (Capac-Raymi) and of the Intipraime (Yntip-Raymi), which months we shall explain when treating of the calendar, those of the partiality of the Incas placed all their idols on litters, called 'rampas,' decorating them with many flowers, plumage, and plates of gold and silver; and with great and many dances carried them to the Island in procession; there they put them in a large square called 'Aucaypata,' where the festival was celebrated. There was the great temple of six doors, where no Colla Indian was allowed to enter or assist at the feast.

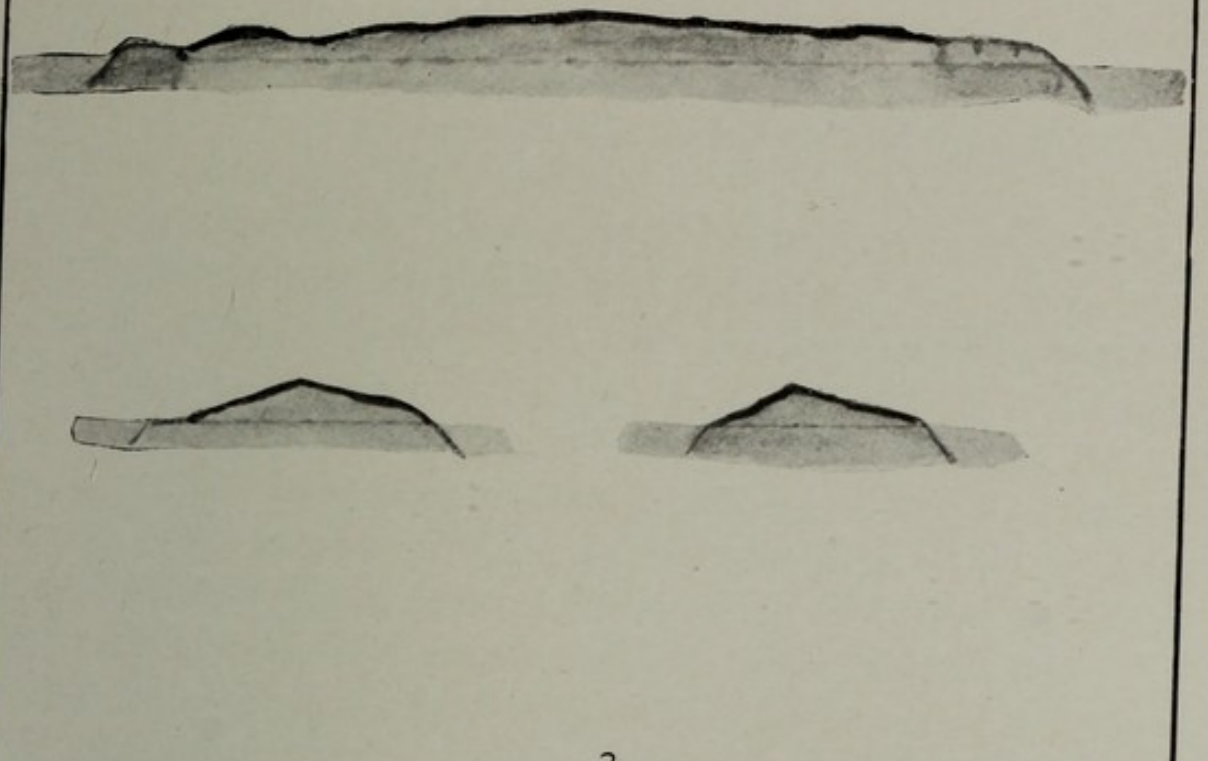
"After having placed the idols they took off their footgear, their mantles, and prostrating themselves before them they worshiped, the principal one beginning and the others following, all taking off their 'Llautos' or diadems. First they worshiped the statue of the sun, then that of the moon, afterward that of thunder and the other idols; since each one had its particular effigy. The sun they represented in the form of an Inca of gold, of so much jewelry and brilliancy as to cause awe; the moon as a queen of silver; thunder as an Indian of silver, also very brilliant. When the prostrations and adorations were over they raised their

PLATE LXXI

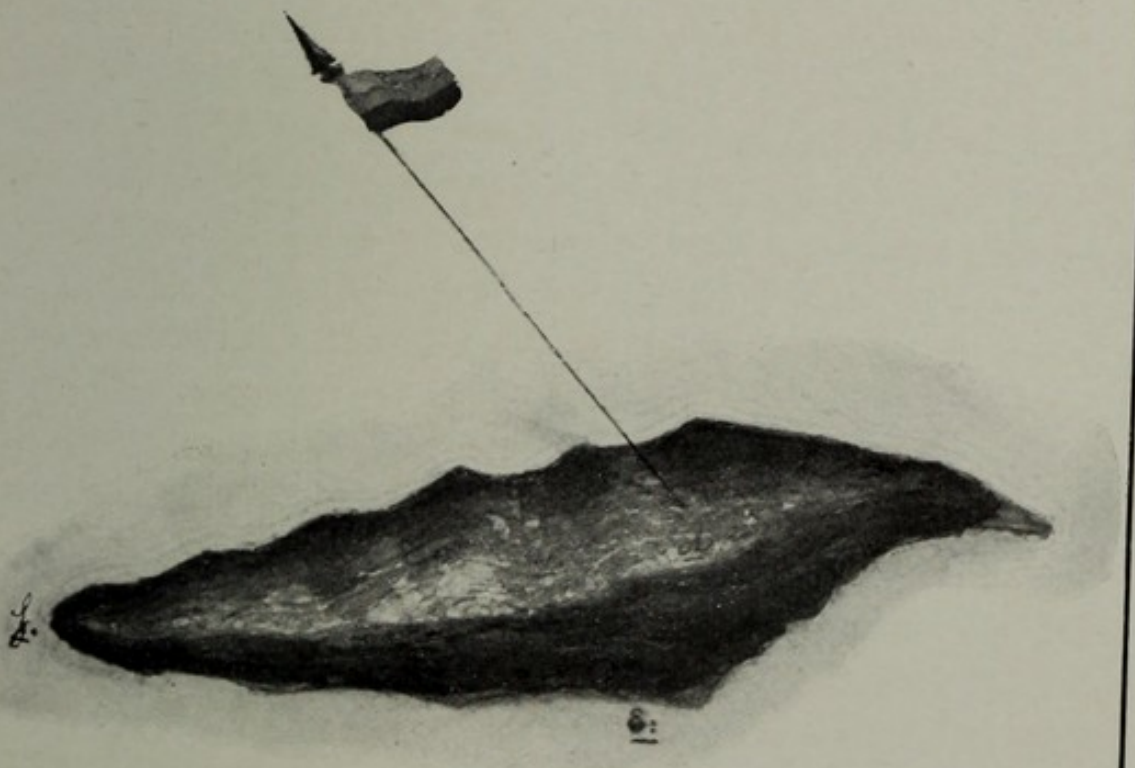
1. Map of the Island of Kosati. 2. Longitudinal and transverse profile of Kosati

Plate LXXI

1. Map of the Island of Koati. 2. Longitudinal and transverse profile of Koati



2



1

hands, making with the lips as if kissing them, just as children do when they wave a kiss to some beloved person. Thereupon followed the dances, banquets, and amusements, which were the end and aim of all their efforts; and to-day even they have not improved much."[49]

The square called "Aucaypata" must have been in the immediate vicinity of the Sacred Rock, and the word is a Quichua name, for, very probably, the level at the foot of the cliff, or the square called by the Aymará "Tican-Aychi." The procession started from Copacavana, hence there was, at Copacavana also, a statue of the sun-father and one of the moon-mother; aside from that of the *principal idol called Copacavana* and described as a head like that of a sphinx without hands or feet.[50] The two effigies were regarded as those of man and wife, and superior to other Inca idols, but their peregrination to the Island was a tribute of respect to the shrine established there, hence to the *rock which constituted that shrine!* This proves that the supreme oracle on Titicaca was believed to reside in that rock.[51]

A similar visit, but from the Island of Koati to that of Titicaca, is described by Cobo: "The priests and ministers of this adoratory and of that of Coata had a great deal of intercourse, and there were many and frequent missions from one Island to the other, with great reciprocity, feigning the ministers of one and the other sanctuary that the wife of the sun, as according to their opinion the moon might do it, sent her respects, which the sun returned with demonstrations of attachment and mutual love; and in this they employed much time, and a great number of balsas that went back and forth between the two Islands; and in order to represent this naturally, the principal minister in one of the adoratories dressed himself like the sun, and in the other an Indian woman played the part of the moon. They saluted each other, and she who represented the moon caressed him who represented the sun, asking of him with

many flatteries to appear every day clear and benign and to never conceal its rays, so that he might fertilize the plantations until the time when rains would become necessary. Besides this, she asked that he might preserve the Inca, his life and health, and that of those who with such faith and devotion occupied themselves in his service and worship. He of the sun responded with loving words and in a satisfactory manner; and in such vanities and crazy doings the wretches spent the time of their blind and idle existence, and all terminated in drinking, which was their greatest bliss." Ramos alludes with less detail to the same custom.[52]

It appears, therefore, that Koati was in constant intercourse with the religious establishments on Titicaca. The pilgrims who visited the latter Island went from it to Koati and the crossing was effected not from the Peninsula of Copacavana (Sampaya), as to-day, but from some point on Titicaca. As the pilgrims had to go first to the Sacred Rock, their journey to Koati started necessarily from there or from Kasapata. But, from either place, a voyage by balsa is almost twice as long as from Titicaca's *eastern* shores! The most convenient point for embarking would have been the little Bay of Pucara. It is hence possible that in view of these frequent voyages the buildings at Pucára were erected, for Pucára is as well the natural *port* for Koati on Titicaca as the foot of the crest on which the buildings now called "Chicherían" stand is the landing-place nearest to Titicaca on the Island of Koati.

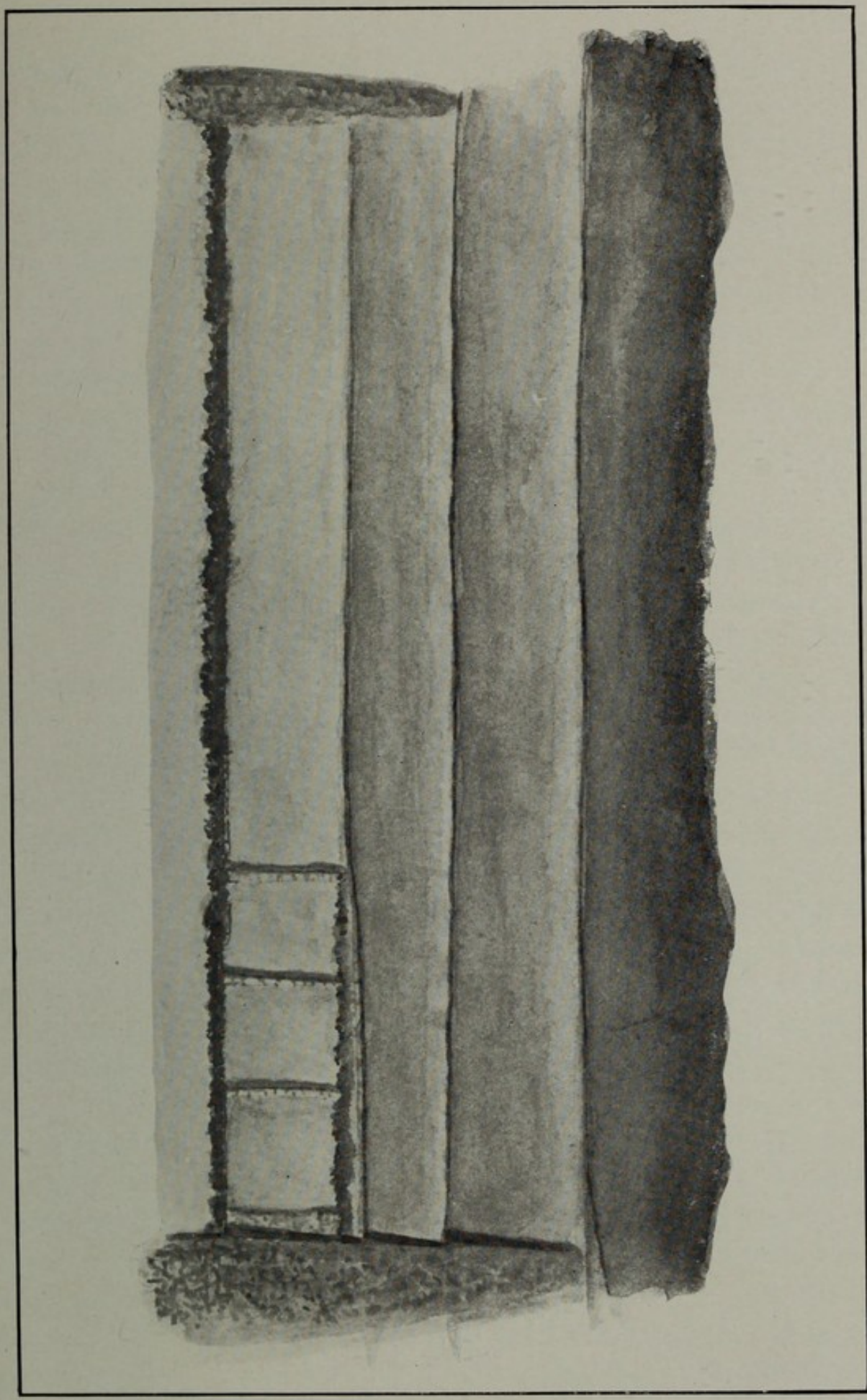
This frequent intercourse formerly carried on between Koati and Titicaca may enable us to form some idea of the probable object of *those* buildings on the latter Island, to which their present condition affords no clue. The resemblance between Iñak-Uyu and Pilco-Kayma in position and arrangement, not in size, leads to the inference that both may have been shrines dedicated to the "Achachila" worship of the peaks of Sorata.[53] The Chicherían, while

PLATE LXXII

Ruins on eastern slope of Koati

PLATE LXXII

Ruins on eastern slope of Koati



resembling architectural vestiges at Kasapata and probably destined to the same end, hints at the possible purpose of the buildings at Pucara. The latter stood near a landing-place on Titicaca, for the frequent communications from one to the other Island.

The number of residents on Koati during the time the Incas maintained their establishments there was certainly greater than it is to-day. The buildings, admitting that Iñak-Uyu had two stories, may have contained as many as two hundred permanent occupants.[54] If, as is stated by some, most of these attendants were females, the number may have been even somewhat greater. For an abode of secluded women, Koati, especially the site of Iñak-Uyu, was very well chosen. The long wall that ran along the crest barred access, and the little ruin (*d*, on map) served as a lookout; the Chicherία, and especially the Red Head, covered a vast extent of horizon. Distance from the mainland at Sampaya is more than three times that from Yampupata to the Island of Titicaca, and whereas there are said to exist Inca ruins not far from the village of Sampaya on the heights, I find no evidence that there was any settlement or landing in front of Koati, on the Peninsula of Copacavana.

The settlements on Titicaca and on Koati made by the Incas for the purpose of worship, are intimately connected. But they do not stand alone. To them pertained also whatever establishments the Incas had on the Peninsula of Copacavana. Unfortunately, circumstances did not permit us to investigate the ruins on that Peninsula as it should be done. We know, by ocular inspection, that ruins of Inca type exist at Cusijata, about a mile to the east of Copacavana.[55] From sources which seem to us worthy of credence we ascertained that Locca, on the Peruvian boundary, three miles from Copacavana, bears traces of ancient Inca occupation.[56] At Yunguyu the abundance of handsome pottery of Cuzco type corroborates the statements that on certain sites, now occupied by dwellings and church struc-

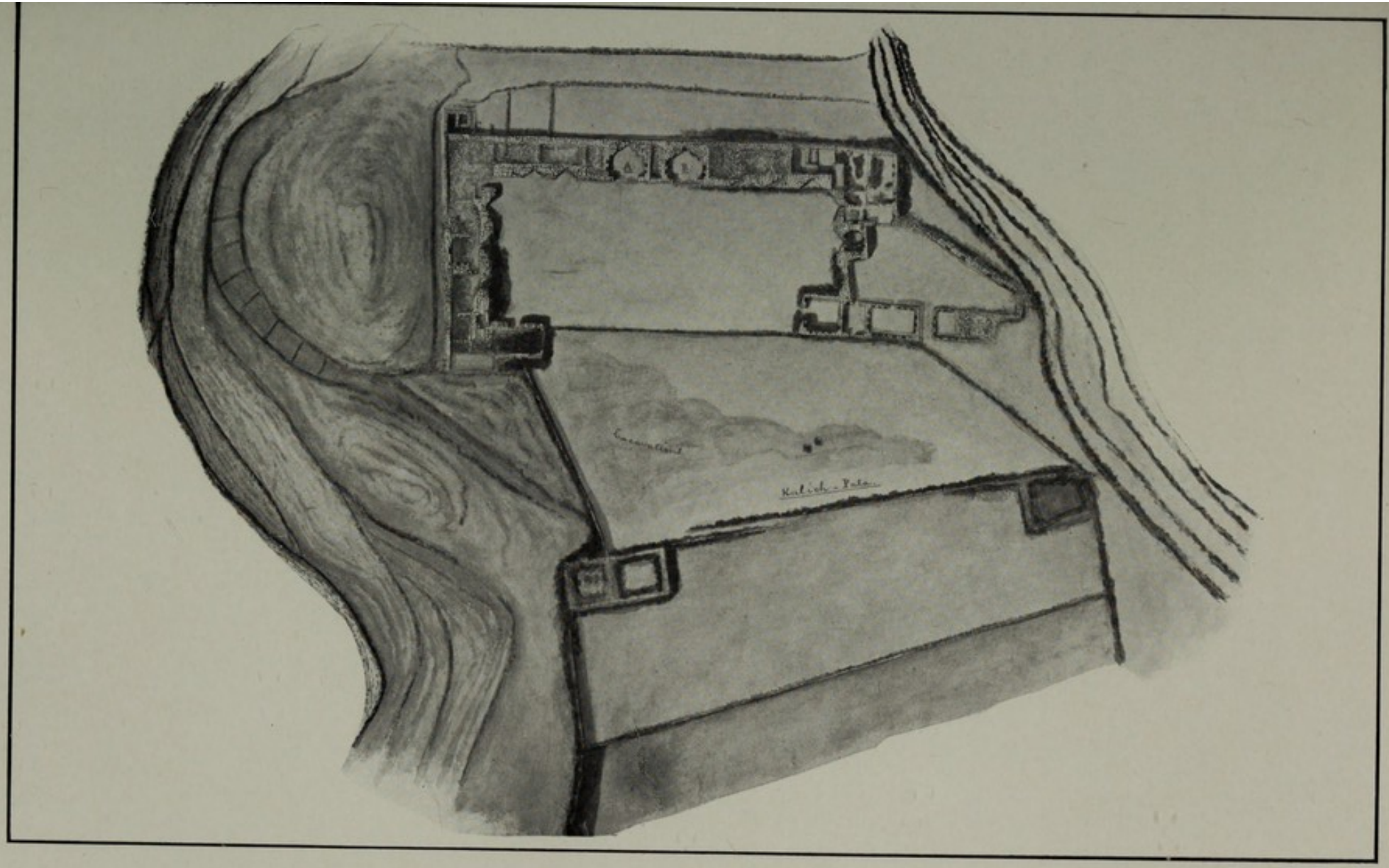
tures, Inca ruins were formerly extant.[57] At Yampupata blocks of cut stone (andesite), like those near the Sacred Rock, were taken out of nondescript ruins. Lastly the site of Copacavana itself was partly occupied by Inca buildings.[58] From all these places the Museum has received, through us, antiquities of Inca type. There are, on the Peninsula of Copacavana, seats cut in the rock. A large cluster of these lies at the very doors of the village. The Aymará Indians of to-day call them "Inti-Kala," stone of the sun. Among the Spanish-speaking inhabitants, the term "Tribunal of the Inca" is current, and to the curious lookout on the rocky summit west of the place the name "Gallows of the Inca" is given.[59] In short, there is no doubt that Copacavana was an ancient settlement, with possibly more inhabitants than the two Islands together, and not of as exclusively Cuzco or Inca character. Tradition has it that "colonists" from various Peruvian tribes had been settled there,[60] and what gives some color to this assertion is, among others, the name of Chachapoyas, applied to a site on the western shore of the Peninsula.[61] Several family names of Indians about Copacavana are clearly Quichua, and may even be called specifically "Inca," like "Inca-Mayta," "Sinchi-Roca," and "Sucso." Of the latter there is conclusive evidence that they are of Inca descent, the original personal names, as was very often the case among Indians in Spanish America, having been converted into family appellatives.[62] Hence the existence of an Inca settlement on that Peninsula cannot be doubted. If subsequent researches should confirm the truth of the statement, made by Cobo and contemporaries, that the very narrow neck of land, separating at Yunguyu the northwestern body of the Lake from the Lagune of Uiña-Marca, was traversed by a wall constructed by the Inca (and this is not impossible),[63] that wall barred access to the Peninsula from the mainland and made of it and of the two Islands a completely secluded cluster in

PLATE LXXIII

Ground-plan of main block

PLATE LXXIII

Ground-plan of ruins of Iñak-Uyu



the midst of vast regions inhabited by Indians speaking the Aymará language.

Very little is known as yet of the archaeology of Bolivia and southeastern Peru. But of Inca settlements, beyond that on Copacavana and the Islands, there are few architectural remnants. Hence we may regard the clusters at Copacavana, on Titicaca, and on Koati as possibly the last outposts of permanent Inca occupation in the direction of the southeast. Inca sway, overawing tribes into tribute and occasional military assistance, may have gone farther; and through inroads, barter, or exchange, articles of Inca manufacture have penetrated beyond the territory swayed over. It must be remembered that independent Quichua tribes occupied southern Bolivia.[64] It is also worthy of note that between Copacavana and Cacha near Sicuani, where Inca structures appear, there are comparatively few traces of *permanent occupation* by the conquering Cuzco tribe. It is asserted that the Islands of Apingüila and Pampiti, on the Peruvian side of the Lake, near Huancané, contain Inca ruins, but these remains are, according to Spanish chroniclers after local traditions, those of places of worship also, established by the Incas on the two rather inaccessible islands, in the beginning of the *sixteenth* century.[65] Inca establishments on the Lake bore chiefly a religious character, and were maintained, on Titicaca and vicinity, alongside of a worship of much older date, which the Incas not only suffered to exist, but actually adopted, even subordinating their tribal worship, on certain occasions, to a cult extant previous to their coming. This is still further exemplified on the Peninsula of Copacavana. The worship of the Sun-father and Moon-mother is stated as having been established at that place, also; but the fetishes "Copacavana," "Copacati," and others, remained for the Aymará the principal idols,[66] just as the Sacred Rock was the main shrine on Titicaca.

This concession, made by conquerors to the religious be-

liefs of the conquered, appears, on the part of the former, as an act of unusual wisdom. It consolidated the supremacy of the Incas far more than any military establishment. It is also stated that the Incas were induced to worship, on Titicaca, by very ancient traditions which made that Island, and especially the rock of Titi-Kala, as sacred to them as to any Aymará tribe. An investigation of this entails the treading of very unsafe ground, the field of aboriginal lore, of traditions and myths.

NOTES

THE RUINS ON THE ISLAND OF KOATI

AND A GLANCE AT ANTIQUITIES OF COPACAVANA

PART V

[1] The vertical height of the cliff is 170 feet. By rounding the "head," a balsa or boat from Titicaca Island very soon reaches a point on the east shore where ascent to the ruins is quite gradual. From the west, ascent is more abrupt. The view, especially of Titicaca, is magnificent.

[2] The spot on which this ruin stands is, within a few feet, the highest on Koati. The Aymará call it: "Uila-Ké," from "uila"—red. The view is even more extensive than that from the "Red Head" and in the daytime approach to the Island can be observed in every direction. Uila-Ké is also one of the "Achachilas" of Koati. The others are Iñak-Uyu, Inca Parqui, Taj-Save, Uito Pampa (the beach in front of the hacienda), Lambamani, Cheje-Puju, Vincalla, Choju Uintu, Cantutáni, Acha Cunde, Isca Cunde, Tara-Ké, Uichin Pata, Tunas Pata, Uirta Kochu, Uaytir Pata, Hacha Putuncu, Inca Pampa, Añut'hém Pata, Arcu Puncu, Calvario Pata. I give these names as they were told us, without guaranteeing their exactness, and because every one of these "Achachilas" had to be addressed during the incantations ("tinka") that preceded our excavations.

[3] *Peru,* p. 336: "The principal monument of antiquity on the Island, and which lends to it its chief interest, is the edifice called the Palace of the Virgins of the Sun, but which might probably better be called the temple of the Moon." Rivero and Tschudi (*Antigüedades peruanas,* 1851, text, p. 297) treat of these ruins without having seen them, else they could not have stated: "Su arquitectura [that of ruins on Titicaca] es inferior á la de las ruinas del edificio mas destruido de la isla de *Coati,* en la misma laguna, sin que se pueda descubrir si fué un palacio, ó un templo." What remains of Iñak-Uyu is better preserved in part than most of the ruins on Titicaca, the outer coating of clay still being visible in places.

[4] *Pérou et Bolivie,* p. 441.

[5] *Historia de Copacabana,* p. 56, *et seq.,* edition of 1880, La Paz. *Historia del Nuevo Mundo,* IV, p. 59.

[6] *Peru,* p. 362. He describes a single one of these narrow passages, the one with a tiny airhole. It is not "vaulted," but covered with flat stones or slabs.

[7] *Peru,* pp. 361 and 362.

[8] *Relatione Per Sva Maesta,* fol. 413: "in mezzo d'esso sono due

picciole Isolette, nell'vna delle quali é vna moschea, & casa del Sole.'' Also, fol. 410. The Spaniards had already heard of the ''due Isole'' at Cuzco, but, it appears, visited only Titicaca.

[9] I have quoted this passage repeatedly, but refer to it again here, on account of the word ''Coyatá.'' The etymology of the name Koati is not unfrequently derived from ''Coya'' which is said to be ''queen.'' That this name was applied to the wife of the head war-chief is positively stated by Garcilasso (*Comentarios,* I, fol. 86), together with the notice that the wife had to be the *sister* of her husband: ''con su hermana mayor, legítima de padre y madre, y esta era su legítima muger llamauanle Coya, que es tanto como Reyna, o Emperatriz.'' Juan de Betanzos, however, who lived at Cuzco already twenty years previous to the birth of Garcilasso and was married to an Inca woman, positively states (*Suma y Narracion,* p. 113): ''á la cual mujer llaman ellos *Pi ui uarmi* y por otro nombre *Mamanguarmi;* y la gente comun, como á tal mujer principal del Señor, llaman, cuando ansí la entran á saludar, *Pocaxa Intichuri Capac Coya Guaco-Chacuyac* que dice 'Hija del Sol é sola reyna amigable á los pobres.' '' He repeats the word ''Pihuihuarmi'' on page 115, calling her ''mujer principal.'' The derivation of ''Koati'' I do not venture to investigate as yet. It seems probable that Coya was only an endearing title and not an official one. It appears first in Cieza: *Segunda Parte,* Cap. x, p. 33, and thence has passed into many older and modern books. Cieza is, however, by no means as reliable an authority as Betanzos. He was at Cuzco but a short time, and was not in any manner proficient in the Quichua language. The Indians of Sampaya pronounced ''Koáti,'' not Koati. The word is (like Titicaca) Aymará, and not Quichua.

[10] *Acusacion contra Don Francisco Pizarro á S. M. por Don Diego de Almagro, Doc. de Indias,* XX, pp. 331 and 455.

[11] Illan Suarez de Carvajal, *Carta al Emperador,* November 3, 1539, *Doc. de Indias,* III, pp. 200 and 201.

[12] *Copacabana de los Incas,* p. 33. See Parts III and IV of this monograph.

[13] Everything points to 1539 as the year when the Peninsula of Copacavana was visited by Gonzalo Pizarro and his officers, with an armed force.

[14] There exist certainly, in Spanish archives, papers relative to the province of Omasuyos, from the second half of the sixteenth century, but I am unable to consult them. Copacavana and the Islands pertained, as to-day, to that administrative district.

[15] Vizcarra: *Copacabana de los Incas,* pp. 70 to 72. He claims this to be taken literally from the *Inventario No. 1,* signed by the ''Justicias mayores'' Santalla and Galvez. One of the ''golden plates'' was assayed. Its weight being nine ounces and one grain, it was found to contain four ounces eight grains in gold, three ounces six grains silver, and one ounce three grains copper (p. 44).

[16] *Copacabana de los Incas,* p. 54. Vizcarra says the report is signed by twelve persons and that it bears three ecclesiastic seals.

[17] *Ibidem,* pp. 30 to 55.

[18] *Ibidem,* p. 51.

[19] Andrés de S. Nicolas, *Imágen,* etc., Prólogo: ''no obstante el auer ya escrito desta Efigie soberana, los Padres Fray Alonso Ramos Gauilan; Maestro Fray Fernando de Valverde, Maestro Fray Antonio de la Calancha, Padre Hipólito Maraccio, y agora poco há el Padre Fray Gabriel de Leon: fuera de los que en sus obras han hecho memoria de tan prodigioso Retrato.'' Not only is Father Salas not mentioned, but there is not, either in Ramos, Calancha, or S. Nicolas, any allusion to the official search of 1618.

[20] These chroniclers might (?) not have considered the results of the visit to be of sufficient importance for a mention.

[21] *Historia del Nuevo Mundo,* IV, p. 64: "La fama que yo oí estando en esta provincia el año de mil y seiscientos y diez y siete, es que hay gran riqueza en la isla de *Coatá;* á la cual fueron entonces ciertos españoles en un barco y no pudieron hallar cosa."

[22] The latter even had parts of the walls scraped to ascertain whether the plaster contained pulverized precious metal. The parties were not Bolivians.

[23] The resemblance is not very marked, still it recalls to a certain extent the Tiahuanaco carvings on both sides of the central figure on the gateway. There is the following curious passage in Vizcarra: *Copacabana,* p. 171: "Gran sorpresa hemos recibido al encontrar cincelados en planchas de tumbaga los monstruos descriptos por el sancto Job . . . Cuyas formas esculpidas en bajo relieve, son de las misteriosas béstias Behemoth y Leviathán." This is from Vizcarra himself.

[24] Ramos: *Copacabana,* p. 47: "Este ídolo Copacabana estaba en el mismo pueblo, por el lado de Tiquina . . . él era de una piedra azul vistosa, y no tenia mas que la figura de una cara, como una cabeza de esfinje, sin piés ni manos. Estaba como mirando a Titicaca, como dios inferior que miraba al principal." This fetish or idol seems to have been Aymará, not Quichua or Inca. The large head found by us on Koati does not fully agree with the description of Ramos. It is of trachyte or andesite, and not "azul vistosa."

[25] *Ibid.,* p. 71, edition of 1880: "Tambien ponian sobre las peñas unos idolitos de sapos y de otros animales inmundos, creyendo que con eso ya alcanzaban agua."

[26] *Final Report,* I, p. 312.

[27] *Historia de Copacabana* 1880, p. 9.

[28] In the note that follows I shall refer to what Garcilasso says about the use of tobacco in primitive times of Peru. Cobo: *Historia,* etc., I, p. 403: "A la raiz del tabaco silvestre llaman los indios del Perú, *Coro,* de la cual usan para muchas enfermedades. Contra la detencion de orina dar á beber en cantidad de dos garbanzos de sus polvos, en un jarro de agua muy caliente, en ayunas, por tres ó cuatro dias. Tomados estos polvos en moderada cantidad por las narices, quitan el dolor de cabeza y jaqueca y aclaran la vista: y el cocimiento desta raíz hecho con vino, echando en él un poco de Sal de compas y azúcar candí . . . Bebida de ordinario el agua desta raíz, vale contra los dolores de bubas," p. 405: "De otra yerba llamada *Topasayri* hacen otros polvos en el Perú para estornudar, que son más eficaces para esto que los del Tabaco."

[29] Garcilasso, *Comentarios,* I, fol. 51: "De la yerua ó planta que los Españoles llaman tabaco, y los Indios Sayri, vsaron mucho para muchas cosas; tomaua los polvos por las narices para descargar la cabeça." Also fol. 212.

[30] Antonio Raimondi: *Elementos de Botánica,* Parte II, p. 158.

[31] Even the shreds of silver-leaf may have been offerings. Pedro Pizarro (*Relacion,* p. 273) mentions gold-leaf, but not as an object of sacrifice. At Chavin de Huantar, not far from Huánuco in eastern Peru an altar made of adobe was found by Mr. Beer, a French explorer, which altar was covered with silver-leaf torn to shreds. Silver-leaf is mentioned by Calancha as an offering of the coast Indians. *Corónica moralizada,* I, p. 413: "I cada año ofrecian oja de plata, chicha i espinco."

[32] It may be that by these the coarse imitations of plumes were meant, of which several were after-

wards produced at La Paz as coming from Koati. These ornaments are found in copper, silver and gold, and were worn on headdresses of the same material.

[33] Nor have we heard of any find of that nature on Koati.

[34] *Historia del Nuevo Mundo,* IV, p. 84.

[35] From "acllani"—select, and "huasi"—house. Torres Rubio: *Arte y Vocabulario,* fols. 125 and 117, *et seq.*

[36] "Enclosure of the dances of the Incas." The phrase may be of some significance. The space looks like a square where public dances could be performed. In connection we might ask: Was not the open plateau between the tambo called now "temple of the sun" at Kasapata and the ruins at the base of Llaq'-aylli perhaps put to the same use on Titicaca?

[37] Possibly, nay, probably, owing to more recent date of erection as well as to fewer visits to the Island.

[38] Ramos: *Hist. de Copacabana,* 1880, p. 56: "Como los gentiles y poetas dieron mujeres á sus dioses, asi Topa Ynga Yupanque quiso darle Coya al Sol, y esa fué la luna: á la cual dedicó un famoso templo, con ministros y doncellas á su servicio, en la pequeña isla de Coati, en éste mismo lago, dos leguas al Oriente de Titicaca; . . . Entre un bosque de esos frondosos árboles, en una quebradita cerca de la playa, erigió Yupanque el adoratorio lunar, en cuya ara puso un bulto de oro, á la traza de una Coya, que representaba á la esposa del Sol." Fray Andrés de S. Nicolas: *Imágen,* fol. 27: "Para complemento de las falsedades del famoso adoratorio decretó el Tupac, que en otra isla, apartada vna legua de la primera, se fabricasse templo, consagrado á la Luna, con el nombre de Coata." Gutierrez de Santa Clara: *Historia de las guerras ciuiles del Perú,* III, Cap. LVI, p. 486: "y por acesores tenian al Sol y a la Luna (diciendo) que eran marido y muger y que estos eran multiplicadores de toda la tierra."

[39] Inca chronology is far from trustworthy previous to the time of the chief Tupac Yupanqui, but from his time on a reasonable approximation to dates becomes possible.

[40] Cobo (*Historia,* etc., IV, p. 62) makes no mention of any shrine dedicated to the moon on Titicaca, nor does he mention the Pilco-Kayma at all. Neither does Ramos.

[41] *Descripcion y Relacion de la Ciudad de La Paz,* p. 71.

[42] Calancha: *Corónica,* I, p. 867: "En los que gastavan mas sacrificios, i estremavan el culto era en el cerro Illimani Cullcachata, i en el mas frontero del Pueblo Cacaaca," etc.

[43] Cieza: *Segunda Parte,* Cap. XXVIII: "Muchos fueron los templos que hobo en este reino del Perú, y algunos se tienen por muy antiguos, porque fueron fundados ántes, con muchos tiempos, que los Incas reinasen, así en la serrania de los altos, como en la serrania de los llanos; y reinando los Incas, se edificaron de nuevo otros muchos en donde se hacían sus fiestas é sacrificios."

[44] This is already hinted at in *Relatione per Sva Maesta,* fol. 413: "& in essa vanno a fare le loro offerte & sacrificij in vna gran pietra che é nell' Isola che la chiamano Thichicasa, doue ó perche il Diavolo ví si nasconde, & gli parla, ó per costume antico, como glié, ó per altro che non s'é mai charito, la tengono tutti quelli della prouincia in grande stima, & gli offeriscono oro & argento, & altre cose." Cieza: *Primera Parte,* Cap. CIII, p. 445: "La gran laguna del Collao tiene por nombre Titicaca, por el templo que estuvo edificado en la misma laguna; de donde los naturales tuvieron por opinion una vanidad muy grande, y es, que cuentan estos indios que sus antiguos lo afirmaron por cierto, como hicieron otras burlerías que dicen, que carecieron de

lumbre muchos dias, y que estando todos puestos en tinieblas y obscuridad, salió desta isla de Titicaca el sol muy resplandeciente, por lo cual la tuvieron por cosa sagrada.'' In regard to Pachacamac, the fact is too well established to require additional testimony.

[45] Cieza: *Primera Parte* (p. 445): ''y los ingas hicieron en ella el templo que digo, que fué entre ellos muy estimado y venerado, á honra de su sol.'' See note 43.

[46] See note 38.

[47] IV, p. 59.

[48] *Hist. de Copacabana,* 1880, p. 31.

[49] *Ibidem.*

[50] Ramos: *Copacabana,* 1860, p. 48.

[51] *Relatione Per Sva Maesta,* fol. 413. The story told by Anello Oliva (*Historia del Perv,* etc., p. 33) may be of Indian origin, but it is hardly primitive.

[52] *Historia,* etc., IV, p. 63: ''Los sacerdotes y ministros deste adoratorio y del de Coati tenian muy grande comunicacion, y habia muchas y muy frecuentes misiones de la una isla á la otra con grandes retornos, fingiendo los ministros del un santuario y del otro que la mujer del Sol, así como lo pudiera á su parecer hacer la Luna, le enviaba sus recaudos; los cuales el Sol le retornaba con caricias de tierna aficion y recíproco amor; y en esto gastaban mucho tiempo, ocupando en su ministerio gran cantidad de balsas, que iban y tornaban de una isla á otra; y para representar esto al vivo, se componía en el un adoratorio el ministro mayor, que representaba la persona del Sol, y en el otro una india, que hacia el personaje de la Luna. Brindábanse el uno al otro, y la que representaba á la Luna acariciaba al que figuraba al Sol, pidiéndole con caricias se les mostrasse cada dia claro y apacible y que nunca ocultase sus rayos, para que fertilizasen los sembrados hasta el tiempo en que fuesen necesarias las lluvias. Demás desto, le pedía que conservase en vida, salud y reposo al Inca y á los demás que con tanta fe y devocion se ocupaban en su servicio y culto; y el que en nombre del Sol se fingía, respondía con regaladas palabras, suficientes á satisfacer; y en este desvanéo y locura gastaban los miserables el tiempo de su ciega y ociosa vida, y todo paraba en beber, que era su mayor felicidad.''

[53] This is, of course, a mere suggestion.

[54] I base this estimate on the present condition of the ruins and on the situation of Iñak-Uyu. It is not likely that there were any buildings except those now seen.

[55] This is especially indicated by some walls included in those of the present hacienda and by a tank made of one block of stone, circular in form, and in existence at Cusijata. This tank is a work of great patience, but not regularly shaped. See description in Squier: *Peru,* p. 325, with illustration. The dimensions given by Mr. Squier fairly agree with our own measurements.

[56] This is also stated by Ramos: *Copacabana,* 1860, p. 27: ''Antes de llegar a Copacabana puso el Inca en el lugar de Locca unos graneros, que llamaban Colcas, donde se almacenaban víveres para el sustento de los peregrinos, de los ministros y del ejercito.'' The Colcas or Collcas were mostly circular.

[57] Cobo: *Historia,* etc., IV, p. 58.

[58] Ramos: *Historia,* etc., edition of 1860, pp. 47 and 52.

[59] Ramos: *Historia,* 1860, p. 31. I am in doubt as to whether the great slab lying across the gap in the rocks of Serocani has been placed there by hand of man or whether it is natural.

[60] Ramos: *Copacabana,* pp. 9 and 10, *et seq.* Cobo: *Historia,* etc., IV, p. 58.

[61] Ramos, p. 9.

[62] Just as, in Peru, the names *Huaman,* Condorcanqui, Tupayachi, etc.

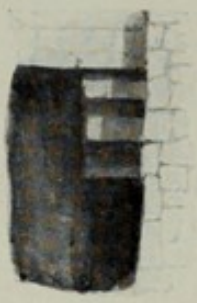
[63] It is mentioned by Cobo: *His-*

toria, IV, p. 58: "y segun los indios cuentan, tuvo el Inca voluntad de abrir la tierra y que el agua de una parte y otra cercase ó cerrase este promontorio, y que hiciese el efecto que la cerca." Of the wall there are several mentions, by Cobo as well as by Ramos.

[64] The allusions to "Inca conquests" are not very reliable.

[65] Our information about these ruins is from hearsay. The statements about the visit of Huayna Capac to the Islands are in Ramos (1860, Cap. XXIII, pp. 42 to 44). Calancha and S. Nicolas copied him. The Jesuit writers make no mention of it. Neither is there any allusion to buildings, in the works of the Augustines. The whole matter is rather vague and doubtful.

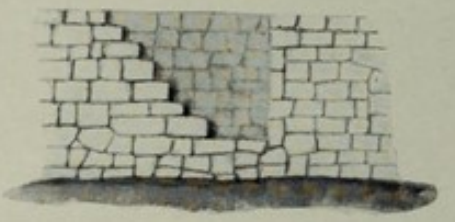
[66] Ramos: *Copacabana,* 1860, p. 48: "Tambien era de piedra de una figura malísima todo ensartijada de culebras . . . Lo imploraban para las lluvias en tiempo seco."



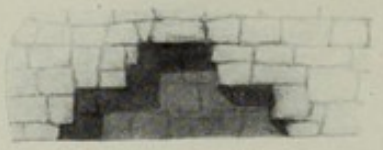
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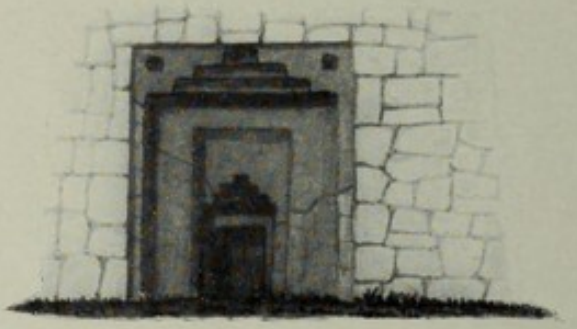
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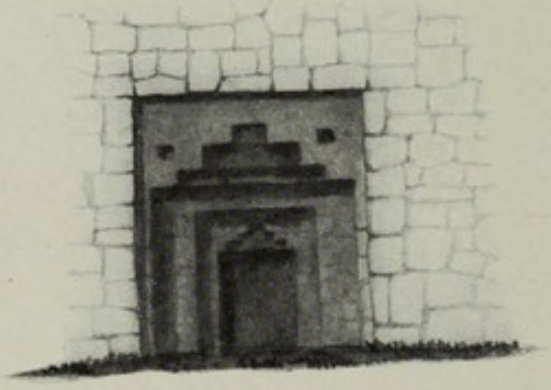
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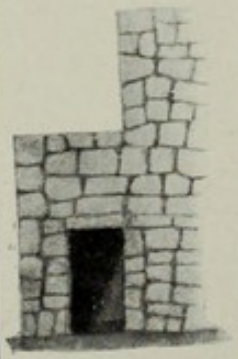
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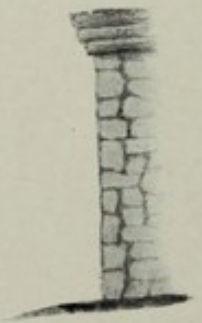
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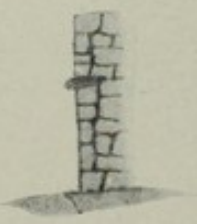
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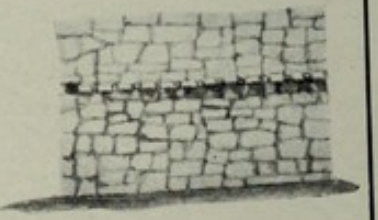
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PLATE LXXIV

Architectural details of ruins of the Iñak-Uyu

1, 2, 3. Stone steps. 4, 5. Ornamented niche and section. 6, 7. Ceiling and niche. 8, 9, 10, 11. Details of walls

PLATE LXXIV

Architectural details of ruins of the Ïñak-Uyu

1, 2, 3. Stone steps. 4, 5. Ornamented niche and section. 6, 7. Ceiling and niche. 8, 9, 10, 11. Details of walls

ABORIGINAL MYTHS AND TRADITIONS CONCERNING THE ISLAND OF TITICACA

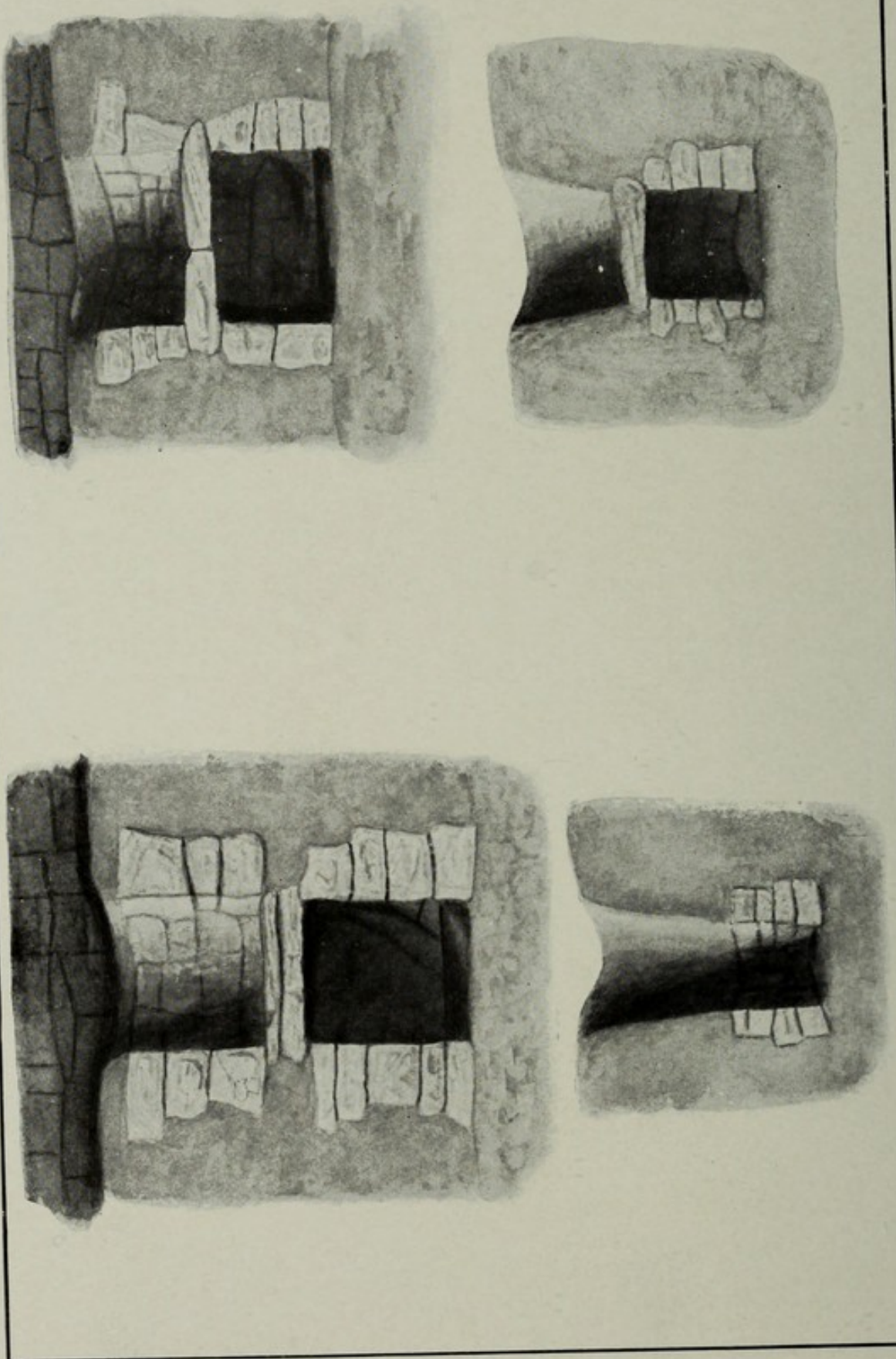


PLATE LXXV

Single and double graves at Iñak-Uyu

PLATE LXXXI

Single and double gauge elytra at Light-Day

Part VI

ABORIGINAL MYTHS AND TRADITIONS CONCERNING THE ISLAND OF TITICACA

THE most authentic sources for aboriginal Indian traditions are songs, orations, and tales, known to the members of religious or other societies of which every tribe has at least rudiments. Such societies sometimes preserve records from very remote times, through oral transmission. The substance changes but little in the course of centuries, but form may suffer modifications which distort the original picture or even shroud it almost completely.

On the Island of Titicaca the changes which its Indian population has undergone, and the promiscuous origin of the present inhabitants, made it very doubtful if any *original folklore* was still to be found. Esoteric clusters exist, but they are not originally from Titicaca. Their present members may have been born there, but the lore with which they are acquainted is not indigenous to the Island; at least in all likelihood. Its original occupants, Inca as well as Aymará, forsook Titicaca soon after the Spanish conquest, and the Island was repeopled only after several decades.

Therefore, at the very beginning of our residence on Titicaca Island we were assured that there was no trace of ancient folklore in the recollections of its inhabitants. Notwithstanding these assertions, we obtained several tales which, while liable to objections, still refer to pre-Spanish times and conditions. In so far as their main secrets of magic and their most important dances are concerned, the

Indians of Titicaca confessed they were derived from two points on the shores of the Lake—Sampaya and Huaicho. It is, therefore, possible that the folktales which we gathered on the Island have come from one or both of these points. It is also possible that what the Indian of to-day gives as primitive traditions were related to his ancestors by Spaniards and especially by priests, and from data preserved by writers of the sixteenth centuries. I shall record the few tales gathered by us, adverting that it was only little by little and with reluctance that the Indians became somewhat communicative on these topics. Their reticence might lead to suppose that what they told contains some authentic and primitive elements.

The belief that, in times far beyond distinct recollection of man, the sun first rose from the Sacred Rock, or Titi-Kala, was mentioned to us by several Indians on the Island, one of whom, an aged blind man, also stated that the moon was created there. The large nodules of limonite, which are said to be tracks of the sun and moon, bear some relation to this belief. One of our informants, an old wizard, told us that "the sun rose into the heavens from the Sacred Rock, in the shape of a big flame." But he also added that "the sun was the child of a woman" whom he called "Mama-Ojllia, who was the mother of Manco Capac." About the origin of the moon he professed to be ignorant.

"In very ancient times," said he, "the Island was inhabited by gentlemen (caballeros) similar to the viracochas" (name given to whites by the Indians to-day). Whence these "gentlemen" came he knew not. "They had intercourse with the women of the people, and the children were deposited in caves, where they were kept alive by water dripping from the rock of the ceiling. After a certain time the mothers went to look after their offspring and found them alive and well. These children, who had thus been exposed, became the *Inga-Ré* (Incas), and they drove out the gentlemen and held the Island thereafter." Whither

PLATE LXXVI

Painted vase, Iliac bottle, from Tell-el-Yehudiyeh in Egypt

PLATE LXXVI

Painted vase, Inca pottery from Iñak-Uyu on Koati


R. Weber.

the expelled "viracochas" retreated, the tale sayeth not.[1] The narrator mentioned the names of two women who acquired some note on the Island, one of whom he called "Maria Ka," the other "Mama Chocuayllo." About the Inca he remembered the names of Manco Capac, Viracocha, Huayna Capac, Roca, Huascar, and Atahuallpa, saying of Huascar that the Spaniards killed him near the Island.[2]

In a subsequent conversation the wizard stated that Atauhuallpa lived on the Island and Huascar at Cuzco, and that after the time of the "Inga-Ré" the Lake once dried up so completely that people from Huaicho came over on foot and killed the "Chullpa" then living on Titicaca. From one or the other Indian we obtained at least partial confirmation of this. All seemed to agree that the sun had made its first appearance on the Sacred Rock, and that the "Inga-Ré" originated on the Island.

While we were at the pueblo of Tiquina, the parish priest, Father Nicanor Vizcarra, related to us the following tale which had been told him by an Indian from Copacavana:

"The Peninsula of Copacavana was inhabited prior to the time of the Inca by a tribe of rude Indians who owned flocks of llamas. Every evening the herders returned the flocks to the care of the chief of the tribe, and among their number was a dumb girl. For several months this girl failed to put in an appearance. The fact of the matter was that she had given birth to a male child in some cave on the Peninsula, and that a female deer was nursing it. The fatherless boy grew up in that cave, his mother visiting him daily toward evening. This went on for a number of years, until at last somebody followed her stealthily. He saw her approach the cave. A boy rushed out of it to embrace her and she returned his caresses. When this boy reached the age of manhood he begged his mother to give him a club and to make him three slings. With the aid of these weapons he soon became powerful, and this was the origin of the Incas."[3]

This tale has a slight resemblance to the Montezuma story as told in New Mexico.[4] But the bringing up of the child in a cave, and with the assistance of a female deer, also recalls the legend of Saint Genoveva and, in a way, that of Romulus and Remus! Legends of the saints, also bits of classical history, were frequently told the Indians by priests of the Catholic Church.[5] The tales from Titicaca and Tiquina agree, as we shall see further on, with Titicaca lore as represented by the majority of older sources in more than one respect, only the story of the hind is found nowhere else. Hence we may be permitted to ask, is it perhaps a post-conquistorial aggregate to primitive tales?

Turning now to the earliest mentions of Titicaca lore by Spanish writers, I must premise that the first report on the Island, the one so often quoted by me (of July 15, 1534), makes no mention of ancient lore.[6] Gonzalo Fernandez de Oviedo y Valdés, who for many years carefully collected the data, written and oral, which his contemporaries brought back from the New World, and especially from such sections of it as were not known to him by personal inspection, makes no mention of Titicaca lore, limiting himself to a brief statement of a Cuzco tradition, according to which the Incas had come to Cuzco from the outside and were not originally from that valley.[7]

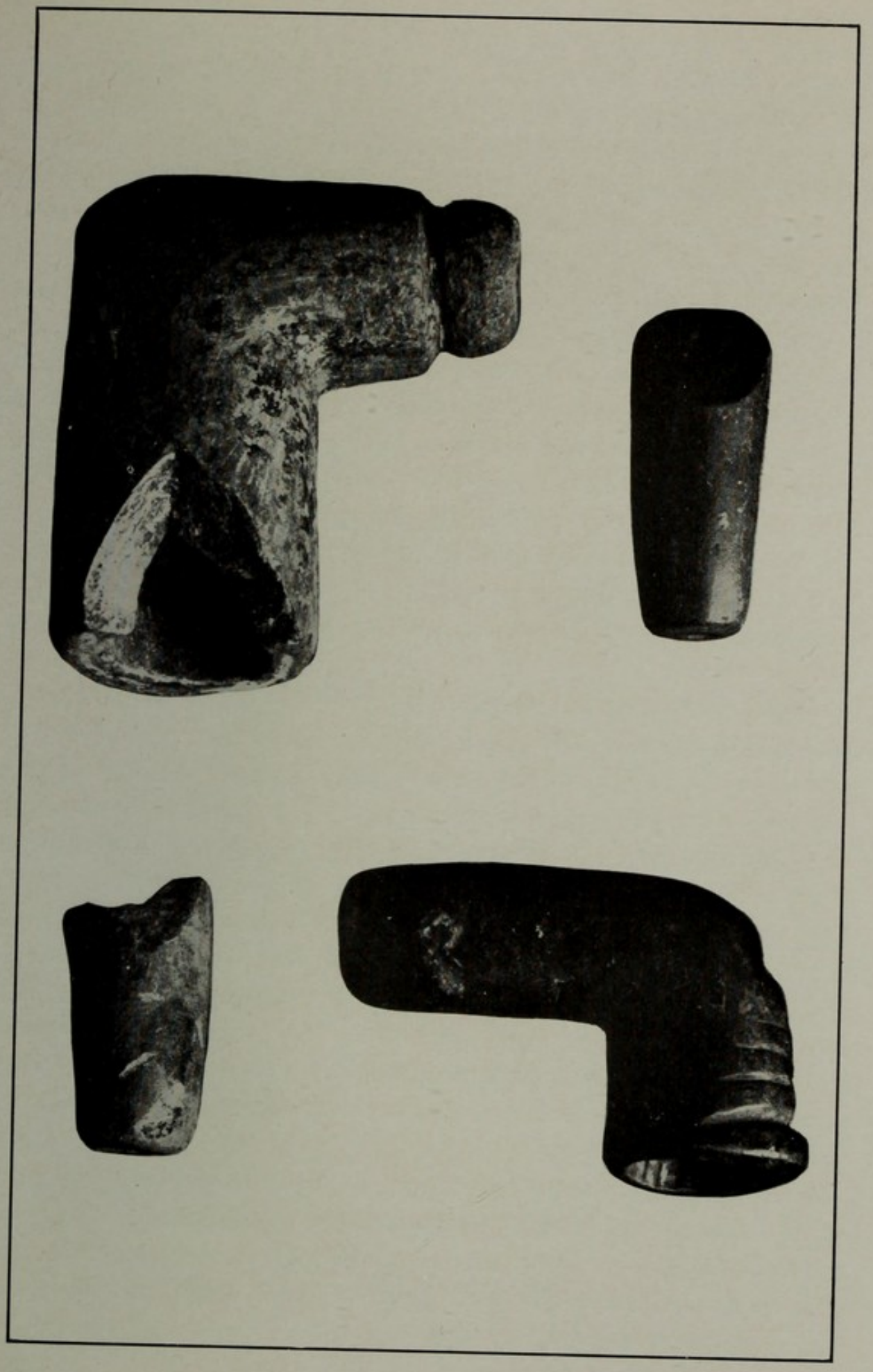
Pedro Pizarro was an eye-witness of the conquest and took an active part in it. His report on Peru was finished in 1571, but is the result of observation and experiences in that country since 1532. I therefore place him here, as one of those who held earliest communication with the natives and saw Peruvian society while it was yet in its primitive condition. He briefly remarks: "These Indians say that an Inga was the first lord. Some say he came from the island of Titicaca, which is an island in a lagoon of the Collao. . . . Other Indians claim that this first chief came forth at Tambo. This Tambo is in Condesuios, six leagues, more or less, from Cuzco."[8]

PLATE LXXVII

Objects of stone from Island of Koati, resembling tobacco-pipes,
and excavated at Inák-Uyu

PLATE LXXVII

Objects of stone from Island of Koati, resembling tobacco-pipes, and excavated at Iñak-Uyu



In 1542 the Licentiate Cristóval Vaca de Castro, then *de facto* Governor of Peru, instituted the first official inquiry into ancient lore of the Cuzco Indians, the proceedings of which are given in a document entitled: *Discurso sobre la Descendencia y Gobierno de los Ingas,* and published by the late Don Marcos Jiménez de la Espada. That investigation, carried on with a great deal of care and much sound discrimination, contains no allusion to lore about Titicaca, but places the origin of the Inca at Pacaritambo (Tambo) near Cuzco.[9] Aside from the value this document has for specific "Inca" history, it is important for mentioning the name of an author who is of great importance in connection with Peruvian Indian lore—Juan de Betanzos. He was one of the two Spaniards who controlled the examination of the Indian witnesses, being in 1542 already "one of the persons who knew very well the general language of this kingdom, and who wrote down what was declared by means of the *Quipos.*"[10]

Betanzos is generally looked upon as one of the earlier companions of Pizarro.[11] He spent the rest of his life at Cuzco, having married an Indian girl from the Inca tribe. He wrote a *Doctrina chripstiana* accompanied by *two vocabularies,* previous to 1550, and which are still unpublished at the National Archives at Lima. While at work on the *Doctrina,* etc.,[12] he also composed a history of the Inca entitled: *Suma y Narracion de los Incas,* finishing it about 1551.[13] The manuscript was intact in the early part of the seventeenth century,[14] but was lost sight of afterward until, in 1875, the indefatigable and judicious student of Spanish-American history, Jiménez de la Espada, found the first eighteen chapters of it at the Library of the Escurial.[15] Of the rest of the book no trace has as yet appeared. Fortunately the fragment published contains what is of greatest importance here: the early traditions of the Indians of Cuzco and especially of the Collas or Aymará, gathered by Betanzos within ten, or at most fifteen, years

after 1532. At such an early date Indian folk-tales and myths could not have been much contaminated through contact with the whites and, while there are, in some of the traditions recorded by Betanzos, inklings of extra-American influence, the substance appears to be authentic and primitive. The connection of Betanzos with the Inca through marriage, while of great advantage in many respects, exposed him to a serious danger; the same that lessened the value of works written half a century later by Indian writers in Mexico and, in a still higher degree, the value of the book of Garcilasso de la Vega. His informants, being Inca, told only *their side* of the story, with a tendency to extol to the conquerors (whose favor they were beginning to court) the importance of their tribe and of its culture. Even traditions and myths, when told by people thus inclined, lose some of their purity. But Betanzos has also preserved to us traditions that originated away from Inca influence. He tells us:

"In ancient time, they say, the country and province of Peru was in darkness, having neither light nor day. There were, at that time, certain people in it, which people had a certain chief who commanded them and to whom they were subjected. Of the name of the people and of the chief who commanded them they have no recollection. And in those times, when all was night in this land, they say that from a lagune in this country of Peru, in the province of Collasuyo, there came a chief called Con Tici Viracocha who, they say, had with him a certain number of people, which number they do not recollect. And after he had sallied from this lagune, he went from there to a site that is close to this lagune, where to-day is a village called Tiaguanaco, in the aforesaid province of the Collao. And as he went thither, he and his own, forthwith there improvisedly, they say, that he made the sun and day, and ordered the sun to move in the course it now moves and afterward, they say, he made the stars and the moon. Of this Con Tici Viracocha they

PLATE LXXVIII

Objects in gold from the Islands of Titicaca and Koati

1, 2. Bangles of gold-leaf from the vicinity of the Sacred Rock. 3, 4. Golden pins fro
the level in front of the Sacred Rock. 5, 6. Llamas of gold from above site.
7. Human figure of gold (offering) from same place. 8. Animal fig-
ure of solid gold-leaf from the Island of Koati (see text).

PLATE LXXVIII

Objects in gold from the Islands of Titicaca and Koati

1, 2. Bangles of gold-leaf from the vicinity of the Sacred Rock. 3, 4. Golden pins from the level in front of the Sacred Rock. 5, 6. Llamas of gold from above site. 7. Human figure of gold (offering) from same place. 8. Animal figure of solid gold-leaf from the Island of Koati (see text).



say he had appeared once before, on which occasion he made the sky and the earth, leaving everything in obscurity, and then he made the people who lived in darkness as aforetold, which people did some sort of wrong to this Viracocha, and being angered by it, he turned to come out again this last time and came forth as on the first occasion, and those first people and their chief he converted into stones, in punishment for the anger they had caused him."[16]

The substance of the above is that there was, at the time of first contact between the Spaniards and the Indians of southern Peru and adjacent parts of Bolivia, a tradition to the effect that there had been two successive "creations," and both by the same being, represented as a man endowed with supernatural faculties. After the first creation, that personage came out of Lake Titicaca and went to Tiahuanaco, where he dispelled the darkness (in which he had left the world after his first creative effort) by making the sun, moon, and stars, and regulating their course in the heavens. Thus far the tales connected with Titicaca Island.[17] It is well to note, that the manuscript of Betanzos has "*Titi* Viracocha," *not* "*Tici*" as Espada changed it, in order to conform with later spellings. It would have been preferable to retain the spelling of the original.

Contemporary with Betanzos, although not participants in the conquest, were two writers, whose role in South America was very similar—Pedro de Cieza (of Leon)[18] and Pedro Gutierrez de Santa Clara. Both were soldiers and made the campaigns of the civil wars among the Spaniards. Gutierrez arrived in Peru at least three years earlier than Cieza and remained in the country (probably) longer than the latter. But he finished his voluminous work only after 1603,[19] whereas Cieza completed the First Part of his Chronicle in 1550, and the remainder between that year and 1560.[20] Hence he deserves precedence, in that he wrote under more recent, hence more vivid, impressions. But Cieza is by no means an infallible guide. He was certainly

a close observer and a painstaking recorder, but, as is the case with many, he lacked time and knowledge of the Indian languages. He freely acknowledges the latter.[21] Hence his information on Indian traditions, compared with that of Betanzos, is in reality "second-hand." But it agrees quite well with that furnished by the latter, thus corroborating in a measure its authenticity. It is also possible that he obtained his information through Betanzos, or at least from Indian sources the latter consulted, although he mentions what may appear to be independent authority. In the First Part of his Chronicle he relates a myth to the effect that, after many years of darkness, the sun rose from the Island of Titicaca in great splendor; thenceforth that Island was regarded as sacred, and the Inca reared on it a temple dedicated to "their" sun. In another place he says that one of the principal chiefs of the Collao went to the "lagune of Titicaca, and met on its principal Island white men with beards with whom he fought in such a manner as to succeed in killing them all."[22] Should this event prove true, then Cieza furnishes an approximate date for its occurrence by placing it during the term of office of the chief Viracocha, hence in the fourteenth century.[23] In the Second Part he is more definite and alludes to the source whence he got his information: "They also tell what I have written in the First Part: that on the Island of Titicaca, in the past centuries, were white people, with beards, and that, coming forth from the valley of Coquimbo a captain by the name of Cari, he reached where now is Chucuito from where, after having made some new settlements, he passed over to the Island with his people, and made such war upon that people of which I speak, that he killed them all. Chirihuana, governor of those pueblos (which pertain to the Emperor) told me what I have written. . . ."[24] The name "Chirihuana" recalls one of the older societies of dancers still extant among the Aymará, and if the traditions should be proven as coming from such a source, seventeen years after

PART XXXI

Tree pottery from Ishigaki

1. From Dusk-Hill on Kosti. 2, 3. From graves on Tittiges Island

Plate LXXIX

Inca pottery from the Islands

1. From Iñak-Uyu on Koati. 2, 3. From graves on Titicaca Island



1



2



3

the arrival of Pizarro and sixteen after his occupation of Cuzco, they might be primitive lore of considerable authenticity and purity.

The first and second chapter, also the greatest portion of the third, of Cieza's Second Part of the "Chronicle of Peru," are unfortunately missing. In Chapter IV he states: "Many times have I asked the inhabitants of these provinces what they knew about what there was in them before the Incas ruled over them . . ."[25] Cieza had a comparatively short time for his investigations, and was dependent upon interpreters, still what he ascertained in this manner concerning Titicaca lore corresponds in the main with what is stated by Betanzos. He says: "Before the Incas ruled in these kingdoms and were known in them, the Indians tell another much more important thing than all the rest, for they affirm that for a long time they were without seeing the sun, and that suffering a great deal on that account, they prayed and made vows to those on whom they looked as their gods, begging them for the light of which they were deprived. And while this was going on the sun rose in great splendor from the Island of Titicaca, which is within this great lagune of the Collao, so that all were delighted. And after this had happened, they say that from the part of midday there appeared and came a white man of large size who showed great authority and inspired veneration by his person and presence; and that this man, of whom they say he had so much power that of heights he made levels and of plains great heights, creating springs in live rock. And as they recognized in him such power, they called him Maker of all Created Things, Beginning Thereof, Father of the Sun, for they say that besides these he performed other and greater deeds, because he gave to men and animals their existence and that finally they derived from him great benefits."[26]

This Being the Indians, according to Cieza, call Ticiviracocha, also Tupaca and Arnauan or Aranauan.[27] It is easy

to recognize in him the "Con Tici Viracocha" of Betanzos. Only the latter makes him come from Titicaca Island, whereas Cieza states he came from the South. There might be, in the tales gathered by Cieza, a confusion with the first appearance of the "Viracocha" mentioned by Betanzos, and of which Cieza does not seem to have been informed.

Pedro Gutierrez de Santa Clara, as stated, is not as original a source as Cieza. The information he conveys is at variance with that of the preceding authors, but it recalls the remark of Pedro Pizarro: "These Indians say that an Inga was their first lord. Some say he came from the Island of Titicaca."[28]

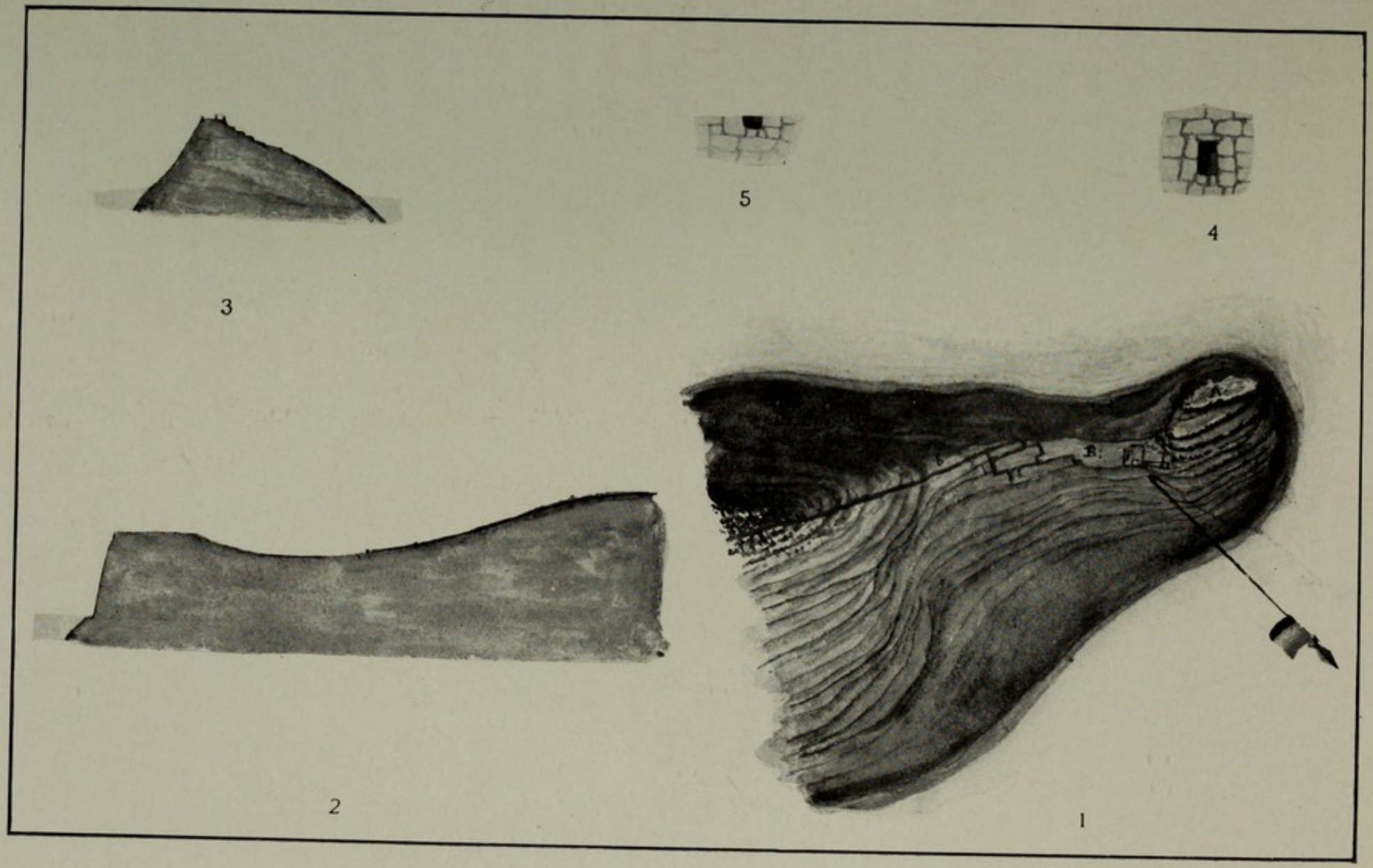
Gutierrez attributes Creation to two distinct beings, the first of which was called "Cons," the other "Pachacama," the second destroying what the first had done to remake it after his own pleasure. After these two deities: "The first Indian lord who began to enter foreign lands was called Mango Ynga Zapalla and this Indian initiated the wars. He went forth with armed people from a large island called Titicaca, which is inmidst of a lagune that is very large and quite deep, in the great province of *Atun Collao*. This Mango Ynga Zapalla succeeded in becoming a very renowned and preferred lord, more than all the small chiefs, curacas, that were around of that lagune; on account of which he, by advice of the fiend and of the sorcerers, sought to occupy their lands in a thousand ways, modes and manners he could, and to place them under his lordship and command. And with this intention he went forth with many people from the Island, in many rafts made of canes and dry wood. Forthwith, by flatteries and threats he drew unto him some curacas and small chiefs, and those who would not obey his bidding he made war upon until he put them under his dominion and command. When he found himself lord of this great province, and that all the curacas and principal Indians served him as their natural lord, he founded a settlement which he called Atuncollao which is to

PLATE LXXX

1. Orthoptera. 2. Longitudinal section of Kosti. 3. Transverse section of thorax of Photomoty. 4, 5. Night and day views of Lilly-Pekí and Tuna valley called La Chiclayeria

Plate LXXX

1. Ground-plan of promontory of Uila-Peki and ruins called La Chicheria on Island of Koati. 2. Longitudinal section of promontory. 3. Transverse section of promontory. 4, 5. Niche and section at the Chicheria


3
5
4
2
1

say: the great Collao. In this settlement he established his seat and royal court in order that the Indians he had conquered might not rebel, and after he had them well subjected and pacified, his days came to an end. . . .''[29] He further states that the seventh Inca war-chief, whom he calls Topa Ynga Yupangue, conquered the settlement of Cuzco and established there the tribe of the Inca.[30]

The list of Inca chiefs furnished by Gutierrez does not agree with that of Betanzos in some respects, neither does it with the list of Cieza, whereas it fully agrees with that of Garcilasso de la Vega.[31] But it does not seem possible that the book of the latter could already have been consulted by Gutierrez. The agreement in the names and the sequence of the war-chiefs points to a common source of information. On the other hand traditions about the conquest of the Collao from Titicaca Island, in the tenth century, about, recall the statements of Oviedo and Pedro Pizarro, in a general way. In other respects (for instance, in regard to the creation by Cons and re-creation by Pachacamac) there is an analogy between Betanzos and Gutierrez. Close agreement in Indian tradition gathered by distinct sources can never be expected, but the conquest of Cuzco by Indians of Aymará stock, part of whom originally came from Titicaca Island, is not mentioned by the two elder Spanish chroniclers, Betanzos and Cieza.

Agustin de Zárate, royal treasurer in Peru, whither he came in 1543,[32] earlier than both Cieza and Gutierrez, states in his *History of the Discovery and Conquest of Peru,* the first edition of which appeared at Antwerp in 1555: ''These lords kept their Indians at peace and were their captains in the wars they had with their neighbors, and there was no general lord of the whole land, until from the region of the Collao, from a great lagoon there is (in it), called Titicaca, which has eighty leagues in circumference, there came a very warlike people which they called ingas. These wore the hair short and had the ears perforated, with

pieces of gold in the holes which enlarge the apertures. These called themselves [are called] ringrim, signifying ear. And the principal among them they called Zapalla inga, (the) only chief, although some mean to say that he was called inga Viracocha, which is 'froth or grease of the sea,' since, not knowing where the land lay whence he came, (they) believed him to have been formed out of that lagune. . . . These ingas began to settle the city of Cuzco, etc.''[33]

Substantially, this is what Gutierrez has stated, and it may have been recorded about the same time.

Three years prior to the appearance of the book of Zárate, the first issue of the Chronicle of Francisco Lopez de Gomara was published, but as the author never was in America and obtained his information at second hand, I place him after the former. Treating of the Inca Gomara states: ''Their origin was from Tiquicaca, which is a lagune in the Collao, forty leagues from Cuzco, the name of which signifies Island of Lead. . . . It is eighty leagues in circumference. The principal Inca who took away from Tiquicaca the first ones and led them, was called Zapalla, signifying only chief. Some aged Indians also say that he was called Viracocha, which is to say 'grease of the sea,' and that he brought his people by sea. They finally affirm that Zapalla peopled and settled Cuzco, whence the Incas began to make war upon the surroundings.''[34]

The similarity of the above and the text of Zárate is striking, yet it is hardly possible that one copied the other, unless Gomara obtained access to the manuscript of Zárate. The latter had good opportunities of securing knowledge about Indian folk-lore at what we may consider first-hand; hence, if there has been any plagiarism, it is more likely to have been committed by Gomara, after the return of Zárate to Spain. The author of the Chronicle, and chaplain of Hernando Cortés, however, lived in official disgrace and obscurity at the time, and his book was not well received at Court, whereas Zárate, who had no intention of publishing

his work himself, but intended it for posthumous issue, was compelled to have it printed by pressure from Court.

There is still another and similar version, from the same period, apparently:

An anonymous document, already mentioned by Prescott, but hardly noticed since, entitled *Conquista y Poblacion del Perú,* states the following: "After this was done, these large-eared people (Orejones) say that the manner in which they got a chief among themselves was, that (from) a lagune which is thirty leagues from Cuzco, in the land of Collao, and (which) is called Titicacaca, the principal of them, who called himself Viracocha, came forth, who was very shrewd and wise and said he was a child of the sun. And of this one they say that he gave them polity in dress and in building houses of stone, and he it was that built the Cuzco and made stone-houses and the fortress and house of the sun. . . ." This document is not complete, hence no certainty exists as yet regarding its date, although there are indications that it was written during the period of early colonization in Peru.[35]

Leaving aside the short notice which Oviedo has preserved to us, and in which Titicaca is not mentioned, we have thus far, in the first half of the sixteenth century what appear to be two distinct versions of traditions concerning the remote past of that Island. Betanzos and Cieza are silent on the subject of a "conquest" of Cuzco by people originally issued from Titicaca. Still even they hint at something akin to it. Betanzos states: "And from there (speaking of the journey of Viracocha from the country around the Lake northward) the Viracocha departed and came on, making people as you have heard, until he came to Cuzco where, upon arriving, they say, he made a chief, to whom he gave the name of Alcauiza, and also named the place of that chief (he) made, Cuzco, and, leaving directions how, after he would be gone, the 'large ears' should come forth, he went on performing his task." He goes on to relate how, while Alcauiza was

chief of the little hamlet of thirty houses that then constituted the settlement, four men came out of a cave at Pacaritambo, among them Ayar Mango who afterward became Manco Capac and the first Cuzco chieftain of the Inca.[36]

Cieza also mentions the preponderance of the tribe at Hatun Colla of which Gutierrez treats, but without connecting its origin with the people of the Island, and he describes the "creation" of the Inca as independent from Viracocha or from any conquest by Colla Indians. I have alluded to the character of his information and manner in which he obtained it.

In the second half of the sixteenth century the number of writers that gathered Indian lore is considerably greater than in the first, but they obtained it at a period more remote from first contact, and when Indian society was already disturbed and the teachings of the church had penetrated the mind of the natives, creating lasting impressions.

Garcilasso de la Vega, who lays particular stress on his Inca descent from the *Mother's side* (!) while pretending that succession was in the *Male line,* was born at Cuzco in 1540, and remained in his mother's care until 1560, when he went to Spain for the remainder of his life.[37] He spoke Quichua perfectly, being in constant contact with his Indian relatives. He also kept up connections with Inca descendants at Cuzco by correspondence, in his later years.[38] At least part of the object he had in writing his *Comentarios* was, to assist in the presentation of certain claims which his Indian relatives had or believed they had on the Spanish government.[39] In order to press these claims more effectively, Garcilasso de la Vega wrote a History of the Inca, with a description of their general degree of culture, society, and creed, very palatable to the notions of the times, especially in that it supplies primitive Peru with a monarchical and theocratic organization which Europe could understand,

PLATE LXXXI

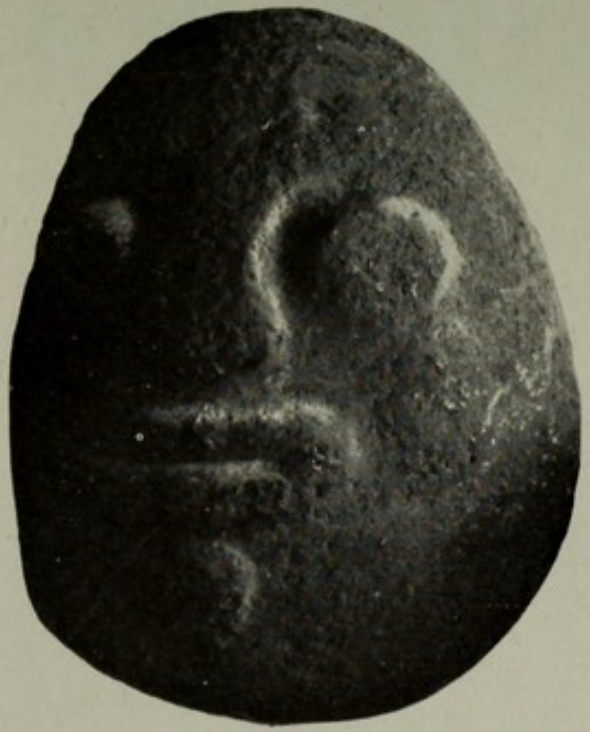
1. Stone head, excavated at Tell-el-Yehudiyeh, found at Kosh.

2, 3. Stone figures from Cobbe's Collection.

PLATE LXXXI

1. Stone head, excavated at Iñak-Uyu, Island of Koati.

2, 3. Stone figures from Copacavana



1



2



3

and by means of which ancient birthrights and claims to succession based upon supposed heredity could be not merely insinuated, but introduced. His statements on the religion of the Inca are colored by the desire to eliminate from their creed and customs as much as possible facts clashing too harshly with Christian principles. Garcilasso is (and for interested motives) constantly endeavoring to push primitive Peruvian culture as near as possible to the European of his time. Much of his detailed information is of the highest value, but he has woven it into a picture (by using terminology of the so-called Old World and its social condition) that is misleading. While this may not be absolutely germane to the subject, it is necessary for a due appreciation of Garcilasso's writings, which contain considerable material for ancient folk-lore, of the Quichua as well as of the Aymará Indians.

Garcilasso conveys the following information concerning the manner in which he secured the traditions, which he gives as authentic:

"It struck me that the best plan and way was to relate what, in my childhood, I heard many times from my mother, and from her sisters and uncles, and from other and elder people, about their origin and beginning. . . . My mother residing at Cuzco, her home, there came to visit her nearly every week the few relatives, male and female, who had survived the cruelty of Atauhuallpa. During these visits their usual conversation was about the origin of their kings, of their supremacy, of the greatness of their empire, of their conquests and great deeds in governing, in war as well as in the laws they made, so beneficial to their vassals.

"During these discourses I, who was a boy, often ran in and out, amusing myself with parts of the story as children do with the tales of nurses. In this manner days and years went by, until I had come to the age of sixteen or seventeen. Being one day present with my kindred, who were discoursing of their kings and ancestors, it came to my mind to ask

the most elderly person amongst them, and so I interrupted his speech in this manner: 'Inca,' said I, 'and my uncle, how is it possible, since you have no writings, that you have been able to preserve the memory of things past, and of the origin of our kings?' "[40] The aged Indian whom he thus addressed and who afterward became his chief informant, made the following statement in regard to the origin of the Inca:

"You must know, therefore, that in ages past all this region and country you see around us was nothing but mountains and wild forests, and the people in those times were like so many beasts, without religion or government; they neither sowed, nor ploughed, nor clothed themselves, etc., etc. Our Father the Sun, beholding men such as before related, took compassion on them, and sent a son and a daughter of his own from heaven to earth to instruct our people in the knowledge of Our Father the Sun, that they might worship and adore him and esteem him for their God, giving them laws and precepts whereunto they might conform their lives, like men of reason and civility. . . . With these commands and instructions, Our Father the Sun placed his two children in Lake Titicaca, which is about eighty leagues hence, giving them liberty to go and travel wherever they pleased; and in whatsoever place they stayed to eat or sleep, they should strike into the ground a little wedge of gold which he had given them, being about half a yard long and two fingers thick, and where with one stroke this wedge would sink into the earth, there should be the place of their habitation and the court unto which all people should resort. . . . Thus Our Father the Sun, having declared his pleasure to these his two children, he dispatched them from him, and, taking their journey from Titicaca northward, at every place where they came to repose they tried to strike their wedge into the ground, but it took no place, nor would it enter. At length they came to a poor inn, or place wherein to rest, about seven or eight leagues south-

ward from this city, which to this day is called Pacarec Tampu, which is as much as to say, 'The Shining or Illuminated Dormitory.' This is one of those colonies which the Prince planted, the inhabitants whereof boast of this name and title which our Inca bestowed upon it; whence he and his queen descended to the valley of Cozco, which was then only a wild and barren mountain." "This was the relation made to me by this Inca, brother of my mother, concerning the origin of the kings of this country. I afterward tried to translate it faithfully from my mother-tongue, which is the Inca, into Spanish."[41]

Garcilasso then proceeds to tell other traditions, from other parts of Peru:

"Having to report the most current opinions touching the origin of the Inca kings, I will say that most of the people of Peru, that is, the Indians from south of Cozco, what they call Collasuyu, and those in the west, called Cuntisuyu, tell about it a very pleasing fable. In order to make it more authoritative through time (antiquity), they say it happened after the deluge, of which they know nothing beyond that it really took place. . . . Thus they say that after the waters of the deluge had subsided, a certain man appeared in the country of Tiahuanacu, which is to the south of Cozco. This man was so powerful that he divided the world into four parts, and gave them to four men whom he honored each with the title of king, the first of which was called Manco Capac, the second Colla, the third Tocay, and the fourth Pinahua. To this they add that he gave the northern part to Manco Capac, that of the south to Colla (after whom that great province has ever since been called), to Tocay that in the east, and to Pinahua that of the west. They further assert that, after having thus favored them, he sent each one to the land pertaining to him, to conquer and govern all the people there found.

"The Indians who live east and north of the town of Cozco report another origin of the Incas, similar to the

preceding. For they say that in the beginning of the world four men and four women, who were brothers and sisters, came out of the windows in certain rocks that are near the city, in a place called Paucartampu. . . . The first of these brothers is called by them Manco Capac, and his wife Mama Ocllo. They believe that this one was the founder of this town."

All the tales except the first one (told him by his relatives) Garcilasso regards as silly fables, while acknowledging that they are authentically Indian and primitive.

It is easy to recognize in the tales recorded by Garcilasso the substance of those contained in the sources preceding him. But it is manifest that, since Garcilasso was told of them while he was yet a youth, his aged Indian relative adapted them to the age of his listener. An Indian of experience, and really versed in ancient lore, will never disclose such matters in their real aspect to younger men, except after their discretion has stood an exceptionally severe test. To such a test Garcilasso does not seem to have been subjected, hence the stories which he repeats have not the merit of the results of serious investigation like those of Betanzos and even of Cieza.

Garcilasso acknowledges also other sources of information. The writings of Father Blas Valera, partly destroyed at the sacking of Cadiz by the English in 1596, are quoted by him repeatedly. Valera was a native of Chachapoyas in northeastern Peru and received in the Jesuit order at Lima in 1568, whence he went to Cuzco three years later, so that, the date of his birth being 1551, he must have begun, like Garcilasso, his investigations about the Indians at quite an early age.[42] This, the fewer opportunities he may have had for cultivating intimacy with the aborigines, and his early death in Spain, lessens the value of Father Valera's data. Nevertheless it should not be overlooked that he arrived at Cuzco at a time when special investigations were being carried on there on the subject of Indian historical

PLATE LXXXII

The Alliance to appeal to Conscience

PLATE LXXXII

The village of Copacavana



lore, both by order of the Viceroy Don Francisco de Toledo and, separately, by instructions of the Bishop of Cuzco, then Sebastian de Artaun or Lartaun.[43]

Through the former, no information relative to Titicaca Island was revealed as far as known. Neither is there any mention of the Island in the investigation reported upon by the Licentiate Polo de Ondegardo in the same year of 1571. The latter merely alludes, in terms very brief, to some stories according to which Cuzco had been originally settled from other parts, but he adds: "This is of small importance, because they say it happened before the Deluge, and they connect it with certain fables that, being very old, it is not necessary to dwell upon."[44] I would add, that the "Deluge" appears first almost simultaneously in the writings of Cristóval de Molina, of which I am now to treat.[45]

The result of the clerical investigation was reported upon by a secular priest, Father Cristóval de Molina, who resided at Cuzco between the years 1570 and 1584 as priest of the hospital founded in 1557 for the exclusive benefit of Indians and afterward converted into a municipal infirmary.[46] Father Molina, in his treatise entitled *Relacion de las fábulas y ritos de los Yngas,* of which only the translation by Sir Clement R. Markham is at my command, treats at length of ancient lore of the Cuzco tribe and adjacent clusters. He states:

"And first with regard to their idolatries, it is so that those people had no knowledge of writing. But in a house of the Sun called Poquen-Cancha, which is near Cuzco, they had the life of each one of the Yncas, with the land they conquered, painted with figures on certain boards, and also their origin. Among these paintings the following fable was represented: In the life of Manco Ccapac, who was the first Inca, and from whom they began to be called Children of the Sun and to worship the Sun, they had a full account of the Deluge. They say that all people and all created things perished in it, in as far as the water rose above all the high-

est mountains in the world. No living things survived except a man and a woman, who remained in a box, and when the waters subsided, the wind carried them to Huánaco, which will be over seventy leagues from Cuzco, a little more or less. The Creator of all things commanded them to remain there as Mitimas, and there in Tiahuanaco the Creator began to raise up the people and nations that are in that region, etc. . . . They say that the Creator was in Tiahuanaco and that there was his chief abode. . . . They say that it was dark, and that there he made the sun, the moon, and stars, and that he ordered the sun, moon, and stars to go to the Island of Titicaca, which is near at hand, and thence to rise to heaven. They also declare that when the sun in the form of a man was ascending to heaven, very brilliant, it called to the Incas and to Manco Capac as their chief, and said: 'Thou and thy descendants are to be Lords and are to subject many nations. Look upon me as thy father and thou shalt be my children and thou shalt worship me as thy father.' And with these words it gave to Manco Ccapac for his insignia and arms the *Suntur Paucar* and the *Champi* and the other insignia that are used by the Incas, like sceptres. And at that point the sun and moon and stars were commanded to ascend to heaven and to fix themselves in their place, and they did so. At the same instant Manco Ccapac and his brothers and sisters, by command of the Creator, descended under the earth and came out again at the cave of Paccari-Tambo, though they say that other nations also came out of the same cave, at the point where the sun rose on the first day, after the Creator had divided the night from the day. Thus it was that they were called Children of the Sun, and that the Sun was worshiped and revered as a father."[47]

In the first place, it is interesting to note that Molina refers to "figures on certain boards" as his principal source for the above tales. These boards he says were kept at a shrine called "Poquen-Cancha," near Cuzco. The proper

name for this shrine, which was one of the eighty "Guacas" or "Huacas," that, according to Father Bernabé Cobo, S.J. (1653), existed near Cuzco, is given by him as "Puquin cancha." This is, very probably, a misprint (or misreading) for *Puquiu Cancha,* signifying "enclosure of the spring." Cobo says of it that it was a house of the Sun on the summit of "Cayocache," where they sacrificed children.[48]

Pedro de Sarmiento Gamboa, to whom the Viceroy Toledo committed the task of condensing the multifarious material gathered about that time into a "History" of the so-called "Inca Empire," spreads out the tale of the painted boards in the following manner: "There connects with this the great investigation which Pachacuti Inga Yupangui, ninth Inga, who issued a general call to all the old historians of all the provinces he subjected, and even of many others more from all those kingdoms, and he kept them in the city of Cuzco for a long time, examining them concerning the antiquities, origin and notable facts of their ancestors of those kingdoms. And after he had well ascertained the most notable of their ancient histories he had it all painted after its order on large boards, and he placed them in a big hall in the house of the sun, where the said boards, which were garnished with gold, would be like our libraries, and he appointed learned men who could understand and explain them. And nobody could enter where those boards were, except the Inga, or the historians, without express license from the Inga."[49]

At the same time and in consequence of the investigation instituted by the viceroy Toledo, four "cloths" were produced, on which were painted "the figures of the Ingas as well as the medals of their women and Ayllos, and the history, on the edges, of what happened at the time of each one of the Ingas, and the fable and noteworthy things that go on the first cloth which they call of Tambotoco, and the fables of the creations of Viracocha that go on the edge of

the first cloth as foundation and beginning of the history; each thing by itself distinct, as it is written and rubricated by me the secretary present," etc. These four cloths were shown to a large number of Indian witnesses that had been interrogated at the time. The paintings had been made for the purpose of accompanying and illustrating the (lately published) work of Pedro de Sarmiento Gamboa, which was then read, in part, to the Indians by an interpreter, and the four pieces of cloth served to illustrate the talk. The Indians, in their usual way, approved everything contained on the cloth and in the talk, which means very little, as the Indian approves (*cum reservatione mentali*) more or less everything that is shown and read to him, and declares it to be true. Whether these four pieces of painted cloth stood in any relation to the four panels of Molina is not possible to assert or deny, as yet. The former were sent to King Philip II of Spain.[50]

The principal source, however, for the statements of Molina, seems to have been, according to Cobo, "another general gathering of the old Indians who had yet seen the times of the chief Guayna Cápac, which gathering was made in the very city of Cuzco by Cristóbal de Molina, curate of the parish of Our Lady of Remedios of the hospital of the natives; by. command of the Bishop D. Sebastian de Lartaum."[51] Cobo claims that the results of that investigation agree with those of Polo de Ondegardo and the Viceroy Toledo, which he states to have had and consulted. What I have been able to see of them does not, as stated before, contain any direct allusions to Titicaca, but there are others which I do not know.[52] Gatherings of Indians with the view of ascertaining ancient lore are not always successful. The Indian dislikes to communicate on such subjects in the presence of witnesses from his own race.

The deep and rapid impression made by biblical tales on the mind of the Indians, through teachings of the Catholic Church, is perceivable in some of the traditions reported

PLATE XXXIII

Purl-Knit : alone seats of legs and to close one Colossean

PLATE LXXXIII

Inti-Kala: stone seats of Inca origin near Copacavana



by Molina, as, for instance, in the story of the Deluge, which earlier chroniclers do not mention, but would surely have alluded to, had they heard of it. Otherwise the tales recorded by Molina agree in substance with those preserved by his predecessors in that the heavenly bodies are represented as having been created on or about the Island of Titicaca, and the Inca to have gone from that Island to Cuzco. As stated before, no close agreement between the texts of traditions obtained by distinct parties, or at distinct localities, can be expected, hence divergence in details does not impair the value of substantial resemblance.

Gamboa's work is, from its nature and origin, a second-hand compendium. It is, furthermore, not an impartial document. Its tendency is clearly shown in the beginning, where he declares his object to be "to disabuse all those in the world who think that the said Ingas were legitimate kings and the curacas natural lords of this land." This tendency pervades the whole book and makes of it a suspicious source, considerably diminishing its value. In everything touching upon primitive tradition Sarmiento only follows his predecessors, partially divesting the original tales of their purely Indian character, and adding nothing that had not already been stated before. About the Island of Titicaca he says: "After the deluge had passed, and when the land was drying, the Viracocha determined to people it a second time, and, in order to achieve it with greater perfection, he determined upon creating luminaries that might shed more light. And in order to do this, he went with his servants to a great lagune that lies in the Collao, and in which lagune there is an island called Titicaca, . . . To which island Viracocha repaired forthwith and commanded that the sun, moon, and stars should at once come forth and rise into the sky to illuminate the world; and thus it was done. And it is said that he made the moon brighter than the sun, and that therefore the sun, jealous at the time they were to rise into heaven, threw a

handful of ashes into the face (of the moon), from which time on it remained of the paler color in which it now appears."[53]

Miguel Cabello Balboa came to Peru in 1566, and completed his *Miscelánea austral* at Lima twenty years later. He places the origin of the Inca at Pacari Tampu, identifying the site with Tambo Tocco, and then adds: "Many Indians pretend that the brothers who appeared at Pacari Tambo . . . were natives of Titicaca, and that in that place were manufactured the garments in which they showed themselves for the first time." According to him, the little band (headed by Manco Capac) traveled at night and hid in the daytime, presenting themselves suddenly, arrayed in gorgeous vestments, a short distance from Cuzco.[54]

The Jesuit Joseph de Acosta resided in Peru from 1569 to 1585.[55] His book, less prolix than usual for the time, is of great value. He mentions the investigations instituted by Toledo and by order of the King of Spain,[56] and it is therefore possible that what he attributes to Indian sources may have been derived from depositions then obtained. But he discriminates between traditions in general, current among Indians of Peru (and Bolivia) and *specific Inca lore.* Of the former he states:

"However it may be, the Indians say that with this their deluge people were all drowned, and they relate that from the great lagune of Titicaca there came out one Viracocha, who made his abode at Tiaguanaco, where to-day are seen ruins and parts of ancient and very strange edifices, and that from there they came to Cuzco, and so the human family began to multiply. They point out in that lagune an islet where they fable that the sun concealed and maintained itself, and for this reason they anciently made to it, there, many sacrifices, not only of sheep, but of men. Others say that out of a certain cave, through the window, there came six or I do not know how many men, and that these made the beginning of the propagation of mankind, and this was at

what (the place which), for that reason, they call Pacari Tambo. So they are of opinion that the Tambos are the oldest lineage of mankind. From there, they say, proceeded Mangocapa, whom they recognize as the founder and head of the Ingas. . . ."[57] Elsewhere Acosta states: "The first man the Indians mention as the beginning of the Incas was Mangocapa, and of him they fable that, after the Deluge, he came out of a cave or window of Tambo, which is five or six leagues from Cuzco."[58]

Acosta expresses himself nearly in the same terms as Pedro Pizarro regarding the two versions, one locating the origin of the Inca on Titicaca Island, the other near Cuzco. In reality they do not conflict; only it seems that the latter was a tradition confined to the Inca tribe, which became separated from the former after the investigation, in 1542, by Vaca de Castro. Acosta, in the passage first quoted, has given but an abstract of what his predecessors recorded concerning Titicaca traditions.

The chronicler Antonio de Herrera follows Cieza in his mention of Peruvian traditions;[59] the Dominican Gregorio Garcia[60] copied Betanzos, and Fray Hieronymo Roman both.[61]

Passing over a number of works of the beginning of the seventeenth century that, while of ethnologic value for ancient Peru, contain nothing germane to the subject, the author next to be taken up, in point of date as far as can be ascertained,[62] would be the Indian Juan de Santa Cruz Pachacuti Yamqui Salcamayhua. He claims to be "native of the pueblos of Sanctiago of Hananguaygua and Huringuaiguacanchi of Orcasuyo, between Canas and Canchis of Collasuyo [follows part of his genealogy], all principal Caciques that were in the said province and professed Christians in the matters of our holy Catholic faith. . . . I say that we have heard, being a child, very ancient notices and the histories, barbarisms and fables from the time of the gentilisms, which is as follows, as among the natives of

the things of times past they always are accustomed to talk."[63] Salcamayhua writes as an Indian from the mountainous regions of Peru, speaks Spanish—*i.e.*, literally translating from his native tongue. Hence a *literal* rendering, however uncouth, is almost indispensable.

Salcamayhua makes such ostentatious professions of Christianity that some of his statements appear suspicious. That perspicacious and sober scholar, Don Marcos Jiménez de la Espada, called attention to it.[64] He tells us that the peopling of what now is called Bolivia took place from the southeast, from "above Potosí."[65] After the country had been settled, there came to the Collao (Aymará region) a bearded man whom he calls "Tonapa," also "Viracoha Pachayachachican," performing miracles, and whom Salcamayhua therefore identifies with Saint Thomas the Apostle. He describes the wanderings of that personage and his tribulations among the barbarous natives around Lake Titicaca,[66] and concludes by stating that "they say that the said Tonapa, after having liberated himself from the hands of those barbarians, remained some time on a rock called Titicaca,"[67] and that afterward he passed through Tiquina toward Chacamarca, and on his way came to a village called Tiahuanaco, where the people ridiculed his teachings. In punishment he changed them into stones. From Chacamarca he followed the Desaguadero to the south, finally reaching the ocean, where he disappeared.[68] While in the Collao, Tonapa met a chief called Apotampo, who was the only one who lent an ear to his teachings, in consideration of which Tonapa gave him "a piece of wood from his walking-stick."[69] This Apotampo was father to Manco Capac, to whom Salcamayhua attributes the foundation of Cuzco, which place was then already occupied by Indians, so that by "foundation" the establishment of a formal village must be understood.[70] In regard to the teachings of Tonapa, the author states: "The modern old men from the time of my father, don Diego Felipe, are wont to state that it was

Chapter and Section of Ordinances

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PLATE LXXXIV

Church and Sanctuary of Copacavana



almost the commandments of God, especially the seven precepts, only the name of God our Lord was lacking and that of our Lord Jesus Christ, as it is public and notorious among the old men, and the penalties were severe for those who broke them.''[71]

The analogy of these tales with those reported by Betanzos and Cieza is unmistakable, as far as their substance is concerned. Details of course vary, and, furthermore, the effect of three quarters of a century of contact with the Spaniards and the clergy is plainly visible. The story of the walking-stick, of which Tonapa gave a piece to Apotampo, recalls the magic wand mentioned by Garcilasso de la Vega.

Contemporary with Salcamayhua (although he is not known to have exerted any influence on their sources of information) are what might be termed a ''school of writers'' of the first half of the seventeenth century. There are even two ''schools,'' one of Jesuits, the other of Augustines. All of them resided for some time in northern Bolivia with the Indians, as missionaries and teachers; their information is, therefore, in a certain way, first-hand.

In the beginning of the seventeenth century the search for survivals of primitive ceremonials among the Peruvian Indians became not only more active, but more systematized. The Jesuit Joseph Pablo Arriaga was one of the principal organizers of that investigation. His own work, the *Extirpation of Idolatry in Peru*,[72] appeared in print in 1621, and, while of the highest value for ethnologic knowledge in general, it contains no allusion to folk-lore connected with the Island of Titicaca. What little is known about the two books written by his co-worker, Father Luis Terhuel, affords no material either for our present investigation.[73] The silence of Arriaga on the traditions of the Titicaca basin need cause no surprise. Arriaga was, officially, the spirit that moved the search for Indian rites and beliefs, in a methodical way, and his book is a manual of

that search rather than a treatise on ceremonials. Hence it contains many valuable descriptions of customs that were still in vigor, but as examples only. For the great mass of details he refers to *special reports* of *local* "visitors," some of which, if not all, still exist in manuscript. Thus it is likely that in the reports of the visitors Alonso Garcia Cuadrado on the Lake-shore near Copacavana, and of Bartolomé de Dueñas on Tiahuanaco, folk-lore on the Islands will be found;[74] also, possibly, in the letters of Father Hernando de Avendaño.[75] Every visitor was, according to instructions framed by Arriaga, to keep a written account of the proceedings of his inquiry.[76]

Leaving aside other works of the beginning of the seventeenth century that are but imperfectly known,[77] I turn to a contemporary of Arriaga and Salcamayhua, the Jesuit Bernabé Cobo. Born at Lopera in Spain, 1582, he came to Peru at the age of seventeen years, and was received a novice in the "Company of Jesus" in 1601, and ordained priest in 1612. From 1615 to 1618 he was on the Lake-shore at Juli and as far as Copacavana, then as a missionary farther south in Bolivia. He had good opportunities to become acquainted with the country and its people, as his voluminous book on the "New World" abundantly proves.[78] He gathered the traditions then current about the Islands and Copacavana, and in their discussion displays much critical spirit. But he investigated and studied at a time remote from the period of first contact and does not always state the sources of his information. These, even in case they were Indians, were no longer untampered with, after eighty years of growing contact with whites and of church influence. Hence the following quotations from the book of Cobo are to be taken with the reserve which the above remarks imply.

"In many ways do the Peruvian Indians relate the origin and beginning of the Incas their kings, interweaving so much confusion and diversity of incongruities that from

their statement it is not possible to gather anything certain."[79]

Then, "leaving aside for the present and its proper place what they held about the Deluge and peopling of the earth," he proceeds to give some of the "fables and fictions, most received by nearly all, about whence proceeded the Inca kings."

"The first is as follows: That from the lagune of Titicaca there came to Pacarictambo, a place distant from Cuzco seven leagues, certain Indians called Incas, men of prudence and valor, clad in a very different dress from that worn by those of the district of Cuzco, with their ears perforated and pieces of gold in the orifices; and that the principal of them, called Manco-Capac," etc., etc. He goes on to give an account of the manner in which Manco Capac made himself master of Cuzco.[80]

Another account says that four brothers and four sisters came out of the cave of Pacarictampu, adding: "About their origin they do not agree, some imagining they proceeded (originated) out of themselves, and others, that from the lagune of Titicaca, where they escaped the Deluge, the Maker of the world led them through the caverns of the earth until they came out through that cave of Pacarictampu," etc.[81]

Still another: "That when the Creator of the world (whom in their language they call by two names, to wit: Ticciviracoha and Pachayachachic) shaped all things at Tiaguanaco, where they imagine he resided, he commanded the sun, moon and stars to go to the Island of Titicaca which is in the lagune of that name, and that from there they should rise into heaven, and that at the time the sun was leaving in the figure (form) of a resplendent man he called the Incas, and to Manco Capac, as the eldest brother, he spoke as follows: 'Thou and thy descendants have to subject many lands and be great lords; always hold me to be your father, priding yourself on being my children and never

forgetting to venerate me as such'; and that, after he had said this, he gave to him (Manco Capac) the insignia of king . . . and that forthwith (after the orbs had taken their respective places in the heavens), by command of the Maker, the Inca brothers sank into the earth and went to come out at the said cave of Pacarictampu."[82]

Finally another tale:[83] "This same fiction others relate in this manner: They say that the Sun, pitying the miserable condition in which was the world, sent to it a son and a daughter of his, to instruct and teach men the knowledge of the Sun, persuading them to worship him as a god and yield him the adoration that was due to him as such, . . . and that they were placed by the Sun in the said lagune of Titicaca, commanding them to take the road and direction they pleased, provided that, wherever they would stay to eat and take rest, they would sink into the soil a rod of gold he gave them, one ell in length. . . ." Then follows an almost textual copy of the story told by Garcilasso de la Vega, although the source is not alluded to.[84]

He mentions a version which, he says, is similar to the preceding, with the difference that the Inca were born on the Island from a woman called Titicaca.[85]

In a chapter devoted to a description of the Islands of Titicaca and Koati (it is not clear whether he visited the former, and certain that he was not on Koati) he relates traditions that are partial repetitions of the preceding, but deserve to be quoted:

"The adoratory (shrine) of the sun that was on the Island of Titicaca was a large and solid rock, the veneration for which and motive why they dedicated it to the sun has for beginning and foundation a very ridiculous novel, which is that the ancients affirm that, having been without light from heaven many days in that province, and all its inhabitants being surprised, confused and frightened by such long and obscure darkness, those who dwelt on the aforesaid island of Titicaca saw one morning the sun come

out from that rock with extraordinary splendor, from which they believed this rock to be the house and true dwelling of the sun or the thing of all that was most acceptable to it. . . .[86]

"Others refer the fable differently, and say that the reason for having dedicated to the sun this rock was because beneath it the sun was kept and guarded during all the time the waters of the Deluge lasted, after which it came forth from there and began to enlighten the world from that place, that rock being the first object that enjoyed its light."[87]

The Jesuit Anello Oliva was a Neapolitan by birth. He came to Lima two years before Cobo and entered the order of Jesuits at that city. Like Cobo, he spent some time at Juli on Lake Titicaca. He concluded his *History of Peru and of the Company of Jesus* in that country in the year 1631, twenty-two years earlier than Cobo finished his more voluminous "History of the New World."[88] But the sources which Oliva acknowledges, as having based upon them his tales of ancient lore, are not as satisfactory as those of Cobo.

Oliva acknowledges having consulted chiefly:

1. Garcilasso de la Vega, laying particular stress on what the latter claims to have taken from the writings of Father Blas Valera.[89]
2. Manuscripts of a certain doctor in theology of the Cathedral of Charcas (Sucre in Bolivia), called Bartolomé Cervantes.[90]
3. The sayings of an Indian by the name of Catari, from Cochabamba (in the Quichua-speaking districts of Bolivia), who claimed to have been Quipucamayoc and chronicler of the Incas.[91]

Of the writings of Father Valera we have already spoken, and Oliva rather discards the version given by

Garcilasso, of the origin of the Inca, for the reason that it implies a supernatural origin for Manco Capac and his female companion.[92]

I have not yet been able to find any data of importance concerning Doctor Cervantes. His principal reliance seems to have been on what was given him as traditions preserved by the keepers of quippus or knotted strings. Of the value of these strings for historical documentation, Garcilasso himself confesses the following:

"In a word, in these knots were expressed all things that could be computed by numbers, as far as to note the number of battles and encounters, of the embassies on the part of the Inca and the declaration the king had given. But by these knots it was not possible to express the contents of the message, the express words of declarations, and such other historic events, for these things consisted of terms uttered in speech or in writing, and the knot marked indeed the number but not the word. To remedy this defect they had also certain signs by which they recognized memorable actions, embassies, and declarations made in times of peace or war: the Quipucamayos learned their substance by heart and taught them one to another by tradition. . . ."[93]

Oliva cannot have obtained his information from Catari earlier than the first decade of the seventeenth century, or three quarters of a century after the conquest, when folklore had been exposed to steady and slowly modifying contact. Furthermore, if the name of his informant is any indication at all, it is an *Aymará, not a Quichua,* name. The primitiveness of stories told in southern central Bolivia, long after the Indians had been under Spanish rule and under the teachings of the church, and at a time when their ancient ceremonials were being subjected to a close and unsympathetic scrutiny, may appear questionable. Their reliability becomes more doubtful yet through the wide geographical range they embrace, about which the Indians of ancient Peru could have no information, and

through the positive manner in which details are given. Oliva tells us:

"After the Deluge, the first people came to South America from parts unknown, landing somewhere on the coast of Venezuela. From there they gradually scattered over the whole continent, one band reaching the coast of Ecuador near Santa Elena. Several generations passed, many made voyages along the coast and some were shipwrecked. At last one branch took up its abode on an island called Guayau, near the shores of Ecuador. On that island Manco Capac was born, and after the death of his father Atau he resolved to leave his native place for a more favored clime. So he set out, in such craft as he had, with two hundred of his people, dividing them into three bands. Two of these were never heard from again, but he and his followers landed near Ica, on the Peruvian coast, thence struggled up the mountains, reaching at last the shore of Lake Titicaca. There Manco separated from the others, leaving them with orders to divide after a certain time and to go in search of him, while he took the direction of Cuzco. He told his people, before leaving, that when any of the natives should ask them their purpose and destination, to reply that they were in quest of the son of the Sun. After this he departed, reaching at last a cave near the Cuzco valley, where he rested.

"When the time had elapsed, his companions started in several groups in search of him. One of these crossed over to the Island of Titicaca, where they were surprised to find a rock, and in this rock a cave lined with gold, silver, and precious stones. Thereupon they sunk the craft in which they had reached the island, and agreed among themselves, if anybody from the surrounding country should appear, to say that they had come out of the cave to look for the son of the Sun.

"A few days after, on the day of full moon, they saw some canoes approaching, and they forthwith retreated to

the cavern. Those who came in the canoes, when they approached the cliff and perceived the strangers viewing the cave apparently with the greatest unconcern, were surprised. The strangers gave them to understand that they had just come out of the rock and were in quest of the son of the Sun. This filled the others with profound respect for the newcomers; they worshiped them and made offerings to the rock, sacrificing children, llamas, and ducks. All together went back to the mainland, and shortly afterward learned that at Pacari Tampu the son of the Sun had come out of a cavern, called Capactocco, in great splendor, bedecked with gold, as brilliant in appearance as his father, and that with a sling he had hurled a stone with such force that the noise was heard for more than a league off, and the stone made in the rock a hole as large as a doorway.[94]

"At these news all the people of those regions went to see the miraculous being. Manco Capac received them as subjects. On this artifice he began to base his authority and the subsequent sway of the Inca tribe."[95]

Oliva mentions also a tradition concerning Tiahuanaco, according to which that place would be the oldest settlement in the land. He says that the original name of Tiahuanaco is *Chucara,* and that nothing is known of its earliest history beyond that "there lived the great chief *Huyustus,* who, they say, was lord of the world." This, he states, was long previous to the time of Manco Capac.[96]

There is, in the tales related by Oliva, something that recalls those recorded by Cabello Balboa, and it would not be surprising if the writings of the latter could have been known to the former.[97] The details given by Oliva on the earliest periods, and about the manner in which Titicaca Island became connected with the Inca and their origin, are manifest explanation of traditions, related in much greater purity by Betanzos, Cieza, and others.

At the time when Cobo and Oliva were gathering folklore on the past of the tribes of Cuzco and of the Collao, the

Augustine monks in charge of the sanctuary of Copacavana were not idle. Leaving aside the yet insufficiently known work attributed to Fray Baltázar de Salas, printed in 1628,[98] we must devote serious attention to the *History of Copacabana* by Fray Alonzo Ramos Gavilan, published at Lima in 1621.[99] That book is exceedingly rare, but the late Father Sans of La Paz has published it as far as the incomplete copy at his command permitted. In that copy the first three chapters were lacking, and Sans replaced them by his own views of the early history of Titicaca, in part. The Right Reverend Bishop of La Paz, Don Fray Nicolas Armentia, however, acquainted with the existence of two complete copies of the work of Ramos, took pains to collate the book of Sans with one of these copies, and was also kind enough to allow me to copy such passages as were not contained in the publications of the former. Hence it becomes possible to investigate the text of Ramos completely. In them, a popular belief is mentioned in the origin of Manco Capac from Titicaca Island.[100] Ramos also speaks of a mysterious white man called Tunupa and Taápac, murdered by the Indians on the Island.[101] Mention is also made of the belief that, after several days of obscurity, the sun came out of the Sacred Rock.[102]

There are, in these statements of Ramos, many points of resemblance with what Cobo preserved. The two were not only contemporaries, but resided on the shores of Titicaca at the same time; the Augustine in the immediate vicinity of Titicaca at Copacavana, the Jesuit at Juli between that sanctuary and Puno. There may have been communication between them, or each may have obtained his information independently of the other. Besides, the Tonapa tale as related by Ramos is almost identical with the statements on the same topics by Salcamayhua, another contemporary of his.[103] It will be recollected that Tunapa was already alluded to by Cieza, but very few are the details he gives, in comparison with what is contained in the writings of Ramos

and Salcamayhua. Between 1550 and the beginning of the seventeenth century only a few fragments of stories resembling the Tonapa or Tunapa tradition are as yet known.[104] Hence it is possibly a Colla or Aymará tale, heard by Ramos and Salcamayhua from Aymará Indians or (in the case of the latter) from Quichuas confining with the Aymará stock. This is also supported by the first appearance in detail of the legend of the cross of Carabuco. Anello Oliva makes an allusion to that singular tale, but he is posterior to Ramos.

Withal elaborate details on one hand, and the brevity of notices on the other, all of which tends to shroud the substance of original tradition, Ramos agrees with Betanzos and Cieza in the main, which is the more important, since it is not likely he consulted the works of either of these early writers.[105] He appears to base mainly on the lore he collected on the shores of the Lake and, possibly, on the Islands. It is no surprise, therefore, to find that those writers of his order that followed him in point of date, are hardly more than copyists, and acknowledge themselves as such.

Father Antonio de la Calancha, a contemporary of Ramos and a punctual follower of his statements,[106] alludes, as a source he consulted, also to the Licentiate Polo de Ondegardo, of whom I have treated before. Calancha refers to the investigations Ondegardo carried on "in all the country above Chuquiago (La Paz), Chuquisaca (Sucre), Potosi, and their surroundings, where the Licentiate Polo made his inquiries, and in that of Chucuito."[107] As before stated, the known writings of Ondegardo contain no Titicaca lore, so that Calancha must have had access to papers that are as yet unpublished. He says that, according to what Ondegardo gathered, the first men lived in obscurity and were nearly all destroyed by a flood, but multiplied again, and the builders of Tiahuanaco were turned into stone; after which, at Tiahuanaco and on Lake Titicaca, the sun and moon appeared. "The sun at once went to the

Indian Mango Capac, adopted him, made him king . . . and then rose into the heavens."[108]

Father Hippolyto Maracci,[109] the Augustine Fray Fernando de Valverde, and finally the Augustine Fray Andrés de San Nicolas[110]—all base their statements on the writings of Fray Alonzo Ramos Gavilan. San Nicolas, after repeating in substance what Ramos said, admits: "The foundation which the Indians had in worshiping the island and the rock . . . was because on it the family of the Incas had their fabulous origin."[111]

While the traditions which we have compiled differ from each other considerably in detail, their substance agrees fairly well, in that they all assign to a remote period the time when Titicaca Island first came into prominence among the Indians. The occasion for it seems to have been some natural phenomenon. A period of darkness (whether long or short is not safe to affirm) seems to have been its principal feature. After it the heavenly orbs shone out in splendor. By what this obscurity was produced we cannot conjecture.[112] Under any circumstances it appears certain that the tales about this occurrence, which fastened itself so firmly on the minds of the Indians, are *local* tales, not *general* myths. They belong essentially to the circle of Aymará folk-lore, whence they penetrated to a certain extent beyond their original home.

To the same circle must be assigned the statements about the origin of the Inca from Titicaca Island, in connection with the natural phenomena alluded to. These also appear, in their primitive form, as traditions of the Aymará, subsequently, as shown in the writings of Garcilasso de la Vega, transferred to those of the Quichua of Cuzco.

NOTES

ABORIGINAL MYTHS AND TRADITIONS CONCERNING THE ISLAND OF TITICACA

PART VI

[1] The "Viracochas" here mentioned recall the "white and bearded men" of Cieza. See further on.

[2] This story is as truthful (it being well established that Huascar was murdered by the order of Atauhuallpa near Antamarca, south of Caxamarca and north of Ayacucho) as that related by Cieza (*Primera Parte de la Crónica*, Cap. CV, p. 447), that Manco, Inca, the one who led the Indians at the blockade of Cuzco in 1536, was born at Tiahuanaco.

[3] Something analogous is mentioned in that long and tiresome poem by Pedro de Peralta Barnuevo, Rocha y Benavides: *Lima fundada o Conquista del Peru*, 1732, edition of 1863, *Canto segundo*, p. 34.

"Despues la astuta Huaco á infante hermoso,
Criado en el seno de una gruta umbria,
Para darle por padre luminoso
Del dia al claro autor, lo negó al dia:
Luego en un monte al parto prodigioso,
A quien oro calzaba, oro vestia.
Lo expuso al vulgo infiel que lo juzgaba
No hijo ya, el mismo Sol que lo alumbraba."

[4] Compare my article on "The Montezuma of the Pueblo Indians," in *American Anthropologist*, October, 1892, p. 325.

[5] Especially at the pueblo of Cochití, New Mexico, where my since deceased host, Juan José Montoya (Mátyaya Tihua), was very fond of displaying a smattering of classical history, gathered at random in conversation with the priests.

[6] *Relatione per Sva Maesta*, Ramusio, 1565, Vol. III.

[7] *Historia general y natural*, Vol. IV, Lib. XLVI, p. 235: "A esta tierra vino antiguamente un grand señor con una gente que llaman Inga é agora se llaman orejones, é solo al superior le llaman Inga . . . Este señor que llaman Inga pobló el Cuzco, é hiço una cibdad muy fuerte para residir él . . ."

[8] *Relacion del Descubrimiento*, etc., p. 234: "Unos dicen que salió de la isla de Titicaca ques una isla questá en una laguna en el Collao, que tenia sesenta leguas en torno . . . Otros indios dicen queste primer señor salió de Tambo, este Tambo está en Condesuios seis leguas del Cuzco poco mas ó menos. Este primer Inga dicen se llamaba Inga Viracocha."

[9] *Discurso sobre la Descendencia y Gobierno de los Ingas*, p. 5. This

document was published in 1892, by Jiménez de la Espada, under the title of *Una Antigualla peruana.*

[10] *Discurso,* p. 5: "Diéron este cargo á personas de mucha curiosidad por interpretacion de Pedro Escalante indio ladino en lengua castellana, el cual servía á Vaca de Castro de intérprete, con asistencia de Juan de Betanzos y Francisco de Villacastin vecinos desta ciudad del Cuzco, personas que sabian muy bien la lengua general deste reino, los cuales iban escribiendo lo que por los Quipos iban declarando." Villacastin is mentioned, now and then, as being very well versed in Indian language. Cieza: *Segunda Parte de la Crónica,* p. 4, and others.

[11] On December 1, 1539, one Juan de Betanzos directed a letter to the Council of the Indies from Santo Domingo, concerning affairs of Cubagua: *Carta al Consejo real de Indias, Documentos inéditos de Indias,* Vol. I, p. 564. It is hardly possible this was the same as the author under consideration, since the latter would scarcely have had time to acquaint himself with the languages of Peru in the course of about three years.

[12] The manuscript of the *Doctrina chripstiana* is at the National Archives of Lima. Betanzos says (*Suma y Narracion de los Incas,* Dedicatoria): "Háme sido tambien muy penoso, por el poco tiempo que he tenido para ocuparme en ella, pues para el otro libro de la Doctrina era menester todo." This shows that he worked at the latter work simultaneously with the *Doctrina.*

[13] *Suma y Narracion,* p. 100: "hasta este año en que estamos de mill y quinientos y cincuenta y un años."

[14] We may gather this from Gregorio Garcia: *Orígen de los Indios,* edition of 1729 (Proemio), p. 4: "Juan de Betancos, conquistador del Perú, á do entró con D:Francisco Pizarro, hiço vna Historia por mandado de D:Antonio de Mendoça, Virrei de aquel Reino, aunque no salió á luz . . . Esta Historia tengo en mi poder, la qual me ha aiudado harto para este mi Libro."

[15] *Suma y Narracion,* Introduction, by Espada.

[16] *Suma y Narracion,* Cap. I, pp. 1 and 2.

[17] *Ibidem.*

[18] Anello Oliva (*Historia del Perv y Varones Insignes en Santidad de la Compañia de Jesus,* 1631, published at Lima about 1892, Lib. I, Cap. VIII, p. 168) calls him "Pedro de Cieza Congora." I have not yet been able to discover on what authority.

[19] He did it in Mexico, according to appearances.

[20] Cieza himself states of the First Part of the Chronicle, *Primera Parte,* p. 458: "La cual se comenzó á escrebir en la ciudad de Cartago, de la gobernacion de Popayan, año de 1541, y se acabó de escrebir originalmente en la ciudad de los Reyes, del reino del Perú, á 8 dias del mes de Setiembre de 1550 años, siendo el autor de edad de treinto y dos años, habiendo gastado los diez y siete dellos en estas Indias." It is well established, also, that he died at Sevilla in 1560.

[21] *Segunda Parte,* Cap. VI, p. 13: "Y por hacerlo con más verdad vine al Cuzco, siendo en ella corregidor Juan de Sayavedra, donde hice juntar á Cayu Túpac, que es el que hoy vive de los descendientes de Huaina Capac, porque Sairi Túpac, hijo de Manco Inca, está retirado en Viticos . . . y á otros de los orejones, que son los que entre ellos se tienen por más nobles; y con los mejores intérpretes y lenguas que se hallaron les pregunté, estos señores Incas qué gente era y de qué nacion."

[22] *Primera Parte,* Cap. CIII, p. 445: "que carecieron de lumbre muchos dias, y que estando todos puestos en tinieblas y obscuridad, salió desta isla de Titicaca el sol muy resplandeciente,

por lo cual la tuvieron por cosa sagrada, y los ingas hicieron en ella el templo que digo, que fué entre ellos muy estimado y venerado, á honra de su sol, . . .'' (Cap. C, p. 443), ''y que el uno dellos entró en la laguna de Titicaca, y que halló en la isla mayor que tiene aquel palude gentes blancas y que tenían barbas, con los cuales peleó de tal manera, que los pudo matar á todos.''

[23] If any reliance can be placed on the various lists of Inca war-chiefs given by the authors of the sixteenth century, Inca Viracocha must have lived about the end of the fourteenth century.

[24] *Segunda Parte,* Cap. IV, p. 4.

[25] *Ibidem,* p. 2.

[26] *Ibidem,* Cap. V, p. 5.

[27] *Ibidem,* p. 6.

[28] *Relacion del Descubrimiento,* p. 233.

[29] *Historia de las guerras civiles del Perú,* III, p. 421: ''Quanto a lo primero dizen los yndios muy viejos y antiguos y que lo oyeron dezir a sus mayores y lo tienen oy dia en sus memorias y cantares, que uvo seiscientos años primeros que no tuvieron reyes, sino vnos señoretes llamados curacas que los gouernauan cada vno en su prouincia y que despues vinieron los Yngas que reynaron en todas estas prouincias, que les auro mas de Seiscientos años. El primer señor que començó a entrar por tierras agenas fue llamado Mango-Ynga Capalla,'' etc. There is a certain analogy between the tale about the Collao and Hatuncolla (now a village a short distance north of Puno near Lake Titicaca) told by Gutierrez, and the following statement of Cieza: *Segunda Parte,* Cap. IV, p. 3: ''Y estando estas gentes desta manera se levantó en la provincia del Collao un señor valentísimo llamado Zapana, el cual pudo tanto, que metió debajo de su señorío muchas gentes de aquella provincia.'' This Zapana is also mentioned by Cieza in *Primera Parte,* Cap. C, p. 443, as one of the earliest and principal chiefs of the Collao. There is a resemblance between Zapalla and Zapana. According to Torres Rubio (*Arte y Vocabulario,* fol. 82), Çapalla means ''solo, vno,'' in Quichua. In Aymará there is, among the words used to designate ''the only one,'' according to Bertonio (*Vocabulario,* I, p. 436), ''sapaktha,'' and for ''alone and unaccompanied,'' ''sapaqui.'' The term Zapalla, as part of a title of the principal Inca war-chief, is found in Cieza, *Segunda Parte,* Cap. LXI, p. 233: ''Y así, á grandes voces decian: Guayna Capac Inca Zapalla tucuillacta uya,'' que quiere decir: 'Guayna Capac solo es rey, á él oyan todos los pueblos.'

The Cons and Pachacamac myth is found in *Historia de las guerras civiles del Perú,* III, Cap. LVI, p. 486 *et seq.*: ''En toda esta tierra, tamaña como es, que los Ingas señores auian, y todos los yndios que en ella habitauan, adorauan dos dioses, que el vno se dezia Cons y el otro Pachacama, como a dioses principales; y por acessores tenian al Sol y a la Luna (diciendo) que eran marido y muger y que estos eran multiplicadores de toda la tierra,'' etc. (P. 493): ''Cuentan los yndios muy viejos que agora ay, que lo oyeron de sus passados, que el primer Dios que uvo en la tierra fue llamado Cons, el cual formo el cielo, sol, la luna, estrellas y la tierra, con todos los animales y lo demas que ay en ella, que fue tan solamente con el pensamiento y con su resuello, y que pasando por estas tierras, que eran todavía despobladas, hizo y crio todas las cosas que se veen y parescen en ellas, y que formo con su resuello todos los yndios y los animales terrestres y aues celestes y muchos arboles y plantas de diuersas maneras. Y que despues desto se fue a la mar y que anduuo a pie enjuto sobre ella, y sobre los rios, y que crio todos los peces que ay, con sola su palabra, y que hizo otras cosas mara-

villosas, y que despues se fue desta tierra y se subio al cielo. Dezian mas estos yndios, que desde a mucho tiempo y a muchos años y siglos vino a la tierra vn otro dios mas poderoso que Cons, llamado Pachacama, que quiere dezir Hazedor del Mundo, o Reformador, y que destruyo con fuego y agua todo lo hecho y criado por el dios Cons, y que los yndios que auia los conuirtio en simios y monos y los embio a biuir a los Andes y a los valles . . . Y que despues de destruydas estas tierras, dizen los yndios que el dios Pachacama, como mas poderoso en todas las cosas y por otra parte misericordioso, las tornó á reformar y a mundificar . . . y que despues de hechas estas cosas, con otras muchas, dizen que se torno al cielo.'' The analogy between the above and the myth consigned in Betanzos, of the two successive ''creators,'' is manifest, but in the version of Gutierrez the utterly ''un-Indian'' notions of a creation performed by the breath of a creative element or individual, and especially the creation by means of the ''*word,*'' show that the lore is no longer in its primitive state. It is likely that Gutierrez, who finished his work nearly forty years after he had been in Peru, either explained while pretending to simply narrate the tales, or that he adopted adulterated versions.

[30] The passages relating to the assumed ''conquest of Cuzco'' are found in his *Historia de las guerras civiles,* III, p. 432 *et seq.*

[31] It would be too long to refer in detail to this subject. Interested students can easily compare the series, in each of the authors mentioned, with others, and draw their conclusions accordingly.

[32] *Historia del Descubrimiento y Conquista de la Provincia del Perú,* Vedia, Vol. II, p. 459.

[33] *Ibidem,* p. 470: ''Y al principal dellos llamaron Zapalla inga, que es solo señor, aunque algunos quieren decir que le llamaron inga Viracocha . . .'' This recalls Pedro Pizarro: *Relacion,* p. 234.

In Quichua, the ear is called ''rinc ri.'' Torres Rubio: *Arte,* fols. 99, 135.

[34] The title of the second edition of Gomara's chronicle is: *Primera y Segunda Parte de la historia general de las Indias hasta el año de 1551,* Medina del Campo, 1553; I use the reprint by Vedia: *Historiadores primitivos de Indias,* Vol. I, p. 231. Levinus Apollonius (*De peruanae Regionis, inter Noui Orbis prouincias Celeberrimae, inuentione: & in eadem gestis,* Libri V, Antwerp, 1567, fol. 36) merely copies, in a condensed form, either Gomara or Zárate.

[35] *Conquista y Poblacion del Perú, Documentos para la Historia de Chile,* Vol VII, p. 447: ''Dicen estos orejones que la manera que tuvieron para tener señores entre sí, fué de que una laguna questá treinta leguas de Cuzco en la tierra del Collao, que se llama Titucaca, salió dellos que se llamaba Inga-Viracocha, que era muy entendido y sabio, y decia que era hijo del Sol, y éste dicen ellos, que les dió policia de vestidos, y haçer casas de piedra, y fué él que edificó el Cuzco, y hizo casas de piedra,'' etc. The document cited was already known to Prescott. There is a manuscript copy of it at the Lenox branch of the New York Public Library, and it has been published twice, both times in South America. Jiménez de la Espada (*Tres Relaciones de Antigüedades peruanas, Carta al Excmo Sr. D:Francisco de Borja Queipo de Llano, Conde de Toreno,* p. xiii) gives a somewhat different title, and suggests, that the author might have been Father Crístóval de Molina, who is known to have written a *Descripcion de todo lo descubierto y andado por Don Diego de Almagro, desde Túmbez al rio de Maule,* in 1539. This document is still unpublished: *Relaciones geográficas*

de Indias, I, pp. xlii and cxlii, *Antecedentes.*

[36] *Suma y Narracion,* Cap. II, p. 8.

[37] *Comentarios Reales,* editio princeps, Lisbon, 1609, Vol. I, Proemio.

[38] *Ibidem,* I, fol. 263.

[39] *Ibidem.* It would require copy of the whole chapter to present the details. The petition was handsomely attended to, the petitioners receiving: "Es assi que al principio deste año de seys cientos y quatro salio la consulta en su negocio, de que se le hazia merced de siete mil y quinientos ducados de renta perpetuos, situados en la caxa Real de su Magestad en la ciudad de los Reyes," etc.

[40] *Comentarios Reales,* I, Lib. I, Cap. XV, fol. 14.

[41] *Ibidem,* fol. 15.

[42] Enrique Torres Saldamando: *Los Antiguos Jesuitas del Perú,* pp. 21 to 23, inclusive.

[43] The name was probably Lartaum, or Lartaun. Mendiburu: *Diccionario Histórico Biográfico del Perú,* Vol. IV, p. 388.

Cobo (*Historia del Nuevo Mundo,* Vol. III, p. 118), after mentioning the investigation carried on under the auspices of the viceroy, adds: "Y poco despues, en otra junta general de los indios viejos que habian alcanzado el reinado del Inca Guaina Cápac, que hizo en la misma ciudad del Cuzco Cristóbal de Molina, cura de la parroquia de Nuestra Señora de los Remedios del Hospital de los naturales, por mandado del obispo D:Sebastian de Lartaum, se averiguó lo mismo, resultando della una copiosa relacion de los ritos y fábulas que en su gentilidad tenian los indios peruanos. La cual conforma en todo lo sustancial con la del licenciado Polo y con la que se hizo por orden de D:Francisco Toledo, que ambas vinieron á mi poder . . ."

[44] The title given in the publication of that important document is utterly misleading, as Jiménez de la Espada has justly observed. It reads: *Relacion de los fundamentos acerca del notable daño que resulta de no guardar á los Indios sus Fueros, Doc. de Indias,* Vol. XVII, p. 9.

[45] Ondegardo: *Relacion de los fundamentos,* p. 10: "porque dado caso como es ansi quellos tuvieron noticia del Diluvio, afirman que se destruyó todo el Mundo por agua; desta generalidad dura la memoria entrellos e muy generalmente como cosa muy notoria." It must be noted that Ondegardo made his search for folklore more than thirty years after the first contact of Peruvian Indians with whites, and when the church was already well established in that part of South America. Also, that neither Betanzos nor Cieza allude to a tale of the deluge in the myths they have preserved. There are some stories of great inundations, but apparently local ones only, and the remark is very pertinent, by Joseph de Acosta: *Historia natural y moral de las Indias,* 1608, Lib. I, Cap. XXV, p. 82: "Ay entre ellos comunmente gran noticia, y mucha platica del diluvio, pero no se puede biẽ determinar, si el diluuio que estos refieren, es el vniuersal, que cuenta la diuina Escritura, o si fue alguno otro diluuio, o inundacion particular, de las regiones en que ellos morã: mas de que en aquestas tierras, hombres expertos dizen, que se veen señales claros, de auer auido alguna grande inundacion. Yo mas me llego al parecer, de los que sienten, que los rastros y señales que ay de diluuie, no son del de Noe, sino de alguno otro particular, como el que cuenta Platon, o el que los Poetas cantan de Deucalion."

[46] The hospital for Indians was founded at Cuzco with the aid of voluntary donations of the Spanish residents (amounting to 17,314 pesos). The subscriptions were opened March 25, 1556, and in eleven days 14,500 pesos had been subscribed. See *Relacion de las mandas y limosnas que los vezinos y abitantes hizieron en la*

fundacion del dicho hospital. MSS. Original in *Libro viejo de la fundacion de la gran ciudad del Cuzco.*

[47] *The Fables and Rites of the Yncas,* Hackluyt Society, 1873, pp. 4 to 6.

[48] *Historia del Nuevo Mundo,* IV, p. 44: "La segunda se decia Puquincancha. Era una casa del Sol que estaba encima de Cayocache. Sacrificábanle niños."

[49] *Segunda parte de la Historia general llamada Indica, la cual por mandado del excelentísimo señor Don Francisco de Toledo, virrey, gobernador, y capitán general de los reinos del Pirú y mayordomo de la casa real de Castilla, compuso el capitán Pedro Sarmiento de Gamboa.* Finished 1572. (In *Abhandl. der Königl. Gesellschaft der Wissenschaften zu Göttingen.* Neue Folge, Band VI, 1902–1906.)

[50] *Informaciones acerca del Señorío y Gobierno de los Ingas hechas por mandado de Don Francisco de Toledo, Virey del Perú,* 1570 to 1572, published by Espada, at Madrid, in 1882, together with the *Memorias* of Montesinos. *Carta de Don Francisco de Toledo al Consejo de Indias,* March 1, 1572, p. 249. A painted cloth containing a "genealogy" of Inca Indians was also sent to Spain in 1603, in care of Garcilasso de la Vega, but it stood in no relation to the four mentioned. *Comentarios Reales,* I, fol. 263: "Y para mayor verificacion, y demonstracion embiaron pintado en vara y media de tafetan blanco de la China el arbol Real, descendiendo desde Manco Capac hasta Huayna Capac, y su hijo Paullu. Venian los Yncas pintados en su trage antiguo. En las cabeças trayan la borla colorada, y en las orejas sus oregeras: y en las manos sendas partesanas en lugar de cetro Real: venian pintados de los pechos arriba y no mas." This agrees fairly well with the so-called pictures of the Inca chiefs given by Herrera, and, as the date when the cloth was sent to Garcilasso was a few years previous to the publication of the latter's book, there is a possibility that this cloth, and not the four painted pieces sent by Toledo, served to Herrera as originals. It is true, however, that Paullu Inca does not appear on Herrera's médaillons.

[51] See note 43.

[52] *Informaciones acerca del Señorio y Gobierno de los Ingas,* p. 267. Only one witness, originally from Chachapoyas, but living on the coast at Huacho, testified that "Manco Capac habia salido de una Peña de Plomo." This alludes to the Quichua interpretation of the word "Titicaca." As already stated, the word is Aymará, and signifies "rock of the wild cat." The Indians who dwelt on and near the Island long before the Inca appeared were Aymará, who gave the name to the Island in their native tongue.

From the writings of Calancha (*Corónica Moralizada,* Vol. I, Lib. II, Cap. X, p. 366) it seems the investigations of Ondegardo are also embodied in another report which is not accessible to me.

[53] *Segunda Parte de la Hist. gral. llamada Indica,* p. 26.

[54] I quote from the French translation of the *Miscelánea austral,* by Ternaux Compans, published under the title of *Histoire du Pérou,* pp. 11 and 144.

[55] Acosta was born at Medina del Campo, in Spain, about the year 1540. Torres Saldamando: *Los antiguos Jesuitas del Perú,* p. 2. The data given in my text are found on pages 2 and 10. He died at Salamanca, February 15, 1600.

[56] *Historia natural y moral de las Indias,* Lib. VI, Cap. XIX, p. 429: "Por mandado de la Magestad Catolica del Rey don Felipe nuestro señor, se hizo aueriguacion con la diligencia que fue possible del origen, y ritos, y fueros de los Ingas, y por no

tener aquellos Indios escrituras, no se pudo apurar tanto como se desseara.''

[57] *Hist. natural,* etc., p. 82.

[58] *Ibidem,* p. 432.

[59] The first edition of Herrera is from 1601–1615. I use the one edited by Barcia, from 1726, 1728–1730. *Historia general de los Hechos de los Castellanos en las Islas y Tierra firme del Mar Océano,* Vol. II, Dec. v, p. 60 *et seq.*

[60] *Origen de los Indios,* edition 1729, pp. 333 and 334. He also quotes Cieza and Acosta.

[61] *Las Repúblicas del Mundo,* Salamanca, 1595, Vol. III, Lib. II, Cap. XI, fol. 163.

[62] I follow the indications of Don Marcos Jiménez de la Espada: *Tres Relaciones,* p. xliv: ''La circunstancia de encontrarse junto con otros MSS. del Dr. Francisco de Avila, y anotado ademas por el sabio visitador, sobre abonar su interes, nos presta alguna luz acerca de la fecha en que debió escribirse, y que yo pongo no lejos de los años de 1613.''

[63] *Relacion de Antigüedades deste Reyno del Pirú, Tres Relaciones.* p. 234. He says: ''que entre los naturales á las cosas de los tiempos passados siempre los suelen parlar,'' etc. The word ''parlar'' for ''to speak'' is used to-day by the Aymará generally. In *Vocabulario de las Voces usuales de Aymara al Castellano y Quechua,* 1895, p. 2, ''Parlai'' is given as the Quichua term for *hablar,* and ''arusiña'' for the Aymará. Hence it would seem to have been a Quichua word, although it is not found in Torres Rubio, *Arte y Vocabulario,* 1754, nor in Tschudi, *Wörterbuch,* 1853, or in Bertonio.

[64] *Relacion de Antigüedades,* p. 234, same volume, p. xliii: ''Porque eso sí, D:Juan de Santa Cruz quiere mostrarse católico cristiano á toda costa, convirtiendo, siempre que puede, en nuestros diablos los antiguos espíritus de los huacas, y sustituyendo la intervencion bondadosa ó severa del incomprensible Huiracocha en ciertos hechos materiales y externos, ó en la conciencia de los Incas, por la de Jesucristo ó la de su eterno Padre.''

[65] *Ibidem,* p. 234.

[66] *Ibidem,* p. 236.

[67] P. 239.

[68] P. 240.

[69] Pp. 237 and 240.

[70] *Ibidem,* p. 240 *et seq.*

[71] P. 237.

[72] *Extirpacion de la Ydolatria del Pirv,* Lima, 1621. Father Arriaga was born at Vergara, in Biscay, in 1564, went to Peru in 1585, returning to Spain (after having been admitted into the Society of Jesus and received ordination) in 1601. He came back to Peru three years after and was engaged in the systematic investigation of ancient Peruvian ceremonials. He became entrusted with the construction of the College of Caciques at Lima, which was opened in 1619. Father Arriaga perished, 1622, near Havana in a tempest that wrecked a number of vessels.

[73] He came to Peru in 1610, and died at Lima, December 3, 1670. Torres Saldamando: *Los antiguos Jesuitas,* p. 122. Arriaga cites him frequently and Fray Antonio de la Calancha (*Corónica Moralizada,* Vol. I, p. 410) refers to his manuscript entitled *Contra Idolatriam* as a very valuable source on the ceremonials of the Indians of the coast. Espada, in his introduction (letter to the Conde de Toreno, *Tres Relaciones,* p. xxxiv), mentions two works of Father Terhuel: *Tratado de las idolatrias de los indios del Perú,* and the above cited *Contra Idolatriam,* of which he says: ''en que se ocupa del orígen de los indios yuncas ó de los llanos costeños.''

[74] *Extirpacion de la Ydolatria,* Cap. IX, p. 53.

[75] *Extirpacion,* p. 6: ''Despues de los dichos dos Visitadores, el primero que puso mas cuidado en esto fué el Doctor Fernando de Avendaño, que

tenia entonces la doctrina de San Pedro de Casta en la misma provincia de Huarochiri.'' Extracts of letters written by Avendaño are given by Arriaga. Very valuable, principally for linguistics, are the sermons preached by Avendaño in Quichua and published (with a Spanish translation) in 1649 at Lima: *Sermones de los Misterios de Nvestra Santa Fe catolica, en Lengua castellana, y la general del Inca.* They contain nothing relative to Titicaca.

[76] *Extirpacion,* Cap. xv, p. 88: ''Todo lo que dixeren á de yr escriviendo brevemente, pero con claridad, y distincion para mejor entenderse en vn libro blanco, que tendra para este efecto; poniendo su titulo. La Ydolatria que se descubrió en tal pueblo, tal dia mes y año. Y en el mismo libro a parte, o en otro distinto, yra escriviendo, lo q̄ incidētemente descubriere de Huacas, o Hechizeros, o cosas semejantes de otros pueblos. Y lo mismo hara cada y quando, que supiere las cosas de otras partes, aunque no sean de su visita . . . De qual quiera manera que sea todo lo que se supiere, lo cierto como cierto, y lo dudoso, como dudoso, se á de escribir con claridad, puntualidad, y diligencia.''

[77] I refer, for such works, to the letter to the Conde Toreno, by Espada, in *Tres Relaciones de Antigüedades Peruanas.*

[78] *Historia del Nuevo Mundo,* completed 1653, but published in Sevilla in 1900, in four volumes. It is one of the most important works on Spanish America (the author also lived in Mexico for twenty years) for ethnology, archaeology and natural history for the seventeenth century.

[79] *Historia del Nuevo Mundo,* Vol. III, p. 121.

[80] *Ibidem.*

[81] P. 122.

[82] P. 123.

[83] P. 124.

[84] P. 125.

[85] P. 125: ''Otra fábula del origen de los Incas es muy semejante á esta, salvo que afirma que los primeros nacieron en la sobredicha isla de una mujer llamada Titicaca, de quien tomó el nombre que hoy tiene la isla y laguna.''

[86] Vol. IV, p. 55.

[87] *Ibidem.*

[88] *Historia del Perv y Varones insignes en Santidad de la Compañia de Jesus,* p. xvi.

[89] P. 5 *et seq.*

[90] Lib. I, Cap. II, p. 23: ''Noticia será esta que no se hallará tan facilmente en las historias, por lo menos con auer visto, y leido muchas no la hé alcançado dellas, y en el tiempo que estoy escribiendo esta vinieron á mis manos unos papeles originales, que me dió el doctor Bartolomé Cervantes, racionero de la Sancta yglesia de los Charcas en que hallé con puntualidad lo que muchos años á é deseado saber.''

[91] Pp. 18, 19 and 20.

[92] Lib. I, Cap. II, p. 17.

[93] *Comentarios Reales,* I, fol. 137. He claims: ''Yo traté los Quipus y ñudos con los Yndios de mi padre, y con otros Curacas quando por san Juan y Nauidad venian a la Ciudad, a pagar sus tributos. Los Curacas agenos rogauan a mi madre, que me mandasse les cotejasse sus cuentas por que, como gente sospechosa, no se fiauan de los Españoles, que les tratassen verdad en aquel particular, hasta que yo les certificaua della, leyendoles los traslados, que de sus tributos me trayan, y cotejandolos con sus ñudos, y desta manera supe dellos tanto como los Yndios.''

[94] *Historia del Perv,* Lib. I, Cap. II, pp. 23–27. The story of the throw with the sling was repeated to us by an Indian from Azángaro north of the Lake, with slight variations.

[95] *Ibidem.*

[96] P. 38: ''Luego diuidió el Reino en quatro partes que son las mismas en qué el gran Huyustus antes que

començara á reinar su padre Manco Capac lo auia repartido . . .'' This refers to the Inca war-chief Sinchi Roca and alludes to a supposed anterior rule, the seat of which was Tiahuanaco. (P. 39.) ''Y passó á las partes de Tyyay Vanacu por ver sus edificios que antiguamente llamaban Chucara, cuya antigüedad nadie supo determinalla. Mas solo que allí vivia el gran señor Huyustus que decian ser Señor de todo el mundo.'' The word ''Huyustus'' is suspicious. It is neither Quichua nor Aymará, and recalls the manner in which the Indians of those parts would pronounce ''Augustus''!

[97] Cabello Balboa was alive in 1603. *Orden y Traza para descubrir y poblar la tierra de los Chunchos y otras provincias, Rel. geográficas,* II, Apéndice III, p. cxii.

[98] Vizcarra: *Copacabana de los Incas.* About this rather suspicious book, and that of Salas upon which it claims to be based, see preceding chapters.

[99] The work of Father Ramos is exceedingly rare. I know of only four copies, one of which (and an incomplete copy) was taken to Spain by Father Rafael Sans, while two intact ones are in Bolivia and the fourth one at the Hispanic Society of America. My friend, the Right Reverend Bishop of La Paz, Fray Nicolas Armentia, had the kindness to compare the text of one of these copies with the purported reprint of the book by the late Father Nicolas Sans, and to furnish me with the title of the original, which is: *Historia del célebre y milagroso Santuario de la Ynsigne Ymágen de Nr̃a Sr̃a de Copacabana,* Lima, 1621. Of the partial reprints made by Father Sans there are two editions, also rare, the first one of which, dated 1860, contains a map of Lake Titicaca and an outline sketch of Copacavana. The second edition bears date 1886. I quote from the former.

[100] *Historia de Copacabana,* 1860, Cap. I–II, p. 3: ''y de la cual la tradicion vulgar hace salir a Manco Capac a la conquista del imperio.'' This is from Father Sans.

[101] Cap. XXVII, p. 53 *et seq.*

[102] Cap. VIII, p. 12: ''El fundamento de la estimacion de esta isla fué haberse creido por los antiguos que, habiendo estado en tinieblas algunos dias, vieron despues salir al Sol de aquella peña.''

[103] With the difference that Ramos gives more detail concerning the mysterious ''Cross of Carabuco.'' See my article in the *American Anthropologist,* Vol. VI, No. 5. ''The Cross of Carabuco.''

[104] And even that resemblance is very faint. Compare *Relacion de la Religion y Ritos del Peru, hecha por los primeros Religiosos Agustinos que allí pasaron para la Conversion de los naturales, Doc. de Indias,* III, p. 24; also Cabello Balboa: *Miscelanéa austral* (MSS.).

[105] The manuscript of Betanzos was, when Ramos wrote, in Spain, and possibly in the hands of Fray Gregorio Garcia. Of the writings of Cieza only the first part had been published.

[106] According to Mendibúru (*Diccionario,* Vol. II, p. 117), Calancha was born at Sucre (now in Bolivia), in 1584, and died 1654. His ponderous, but valuable work, *Corónica Moralizada,* was published, the first volume in 1638, the second (very rare), in 1653.

[107] *Corónica Moralizada,* Vol. I, Lib. II, Cap. X, p. 366.

[108] *Ibidem,* p. 367.

[109] *De diva virgine, Copacavana, in peruano novi mvndi Regno celeberrima, Liber vnvs, Quo eius Origo, et Miracula compendio descripta,* Rome, 1656.

[110] *Imágen de N:S: de Copacavana,* mentioned previously.

[111] *Idem,* fol. 19.

[112] Ramos: *Historia de Copacabana,*

Cap. VIII, p. 12, edition of 1860: "El fundamento de la estimacion de esta isla fué el haberse creido por los antiguos que, habiendo estado en tinieblas algunos dias, vieron despues salir al Sol de aquella peña." I call attention to the various versions concerning the duration of the obscurity in which the region is said to have been plunged. Some authors mention a long period, while others speak of merely a few days. Such a short period of darkness was at Copacavana produced by the eruption of the volcano of Omate in 1600. Ramos: *Historia*, p. 120.

LIST OF INDIGENOUS PLANTS

These plants were collected by Mrs. Ad. F. Bandelier on the Island of Titicaca, and use was made thereof according to statements of the Indians.

Name in Aymará	Latin Name	Use in Indian Medicine
Belalaya	Malvastrum	"Against all kind of diseases"
Chapi	Relbunium microphyllum (Gray) Hemsley	Same
Chaucha	Not determined	Against dog-bite. The plant is ground to a pulp, which is mixed with the ashes of the hairs of the dog and applied as a plaster on the wound
Chiki	Acicarpha procumbens Lass	Taken as an infusion to refresh the blood after a dispute or quarrel
Hanuca	Not determined	Not used on the Island
Hanuk'ara	Lepidium bonarensis DC	Against pneumonia and pleurosis. Taken as infusion
Hanuk'ara irma	Not determined	Not used on the Island
Kachu-Kachu	Erodium cicutarium L'Her	Against goitre. Toasted like coffee, ground and applied on the skin. Same use in the case of sores
Kea-Kea	Not determined	Placed on wounds or cuts to stop bleeding
Layu-Layu	Oxalis, probably a new species	Not used on the Island
Marancela	Sisyrinchium Sps., near S. pusilla H. B. K.	Both used as purgatives
Marancela	Lobelia nana H. B. K.	
Misicu	Not determined	Against pain in the stomach
Muni-Muni	Not determined	Same use as Chik'i

Name in Aymará	Latin Name	Use in Indian Medicine
Nuñumaya	Solanum aureifolium Rusby	The leaves, dried and moistened with native grape-brandy, are wrapped around the body of a child that has been frightened by the sight of a corpse. If the child falls into perspiration and its cheeks become red, it is looked upon as saved, otherwise it may die. See "Larpata"
Panti-Panti	Cosmos pulcherrimus	The root and flowers are used for preparing a hot infusion which is an excellent remedy against severe colds
Sasaya blanca	Cerastium arvense L.	Taken as infusion against sudden affections of the lungs and some nervous diseases peculiar to the country
Tonouari	Acicarpha	While admitting that the plant is used by them for medicinal purposes, the Indians obstinately refused to give any information on the subject
Uairank'aya	Ranunculus præmorsus H. B. K.	Not used on the Island
Verbena	Verbena	For all sorts of diseases

The determination of botanical names in the above list is due to the kindness of Professor Nathaniel L. Britton, Director of the New York Botanical Gardens.

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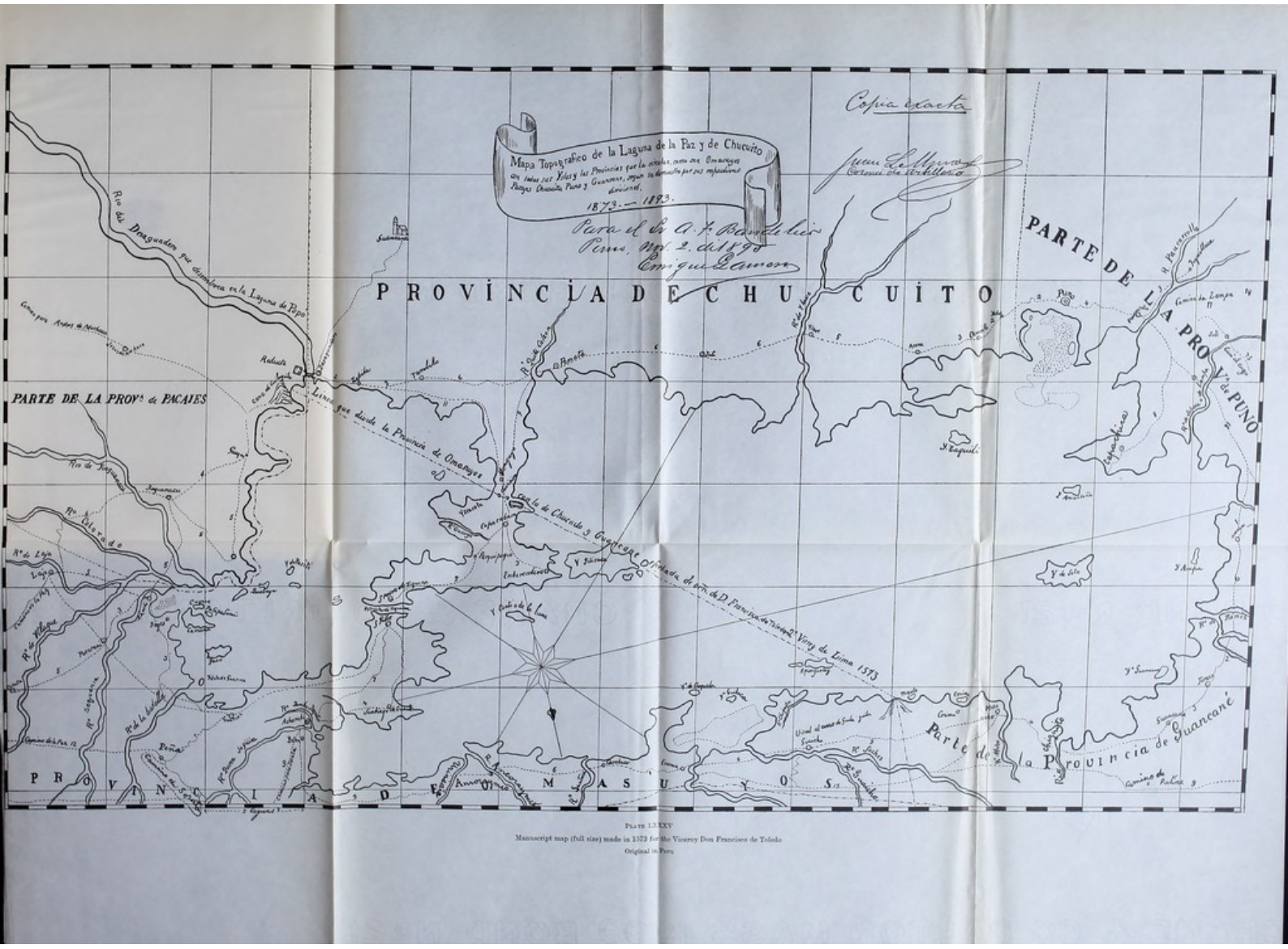
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Mapa Topográfico de la Laguna de la Paz y de Chucuito
con todas las Yslas y las Provincias que la circulan, como son Omasuyos
Pacajes Chucuito, Puno y Guancané, según se demuestra por sus respectivas
direcciones.
1873. — 1883.
Copia exacta
Para el Sr. A. F. Bandelier
Lima, Mayo 2. de 1892
Enrique Lamon
PROVINCIA DE CHUCUITO
PARTE DE LA PROV.a de PACAJES
PARTE DE LA PROV.a de PUNO
Parte de la Provincia de Guancané
PROVINCIA DE OMASUYOS
Rio del Desaguadero por donde sale la Laguna de Pipo
Linea que divide la Provincia de Omasuyos
Linea de Chucuito y Guancane
Linea de Chucuito y Omasuyos
Linea de Omasuyos y Pacajes
Linea de Pacajes y Chucuito
Linea de Puno y Chucuito
Linea de Puno y Guancane
Linea de Guancane y Omasuyos
Linea de Guancane y Pacajes
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