

A visit to Madeira in the winter 1880-81: two lectures delivered before the members of the Literary & Philosophical Society of Newcastle-upon-Tyne, on the 17th and 19th of October, 1881 / by Dennis Embleton.

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A VISIT TO MADEIRA

IN THE WINTER 1880-81.

TWO LECTURES

DELIVERED BEFORE THE

MEMBERS OF THE LITERARY & PHILOSOPHICAL
SOCIETY OF NEWCASTLE-UPON-TYNE,

ON THE 17TH AND 19TH OF OCTOBER, 1881.

BY

DENNIS EMBLETON, M.D., F.R.C.P.,

Consulting Physician to the Newcastle-upon-Tyne Infirmary.



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1882.

A VISIT TO MADEIRA

IN THE WINTER 1868

3

TWO VOLUMES

By J. H. COLEMAN

MEMBER OF THE LONDON & LANCASHIRE

ASSOCIATION OF AMATEUR PHOTOGRAPHERS

IN THE WINTER OF 1868

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I DEDICATE THESE TWO LECTURES

TO

"THE GIRL I LEFT BEHIND ME,"

MY DEAR DAUGHTER,

Anna Embleton.

Newcastle-upon-Tyne,

January, 1882.



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CONTENTS.

LECTURE I.

	PAGE
Departure; Voyage	5
Arrival	6
Landing—Sancta Clara Hotel	8
First Night	<i>ib.</i>
First Morning	9
Was Madeira Known to the Ancients?	10
Insulæ Fortunatæ and Purpurariæ	<i>ib.</i>
Atlantis of Plato	13
Authorities	17
Archipelago	<i>ib.</i>
Population	<i>ib.</i>
Desertas and Selvagens	18
Madeira	<i>ib.</i>
Tides	19
Mountains	<i>ib.</i>
Geology	20
First undoubted notice of Madeira	<i>ib.</i>
Story of Robert and Anna	21
Discovery of Madeira by the Portuguese	26
Second Expedition and Colonization	28
Government; Civil	30
Taxes; The Post; Emigration; Landlord and Tenant	31
Government; Military	<i>ib.</i>
Funchal	32
Country Roads and Quintas; Pavements,	34
Workshops	35
Street Signs; Sale Shops	36
Houses; Street Sights	37
Dress	38
The People	39
Food	41
St. Brandon	<i>ib.</i>
Ethnology	<i>ib.</i>
Music	42
Situation of Funchal	<i>ib.</i>
Rivers; Irrigation	43
The Water	44
Vegetables; Flowers	<i>ib.</i>
Fruits	45

LECTURE II.

	PAGE
Meteorology; Winter of 1880-81	49
Weather in North of England in January ..	<i>ib.</i>
Ditto in February and March	50
Meteorology, General; Atmospheric Pressure ..	51
Rainfall	53
Days of Rain	<i>ib.</i>
Winds	<i>ib.</i>
Humidity, &c.	<i>ib.</i>
Religion; Churches	56
The Sé; The First Bishop	<i>ib.</i>
Other Roman Catholic Churches	58
Anglican Churches	<i>ib.</i>
Presbyterian Church	59
Branch of Society for the Propagation of the Gospel	<i>ib.</i>
Number of English in Madeira	<i>ib.</i>
Cemeteries	<i>ib.</i>
Duration of Life; Proportion of Deaths ..	60
Education	<i>ib.</i>
Schools; Newspapers	61
Language	<i>ib.</i>
Names of Days of the Week	66
Charitable and Medical Institutions; Hospicio ..	<i>ib.</i>
Consumption in Madeira	67
General Hospital	69
Orphanage; Leper Hospital	70
Poor House	72
Prison; Military Hospital and Country Hospitals ..	73
Modes of Travelling	<i>ib.</i>
Beasts of Burden	75
Principal Productions	76
What to do on Arrival	81
Necessary Articles	83
Books on Madeira	84
Medicines	<i>ib.</i>
Fauna	<i>ib.</i>
Flora	86
Conclusion	88

LECTURE I.



A VISIT TO MADEIRA

IN THE WINTER 1880-81.

A TRANSITION from the dreaded influences of a cold, wet, and penetrating north-east wind, or of severe frost and snow, to the genial warmth of a soft south-west breeze, even if it be only for a day or two, in this country is felt to be an agreeable event; but after quitting even this, one's own country, covered with ice and snow, and finding one's self, after a few days of ocean tossing, gliding tranquilly over a deep blue sea in clear and sunny weather, which day after day for a month continues the same, unpolluted with smoke or fog, and lighting up majestic scenery, the sensations that therefrom spontaneously arise, constitute a new and intense delight which must indeed be felt to be appreciated, and which cannot easily be described.

parture. Three in number, we left England, covered with snow, and the Mersey dim and cold with drizzling fog, in the good steamship "Gaboön," Captain Daniel Munro, (1,862 tons, 280 h.p., length 310, breadth 33, and depth 23 feet, owned by The British and African Steam Navigation Company, agents, Elder, Dempster, and Co.) at 1.30 p.m. on the 20th of November last year (1880), after taking leave of two kind, fair friends.

oyage. We ploughed our way down St. George's Channel in the dark, and at about six o'clock next morning sighted the Tuskar light off the Wexford coast. Keeping outside the Bay of Biscay, and at least 100 miles from the coast of the Peninsula, and still farther from that of Africa, we saw no land until the volcanic peaks at the east end of Porto Sancto, one of the islands of the small Archipelago of Madeira, appeared before us at about 10 a.m. on the morning of the 27th.

We were then 50 or 60 miles from our desired haven. Before passing Porto Sancto on the left hand our attention was drawn by the Captain to an obscure cloud in the western horizon that gradually got darker and more distinct as we drew nearer, and was eventually found to consist of masses of vapour hanging on the sides, and veiling the tops, of the mountains at the east end of Madeira.

This phenomenon, no doubt a common one and little noticed now, was an object of distrust and fear to the navigators of the time when Madeira was discovered, as will appear farther on.

The coast of the east end of Madeira presents a scene of true volcanic desolation, bare and lofty precipices, jagged, arched, and pointed rocks, and islets against which an angry surf is seen to beat.

Passing southwards we soon turned to the west, rounding the south-eastern point of the island, the point of St. Lawrence (Ponta de São Lourenço), where, on an isolated rock of basalt stands a lighthouse, and also a telegraph station in connection with Brazil, Lisbon, and England, the wires extending also on to Funchal, the capital, and to other places in Madeira. As we steamed rapidly along the south coast, leaving the three Desertas on the port side, we could see at a distance the rugged cliffs bordering the sea, with here and there a small bay or shingly beach where a torrent discharges itself. Above these the land rises in ridges with interposed ravines, all dotted with woods, straw-covered cottages, small villages with their white churches, gardens, and fields of verdant sugar cane, the whole over-topped by lofty mountains, some bare, others covered with forest.

We were charmed with the scenery; and the temperature of the air, which at Liverpool had been 48° gradually rose, after we had passed the Bay of Biscay, to 66° Fahr.

The two invalids on board as well as the other passengers had been obliged to lessen their nightly coverings and their daily wraps, and were now on deck enjoying the lovely air, the genial sunshine and the varying prospect; and the invalids felt already somewhat improved.

We cast anchor on the side of the mountain, in the Bay of Funchal, at 3 p.m. on the 27th, after a not very

eventful voyage. Not many vessels were seen, and only a few gulls and porpoises. For two or three days and nights, about the middle of the voyage, we had what the sailors called "a nasty sea," with great hills of waves, at times battering the sides of the ship, and then there was besides the usual rolling swell of the Atlantic from the west; we only once, however, shipped a considerable drenching sea.

Our fellow-passengers were a young invalid seeking relief to his chest in Madeira, two young persons, one a Lancashire lad, the other older and from St. Kitts', going to act as clerks at trading stations on the West Coast of Africa, and one William Jumbo, a negro, son of one of the great chiefs on the river Bonny: he had been seven years in England where he was educated. He had been several times back and forward, and was now taking home with him two boats for the navigation of his native river—he spoke like an Englishman.

We were in all only seven passengers and had plenty of room.

The berths were clean and comfortable, the food ample and varied, with fresh meat, vegetables, and milk daily, the attendance good, and Captain Munro kind and obliging.

No sooner had we cast anchor than there came off from the beach, there is no quay, the customary swarm of boats; first that of the Port Doctor, to inquire if we had yellow fever or any other infectious disease on board, and as we had none of those undesirable commodities, we escaped having to hoist the yellow flag of quarantine. Next came alongside the Custom House boat with officials in search of contraband articles; both these boats carried the blue and white Portuguese flag.

No passport is required on entering Madeira, but on leaving it a police permit is essential.

Other boats followed with fruit, vegetables, wicker chairs, broad straw hats, &c. Boats with half-naked, bronze-skinned boys, whose game it was to dive after any silver coin thrown to them in the sea, and to catch it long before it could get near the bottom; lastly, passenger boats manned by active fellows, to carry visitors and baggage to shore.

We put ourselves entirely into the hands of Mr. Reid, who had come off in the interest of his hotels. He got our luggage passed, and after we had taken leave of our Captain and passengers, we got into a boat and were rowed quickly over the dancing waves to the steep beach, a distance of a few hundred yards.

The surf was rather rough and we were landed stern first on the crest of a breaker ; as soon as we touched land the boat was seized by a crowd of clamorous, bronzed, black-haired, white-clad boatmen, and a yoke of small, sturdy, red bullocks attached by a rope to the boat. These had only just began to pull when the rope gave way and we might have gone to sea again but for our friends the boatmen. A second attempt with a better rope succeeded and we were drawn up to the level part of the beach.

Sancta Clara
Hotel.

There we were transferred, the men to a bullock car, the lady to a hammock, and were carried up through steep, narrow, quaint-looking streets of white houses and odd shops, to the Hotel Sancta Clara, opposite to the Convent of the same name, and situated at an elevation of 150 feet above sea level.

In this large hotel we found every comfort and attention after our voyage, the dining, drawing, and bed-rooms were clean and orderly, the dietary excellent and plentiful. The service was good ; and some of the domestics, as well as the Manager, Mr. Cardwell, and the Housekeeper, Miss Goodman, were English, and in every way obliging, and there we stayed very pleasantly two weeks, looking about us to find a private house.

First Night.

The first night, owing in part to the novelty of all around us, and the motion of the " Gaboon," still felt, we did not sleep very well ; for my part I had to listen to a frequent ringing and tolling of bells from the church towers ; some of the bells were cracked, others rung like the bells of steamboats on the Tyne, and altogether there was discord. Added to this, and interposed between the bell-rings, were cock-crowings such as I had never heard before, they occurred late at night and up to midnight, when there was a general chorus, after that a pause ; but before and after four o'clock, about the time of early mass, the cocks woke up again for a general salute, next a pause again ; and lastly, the réveill   sounded on the bugle at the

barracks, and the ringing of the church bells at six o'clock woke the cocks for good and all, and they saluted the morn lustily. There were big cocks, evidently, and little cocks, young cocks and old cocks, cocks near at hand, cocks at the middle, and cocks in the far distance—a long auditory perspective, if I may so speak, of cock-crowing all round, in the dark, the voices varying in volume, pitch, and tone, from the hoarse bass of the great Brahmapootra up to the shrill treble of the spirited little Bantam. As there were so many cocks, I wondered, half-a-sleep, how many hens there might be in Funchal, and if their eggs would be good at breakfast time.

East Morn-
ing.

I was not late in rising, and on opening my window, I looked out upon an enchanting scene; just below was a semi-tropical garden with a low terrace, on which were stone benches of classic form, separating flower beds from a tennis lawn bordered by a row of bananas in fruit, (*Musa Cavendishii*), 12 and 14 feet high, by custard apple trees, eucalyptuses of two species, poinsettias, strelitzias, guava plants, roses, heliotropes, vines, and other plants grown only in hothouses in England.

Enclosing the garden on one side was a mediæval convent of Capucine nuns, on the other, and in front, Italian-looking houses and sugar-cane grounds; in the distance a glorious amphitheatre of brown and green mountain, studded with white country houses and their gardens; conspicuous above them, the Church of Our Lady of the Mount (*A Igreja de Nossa Senhora do Monte*) with its two white and black towers. The sides of the mountains above all these terraced to a great height, their summits veiled in clouds or covered with pines. Away to the south was the broad Atlantic with the Desertas in the remote distance. Over all this wonderful scene a blue cloudless sky, a warm, invigorating sunshine, and pleasant airs.

I found that there is no exaggeration in the florid and fervent reports made by visitors to Madeira; to me it appeared a terrestrial paradise.

French visitors have been the most effusive and glowing in their praises of this "Queen of the Atlantic," but I will quote one passage from the book of an

Englishman,* and a soldier, a man therefore, I suppose, not given to ecstasies. He says, "I can fancy no scenery, and I have travelled over most parts of Europe, and a large portion of Asia, more lovely, more majestic, than that of this enchanting island. On the hills, as far as the temperature will admit, are vines of extraordinary luxuriance; whilst even the loftiest mountains are adorned with a perpetual verdure. Here reign in unbroken succession alternate spring and autumn; utterly unknown are the scorching heats of summer and the icy chills of winter. The eye is enraptured by the view of perpetual bloom, and the traveller ranges through meadows where grow spontaneously flowers raised with difficulty in the green-houses of England, and scrambles through hedges composed of the myrtle, the rose, and the jasmine."

If the Poet had ever seen Madeira he would never have styled that unhappy, though beautiful, Ireland

"First flower of the Earth and first gem of the Sea."

Was Madeira
known to the
ancients.

It has been conjectured by some historians and geographers that Madeira may have been known to the ancient Egyptians, who are said to have circumnavigated Africa, or to the Phœnicians, and through them to the Greeks also. The Arabians, too, have been credited, but how far truly I know not, with a knowledge of this and the other islands off the African coast. Humboldt says, "The many indications which have come down to us from antiquity, and a careful consideration of the relations of geographical proximity to ancient undoubted settlements on the African shore, lead me to believe that the Canary Islands were known to the Phœnicians, Carthaginians, Greeks, and Romans; perhaps, even to the Etruscans." *Cosmos*, Vol. II., p. 497. Bohn's Series.

The Insulæ
Fortunatæ.

The Hesperides of the Greeks, mentioned in the fourth book of the *Odyssey*, the *Insulæ Fortunatæ* of the Romans, where the golden apples or oranges grew, and in which Greeks, Romans, and Barbarians alike believed were the Elysian Fields, or abodes of the blessed after death, were certainly the Canary Islands, and probably, also, the Cape Verde Islands, lying as they do nearest to the Coast of

* Truths from the West Indies, including a sketch of Madeira in 1833; by Captain Studholme Hodgson, of H.M.'s. 19th Regiment of Foot. London, 1838.

Africa, along which the ancient mariners crept cautiously, hugging the shore from a superstitious dread of the, to them, unknown and illimitable Atlantic.

The description of the *Insulæ Fortunatæ* by Plutarch, in his "Life of Sertorius," suits the Canaries, but does not apply to Madeira. He says, "Rain seldom falls there, and when it does it falls moderately, but they have soft breezes which scatter such rich dews that the soil is not only good for sowing and planting, but spontaneously produces the most excellent fruits, and those in such abundance that the inhabitants have nothing more to do than to indulge themselves in the enjoyment of ease." Now, during last winter, no rain had fallen in the Canaries for five or six months, and water had become so scarce that the inhabitants were compelled to import it in ships to keep themselves and their cattle alive. This fact seems to corroborate the account of Plutarch as regards the paucity of rain-fall, and it is known that at the present day, the climate of the Canaries is a dry one generally.

Again, the Fortunate Islands, when known to the dwellers around the Mediterranean, were inhabited by the Guanches, and were cultivated and productive.

When Madeira was first discovered there were found no traces of any former occupation by man, the whole island was covered with very ancient forest down to the sea and uncultivated, and there has been no report of the golden apples having been found there. Owing to its being a lofty, mountainous, forest-covered island, rains would be much more copious in ancient times than they are at the present day when the forest is comparatively trifling. At present there are rather over 30 inches of rain annually.

Madeira could never have been dry at the beginning of the Christian era, like the Canaries.

^e *Insulæ*
urpurariæ. That Madeira and Porto Sancto were the *Insulæ Purpurariæ*, in which Juba, king of Mauritania, established dye-works of Getulian purple, is extremely doubtful, though this is asserted by the celebrated geographer Cellarius. Alexander Von Humboldt is of the same opinion, as appears from the following passage in his *Cosmos*:—"As Plutarch says that Sertorius, when driven away from Spain, wished to save himself and his

attendants, after the loss of his fleet, on a group of two Atlantic islands 10,000 stadia to the west of the mouth of the Bætis, it has been supposed that he meant to designate the two islands of Porto Santo and Madeira, which were clearly indicated by Pliny as the *Purpurariæ*."

The passage in question is as follows:—"Ultra has (Insulas Gorgades) etiamnum duæ Hesperides Insulæ narrantur. Adeoque omnia circa hæc incerta sunt, ut Statius Sebosus à Gorgonum insulis prænavigatione Atlantis dierum XL ad Hesperidum insulas cursum prodiderit, ab iis ad Hesperion ceras unius. Nec Mauritaniae insularum certior fama est. Paucas modo constat esse ex adverso Autololum, à Juba repertas, in quibus Getulicam purpuram tingere instituerat."—*Plin Nat. Hist. Lib. vi. Chap. xxxi.*

Now, with all deference to these high authorities, I cannot find that Pliny has stated more than that reports concerning the Hesperides Islands on the north western coast of Africa were very uncertain, and those respecting the Mauritanian Islands were not less so, but that there were certainly a few (or small) islands off Autolulum discovered by Juba, in which he set up a factory for dyeing Getulian purple.

This Autolulum, the capital of the nation or tribe called Autolules, was on the coast of Getulia, and on that coast were found the Murex and the Purpura—shellfish yielding precious dyes. The sea around islands off that coast was, doubtless, also the habitat of these shellfish, and it is to be believed that a clever and learned man like Juba would establish his works on the spot where the raw material was to be had for the gathering.

Madeira is 360 miles from the nearest point of the coast of Africa and it is hardly likely that dye works, at that time of day, would be established so far from the coast if even the Madeira group had been discovered. Moreover, the strong oceanic current running from north west to south east between Madeira and Africa, and occasional storms, would be impediments to the transit of goods in those days. In Keith Johnson's Atlas, the most northern of the Canary Islands are marked as the *Insulæ Purpurariæ*, and probably correctly, unless it can be shown that there are some small islands farther

north than the northern Canaries, and nearer to the African coast, and which are not laid down in our common maps.

There appears to have been much confusion respecting these islands, in the minds of ancient authors, who probably derived their information from ignorant sailors or adventurers, and had themselves never seen the islands.

We may conceive it to be not altogether impossible that the Madeirian group may have been reached by some of those "old salts" of ancient days, who either had lost their way in some blinding tempest, or had been blown out to sea by an east wind, and carried out of their course by adverse currents, but of such possible events no record or trace of any kind has come down to us from antique times.

Nothing was known of Madeira, by the world, before the time to be shortly pointed out—when it was certainly discovered and made known by the bold, adventurous mariners of Portugal.

7. Atlantis
of Plato.

I will here venture on a short digression to notice the weird and ancient legend which was said to have been handed down by the old Egyptian priests of Saïs, and told to Solon, and which has been recorded in the "Timæus and the Critias of Plato."

According to this legend there existed, at least 9,000 years before the time of Solon, who flourished 600 years before the Christian era, an island, called Atlantis by Plato, from which voyagers could pass to other islands and from them to the opposite continent which surrounds the Atlantic sea.

This Atlantis was more extensive than Asia and Libya taken together, and stretched from opposite to the Pillars of Hercules, similarly to Africa, into the ocean. It was mountainous, fertile, and agreeable, endowed with all kinds of animals, plants, and minerals, and inhabited by a great, numerous, and warlike people. It was destroyed in one day and one night by an awful cataclysm, having been submerged in the billows of the Atlantic with its entire population.

There was a report in the time of Pliny of the existence of such an island. He says, "Traditur et alia insula contra Montem Atlantem, et ipsa Atlantis appellata." —*Nat. Hist. Lib. vi. Chap. xxxi.*

It has, up to the present time, been a curious subject of speculation and enquiry whether or not there be any truth at the bottom of this archaic legend, which has, generally, been discredited.

In a little work on the Azores by Senhor A. G. Ramos,* it is stated as the belief of the Count Vargas de Bedemar, a Portuguese authority, "that the Canary Islands, Madeira, and the Azores, though mainly composed of volcanic rock, rest upon bases of primitive formation—portions of a great island or continent of which they may have formed part, and which, by internal terrestrial convulsions, was divided into fragments, the intermediate parts being submerged, whilst the others were elevated by an explosion."

Others, and especially Azorean writers, have been anxious to discover an analogy between the Azores and the great Atlantis of Plato.

Here we have the mere expression of opinions and desires of an anticipatory character; but what has happened at one part of the crust of the globe may be expected to have its counterpart at another, and what has occurred in one age may be repeated in another, for we know that the same terrestrial agencies have been in operation all over the earth from the earliest to the present time.

It ought not, therefore, to be a matter of unbelief, though it may be one of much astonishment, that an island has disappeared, when we know from geology that such an event has really occurred. For instance, Great Britain and a vast tract of land around it, as far as the 500 or 600 fathom line in the sea, has, in the distant ages and at two or three distinct and, indeed, widely separated epochs, been submerged beneath the ocean, and then parts, or the whole of it, again elevated above the waters.

On more than one occasion the tops only of the highest mountains were left standing out of the water like an archipelago of islands, and at such times Great Britain must have presented a somewhat parallel case to the present Atlantic Archipelagoes.

* *Noticia do Archipelago dos Açores &c. por Accurcio Garcia Ramos, Lisboa, 1871.*

But this was only a small part of the volcanic work that was going on in those ancient days ; part of the floor of the Atlantic far to the southward of Great Britain must have been also above water, and there actually was an island or a continent there where now rolls a wide waste of water to the west of Gibraltar.

Mr. Judd, in his work on Volcanoes,* writes : " Through the midst of the Atlantic Ocean runs a ridge, which, by the soundings of the various exploring vessels sent out in recent years, has been shown to divide the ocean longitudinally into two basins. Upon this great ridge, and the spurs proceeding from it, rise numerous mountainous masses, which constitute the well-known Atlantic islands and groups of islands. All these are of volcanic origin, and among them are numerous active volcanoes. The island of Jan Mayen contains an active volcano, and Iceland contains thirteen, and not improbably more ; the Azores have six active volcanoes ; the Canaries three ; whilst about eight volcanoes lie off the West Coast of Africa. In the West Indies there are six active volcanoes ; and three submarine volcanoes have been recorded within the limits of the Atlantic Ocean. Altogether, no less than forty active volcanoes are situated upon the great sub-marine ridges which traverse the Atlantic longitudinally.

" But along the same line the number of extinct volcanoes is far greater, and there are not wanting proofs that the volcanoes which are still active are approaching the condition of extinction.

" At a somewhat earlier period of the earth's history the whole line of the present Atlantic Ocean was in all probability traversed by a chain of volcanoes on the very grandest scale ; but submergence has taken place, and only a few portions of this great mountain range now rise above the sea-level, forming the isolated islands and island groups of the Atlantic.

The existence of an Atlantic island being thus rendered more than probable, the question then arises, were there men, capable of handing down tradition, living

* Volcanoes, what they are and what they teach, by John W. Judd, F.R.S. International Scientific Series, Vol. xxxv., London, 1881.

at that time on such island and on the shores of Europe and Africa? In short, was man living at all in the Meiocene age?

Lyell says that "no certain, proved traces of man anterior to the Pleistocene Age exist."

Some French savants, on the other hand, believe that they have discovered evidence to prove that man existed in the Pliocene, which immediately succeeded the Meiocene age.

Sir John Lubbock, in his Presidential address to the British Association for the Advancement of Science, this present year, states that it has not been settled yet whether man did not exist in the Pliocene and even in the Meiocene age.

Adhuc sub-judice lis est!

If the island existed and was swallowed up in the Meiocene period, and men were then living on the shores of the Atlantic they must have been capable of handing down traditionally an account of the disappearance of the island, and in that way the Egyptian priests may have heard of and recorded it; but that would bring down the date of the Meiocene age to somewhere about 10,000 years before the Christian era, which would not suit the computations of geologists, and would also require that men should have been advanced in intellect and civilization far beyond what the ethnologists of the present day would credit them with.

If the cataclysm occurred during the Meiocene age, and man was non-existent, tradition was impossible, and the Egyptian legend must be a fable.

There is, as already stated, a prevalent disbelief in the legend. Senhor Ramos, above quoted, derides it as a mythic story of the Egyptian priests embellished by the brilliant imagination of the Greek philosopher.

Cellarius,* the celebrated geographer, believed it to be a fable.

The subject is discussed at length on its merits in Vol. I. of Smith's Dictionary of Greek and Roman Geography, Article *Atlantis*. The result is left in doubt, but the author inclines to disbelief in its truth.

* Christopheri Cellarii, Smalcaldensis, Geographia antiqua, 6th. Edit. Minor work, by Samuel Patrick, LL.D. Londini, 1790.

It is quite possible that at some future day evidence more satisfactory may come to light as to the existence of an Atlantis and its relation to primeval man, than we at present possess.

But to return to Madeira as at present existing.

Authorities.

The account I have to give of this "Flower of the Ocean" and its inhabitants is derived from the following sources; namely, "The Historia da Madeira," by the Doutor Gaspar Fructuoso, written in 1590 in the Azores, and republished with copious and valuable notes, in Funchal, in 1870-73 by Alvaro Rodriguez de Azevedo; Dr. C. A. Mourão Pitta's "Le Climat de Madère," Montpellier, 1859; Dr. Grabham's "The Climate and Resources of Madeira," London, 1870; Dr. J. Goldschmidt's "Madère étudiée comme Station D'hiver," Paris, 1880; Mr. J. M. Rendell's "Handbook of Madeira," London, 1881; and lastly from other sources named in the narrative and from personal enquiries and observations.

Archipelago.

Madeira is the principal island of a small group consisting of Porto Sancto, the three Desertas—Ilheo Chão, Grande Deserta and Bugio—the Selvagens and Madeira proper.

Madeira is situated between $32^{\circ}37'$ and $32^{\circ}51'$ N. Lat. between $16^{\circ}37'$ and $17^{\circ}16'$ W. Long., nearly ten degrees north of the Tropic of Cancer.

Population.

The population of the whole group is differently stated; Grabham in 1870 gives it as 109,047; Goldschmidt in 1880 as more than 120,000; Rendell in 1881 as 132,221. Porto Sancto is said to have about 1,600 or 1,700 inhabitants.

Madeira, according to the census of 1878, contained 132,473, of whom 63,018 were males and 67,455 females; London, in 1880, in a population of 3,664,149, had males 1,714,999, and females 1,949,150.

Dr. Goldschmidt informed me that there is a very dense population in Madeira, somewhere about 300 to a square mile; the density in Great Britain at the census of 1871 was 260 to the square mile, and in the whole of the Empire 30 to the square mile.

Madeira is said to be four times as populous as Portugal.

Funchal has a number of inhabitants estimated at 25,000 (Grabham and Goldschmidt); 21,000 (Rendell).

The Concelho de Funchal, or district of which Funchal is the chief place, has a population of 38,650 persons (Goldschmidt). The mortality, says Mr. Rendell, is 20 in 1000 inhabitants; that among young children being enormous raises the rate considerably.

The remainder of the population of the island is distributed among a number of villages, hamlets, and isolated houses or cottages (*casas de palha*) scattered over the whole island, but mainly on the Southern side.

Desertas and
Selvagens.

The Desertas and Selvagens are uninhabited by man; the former being visited only by fishermen, men collecting the dye-weed, *Lichen Rocella*, and occasionally by some eager sportsman whose quest is the abundant rabbits, and the wild goats of the rocks. As seen from Madeira, at a distance of about 10 miles S.E. from Funchal, the Desertas present a range of wild, precipitous cliffs, rising in parts perpendicularly to a height of 2,000 feet, and form picturesque objects when the sun is setting. The Selvagens lie at a distance of 100 miles southwards of Madeira.

Madeira.

Madeira, so named from the immense forests or woods with which it was clad when first discovered—Madeira in Portuguese signifying wood—is distant from Porto Sancto, which lies to the north-east, 50 miles (Grabham); 23 from Ponta São Lourenço (Rendell); from Cape Cantin, the nearest point on the Coast of Africa, about 360 miles; from Teneriffe, 240; from Lisbon, 535; from Southampton, 1,334; and from Liverpool, 1,429 miles. From Sta Maria, nearest of the Azores, 480 miles.

The accounts of the dimensions of Madeira are conflicting, one author says it is from 28 to 30 miles long and from 12 to 16 in greatest width; another (Dr. Pitta) gives its length from Point St. Lawrence in the east to Point do Pargo in the west as 54 miles. Goldschmidt says it is $37\frac{1}{4}$ miles long and $13\frac{1}{2}$ miles broad. Its circumference is also differently given, as from 65 to 70 miles (Grabham); 110 (Rendell); and 140 (Pitta.) These differences arise, probably, from the route taken, by sea or land. A road runs all round the island and is seldom level.

It is bounded on all sides by rugged precipices of greater or less altitude, some reaching to 2000 feet of

perpendicular cliff, and only interrupted by small bays (*praias*), or where down some deep ravine one of the numerous mountain torrents (*vibeiros*) discharges its waters into the ocean.

The west is higher than the east end of the island, where the rocks are more rugged and distorted, and are prolonged southwards into an irregular promontory, the Point of St. Lawrence.

A perpetual surf beats upon this rock-bound coast.

les.

The tide, from the S.W., rises commonly about six feet, and at the full and change of the moon about seven feet. In storms, especially those from the S.W. and S. the water rises several feet higher, the surf then being extremely dangerous.

mountains.

The mountains form, as it were, the backbone of the island: the south side of the watershed slopes more gradually down to the sea, and has, therefore, a greater surface exposed, and more favourably exposed, to the sun than the northern.

They have, above Funchal, an elevation of 4,000 feet, but in the interior are much higher; Pico Ruivo rising, at near the centre of the island, to 6,050 feet, and there are nine others over 5,000 feet. They are very wild and irregular, exhibiting numerous lofty and sharp peaks, needles and cones, enclosing profound chasms and deep valleys, and there are at least two distinct craters remaining.

Some are bare rock, others clothed with vegetation, consisting of various shrubs and trees of indigenous or foreign origin, and notably with (*pinheiros*) or pines, which, with a tall heath, gorse and broom yield large (*lenha grossa*) and small firewood (*queima*), for the use of the people.

When trees are cut down none are planted in place of them, others spring up at once spontaneously.

The scenery among the heights is magnificently grand, many of the ravines are remarkable for their depth and rugged grandeur, others for their picturesque and sylvan beauty.

The sides of the mountains are in many parts terraced up to two or even three thousand feet; every part is utilized.

From the central chain descend on all sides towards the coast huge spurs which give off minor ones, and in the

ravines and valleys among them are many charming scenes ; the waters from the mountain sides running down in their rocky beds, slender streams in summer, brawling and violent torrents in the winter or rainy season.

Geology.

The island is one immense irregular mass of volcanic rock, mainly of basaltic character, and where the soil is visible among the sugar-cane fields and elsewhere it is of a deep red brown colour, and is made up of basaltic and vegetable remains.

It is evident that there have been in ages now far remote successive eruptions of melted rock from active volcanoes in the heights, for, both from the sea and in many places on the land, as by the sides of ravines, successive layers of basalt, in some cases columnar, superimposed on each other as if stratified, can be observed as in section. These cliffs are weathered and about the same colour as the soil, except where they are flecked with lichens, and further adorned with cactuses, aloes, &c., rooted in their crevices.

Long periods of time must have elapsed between the various eruptions. At St. Jorge, on the north coast, a vein of limestone has been found embedded in the basalt.

Near Porto Sancto there is a small islet of limestone which is supposed to have been an elevated coral reef.

Madeira is supposed to have been upheaved 4,000 to 5,000 feet by a primary series of eruptions, and at a later period to have been raised 1,000 or 2,000 feet higher.

There are various forms of basalt, compact and uniform, red and yellow tuff, ashes, cinders, &c. (Rendell.)

The upheaval of this and the other Atlantic islands must, we are told by geologists, have occurred during what is called the Meiocene period, the duration of which was long, and signalized by great volcanic activity at various points of the expanse and of the shores of the North Atlantic, including the British Isles.

No primitive rock, as granite, is observable in Madeira.

First
undoubted
notice of
Madeira.

The first known representation of Madeira exists, it is recorded, on a Genoese map, dated 1351. On it Madeira is designated by the Italian name, *Isola della Legname*—the island of wood.

It has been presumed, therefore, by some, that it had become known to the Mediterranean mariners in the first half of the 14th century; there is, however, no evidence that the Portuguese discoverers of Madeira were aware of that name; the island could not have been laid down on their charts, or some mention of it would be met with in the narrative of their voyage; the island evidently was to them a *nova terra*. It has reasonably been believed, by others, that the insertion in the Map of the Archipelago of Madeira was posterior to 1351, and had been made for his own use by Columbus in Madeira, where he resided some time in the Rua da Esmeralda, and employed and maintained himself in making and selling marine charts.

History of
Robert and
Anna.

The history of the discovery of Madeira is so interwoven with the romantic, but deplorable, story of the loves, adventures, and tragical ends of two English lovers, Robert Machim, or Masham, and Anna D'Arfet, or Dorset, or D'Arcy, that I have taken and give them together as they are related in the old "*Historia da Madeira*," written by the learned Dr. Gaspar Fructuoso; this history is quaint, rather prolix, and besides, in antiquated Portuguese; I give it, therefore, somewhat abbreviated, but without omitting anything of importance. It is proper to say *in limine* that the story is, by some, disbelieved altogether. I can only say, "*se non é vera é ben trovata*."

(In Vol. II. of A general History and Collection of Voyages and Travels, by Robert Kerr, F.R.S. and A.S., Edinburgh, 1811, two versions of this story are given).

The story commences at Chapter IV. of the *Historia*, and has this heading:—"A true and particular History of how the Englishman Machim arrived at the Island of Madeira."*

"In the time of King Edward of England there was a noble Englishman, a famous cavalier, whose family

* Translated from "As Saudadas da Terra, pelo Doutor Gaspar Fructuoso. Historia das Ilhas do Porto Sancto, Madeira, Desertas e Selvagens; Manuscripto do Seculo XVI."—Written in 1590 at St. Miguel dos Açores; annotated copiously by Alvaro Rodriguez de Azevedo; and published in Funchal, Typo Funchalense, 1870.

name was Machim, (this name is still existing in England), who, being of lofty thoughts and honourable deeds, happened to fall in love with a lady of high lineage, by name Anna de Harfet, who returned his affection.

“ No long time passed over, their mutual love being strong, before the lovers were detected, owing to certain indications and suspicions having arisen. The parents of the lady, thinking to throw cold water on the fire which consumed the young pair, contrived, with the approval of the King, to cast Machim into prison, and then to marry their daughter to a gentleman of high degree at Bristol.

“ Robert Machim, on being set free, was greatly disconcerted and enraged. He contrived, however, to communicate with Anna, and together, finding no other way out of their pains and sufferings, and lamenting with burning tears that unhappy marriage, they agreed to flee in all secrecy to France. And Machim consulted with certain malcontents and with his own friends, to whom he opened his heart and declared all his love; these all pledged their faith to him and swore to go with him into France. To effect this, their design, they proceeded, secretly and separately, and at different times, to Bristol, where lay certain merchant ships laden for Spain; in one of these, having covertly warned Anna of their purpose, that she might flee with them, they determined to take passage, and by force have themselves landed in France.

“ Choosing a certain day when the ships' crews were mostly ashore on a holiday, and the masters and merchants as well, Anna de Harfet, duly informed, and taking with her a crucifix and her precious jewels, rode very secretly on her palfrey to the appointed place, where her friends awaited her with the ship. She confided herself to her own Machim, who, with his servants and friends, placed her on board the vessel ready to sail. They then cut the cables, hoisted the sails and put to sea. It came on, however, to blow a gale, and a rough sea arose; then, fearing pursuit, they went out of the usual track to France, hoping to reach Gascony or Spain, but as neither captain nor pilot was on board, they drove on with a full sail and favourable wind, not knowing where they might land. In a few days (another account states fourteen) they arrived

at a point of rugged land covered with forest down to the sea, so that it appeared frightful and mysterious.

"A little beyond the point, they sighted a large bay. Passing in they cast anchor, and sent out boats to try and make out what kind of a land it was. The men landed on a beach between the forest and the sea, where they discovered a stream of good water coming out of the forest; but, with the exception of many birds, saw no animals of any kind.

"They found the forest so dense and the trees so lofty that they were struck with astonishment and awe. Among the trees they spied one very much higher and bigger than the rest, and which, owing to its great age, had near the ground, as it were, a hollow cave in it, into which they walked as if it were a house.

"Anna de Harfet, sick and worn out with the voyage, was taken on shore to see this new land and to remain in it for a few days to recruit. Baggage and food were disembarked, and whilst Machim and some of his friends stayed on shore, the rest remained on board the ship. On the third night after their arrival there came on so violent a storm from the sea that the vessel drifted from her anchorage, and as those on board could not weather the storm, they hoisted sail, and driven by wind and current, arrived in a few days at the coast of Barbary, where they were made prisoners by the Moors and carried as slaves to Morocco.

"When the next morning dawned those who had remained on land, seeing that the ship had disappeared, were filled with grief, and despaired of ever being able to leave the place. The lady, finding herself in this melancholy predicament, had a sudden attack of illness, never spoke more, and in three days was a corpse. Machim, from the deep love he bore her, broke down entirely; exiled as he was from his country, and having lost his only comfort in life, he took no heed of the beauties of the place, but with heavy sighs and scalding tears ordered the interment. At the head of the grave he placed a cross of wood, and at the foot a slab or sepulchral stone with Anna's crucifix upon it. At the

foot of the crucifix he carved an inscription in Latin, in which he related his most lamentable story, one such as never up to that time had fallen to the lot of any man, and prayed that, if ever Christians should at any time come to the spot, they would there erect a church for the invocation of Christ. All this having been accomplished he begged his companions that, as to the goods, &c., they possessed, they were henceforth to be their own masters and guides, for he could never survive his dear Anna, that he wished to stay and die where she had died, and to remain with his bitter affliction near the corpse of her who in life had borne him company.

“His companions all, moved with pity, said they would never leave him, but would there remain and die with him. Machim, though most grateful to them for their affection, yet through pain and suffering for his dear love, lived no more than five days after her. His friends, with intense grief for the loss of his company, buried him by the side of his own Anna de Harfet, and erected another cross at his head, and the crucifix having been replaced as Machim had previously placed it, these two graves remained on that island, a sorrowful, regretful, and lovely memorial.

“All this having been performed, the companions took to the boat that had brought them from the ship (though others say that they made a boat of the trunk of that hollow tree, which was immense and capable of holding many persons) and were, like their shipmates, driven on to the Barbary coast, where they also were made prisoners of the Moors, and carried as slaves to Morocco, where with much pleasure they met with their former companions.

“Chap. V. At the time when these friends of Machim were cast on the Barbary coast there were many other captives of the Moors, among whom was a Castilian, by name João Damores, a seaman, a good pilot, and one well versed in the art of navigation. This man conversed much and frequently with the Englishmen who told him of the loves of Machim and Anna, and how they had got to Morocco, having put to sea in despair. He enquired

from which English port they had sailed, how long it took them to get to the new island, and how long in going from it to Barbary, and obtained from them every possible information about the island.

“At this time there happened to die in Castile, The Master of Santiago, a great personage. He had directed by his will that, for the good of his soul, a certain number of the captives in Africa should be redeemed, and among those so redeemed was this João Damores. And, as at that time there was war between Portugal and Castile, there was a certain João Gonçalves Zargo, Captain of the Portuguese squadron, guarding the coast of the Algarves, who, cruizing off the coast of Andalusia, fell in with a ship coming from Africa with ransomed captives. This he attacked and took. The pilot, João Damores, happened, as one of the ransomed, to be on board the vessel, and finding himself in the hands of Christians, he approached the Captain and told him all that he had heard from the Englishmen concerning the new land which they had reached, and which he thought might be taken possession of for the King of Portugal.

“Zargo, much pleased with what he had been told, after having set at liberty the other ransomed slaves, took the pilot with him to Sagres, near to Cape St. Vincent, where the Infante Dom Henrique then was staying. The Infante sent him and the pilot to Lisbon where they had interviews with the King, João the Second, who at that time was about to send an expedition to explore the Coast of Africa to the southward of Cape Mogador.

“The King, delighted with what he heard from these men, did them much honour; the Infante Dom Henrique, coming to Lisbon at the same time, in concurrence with the King, ordered Zargo and the pilot to go and make discovery of the new island. A war-ship and a barinel being got ready for them, Zargo sailed from Restello in the Tagus, at the beginning of June, in the year of our Lord 1419. Their instructions were to proceed first, for information, to the island of Porto Sancto, in latitude 32°, and which two years before had been discovered by some Castilians, and for that island the pilot directed his course.

"It had previously been reported by seafaring men that from the island of Porto Sancto there could be descried an immense and fearful black fog or cloud in the distance, one that grew bigger as it was approached, and that it was never absent. Of all the sights in the world, they had said, there was not one so fearsome for its black and horrid shade, so they always gave it a clear berth, imagining fabulous causes for the darkness; some saying that there was an abyss in the ocean where it was, others, that it was the mouth of hell, and that the vapour was the smoke rising from it, for it was like the smoke of a furnace. Owing to these reports, the mariners of Porto Sancto conceived in their minds such a dread of the place, that they would never go near to it.

"Sailing from Lisbon with a fair wind, João Gonçalves Zargo and his company arrived, after a few days, at Porto Sancto, whence, over the sea westward, they took note of that dark fog which had given rise to so many fears. The Captain and the pilot, having consulted together, agreed to land where they were, and stay for a quarter of a moon, to see whether or not the darkness might change, or pass away; but it did neither.

Discovery by
the Portuguese.

"Chap. VI. After much consultation of all on board, the pilot said, that from the information given him by the Englishmen, he believed that the new island could not be far off, and that the black fog arose from the forests with which the land was covered, and he was of opinion that they ought to go on and ascertain what that fog might be. But all the sailors were of a contrary opinion through the fear engendered by the reports which they had heard.

"The Captain, being of a valiant heart, determined to prosecute the adventure; announcing this to all, he, one Sunday, three hours before sunrise, ordered sails to be set and proceeded, that he might see by daylight what that awful thing was. So, commending themselves to God, they started with favourable weather to meet the black fog, which appeared as they approached more and more fearful, high, and black."

This was the appearance observed by us, as noted in the beginning of this lecture, and which, in these modern days, inspires curiosity in place of fear.

"About mid-day they got close in, when the sailors were seized with mortal terror, and cried out as one man that they ought to turn back, and not get swallowed up miserably in the abyss which they imagined to be there. When they had arrived alongside the fog, every one, except the Captain and the pilot, was urgent to retreat. Nevertheless and notwithstanding, the Captain ordered the boats to be lowered to tow the vessels and get nearer in; he sent in one, Antonio Gagos, a nobleman of the Algarves, and in the other, his friend and companion Gonçallo Ayres, in whom he had great confidence. Besides these, he sent others along by the fog, the sea being very rough towards the east. After they had coasted for some time, the fog became less dense, and they perceived certain black peaks of mountains, and then a point of land, which at first they did not believe to be land; but the Captain at that time cried out with a loud voice, "Saint Lorenzo assist us!" and jumped on shore. The point was thence named The Point of Saint Lawrence, or *Ponta de São Lourenço*.

"When the men saw that it was in reality land, they were greatly delighted, and broke forth into cries of joy. After a while, they came to a spacious shore, and the pilot recognized it as the place where the Englishmen had been. They spent the first night on board their ships. Next morning the Captain sent a boat on shore, and in it Ruy Paes, who found a spot, towards the east, where were many stones and pebbles, affording an easy landing place, and this they named *Desembarcadouro*, and it proved to be the spot where Machim had landed. Here they found a pleasant and desirable locality between the forest and the sea, with felled timber and other traces of man, and they entered the cavity of the monster tree and found the slab and crucifix which the English had placed, and the sepulchres with crosses at their heads. All these things filled them with astonishment, for they were exactly what the pilot had told them.

"The Captain and the chief part of the crews, hearing the news, landed, taking with them two Padres, and seeing how beautiful and luxuriant everything was, they gave many thanks to God for the mercies vouchsafed to them. Holy water was sprinkled through the air, and on the ground, in order to dispel any enchantment that might be

there, in that land unknown, up to that time, from the beginning of the world. They next erected an altar in the tree or house that had been made and on the tablet of Machim, whence Mass was said with much solemnity and devotion, and this was ended on the graves. They examined a part of the interior of the island, where they met with no living creatures but lizards, and birds which were so tame that they could catch them with their hands.

"Chap. VII. and VIII. After this they coasted along, examining the shores as far as Cabo Giram, or Cape Turn Again, a little to the west of the present Funchal. Having taken on board specimens of the woods, soil, and even water, they returned to Lisbon, and laid before the King the results of their expedition. They were received by his Majesty with great distinction, and Zargo was ennobled and presented with a coat of arms.

Second Ex-
pedition and
Colonization

"In the following year, 1420, in the month of May, the King, being desirous of colonizing the island, sent Bartholomeu Palestrello* as Governor of Porto Sancto, and João Gonçalves Zargo and Tristão Vaz Teixeira to explore the new island. Quitting Lisbon, Gonçalves took with him his wife and little children, a number of criminals, though not of the basest sort, and other persons chiefly from the Algarves, with flocks and herds, fowls, and domestic animals, and rabbits, wherewith to stock the island. He landed again at the place of the Englishmen, and called it Machico, in memory of Machim. He there traced out a plan of a church for the invocation of Christ, as Machim had desired might be done. He cut down the great tree, and arranged his plan so that a chapel should cover the sepultures." (The present church at Machico is believed to stand on the site of Machim's grave.) Tristão Vaz was made Governor of Machico and district, and Gonçalves Zargo of the rest of Madeira. These two Governments have long ago been merged into one, and the capital of the whole island is Funchal.

* This Palestrello or Perestrello had a daughter, who was married to Christopher Columbus. When her father died her mother gave to Columbus all the papers, journals, maps, and nautical instruments which had belonged to her husband. Columbus himself is said to have resided for some time in Madeira, and they used to point out his house, but it has long been pulled down.

Colonists flocked in from the mother country. Since the people who came as colonists could not hope by human labour to rid themselves of the dense and universal forest, it was set on fire, and the fearful conflagration is said to have lasted seven years. The island was gradually explored, and the population spread over it. The land was, by authority, divided into portions called *Sesmarias*, and some of the descendents of the first settlers are still in possession of the land at first portioned out to their ancestors.

Churches were founded in Funchal and elsewhere, the first of which was that built by the wife of Zargo, and dedicated to St. Catherine, and is still to be seen, a rude specimen of ecclesiastical architecture, situated near to the Hospital for Lepers.

Prince Henry (Dom Henrique), the Navigator, son of King John II., who died in 1433, procured sugar canes to be sent to Madeira from Sicily, and afterwards the vine was sent from Cyprus, Candia, Crete, and other places in the Levant. These plants were found to flourish in their new soil, but the vine was not cultivated extensively till the middle of the seventeenth century.

Madeira has suffered from time to time from earthquakes, especially from that which so lamentably destroyed Lisbon in 1755; from deluges of rain or waterspouts in 1803 and 1842; from the plague; the cholera; and the ravages among its vines by the *Oidium Tuckeri*; and lastly, by the *Phylloxera vastatrix*, which, unfortunately, still exists.

The island fell for a time into the hands of the Spaniards, who held it from 1582 to 1640. In 1566 it was taken, sacked, and pillaged by French privateers. In 1801 it was amicably occupied by the English, and evacuated next year; in 1807 it was taken by us again, under Beresford, and retained for seven years. Since then it has remained in the peaceable possession of its discoverers and rightful owners, the Portuguese.

The foregoing may serve as a sketch of the History of Madeira; and attention may next be directed to its present Government.

Government. In Funchal reside both a civil and a military Governor, in telegraphic communication with Lisbon. Their residence is in a large, irregularly-built, yellow erection, facing the sea, and on the west side of the entrance to the city. Open to the sea in front, it is surrounded on the land side by high mediæval fortifications, as if the chief danger to be apprehended was from the citizens.

Civil. The civil Governor last winter was The Visconde de Cannavial, who has, since May, been succeeded by The Visconde de Villa Mendo.

Madeira and Porto Sancto, together, form two *Comarcas*, or chief divisions, comparable to the marks or marches of the northern nations. These are divided into *Concelhos* or Council districts, one being that of Porto Sancto, and these are sub-divided into 47 parishes (*Freguezias*). Each Comarca has a *Juiz de Direito*, and under him are other minor judges, the lowest being the *Juiz de Paz*—an official peacemaker, who tries conciliatory measures to avoid litigation; if he fails, the case then goes for trial by jury, who decide by majority.

Would not an official peacemaker be valuable in England?

The members of a Council are usually the most important persons in the district, and one is deputed as his representative by the Governor. Each *Concelho* has a Chief Constable, or *Administrador*, and a second, or *Regedor*. Funchal has a police in uniform, bearing swords, and commanded by a *Commissario*. They do not appear to have much work on their hands, greatly to the credit of the city.

Madeira, being an integral part of the Kingdom of Portugal, sends three members, *Deputados*, to the Cortes or Lower Parliamentary Chamber in Lisbon; two of these, at present, are priests. Parliaments are triennial in Portugal, but owing to frequent dissolutions, they do not usually last so long as three years. There is a money qualification required of electors. They must be in receipt of an income of £22 per annum; so that practically nearly the whole population can vote for *deputados*.

Priestly influence is greatly in operation. Madeira, it is said, gives, like the Azores, in different ways, more to the mother country than she receives from her.

Taxes.

Taxes are numerous, and especially heavy on goods not Portuguese. English articles sent out to Funchal, to order of any person staying there, are charged as much, or even twice as much, as the original price of the articles. This appears to be a mistake, and is neither free nor fair trade; and it is, therefore, advisable for any one going out there, to take with him all that may for some time be wanted, such as plate, linen, and instruments of all kinds.

The Post.

Portugal, and therefore Madeira, is a member of the Postal Union.

Migration.

A considerable amount of emigration goes on from this populous island to the Brazils, the Sandwich Islands, and the West Indies; Demerara was a favourite place. Many country people have been abroad, made money, and returning, have bought land and settled.

Landlord and Tenant, &c.

"It is not customary to pay rent of land in money. The landlord or owner takes half the produce. To get rid of a tenant, a landlord must pay him for all the plants he has put in, and the walls for terraces, &c., that he has put up. It is, therefore, hard to get rid of a tenant; and, I am informed, it is seldom done. The tenant "keeps a good grip of the land." There is only a small proportion of peasant proprietors; those existing have purchased their property from some of the aristocracy of the island who had become impecunious. They are very successful, being very industrious people. A man cannot by his will lawfully alienate more than one sixth of his property from his family. The widow gets one half, and the children the other, unless there have been some pre-nuptial contract to the contrary." (D.C.E).

Military.

Under the Military Governor, who was in April last Colonel (*Coronel*) Quaresma, there is a force of 800 or 900 men, mostly young. Recruits are added by conscription.

Many years ago Funchal was a walled town. There are a few forts, as that on the Loo Rock at the Pontinha, whence salutes are fired, and guns to warn

vessels that on arrival may be contravening the regulations of the port ; that near the Governor's house ; those of St. John, on the Pico, overhanging the city and bay, and built by the Spaniards ; of Pico de Frias ; St. Thiago, at the eastern end of the city ; and other batteries on the old sea wall. There are also small forts at different small villages around the island, where there are possible landing places, but all are old works, few have any mounted guns, and none are of importance in these days of heavy artillery.

Funchal.

Funchal, so-called from the Fennel (*Funcho*), that abounded there when the city was founded, lies on the shore of an open bay or roadstead, backed by mountains to the North. The bay is very slightly protected on the west by a small, partly natural, partly artificial pier, the Pontinha, and a separate rock, the *Ilheu* or Loo Rock, at its point, on which a poor red light can be discerned at night.

The anchorage in the bay is not very good, the shore shelves rapidly into deep water. The surf beating on the steep, shingly beach with violence in a storm, renders landing and embarking either very difficult and dangerous, or impossible. In the beginning of January last, during the prevalence of a south west gale, we witnessed two small vessels dragging their anchors ; they were driven ashore close to the east end of the city and wrecked. They were deserted by their crews, who saved themselves. Nothing was done, or, perhaps, could have been done, to save the ships.

Funchal is situated on a shelf, so to speak, on the side of a very high mountain whose base is at the bottom of the Atlantic and whose head is in the clouds or above them. From the sea the land begins to slope up immediately, at first gently, and there the principal part of the city lies, afterwards more and more rapidly up to 4,000 feet.

The entrance to the city, *Entrada na cidade*, from the sea is pleasingly shaded by an avenue of plane trees, and leads up to a public place or square, *The Praça da Constituição*, also shaded by tall trees, as oaks, magnolias, Indian figs, &c. On the west side of the *Entrada* is a terrace in front of the Government House—a public promenade.

At the east end of the *Praça* stands the Cathedral, or *Sé*, in an open irregular space, the *Largo do Sé*. From this branch off narrow streets to the north, south, and east, in which are very many of the shops and other places of business.

At the east side of the *Entrada* and fronting the sea, are a Portuguese Club House; merchants' offices; notably, the British Consulate—Mr. Hayward's; the English Rooms and Library; Messrs. Blandy's; the Custom House, or *Alfândega*; the new Markets for fish, flesh, and fruit; these are substantial erections, and well supplied with water. At a distance from the town eastwards, and in a rocky ravine close to the sea, is the white-walled Lazaretto, which has never yet been used.

The *Praça Academica*, another public promenade, shaded by rows of trees, is near the east end of the city, and close to the sea-side, and to some small ship—or boat-building establishments.

The *Praça da Constituição* is the great *passeio*, public promenade, or lounging place, with shops on each side, and the General Hospital on the north side. It is provided with seats under the trees, and a stand for military musical performances, which are given once or twice a week.

Adjoining the *Praça*, on the west, is the Governor's Castle, and a small public garden, the *jardim novo*, in which are several rare Coniferæ and Palms, the *Ficus elastica*, and other tropical plants. Beyond this is another and larger garden in course of preparation, on the site of a demolished monastery. The entire extent of these three is small as compared with that of our Leazes Park. You meet, on the *Praça*, with all the *beau monde* of Funchal, dressed in the newest fashions, and enjoying the music and a stroll about with their friends, in clear sunny air, in which neither smoke nor dust exists—those nuisances which so frequently and greatly mar the pleasures of our streets and open spaces.

Beyond these gardens are more streets to west and north. There is scarcely a level street in the city; that called *Carreira*, running east and west through half the city, at the west end; and another or two long, narrow thoroughfares, running eastward, are the most level.

Outside the city, however, and extending a few miles westward, there is what may be called a level road, the *Rua Nova*, one macadamized according to Madeirian ideas, and on which a good walk or gallop may be had. It is much frequented by invalids, especially the English, who enjoy there the refreshing breezes from the ocean.

The Levada de Sta Luzia, a walled water-course, with a good paved road alongside, which runs across country from west to east at an elevation of 500 feet above the sea, forms another almost level walk or ride, through charming and varied scenery, and affording beautiful views of Funchal and its bay, often lively with ships of all nations.

Country
Roads and
Quintas.

From the city, roads (*caminhos*) leading up into the hill country diverge in many directions, by steep ascents, among sugar cane fields and white-walled, green-blinded, country houses (*Quintas*), with their gardens and plantations, and their corridors covered with trellised vines. Straw-thatched cottages are dotted rather too closely about, and many are hidden, here and there, under the vine and pumpkin trelliswork. These uphill roads are, at first, grievous to ascend and descend, even for a healthy person, and quite impracticable on foot for an invalid; and as they are narrow, and confined for the most part within the high walls of the Quintas, you only here and there get a view of the gardens around, or of the city below.

Every Quinta has its *Mirant*, or Belvedere, or summer house, overhanging a road. It is shaded with bignonias, alegre-campos, wistarias, passion flowers, plumbagoes, roses, bougainvillæas, or any other beautiful or fragrant plants, and these hang over the walls of the Mirant and Quinta, rejoicing the senses of the passengers. In these Mirants are benches, or chairs, and tables; and the natives sit there of an evening, or any other vacant time, gossiping, playing on the *Machete*, and always with an eye to the wayfarers below them.

Pavements.

The roads are paved *either* with chips of basalt, of more uniform size than our granite chips, set on edge; the middle of the road, marked by larger stones, is kept higher than the sides, and the lines of chips slant downwards from the central line, to the gutter or water-channel

on each side, facilitating the flow of rain from the roadway; or with cobble-stones from the beach, set also on edge, closely packed and arranged so as to form rounded steps of a convenient size for the feet of man and beast.

In the city the cobbles are mostly disposed so that the middle of the street is the lowest part, and the rain from the roofs, as there are few horizontal and no vertical spouts that I have seen, falls directly down in streams and from gargoyles placed at intervals, on to the roadway, and runs among the cobbles to frequent openings in the middle of the street, through which it passes conveniently into a sewer below and finds its way to the sea. These openings are either slits cut in blocks of basalt or wood, and here and there are wooden doors, hinged, and fastened with lock and key, so that they can be opened if the state of the sewer demands investigation.

The cobbles are more or less flat, and round-edged pieces of hard basalt that have been for ages rolled on the beach. They are black, dark and light grey, and can be had of uniform size and colour to suit certain definite purposes; those for street paving are black, rather large and irregular; those for a good garden terrace, or an entrance hall, or ground floor, are smaller, more uniform in size, and when set in different colours arranged in an elegant pattern, have a very pleasing, tasteful effect, resembling a coarse Mosaic.

Dr. Pitta, a celebrated physician of Funchal, and to whose kindness I am much indebted, told me that the street in which he resides, the *Carreira*, was paved 40 years ago with beach stones and has never yet been repaired, but it does require a little attention now. This pavement is very cheap and is well adapted to the streets of a place like Funchal, where there is no very heavy traffic, and where loads are drawn on sledges by bullocks, but it would not answer in our English towns. Flagged sidewalks for pedestrians are almost altogether wanting.

Workshops. The workshops of joiners, shoemakers, smiths, and others seen in every street, are lighted mostly from the open door, some have a small window. They seem dark and ill-ventilated, and in summer must be very hot. I suppose they much resemble the *officinæ* of handicraftsmen of ancient cities.

Street Signs.

The shop signs strike a Briton as curious. Here are one or two specimens: a wine shop calls itself "*Lanterna de Baccho*," in large letters painted on the stone beams over the broad window. A very common sign is "*Mercearia e Bebidas*," general grocery and drinks; to which is often appended "*Habilitado para vender Tabaco*." Up the mountain roads, at every convenient corner where people are likely to rest awhile and be thankful, you are sure to find a shop with one of the above signs, and near to it benches, and perhaps, shady trees.

Many signs are English, as "*Articles of Madeira Industry*," "*Burlington Arcade*," "*Madeira Wines, Spirits, and Beer*." The following attracted my attention "*Barbeiro, Cabelleireiro, Sangrador, Dentista, Amolador*." This is surely a remnant of the old times when Dr. Sangrado, with his custom of frequent bleeding, flourished in the Peninsula and elsewhere. I am old enough to recollect the abolition of the habit of being bled in Newcastle. There still survives in Funchal a Sangrador, or phlebotomist.

A French, and even a German, announcement may be observed during a stroll through the streets.

Sale Shops.

The shops for the sale of goods are numerous, and many well stocked with miscellaneous articles to suit almost all comers, like village shops in England. You can buy books, crockery, photographs, at an ironmongers, and if the shopman has not got quite what you want he will, most obligingly, send or go out himself to seek and get what you desire.

Bastos & Co., in the *Rua da Alfândega*, will supply you with almost everything. There is not in all Funchal a book shop, properly so-called, but there are many special shops for *Bebidas* and for *Tabaco*. Mr. Bentham, the English baker in the *Rua das Murças*, is a most obliging person in very many ways.

As a general rule the shops (*Lojas*) are low, confined places, badly ventilated, and their windows small.

There was only one plate glass window last winter in Funchal, and that was put in this year at the shop of a chemist. The chemists' (*Boticas*) shops are the smartest in the city, and an English dispenser of English medicines

makes the fortune of the establishment. The shops, on the whole, put me in mind of those in Newcastle 60 years ago.

Everywhere you meet with much politeness.

There is no gas; the streets are lighted at night by a sort of Argand lamp placed at intervals.

Houses.

The basements of the houses are solidly arched over with stone, or have strong beams of wood over them, and are utilized as wine cellars or shops. People, even in the best streets, live in the upper stories, and the windows that look upon the street are fitted with small balconies and jalousies. In the balconies, in fine weather, the Senhoras with their children delight to sit of an evening, and work, and gossip, and survey what is going on in the street.

The houses in Funchal are all very solidly built of native basalt, an excellent, compact, hard and durable material, and the mortar used has *much less sand* in it than that in use here. They have commonly one story, though some have two, or even three, above the ground floor, and there do not appear to be underground cellars or rooms. Most of the houses are plastered white, a few yellow, and some both white and yellow.

Street Views.

The street sights in Funchal are peculiar and interesting to a stranger landing from the steamer.

The narrow, irregular streets (*Ruas*), curiously paved; the white houses with their green blinds, and balconies, and roofs of brown tiles with projecting eaves; the old-fashioned shops; the pairs of little red bullocks drawing the grotesque carros, or dragging patiently, on low wooden sledge-frames, wine casks, flour sacks or barrels, sugar canes to the crushing mill, firewood, poles for vine corridors, and other commodities; the strings of mules and donkeys, usually two or three mules and a donkey leading, and carrying in bags, flour, sand, manure, or stones; *the* camel, for there is only one, similarly employed; together with the wild and incomprehensible yells and cries of the carro—and sledge—men and boys (*Burroqueiros*), as they manage the silent beasts; the curious but elegant hammocks and their bearers; the black haired, black eyed and brunette Senhoras with their gay dresses—not quite so gay as those we *may* meet in Grey Street; the mediæval

costumes of the country men and women, who are always carrying baskets or some burden on their heads or shoulders ; all these attract considerable attention.

As you walk along every second or third man, of the lower orders, takes off his cap to you. Now and then you meet or see a party of ladies and gentlemen on horseback, or in hammocks, of whose nationality, from their dress and manner, you can have no doubt, but who would not speak to you on any account. After them come leisurely a pair of black-clad, burly priests, with broadbrims and an umbrella each, enjoying a mutual pinch of snuff. They are followed by a man carrying on his head or shoulder a classically shaped vase or pitcher of water, securely poised without hands, though he goes at a good pace. Here you may see a small family of turkeys that have come in from the hills to be sold ; there a motherly hen with her brood, but she is tethered by one leg to a stone, or an old shoe sole ; and any amount of little mongrel dogs.

All these things, seen under a bright, hot sunshine, make a novel, curious, and interesting scene. But you feel a want which you did not at home. You have not seen or heard any carts and horses, or omnibuses, or tram-cars, and the sound of the railway whistle has not disturbed the quiet of Funchal. Funchal, indeed, is almost as quiet as Venice.

Dress.

The well-to-do male part of the population dress as English, or as Frenchmen, with bell-shaped trousers. Knickerbockers are unknown.

The poorer working people of town and neighbourhood, male and female alike, cannot boast of much dress of any kind, nor, perhaps, do they require much. For the men, a pair of white or coloured trousers and shirt, with a woollen or cloth cap, and a pair of little, odd top-boots constitute the costume. Some have a dark-coloured waistcoat, always open, or a coat, which, on account of the heat in travelling, is often carried on the end of a long stick over the shoulder, Irish fashion. They never wear braces (*suspensorios*).

For the women, a cotton gown, and a white or gaudy-coloured handkerchief (*lenço*) of cotton or silk, over the head and tied under the chin, seems to suffice in hot

weather, for many wear neither shoe nor stocking. Other women, better off, wear more and better clothing, and put on a woollen shawl, and shoes or boots. Very young children are not encumbered with much dress, but girls and boys are often better dressed, and on Sundays look neat and tidy. Among those who are pretty well off there is a passion for fine dress, gold earrings, finger rings, brooches and other trinkets; and on these more money is spent than on more useful attire and good diet, as is also too much the case here in our own country.

Many countrymen from the mountains, who seldom come down to the city, are wild-looking fellows, with coats and trousers of a kind of rough frieze made in the island, often ragged, and, like some Irishmen's habiliments, so marvellously patched that it is hard to say which part of the garment was the original fabric. Others wear baggy breeches of cotton, tied in just below the knee, the calf of the leg being exposed, and the feet and lower part of the leg enclosed in the low top-boots.

They commonly wear on the head either a dark brown woollen cap, with tuft on the crown, or one of black cloth of peculiar shape (*carapuça*), which is prolonged at the top into a horn standing straight up. This cap is worn rather on the back of the head, and around its border projects a shock of black, unkempt hair.

Country men and women carry a small pole, or long stick, somewhat like the Swiss alpenstock, to assist them in going up and down the steep roads and paths. The women wear a tippet or cape (*capa*) of blue or scarlet cloth, scalloped at the border, and a petticoat, or gown, of coarse, woollen material, striped from top to bottom with different colours; and many have the same kind of boots and cap as the men.

People. The population of Madeira are of Portuguese origin; and chiefly, at least on its colonization, from the Algarves and other southern provinces of Portugal.

Dr. Grabham states there is strong evidence of some African intermingling, which, indeed, is here and there visible among the lower orders in Funchal. There must also be strains of Arab blood, and there are also a few names of English, Scotch, French, and German

families to be seen on the shop signs, just as you see here Scandinavian, German, French, and Italian names, indicative of admixture of races. There have been Drummonds in Madeira since the beginning of the sixteenth century.

Dr. Grabham says of the Madeira people: "They are a fine race, and possessed of average physical qualities; contented and enduring in labour; and have a manner full of natural politeness and grace. The women are much inferior to the men in many qualities and endowments, and it is only the young who have any pretensions to beauty." We have remarked many pretty and graceful children, and even some comely young maidens; but, generally speaking, beauty is quite the exception, and, when it exists, fades early. The old people, especially the women from the country, and those of the working-classes in the city, are swarthy, and wrinkled from labour and exposure.

The ladies are better looking, and have a strong tendency to *embonpoint*, which has been accounted for by the following change or revolution in one of their habits. I have been told, but cannot vouch for the truth of the report, that up to eight or nine years ago they were accustomed to be bled frequently, some even monthly;* and in those days they were, as might be expected, thin and slender. Since that time they have gradually abandoned that Sangrado practice, and in consequence, have attained to their present comfortable condition of development.

They appear to take little out-of-door exercise, and as they have lately adopted the absurd, injurious, deforming, antiquated, and never sufficiently to be condemned, but, unfortunately, lately revived, habit of tight lacing, their lot is not an enviable one. They *will*, like our own ladies, follow the fashions of London and Paris, however absurd they may be.

* Compare the instructions contained in the following rhyming Medical Latin verses, taken from an old author who wrote in 1522, with this habit of phlebotomy, continued probably from that time up to a very recent period in Madeira, and, perhaps, in other places:

"Ver estas d̄xtras, aut̄ni hyemisq̄e sinistras,
Incidunt uenas morbosos sanguine plenas.
In sene uel iuene, si sint uene sanguine plene,
Omni mense bene confert incisio uene."

The whole population are dark-skinned, black-eyed, and have abundant black and strong hair, rather high cheek bones, broad faces, large jaws, and medium stature.

The hill people are, as is the case in many other countries, taller, stronger, and more enduring in exertion, than those of the city. The *hómens de réde*, or hammock men, are mostly from the hills, and are fine fellows.

Fd. The middle and lower classes, generally, bear a strong resemblance to the southern and western Irish, in stature, face, and habits. The lowest are scantily and poorly clothed, and dirty in person. Their food is poor, being chiefly dried salt-fish (*bacalhão*), rice, milho, or Indian corn flour in porridge, sweet potatoes, cabbage, and other vegetables. Many of the labouring classes, I understand, eat meat only once or twice a year, and live in confined, straw-thatched cottages, comparable to the beehive huts of the ancient people of Britain and elsewhere. Those who can afford it keep a pig or two, of a black and lanky breed.

The people seldom know their ages. They are great church-goers; fond of pilgrimages and religious processions. Many miracles are recorded as having taken place in the island.

SBrandon. As in Ireland, so in Madeira, there are no venomous reptiles; and although it cannot be alleged that St. Patrick ever visited Madeira, there is, nevertheless, a legend that another Irish Saint, namely, São Brandão, or St. Brandon, once, with some monkish companions, searching for an earthly Paradise, found out the island, but as there were only lizards in the land, he had no opportunity of banishing "the varmint;" and it is related that he safely returned to "his own native isle of the ocean."

E nology. The population of Madeira appear to belong to that rather short-bodied, dark-complexioned, black-haired race which occupied Europe before the Celts came from the East, and dispossessing them, drove them westward to the sea and southward. The race still lingers in the west of Europe, fringing the coasts of Ireland, Wales, and France, and abounds in Portugal and Spain. It has been supposed that there were two branches of the race; the Lloegrians, or Ligurians, who went to the south-east; and

the Iberians, who passed into the Peninsula, and were the ancestors of the Spanish and Portuguese people; there have been doubtless intermixtures, more or less, of Celtic, Gothic, Vandalic, Moorish, and possibly, here and there, of Negro blood; that of the old Iberian stock still predominating in Portugal and Madeira. Some ethnologists think the ancient stock were Finnish; others, Phœnician. The subject, however, remains in much obscurity.

Music.

The Madeirienses are not a musical people; but there is in Funchal a Teatro Esperança, where operas are given by artistes from Lisbon, who go on to the Azores; and a Circo Funchalense, for various minor performances. Neither is very attractive or well ventilated.

They have a special small guitar, called *Machete*, with four, five, or six strings, the sound of which is pretty when in the hands of a skilled performer; and you hear it tinkling pleasantly among the straw cottages of an evening. Walking through the streets, the sound of a piano now and then greets your ears from the open windows of respectable houses. As already mentioned, a military band plays about twice a week in the shade of the trees on the Praça.

The church bells cannot be called musical: on the contrary, they are the most discordant of all that I have heard. Other observers have made the same remark. There are no German bands, no Italian organ-grinders—not even a hurdy-gurdy player, in this quiet land, to vex the soul of a mathematician, or of a crusty old bachelor.

Situation of Funchal.

Funchal appears, from the sea, to lie at the bottom of an extensive amphitheatre which is exposed to the south, hemmed in on the east by a high ridge, extending from the range of mountains in the north down to steep precipices that overhang the sea, and bounded on the west by another ridge of less elevation, also trending from the north, and on which three or four conical hills stand clearly out. The amphitheatre is intersected by several minor ridges, and between these lie more or less deep and rocky ravines, down which the waters from the hills find their way to the sea. Bounding these ravines, here and there, are brown basaltic crags, stratum upon stratum, topped by Stone Pines, Cypresses, Indian Figs, and

Eucalyptuses, and nourishing in their crevices Aloes, Cactuses, and other plants, which give them a charming decoration. The higher parts of these ravines are remarkably majestic and beautiful, and the general aspect of the amphitheatre is wonderfully fine.

vers.

There are three principal mountain streams (*ribeiros*) flowing through Funchal. As they near the city, they are walled in by masonry of solid work, thirty or forty feet high, through which they give off and receive, in proper channels, water to and from the parts of the city through which they pass. They are spanned at intervals by strong bridges of stone, of a single arch ; and rows of plane trees form an agreeable and useful shade on each side of them where roads extend.

rigation.

The fields, gardens, and houses are well supplied with water from the mountain streams. Elaborate water-works, involving great labour and expense, have been formed at considerable elevations in the ravines, intercepting a portion of the water, which is then carried along the sides of the ravines in gently inclined and walled channels, called *levadas*, and for long distances across the face of the country. Every here and there, in these channels, lateral openings exist, through which the indispensable water is allowed to flow down into a complicated system of conduits and open channels, leading to the houses, gardens, and fields, for domestic supply and irrigation. Currents of water are allowed to run down the gutters on each side of the steep roads, and from these also many of the Quintas obtain water, by the interception of a part of the current, and the turning of it into openings, formed for that purpose, in the bottom of the garden walls.

The water thus conducted, is periodically supplied, according to authorized regulations, being allowed to flow once in ten days or a fortnight, in a large stream for a few hours at a time, during which you can have your tanks and filters re-filled, and your drains flushed. Of course the water must be paid for, and this is the landlord's duty. If your house is close up to the Levada, the water you get is clean and good ; but if a good way down the hill, then it is necessarily impure from the frequent washing of clothes, &c., in it by the people above. The water running

down the roads is very impure from various unsanitary causes, but you constantly see women washing their dirty clothes in it, and laying them out to dry on the roads. The rivers, too, are similarly utilized, and washerwomen in crowds are daily at work in their deep rocky beds, so that by the time the water reaches the sea it is necessarily laden with all kinds of impurity, and its odour is far from being of a pleasing or sanitary quality.

The Water.

There are many public fountains in and about the city, the water of which is drunk by the natives. Some also do not scruple to drink the water in the garden tanks, which is more polluted still; and the only really pure drinking water to be obtained is that got from some wells, and at the Governor's fountains, at Government House, near the shore, whence it is daily carried for the supply of good families, on men's shoulders in elegantly-shaped earthen vessels, something like the ancient Amphoræ. This water is said to be led down by a conduit, distinct from all others, passing at last under the Governor's House, in front of which it flows out copiously and perennially by five separate pipes *pro bono publico*, and is a blessing to the city. It is from these pipes that ships are watered. This water, and that of Madeira, generally, before it is rendered impure, is good and soft, like water off the primitive rocks.

Owing to the complicated system of irrigation, to the periodical and occasional rains, to the mild and equable climate, and to the natural fertility of the soil, vegetables, flowering plants, shrubs and trees of most other regions, are found to thrive admirably.

Vegetables.

New potatoes, and batatas—sweet potatoes, beans, peas, spinach, French beans, and lettuce may be had nearly all the year round. English flowers do well.

Flowers.

Climbing and trailing plants hang in masses, in summer and autumn, over the walls of Quintas and their Mirants. Roses, heliotropes, begonias, iresines, stocks, violets, acacias, hybiscuses, belladonna lilies, geraniums, aloes, cactuses, several ferns—of which there are forty species at least in the island; passion flowers, bignonias, plumbagoes, habrothamnuses, bougainvillæas, half a dozen varieties of camellias, and many other flowering plants and numerous weeds flourish in gardens. The following

Fruits.

fruits do not exhaust the list. Grapes, oranges, lemons, apples, pears, alligator pears, cherries, peaches, apricots, nectarines, pomegranates, mulberries, strawberries, cape gooseberries, bananas, pineapples, custard apples, mangoes, guavas, figs, walnuts, chestnuts. No gooseberries or currants live in Madeira. It ought, perhaps, here to be remarked that all these flowers and fruits do not bloom or ripen in one and the same garden. The pineapples grown in Mr. Hollway's Glass Houses, near Funchal, and sent to Covent Garden Market, are said to be among the very finest sold there.



LECTURE II.

LECTURE II

eteorology.
—
/inter of
1880-81.

AS noticed in the previous lecture, we arrived at Funchal, the capital of Madeira, on the 27th of November.

The rainy season, we were told, was later than usual; and, in consequence of this delay, we had a December of the most delightful summer weather, with only two showers of rain, whilst in England you had frost and snow.

On Christmas Day we took tea in the open air in the garden of our Quinta (*do Rato*), on the Saltos Road (*Caminho dos Saltos*), 475 feet above sea level, amid roses and poinsettias, and shaded by camellia trees in flower, from the hot rays of the sun.

Soon after, the rains began, and lasted, with an occasional fine day, for about a month. During this time, torrents of rain fell as they do in thunder storms in England. Brooks of water rushed through the beds of the garden, and down the walks into a sugar-cane field below, in an alarming manner. The air became, of necessity, almost saturated with moisture; everything outside was thoroughly soaked, and every article in the house became damp. Our clothes were scarcely ever quite dry; the bed and bed-clothes had to be dried before our invalid and his wife could retire for the night. This was a matter of difficulty and time, as we had only a small iron stove (*fogão*) in the *sala*, or drawing-room, in which pine-wood logs burnt rapidly and wastefully away. Not even the invalid took cold, however, for the temperature was, for some days, at 65° Fahr., and gradually declined to 57°, 55°, and lastly to 53°, when snow had for two or three days fallen on the highest mountains we could see: after that the temperature rose again.

weather in
North of
England in
January.

[In Newcastle, during the first week of January, there was a severe frost with snow. On the 26th the thermometer at the Literary and Philosophical Society's Library was at 4°, whilst in the country it was at—6°, and even—12°.]

Fine weather returned at the end of January, and continued till the 17th of February, when, with the wind at north and north-east, the tops of the mountains became twice, or three times, again covered with snow; and the thermometer, on two nights, marked 46° Fahr. This was the greatest cold we experienced during the winter, which, we were told, was the most severe that had occurred in Madeira for some years. On the night of February 27th came a storm of wind and rain, with much lightning and thunder.

Weather in
North of
England in
February &
March.

[In the North of England, from the 8th to the 22nd of February, occurred a succession of strong gales, with rain and cold; and from the 26th to the 9th of March, terrific storms of wind, heavy snow falls, and then rain, followed by mild weather. From the 20th of March to the 30th, snow; severe frosts and snow again; wind N.E. In April, from 1st to the 11th, severe frosts, and wind N.E.]

In March we had again cold weather, with strong gales from the west, lightning, thunder, and rain; the winds, especially about the equinox, lasting daily for a fortnight.

A comparison of the weather at the above dates in Madeira with that in the North of England about the same times will show that the atmospheric disturbances during January, February, and March, were pretty nearly contemporaneous in those two localities, but the differences of temperature were considerable—the difference, on or about January 26th, being 65° Fahr.

In April the weather became sunny and warm, and then hot. Vegetation was rapidly progressing; many flowers had appeared from the soil and from trees; the vines were shooting forth and showing blossom; and spring advancing when I left the island.

I returned by the "Kinsembo," sister boat to the "Gaboon," leaving Funchal Bay at 8.30 p.m. on the 22nd, and, after an easy passage, arriving in the Dock at Liverpool at 10.30 on the 29th. During the whole voyage we had a north and north-east wind, but only felt it cold when we neared the Mersey.

We had eighteen passengers, mostly from the trading ports on the West Coast of Africa, and Mr. and Mrs. Elder,

from Madeira. The Captain and Stewards were kind and attentive; we were well-fed; and I was much indebted to Dr. Collins, the Surgeon of the vessel, for his kind services.

Metorology;
General.
—
Atmospheric
Pressure.

Dr. Grabham, the resident English Physician of Funchal, whose experience in all that concerns Madeira is great, states in his book that "the mean annual standing of the barometer in Funchal is 30°·14 inches, and that the variations are very slight and infrequent." This statement has been confirmed to me by Mr. Leland Cossart, the well-known wine merchant and banker, of Funchal, and other observers. "The most important changes occur when the wind veers from north to south and back again, but at such times a variation of three or four degrees (of the French and Portuguese barometric scale) is, in general, the most that happens." According to Dr. Goldschmidt, there has been a difference of 18°·71 of the same scale. This is a great contrast to the variations we are subject to in Newcastle, the barometric range being rather over two inches.

The same authority tells us that "the mean annual temperature of Funchal is 67°·3, that is 17° warmer than that of London,* about 7° warmer than that of Mentone, and 9° above that of Nice."

For the four seasons he gives the following comparative statement: viz., the mean of

		Madeira		London		Mentone
Winter	...	61°·20	...	39°·12	...	49°·5
Spring	...	65°·39	...	48°·76	...	60°·0
Summer	...	70°·01	...	62°·32	...	73°·0
Autumn	...	67°·87	...	51°·35	...	55°·6

"In Madeira there is a difference of only 9° between summer and winter," (Pitta makes the difference 11°·80), whereas in London it is 23°, and in Mentone 24°.

"An invalid coming from a London summer to a Madeira winter will feel a difference of only 1°, whereas, at Mentone, there would be one of 12°. The transition from winter to spring in Madeira is little more than 4°, but in Mentone it is 10°·5."

* According to the Tables of the Registrar General for 1880, the mean temperature at Greenwich for the year was 47°·9 Fahr, which, subtracted from 67°·3, gives 19°·4 in favour of Madeira.

"The mean annual maximum *of the day*, in the shade, in Funchal, is 72° ; the mean maximum of the hottest month $76^{\circ}05$, and that of the coolest month $67^{\circ}24$.

"The mean annual maximum *of the night* $63^{\circ}04$, the mean maximum of the hottest month $68^{\circ}57$, and of the coolest month $56^{\circ}12$."

During the prevalence of the *Léste*, an east and E.S.E. wind, or Sirocco, which is hot, dry, and oppressive, but lasts only from three to five days and during the warm months, the temperature has been known to rise to 91° . My son, Mr. D. C. Embleton, during a *Léste* which lasted four days and three nights, in August last, observed a temperature of 90° Fahr.

In Lowe's Manual Flora of Madeira, Vol. I., the mean *annual temperature* of Funchal is given as from 65° to 67° .

Messrs. Barral and Pitta make it $67^{\circ}23$; Dr. Goldschmidt $66^{\circ}68$.

Mr. J. M. Rendell gives the following results, as arrived at by several independent observers, namely, White, Dove, Gourley, Heineken, and Renton, and combined by him, as to the mean temperature of the seasons, viz,

Winter, $61^{\circ}34$; Spring, $64^{\circ}23$;

Summer, $69^{\circ}77$; Autumn, $67^{\circ}36$.

These numbers are pretty nearly the same as Dr. Grabham's.

Mr. Rendell states that "the average day and night ranges may be given as 9° , the extremes as from 5° to 15° ."

The extreme ranges for the year are from 91° , during the *Léste*, to 46° in winter, that is, 45° .

[In the neighbourhood of Newcastle, the extreme ranges may be roughly stated as from zero, or even 12° below, as during last winter, to 82° in the summer—a vast difference in favour of the equability of the climate of Madeira.]

Mr. Rendell says "January and February appear to be the coldest months." During the last winter, February

and March were the coldest months; and Dr. Goldschmidt has made the same observation as to some previous years.

"Autumn rains usually begin about the end of September and end in December; winter rains in January and February; March and April are usually showery and windy; May fine, with a passing shower; in June, July, and August there is seldom a drop of rain."

Rainfall.

The average yearly rainfall in Madeira is 29·82 inches—Johnson's Physical Atlas. Dr. Pitta says 32·021. It has varied, according to Lowe, from 20·45 to 43·35 inches. Goldschmidt gives it as 760 millimetres, or 29·92 inches.

[The average rainfall in 20 great towns of England in 1880 was 32·57 inches. The average yearly rainfall in Newcastle, as recorded in this Institution for the last ten years, is 29·132 inches; and it has varied during that time from 19·02 in 1873, to 41·33 inches in 1872. The quantity in 1881 was 30·5 inches.]

In respect to the amount of rainfall, therefore, these two places, Funchal and Newcastle, are, curiously enough, very nearly the same; only in Madeira the rain is more regularly periodical, and occurs after considerable intervals of time, and mostly in the autumn and winter; whilst, with us, it is more equally spread over the months.

Days of Rain.

According to Vivian's Table the number of rainy days was 88; according to White, in 1876, 91 days; and to Goldschmidt 90·9, in a year.

Winds.

The prevalent winds, according to Grabham, are those from the north-east and west; according to Pitta, north-east or north, south and south-east; according to Goldschmidt, north-east, west and north.

[Our prevalent winds are from the west, south-west, north, and north-east.]

Humidity.

The humidity of the air in Funchal city has varied, according to Goldschmidt, from 66° to 73°, saturation being 100°. At the Government Observatory, in Funchal, situated close to the beach, in 1876, the humidity varied from 59°·7 to 73°·8. At the Hotel Sancta Clara, during last winter, it varied from 54° to 93°.

[I find no record of the humidity of the air in Newcastle.]

It is probably owing to the state of the air in the rainy season that the climate of Madeira has been stigmatized as very damp. It certainly was so for about three weeks last winter, but any country will have damp air where rain has fallen continuously for weeks together, as it did in the North of England in August and September last. At other times than the rainy season, Madeira, in the region inhabited by invalids, above the city, is really a place of comparatively dry air. "The moisture of the air is greatest among the mountains and by the seaside. There is dew by the seaside and on the mountains, but little for a few hundred feet above the city."

Dr. Goldschmidt says "that during his residence of fifteen years he has only once seen a thick fog in Funchal," and "that the atmosphere of Madeira is always charged with a mild and beneficial humidity; it diminishes in summer and augments in autumn and winter. It is then an error to qualify this climate as being always very moist. At all events it is not a rainy climate."

From Mr. Rendell's useful Handbook I copy the following Table of Mr. E. Vivian's, made some years ago, giving an interesting comparison between Funchal and Torquay, as regards temperature, rainfall, and humidity.

	Torquay.	Funchal.
Annual mean temperature...	50°·3	66°
Maximum	76°	83°
Minimum	27°	46°·5
Mean daily range	9°·9	9°·2
Days of rain	155	88
Inches of rain	27	30
Mean humidity	76	73

"The movements of the clouds are very regular and systematic; the hills being generally clear in the early morning. The clouds descend with the day, break off again in the evening; a bank forms at night, and the nights are clear. The twilights in Funchal are short, but, though

there is no sudden change of temperature at sunset, invalids do better to go indoors, and so remain for two or three hours. The change is felt more up the hills." This last observation of Mr. Rendell's, I can fully endorse. There is a general belief that, at the time of sunset, and an hour or two after, there is an unhealthiness in the air. I cannot say that I have felt this.

It must be borne in mind that there, as well as at home, the years and the seasons vary as to atmospheric temperature, winds, and rainfall. The pressure of the atmosphere in Madeira, as already stated, varies surprisingly little.

The brightness of the sun, moon, and stars is, to a Newcastle Englishman, remarkable; and is due to the absence of smoke, fog, and dust, and therefore, to the purity and clearness of the atmosphere. No invalid should run the risk of exposing himself to the direct rays of the sun during the greater part of the day, but still should live as much as possible in the open air. The pavements dry in a few minutes after rain, so that exercise can be taken, and there is abundance of shade to be found.

It must also be clearly understood that the data here given are for the low-lying city of Funchal itself; and that the higher you go up towards the mountains the more will barometer, thermometer, and hydrometer vary. But for most of the Quintas and Hotels inhabited by invalids, the above numbers, with a little variation, may be depended on, they are very close to the truth.

At the *Quinta do Rato* the variation of the thermometer from December 1st, 1880, to February 24th, 1881, was 18°, i.e., 3° degrees more than the variation according to Rendell.

Mr. Rendell informed me that during the winter 1879-80, a violent rain fell, with little intermission, for three weeks, and the mercury fell to 46° Fahr. I have already stated that we observed the same temperature in February of this year. Dr. Goldschmidt tells us that the lowest temperature he has observed in fifteen years was in February and March. At night it was 8°·50 Centigrade,

or $47^{\circ}3$ Fahr., and during the day 14° Centig., or $57^{\circ}2$ Fahr. The doctor lives at the east end of the city, and a little way above the sea.

The climate, therefore, of this highly favoured island, whose temperature, in and near the Capital, Funchal, ranges between 46° and 91° Fahr. its two extremes, and has an annual average of from 65° to $68^{\circ}5$ Fahr., must be considered as remarkable for its mildness and equability; and in the absence of fog, smoke, and dust, and ill odours, as distinguished for its purity.

So much for the weather and climate of Madeira; pass we on now to ecclesiastical matters.

Churches.

Churches in Madeira are numerous. "Roman Catholicism is by law established, and all officials had to swear allegiance to it, but lately, special laws have been framed for Portuguese non-Catholics, such as the Civil Registrar. The preaching of the Gospel in houses is not now interfered with, as it was some years ago." The first civil marriage in the island took place in January of the present year. It caused, as might be expected, a great sensation, and I understand that the ecclesiastical authorities did everything in their power to prevent such an innovation being introduced; it being, however, Portuguese law, the opposition failed, and the marriage took place. The Jesuits (order founded in 1534 by Ignatius Loyola) were expelled from Portugal in 1759. Monasteries and convents were suppressed by law in 1835; the monks were summarily driven out, and their property confiscated to the State; the nuns were allowed to remain, and when they have all died, their establishments will also go to the State. There are now only three convents remaining in Funchal, those of the Mercés, the Incarnação and Sancta Clara. Few nuns now survive. Those of the last mentioned convent employ themselves in the manufacture of pretty artificial flowers from dyed feathers. These are sold at the convent, and are among the productions peculiar to Funchal.

The Sé.

"The Cathedral or Sé, was built in 1508 by order of King Dom Manoel, from the money accruing from a tax on wine, and the proceeds of some royal property. It was consecrated the same year by the Bishop João Lobo. At

the solicitation of the King, it was made a Cathedral See; and in 1538 Funchal was erected into an Archbishopric, but in 1550 was reduced to its former state of Bishopric, and so remains." (*Historia da Madeira.*)

The first Bishop was instituted by a Bull of Pope Leo X., in 1514; his name, style, and title, were as follows: "Dom Diogo Pinheiro, Doutor in utroque jure, Vicar General by authority of the Holy Mother Church of Rome, in all spiritual and temporal things, of the whole Order and chivalry of our Lord Jesus Christ: of the Villa of Thomar and of Santiago; of Santarem and of Santa Maria de Africa in Ceuta; of Tetuan and Valdancer, and of Santa Maria de Alcacer in Africa; Bishop of the isles of Madeira, the Azores, Cape Verde, of Æthiopia and the Indies; immediately from the said sacred Mother Church of Rome." (*Historia da Madeira.*)

This is an extraordinary episcopal jurisdiction. The Bishop must have possessed miraculous powers to have been enabled to perform a tithe of the duties of so many offices in so many different and distant places and climates. But this was in the first quarter of the sixteenth century.

"Besides the Bishop of the Sé, who is the head of all the clergy of Madeira, there are two classes of priests: one which takes charge of the government, the other of worship, and the property of the see. The first constitutes the Camara Ecclesiastica, and is formed of the Proctor (*provisor do bispado*), the Vicar General, the Penitentiary, the Notary (*escrivão*), and the *Aljubeiro*, or Keeper of the church prison: the second class consists of five dignitaries, viz., the Dean, the Archdeacon, the Precentor (*chantre*), the Treasurer, the School Master; then fourteen Canons, and four Minor Canons, two Preachers, ten Chaplains, and a Subchantre; then the Chapel Master and Organist, an Altar attendant, a Sacristan, a Mace Bearer, and a Bellringer." (*Hist. da Mad.*)

"The Cathedral has a spacious interior, with a nave and aisles, of what is called Manoeline architecture; the lofty roof is a very rich work in indigenous cedar" of quite Saracenic character. It has a square tower, 150 feet in height, surmounted by a quadrangular spire covered with tiles of light colour. The exterior is like the houses,

plastered in white, except at the top of the tower and the long and short quoins, where the stones are left of their natural dark colour. In the tower is a clock face, the only public one in the city ; it is said not to keep good time and has not yet arrived at the usefulness or dignity of having a minute-hand, or of being lighted at night.

Besides the Cathedral, there are many minor churches ; the chief of these is that of the *Collegio*, formerly the Jesuits', then *São Pedro*, *Do Carmo*, *Sancta Clara*, *São Jorge*, *Concepção*, *Consolação*, *Sancta Luzia*, *São Thiago*, *São Roque*, *Santo Antonio*, *Sancta Catherina*—the first founded, and that of *Nossa Senhora do Monte*, &c.—this last, at an elevation of about 2000 feet, with its two white turrets and black quoins, is a conspicuous object from the sea. It is a place of pilgrimage, and much frequented by sailors and others going on long voyages, in order to pay their devotions to the Virgin, and implore her protection. It is credited with many miracles.

The exterior of the churches is commonly plastered white, except the quoins, and has rather a mean appearance : the interior is generally spacious, gorgeous in a sort of renaissance ornament and much gilding. The windows are few, small and plain : the chapels hung with pictures and white or coloured paper flowers, but on days of festa with fresh and charming flowers and garlands. On extraordinary occasions the Sé and the *Praça* are splendidly decorated with wreaths and garlands of flowers and greenery from the hills.

In the Cathedral and other churches, silver lamps hang from the roof ; and at *Nossa Senhora do Monte*, at the side of the high altar chapel, are suspended wax models of faces, arms, &c., presented in grateful acknowledgement of some relief believed to have been obtained from Our Lady of the Mount.

On grand church festivals long processions traverse the principal streets with images, crosses, banners, and music, attended by crowds from the town and country.

There is, in Funchal, a pretty English church in a small street (*Rua da bella vista*), leading northwards from near the west-end of the *Carreira*, and in a beautiful

garden. The Chaplain is the Rev. Richard Addison. The church is circular in form, surmounted by a small dome, and tastefully decorated in the interior; the circle is interrupted on the east by a recess, forming a small but elegant chancel. There is a gallery that runs round, except where the chancel is, and divided into compartments somewhat after the style of boxes in a theatre; the floor is occupied by low pews painted to resemble Madeira cedar. The decorations of the pillars are arrangements in black and white, and of the walls, in green and red.

There are two services, at least, every Sunday and on Saints' Days. There is a voluntary choir, the members of which meet once a week for practice, and during service sit in their own pews. They are English residents, or visitors to the island. A library is attached to the church. It is quite a treat for the natives, in their windows and balconies near the church, to see the Inglezes and their Senhoras going to worship—the ladies, in the newest and freshest fashionable garments, alighting from their horses, their *védes*, and their *carros*, with which, and their attendants, the little street is crowded.

There is another Anglican place of worship in a curious old Portuguese mansion, the sala of which has been fitted up in the High Church style. It had not been consecrated when I left. It is the property of Mr. Foljambe, of the Quinta Palmyra, on the Levada.

There is, moreover, a small Presbyterian Chapel, also in a garden, the Minister of which is the Rev. J. M. Allen. To this also a library is attached.

In the *Rua das Pretas* is a Depôt of the Madeira branch of the Society for the Propagation of the Gospel in Foreign Parts.

umber of
English.

At the Census taken by Mr. Hayward, Her Majesty's Consul, the number of English persons in Madeira, on the 4th of April, 1881, was 450. In September the number was 225 residents, the casual visitors having been absent during the summer.

cemeteries.

Funchal has its cemeteries on the west side of the city. That for Portuguese and Roman Catholics is at the

outskirts westward, and on the opposite side of the road to the Consumption Hospital and the Poor House. It is large, and beautifully kept, adorned with rows of cypresses and other funereal trees, and abounds with a great variety of native and exotic shrubs and flowers; two varieties of bougainvillæa cover with flower several hundreds of yards of boundary wall.

The English, or Protestant, cemetery, situated at the west end of the Carreira, and a little way uphill beyond the street in which the English church stands, is next to the former in arrangement and ornament; in it, as in the Portuguese cemetery, are to be read many heart-touching and melancholy memorials of deep love and affectionate regret that have emanated from natives of almost every European and of some American countries.

There is, besides, a Hebrew place of interment, at a distance from the city, but I have not seen it. There is a small sprinkling of the Hebrew race in the population of Funchal.

Every little town or village has its white church and green cemetery, apart from the church and village, and shaded by funereal trees.

In Madeira, as in most warm countries, interment must take place within twenty-four hours after death.

The average duration of life in Madeira is 35 years; the proportion of deaths, 20 per 1,000 of the population. (Rendell and Goldschmidt.) In 1880 the proportion was in Christiania, 20·3; London, 22·2; in Geneva, 22·9; in Paris, 29; Berlin, 29·9; Munich, 33·5; Madrid, 40·1; St. Petersburg, 46·1; in twenty great towns in England, 22·7.

The proportion of mortality in Madeira would be much lower were it not for the deplorable negligence which causes so many deaths among very young children. (Goldschmidt and Rendell.)

Education.

After ecclesiastic matters we come to education. On this head my information is scanty, and this is in part owing to the scantiness of education in Funchal; a small portion only of the people, I am told, can read and write.

Schools.

There is the *Lyceo*, or school for young men at the Collegio; and there are other schools. Great improvement in education, it is said, is now taking place. In the schools are taught Portuguese, Latin, French, and English; arithmetic, mathematics, physics, chemistry, geography, history, commercial education, &c. Many adults study and speak English and French. Italian or German are seldom heard. Next to Portuguese, English and French are the most prevalent languages. Young children are now taught the alphabet done into childish verse, which they chant in marching round the school-room, to the sound of some simple music. This method of teaching is much relished, as it is far from being irksome or laborious, and is like the kindergarten system.

The want of booksellers' shops is a sure sign of the backwardness of education among the people, and it is a great inconvenience to visitors.

Newspapers.

In this connection, newspapers may be mentioned. They are numerous for so small a place, and cost a penny or twopence each. Many are only short lived. They are about one-fourth or one-half the size of the *Newcastle Journal or Chronicle*, and are partly filled, like French newspapers, with an elastic feuilleton (*Folhetim*). They are of most shades of politics. Happily Socialism does not seem to have penetrated to Madeira. I conclude that there is no censorship of the press, as the Editors seem to speak out freely in their comments on the proceedings of the Government and the Cortes. English and some French and Cape newspapers and other periodicals, can be seen at the English rooms, *Rua da Alfândega*, where there is a large library. Visitors must be introduced by a member. There is a Portuguese Club House, in a beautiful garden, with spacious saloons for balls and concerts, close to the Police Office.

Language.

"The Portuguese language," according to the Padre Vieira, "the eldest daughter of the Latin tongue, is one of the many dialects of Latin which were spoken in Gallicia, Leon, and Portugal; and is similar to the Aragonese, Catalanian, and Provençal. It was for a long time rough and rude, but received much polish from the Provençal and the poetry of the Troubadours."

"The invasion of the Peninsula by the Saracens, beginning in the fifth, and their occupation ending with the sixteenth century, was of shorter duration in Portugal than in Spain, and the Portuguese adopted from them only a certain number of terms," as for instance—*Alcaide*, Judge; *Alfândega*, Custom House; *Algebeira*, pocket; *Almoxarife*, Collector of Taxes; and other words beginning with the Arabic article *Al*, the; "and scarcely any modes of speech, and these have not influenced the grammatical structure of the language. The language was improved when Portugal, in 1264, was made an independent kingdom, and after this it received many words and phrases of French, introduced by the court of Prince Henry in the fifteenth century."

"In pronunciation the Portuguese have rejected the gutturals and strong aspirates of the Spaniards" and the Arabs. "The nasal sounds, proper to the Celtic tongues, have been continued in Galicia and Portugal. The Latin *f* was preferred to the aspirate *h*, as *facere* for *habere*." The Latin *pl* is changed to *ch*, as *pluvium* to *chuva*, *plumbum* to *chumbo*, *plenus* to *cheio*, *plaga* to *chaga*, *plorare* to *chorar*, &c. "The nasal sounds, indicated by the sign ~, called the *til*, placed over a vowel, approximate the sound of the letter so distinguished to the French nasals, as *não*, no; *mão*, hand; *Camões*, the poet Camoens; *fogão*, stove, &c. There exists, also, the cedilla, as in French; as *cabeça*, head; *caça*, chase. The *x* and *z*, and even the *g*, and the *s* at times, are pronounced like *sh* or *zh*. The *h* is never sounded. The *lh* and *nh* are sounded like *ly* and *ny*, as *tenho*, tenyoo; *milho*, meelyoo; *r* like *rh*, when double or not between two vowels; *m* and *n* final are pronounced nasally; *ch* and *j* are soft, &c., &c." These and a few other examples of less importance appear to be the difficulties of Portuguese pronunciation, but they are got over by practice with natives, or with a good teacher. The verbs are difficult to learn.

The dialect of Madeira is a rude patois. It may be called a patois of a patois of Latin; terminal syllables being often dropped, and other liberties taken with the proper Portuguese; certain names of things are in use that are not recognised in Portugal; for instance, in Madeira, *semilhas* is the word for common potatoes, and *batatas* for sweet potatoes, whilst in Portugal both are *batatas*.

Portuguese is a very copious language, especially in words beginning with the letters A, B, C, D, E, F. These words occupy more than half the dictionary.

"It adapts itself well to poetry, as witness the celebrated *As Lusiadas* of Camões, the great epic poet, and the poems of several other authors, about twenty in number, but who are hardly known out of the Peninsula. Few nations possess as many epic poems as the Portuguese; and these mostly relate the daring deeds and heroic exploits of their men of renown."

The language of Portugal, says M. Sané, is "*belle et sonore, nombreuse, affranchie de cette aspiration gutturale que l'on reproche à l'Espagnole, elle a toute la douceur et la souplesse de l'Italienne, la gravité et les couleurs de la Latine.*"*

It is extensively spoken in the Brazils and other parts of South America, in East and West Africa, and the eastern parts of Asia, as well as in Portugal, Madeira, and the Azores.

So nearly is this language allied to Latin that many and successful attempts have been made to compose passages that are at once Latin and Portuguese.

The following extracts from the Preface to the celebrated Portuguese Dictionary of Constancio† are adduced to show the relations existing in A.D. 842, and in the twelfth century between the Latin, the Romance, and the Portuguese languages.

"To give a good idea of the corruption that the Latin language has suffered in the formation of the Romance tongues, we shall cite one of the most ancient and authentic documents, namely, the oath which Louis the German and his brother, Charles the Bald, mutually swore at Strasburg, on the 16th day of the Kalends of March, 842."

"Tendo Carlos prestado juramento em lingua tedesca aos Allemãos, Luiz o fez aos Françaезes em lingua roman."

* Sané, *Poésie lyrique Portugaise*. Introduction, p. xc, Paris, 1808.

† *Novo Dicionario critico e etymologico da Lingua Portugueza*, por Francisco Solano Constancio. Terceira Edição. 4to. Paris, 1852.

“Cumque Carolus hæ eadem romanâ linguâ perorâsset, Lodhuvicus quoniam major natu erat prior hæ deinde.”

“Pro deo amur, et pro christian poplo et nostro commun salvament, dist di in avant, in quant Deus savir et podir me dunat, si salvara jeo ciste meon fradre Karlo, et in adjudha, et in cadhuna cosa si cum om per dreit son fradre salvar dist in o quid il mi altre si fazet, et ab Ludher nul plaid numquam prindrai, qui meon vol cist meon fradre Karlo in damno sit.”

The same in Latin, according to Bonamy :—*

“Pro Dei amore, et pro christiano populo et nostro commune salvamento, de istâ die in avante, in quantum Deus sapere et potere mî donat, sic salvâro ego eccistum meum fratrem Karlum, et in adjutum ero in quâque unâ causâ, sic quomodo homo per directum suum fratrem salvare debet, in hoc quid ille mi alterum sic faceret, et ab Lothario nullum placitum numquam prendero quod meo velle eccisti meo fratri Karlo in damno sit.”

Oath of the French nobles, vassals of Charles the Bald :—

“Si Lodhuvigs sacrament que son fradre Carlo jurat, conservat et Carlos meos sendra de sua parte non lo stanit, si jo returnar non lint pois, ne jo ni neuls cui eo returnar int pois in nulla adjudha contra Lodowig nun li juer.”

In Latin, according to Bonamy :—

“Si Ludovicus sacramentum quod suus frater jurat. Karlus meus senior de sua parte non illud teneret, si ego retornare, non illum indè possum, nec ego nec nullus quem ego retornare indè possum in nullo adjuto contra Ludovicum non illi fecero.”

Translation of the two oaths in Romance of the 12th century, according to Bonamy :—

“Por Dex amor, et por christian pople et nostre commun salvament, de cest jor in avant en kant Deus saveir et pooir me done, si salvarei jeo cist meon frere Karle, et en adjudhe servi en cascune cose si cum um per

* Mem, da Academia dos Inscriptões de França, tom. xxvi. p. 640.

dreit sun frere salvar dist en o ki il mi altresí faset, e à Lothaire nul plaid n'onques prindrai qui par mon voil à cist meon frere Karle en damn sit."

"Si Loois lo sacrament ke sun frere Karl jure, conserve et Karles meon senhor de sue part non lo tenist, se jeo lo no l'en pois, ne jeo ne nulz ki jeo retorner en pois, en nul adjudhe contre Lovis non le serai."

Literal translation in Portuguese :—

"Por o amor de Deos e por o povo Christão e nosso commum salvamento, de este dia em avante, em quanto Deos saber e poder me doar assim salvarei (*defenderei*) en este meu freire (*irmão*) Carlos, e em ajuda lhe serei em cada huma cousa, assim como hum homem por direito deve salvar (*defender*) seu irmão, como o elle a mim assim faria e como Lothario por nenhum preito nunca me prenderei (*ou nunca farei*) que por meu querer a este meu irmao Carlos em damno seja."

"Se Luiz o sacramento que seu irmão (*frade*, *freire*) Carlos jurou conservar, e Carlos meu senhor de sua parte não o mantiver, se en d'ello o não puder trastornar, de nenhuma ajuda serei a Carlos contra Luiz."

"This translation," says Constancio, "I have made not with elegance, but with rigorous exactness, in order to make appear how nearly the Portuguese idiom approximates to the Latin already corrupted in the ninth century, the only exceptions being *frade*, brother, *irmão*, which however we retain in *freire* and *fraterno*; and *retornar* for *desviar*, *dissuadir*, *trastornar*, and the resemblance would be greater if I had employed the ancient Portuguese orthography, and used the verb *teer* instead of *manter*."

I may venture to instance the eighty-first stanza of the sixth Canto of the *Lusiadas* of Camões, which is almost entirely Latin, as well as Portuguese :

"Divina Guarda, angelica, celeste,
Que os ceos, o mar, e terra senhoreas,
Tu, que a todo Israel refugio dêste
Por metade das aguas Erythreas;
Tu, que livraste Paulo, e defendeste
Das syrtes arenosas, e ondas feas;
E guardaste co'os filhos o segundo
Povoador do alagado e vacuo mundo."

The months have the same name in Portuguese as in English, only with different spelling ; but the days of the week are not the same, *e. g.* :

Sunday	is	Domingo,
Monday	„	Segunda Feira,
Tuesday	„	Terça Feira,
Wednesday	„	Quarta Feira,
Thursday	„	Quinta Feira,
Friday	„	Sexta Feira,
Saturday	„	Sabbado.

Thus the Portuguese have not taken the names either of the Roman or of the Scandinavian deities to designate the days ; but, somewhat like the Society of Friends here, have numbered the majority of them, as Sunday, second day, third day, fourth day, fifth day, sixth day, Sabbath or Saturday.

Charitable
Institutions
or de
Beneficencia.

We come next to the Charitable Institutions, or *de Beneficencia*.

These are, 1, The Hospicio, or Hospital for Native Consumptive Patients.

2.—The General Hospital, or Casa da Misericordia, for cases of all kinds, medical and surgical.

3.—The Orphanage.

4.—The Hospital for Lepers.

5.—The Mendicity Asylum, or Poor House.

6.—The Military Hospital.

Hospicio.

1.—The Hospicio da Serenissima Princeza Dona Amelia was founded in 1856, by Her Majesty Senhora Dona Amelia, Empress of Brazil, Dowager Duchess of Bragança, in commemoration of the loss by consumption, in Madeira, of a much beloved daughter. It was erected on the plans of Mr. Lamb, the architect of the Brompton Hospital for Consumption, and was finished in 1859.

It is charmingly situated on an elevated plot of ground at the west end of Funchal, but separated from it by a deep ravine, down which runs the São João, or St. John, one of the three rivers which traverse the city.

The house is large and handsome ; around it is an ample clear space, and beyond this a fine garden in which are many native and exotic trees, shrubs, and flowers, and the views from it are charming.

Passing up a broad flight of steps, on to a terrace at the front, which has a southern aspect and overlooks the sea, you enter a spacious entrance hall. In front is a good staircase which, dividing, leads to the upper floor. On each side of the hall is a room, that on the right hand is a board-room, adorned with portraits of the Imperial foundress, and other female members of the Royal House of Portugal, including the Queen of Sweden. That on the left is the Dispensary, where the medicines are prepared by an English Sister. The kitchens, &c., are behind, and other offices in the wings.

The wards for patients are on the first floor, these are of various sizes for accommodating one, two, four, or six patients. They are all of good height, bright and airy, with good windows, like those of our Infirmary. They are all open during the day and closed at or before sunset. Their walls are white and without ornament; and with the beds, floors, passages, and a beautiful small chapel, are models of purity and cleanliness. The drainage is excellent. The air in this favoured place, where there is neither fog nor smoke, comes fresh from the Atlantic, and is remarkably equable in temperature. The physician is Dr. C. A. Mourão Pitta, successor to his father.

The patients are carefully nursed and attended by the Sisters of Saint Vincent de Paul, who are English, French, and American; and these ladies are most polite to strangers visiting the house. The Institution is in the hands of Trustees.

There were not many patients under treatment at the times of my visit, not that consumption is not, to some degree, prevalent among the natives of Madeira. Women engaged in embroidery work, living in dark, damp, ill-ventilated, undrained cottages, are the greatest sufferers.

No doubt it sounds strange that, in a beautiful place like Madeira, to which so many have resorted for the cure or alleviation of consumption, this disease should be naturalized, but such is unhappily the case; and it is owing mainly, if not altogether, to the unhealthy, overcrowded, and unsanitary conditions of the straw-covered hovels in which so many of the poor live and work, and

to the poor and often unwholesome or insufficient food on which they subsist. Another cause has been alleged by the natives and believed in by their medical men; viz, when a foreigner, probably an English person, dies in the island, of consumption, the friends frequently give away to any natives who may have rendered services to the patient, the flannels, linen, and other clothes which have been worn by him, and which have become imbued with morbid exhalations. Such articles the natives wear, and thereby, it is said, contract by contagion the disease of the deceased, which is then propagated to the children by heredity, and in this way whole families become diseased. But it is a propensity of human nature to blame others rather than ourselves.

The following passage from Dr. Goldschmidt's pamphlet *Madère étudiée comme Station d' Hiver*, page 18, supports my view of the cause of the prevalence of phthisis among the Madeirienses:—

“ La population se nourrit presque exclusivement de farineux, auxquels elle ajoute de temps à autre des rations de porc salé ou de poisson. Les habitations des gens de la campagne sont tout-à-fait primitives: un trou creusé dans le roc ou quatre murs très bas en pierre, sans mortier, couverts de chaume, une porte servant à la fois de fenêtre et de cheminée, voilà la misérable demeure où s'entassent souvent des familles très nombreuses. Habitations humides, malsaines, sans air, sans propreté, sont la cause de beaucoup de maladies cutanées et constitutionnelles. Les mariages se concluent de très bonne heure et presque toujours entre personnes de la même paroisse avec trop peu d'attention aux liens de parenté. De tout cela résulte un nombre assez considérable de scrofuleux et de phthisiques parmi les Madériens. Les changemens brusques de température auxquels se soumettent la plupart des habitants du voisinage de Funchal en descendant tous les matins de la montagne à la ville, ou avec de lourdes charges ou pour se livrer au dur métier de porteur de hamac, augmentent encore le nombre des maladies des poumons et du cœur. La phthisie atteint moins les hommes que les femmes, qui restent toujours enfermées dans leurs cabanes se livrant généralement à la broderie et aux travaux de l'aiguille.”

It is a common belief in southern countries, as Italy and Spain, that consumption can be thus communicated by contagion, and it is difficult to resist the belief, in the absence of facts demonstrative of the contrary, that in those countries such contagion may take place, particularly where the strict cleanliness habitual to good English families is not observed. Among the poorer classes, at least, in Madeira, such precautions are not observed. The contagiousness of phthisis in England is not generally held by English medical men, and real proofs of it abroad are perhaps still wanting.

To show, however, how strong the belief in the contagiousness of phthisis has been, both abroad and in England, I make the following quotation from "Thoughts on Contagion," in the Edinburgh Medical and Surgical Journal, No. 97, by the late learned and travelled Thomas Masterman Winterbottom, M.D., of South Shields :—

"In the list of contagious diseases we find *phthisis pulmonalis*, though not generally acknowledged to be such in this country; yet we meet occasionally with such melancholy instances of the disease following close attendance upon a near relative or friend, even in those not apparently disposed to it, as must excite considerable apprehension on the subject. No prudent physician would allow a young and healthy person to sleep in the same room with a patient in an advanced stage of phthisis, where it can be avoided; and certainly he would not permit the same bed to be used at any period of the disease. In the south of Europe it is universally dreaded; and at Naples a public ordonnance (in 1782) commands the clothes, and even the furniture, used by such as have died of phthisis, to be burnt on the sea shore. An infringement of this order was punishable by confinement in prison, or condemnation to the galleys. Similar ideas prevailed also in Germany."

General Hos-
pital.

2.—We pass on next to the Casa da Misericordia, or General Hospital; this dates from the year 1514, but the present building, on the north side of the Praça, or public promenade, was erected about the end of the 17th century. It contains a number of large, lofty, and airy wards, for both sexes, and for medical and surgical

cases. At the time of my visit, January 6th, 1881, many beds were empty. Windows open upon the Praça in front and upon gardens behind. The whole has an air of antiquity, and I was told that people prefer to be treated at home, instead of going into the hospital. An intelligent House-Surgeon seems to perform his functions well. The yearly number of patients in ordinary times varies from 600 to 1,100 per annum. No Report, official or other, of the Hospital has ever been issued. This would not be allowed here in England. Attached to the establishment is an Escola Medico-Cirurgica, instituted in 1838, *i.e.*, four years later than that in our own town. Of this Funchalese School I have nothing to say, for I know nothing.

Orphanage.

3.—The Orphanage was established lately by the Sisters of St. Vincent de Paul for the bringing up of destitute female children. There are over twenty girls fed, clothed, and taught by these charitable ladies, and the Institution is supported by the sale of the work of the girls, and by charitable donations. In the school are taught about forty girls. They learn Portuguese, English, and French, so that when they attain a proper age they may more easily find employment in the families of English or French visitors. With the help of hired women, they learn to wash and perform all the duties of the laundry, and of the house generally. They are also taught to do embroidery. They are about of the same age as the girls at the Orphanage at our Moor Edge, are dressed much in the same style, and are taken out daily for exercise.

Leper Hospital.

4.—The Hospital of São Lazaro was founded at nearly the same time as the Casa da Misericordia, that is in 1515 or a little earlier, in pursuance of a resolution of the Municipal Camara of Funchal. The Camara also ordered, in the old Portuguese language, that "*Os doentes do mall de São lazaro so baõo aa Casa de São lazaro,*" and they were accordingly sent there. Previous to the founding of this hospital the lepers do not appear to have had any public provision made for them in Madeira.

Dr. Goldschmidt, the excellent and talented German physician in Funchal, kindly took me to see it. It is

capable of holding twenty or thirty patients, but at my visit there were only eight or nine in the house. Two were in bed, adults, in the last stage of the leprosy of the island; others were adults and boys. Those in bed were located in a large, airy, but scantily furnished ward; adjoining this, and opening into it, is another ward, having an open timber roof. There is a central passage through it, and on each hand as you pass along, there is a series of stalls, which, as they had each a not very tidy cotton curtain stretched across them, I concluded were still in use as sleeping places for the patients who are on foot. I looked into one, but could see nothing like a bed, but then it was rather dark. There was a peculiar, musty smell about. There are, besides, several small rooms, probably for the attendants. In one part of the building, fronting the south, is the smallest chapel I have ever seen; it could not be more than about three yards long and two broad. It is disproportionally high, perhaps thirteen or fourteen feet, which allows of a gallery at a high level. This is made for only one person to pass along at a time, it is so narrow, and at each end it opens into a room, or passage, of the house. When you stand on this gallery you look down upon the altar, and see that an officiating priest would run no risk of coming into contact with the lepers, who have only the gallery, whence they can, only one or two at a time, see and hear what is done and said. The fumes of incense, if any were used, rising up, would be carried by the air up to the lepers, who would, to a certain extent, be disinfected, and the fumes would pass out at the doors at each end of the gallery; the priest being to windward of the lepers, would run no risk of infection. To me, this Hospital was the most remarkable, though by far the least pleasing, sight in Funchal, and has made an impression on me not to be obliterated.

I have often wondered what the *Léproseries*, or *Maladreries*, or *Leper Houses*, of the Middle Ages were like. Here in Madeira, without doubt, is one still extant. They were common once all over Europe, including the British Isles; now, happily, long extinct here. They still linger in Norway and Sweden. The name *Spital*, on our Maps, marks the spots where they once stood.

This Hospital of St. Lazarus, in Funchal, is a rare and well preserved specimen of medical antiquity, founded at

the time when the Anatomy of the celebrated Mondinus, the first of the moderns who dissected the human body, and that of Alexander Achillinus, "The great Philosopher," and the medicine "consūmatissimi artium et medicine doctoris Joannis de Ketam alemani," were taught in the schools ; when the Signs of the Zodiac still governed their respective regions of the human frame ; and the direct influence of the moon and stars on the births, lives, and diseases of men, was believed to be great. It was founded in about the fifth year of the reign of our Henry VIII., and to bring the date more closely to the minds of Northumbrians, only a year or two after the battle of Flodden Field. No special treatment is undergone by these poor creatures. They are fed and clothed and generally taken care of.

Poor House. 5.—The Poor House, or Asylo de Mendicidade. This was intended for the reception of beggars, or destitute persons of both sexes ; for domestics out of place ; and patients, who, having left the Hospital, have no means of subsistence. It comprises workshops for shoemakers, ropemakers, and others. — According to all accounts it is a miserable place, though its surroundings look pleasant, and it adjoins the garden of the Consumption Hospital. It is supported by the governing body of the city, by voluntary subscriptions, and by a ball, in the season—the winter, at the Portuguese Club House, to which the English residents are all invited. There may be beggars in the house, but there are many outside who thrive better than the inmates ; these, I have been told, have only two poor meals a day, have to wait upon themselves, and have only one person in charge of them.

There are no poor rates in Madeira ; hence, beggars are numerous. Indeed, almost every child on the roads of the hills is ready to hold out its little hands for *backsheesh*, under another name. The jolly beggars in the city, who, no doubt, have a rooted objection to "go into the house," appear to know instinctively, or have scouts to inform them, of the landing of visitors from the ships. No sooner do these appear in the streets than the beggars, young and old, the lame, the blind, the deformed, swarm out from their abodes, and hang pertinaciously on the skirts of the strangers, tugging at them, and thrusting their afflictions,

which they consider to be meritorious, under their notice, and without the least let or hindrance from the authorities, and then, after a successful quest of Reis, or English copper, or silver, retire to their dens to feast. They have a practised discernment, and do not molest those foreigners who are resident, and whom they know by sight, but like mosquitoes and fevers, they settle by preference on the new comers. It is a scandal to Madeira, and a blot on the management of Funchal, that these poor people should be allowed thus to prey upon aliens, instead of being supported by their own people.

Prison.

After the scandal and nuisance of the beggars, is that of the Public Prison. This is an ordinary house, fitted up with iron-grated windows, and in one of the most public and frequented parts of the city; close to the *Largo do Sé*, the *Praça*, the Post Office, the principal merchants' offices, and the English rooms. Through the gratings the prisoners, most conveniently to themselves, beg, and offer for sale wicker baskets, combs, &c., of their own manufacture, and enjoy the society of their friends, and the sight of the passers by. There is a military post forming a part of the prison. Surely a more suitable place for a prison might be found!

Military Hospital.

6.—The Military Hospital. This is at the barracks, formerly a monastery, behind the Collegio Church, and has a large garden attached; but I have no further information concerning it.

Country Hospitals.

Small public hospitals, I have been told, exist at Sancta Cruz, Machico, and Calheta, small places on the south coast, but are little used.

Modes of Travelling.

The modes of travelling are, on horseback, in a bullock car, in a hammock, or on foot. Railways and tram-cars are unknown, though the latter might be applicable on the Rua Nova. There are in certain places on roads leading down to Funchal from the hills light wicker sledges, guided by careful men, to be had, by which a rapid descent can be effected. There are no carts, and only two or three wheeled carriages, drawn by one horse, and belonging to private persons—these are not well adapted to the roads. Horses are used, with the above exceptions, for riding only, by well-to-do natives and by foreigners.

They are of English or Spanish blood, entire, active, and surefooted, walking or trotting up and down the steep, and often slippery, roads in perfect safety. At some places up the mountains, where there is level space, a good gallop may be enjoyed.

Each horse is attended by a groom, or *burriqueiro*, clad in white, who carries a horse tail, mounted on a rod, to flap away flies and gnats, which, in hot weather, are a pest to horses. He is usually civil and obliging, carrying any parcels, as well as the overcoat and umbrella that the rider may have. He keeps well up with his horse for long distances, when not galloping, and in going up hill helps himself by catching hold of the tail of the horse, and this the animal does not resent. Many of these men speak a few words of English.

The bullock car, or *carro*, is a strange, heavy-looking, but convenient affair. It resembles most a small, curtained, old-fashioned, four-poster bedstead, not on castors or wheels, but on a sledge-frame, made of wood or iron. Inside is a cushioned seat, back and front, each capable of holding two persons who sit face to face, with their feet on a transverse bar at the bottom, to prevent slipping in going down hill. The curtains are variously coloured cotton or woollen, and can be drawn and opened at pleasure; in wet weather waterproof curtains are employed.

These cars are pleasant, amusing, and convenient; the sledge running evenly over the cobble pavement, but in going down a curving, steep hill, they require a good deal of steering. They are drawn by a yoke of oxen, and attended by a man and a boy; the boy walks before the oxen to show them the way and guide them; the man walks or runs by the side of the car to steer, and keeps the oxen going with a pole, at the end of which is a short spike, or goad. The yelling and shouting of the man, echoed by the boy, with additional expletives understood by the oxen, but unintelligible to the fare, are at first alarming, but afterwards rather amusing. The tips of the horns of the oxen are perforated to admit a short thong by means of which the men, or boys, often guide them. The oxen are quiet, silent, docile, patient creatures, and go at a fair sharp walking pace. Oxen are used, also

to transport, on low sledges, heavy loads of wood for firing, wine casks, &c. These beasts are small, nearly all of them of a uniform red colour, as are those also of Porto Sancto, and are strong and enduring in labour.

Mules and asses, of which there are many, have a hard time of it. They are the beasts of burden, being heavily laden with flour, or grain, sand, or pebbles from the beach, stones for walling, or the scavengings of the streets, byres, and stables. Usually, you see two or three mules and one donkey, the latter leading, in charge of a boy, (*vapaz*), who carries a long stick. Each animal has a thong passing back from the headstall, on the near side, to the pad on his back, and made so tight that the head is kept always a good deal drawn to the near side. This is, in appearance, strange. It is said the animals like it, which I rather doubt. They, as well as the oxen, are unshod.

The hammock, palanquin, or *Réde*, suspended from a strong pole, the ends of which rest on the shoulders of two active, strong men, is a strong net, canvas-lined, and padded with cushions. It is provided with a hood and small curtains in front that can be made to quite conceal the person, and keep out the sun and rain. There is a coverlet over the occupant, and a valance hangs down on each side. These parts are variously fringed and decorated with coloured work. The *réde* (Latin *rete*) is the common conveyance for ladies and invalids, or lazy men; it can be hired, but it is better and cleaner to have it as private property, at your Quinta, or Hotel. The bearers are young or middle-aged men, from the hills, capable of much and sustained labour, and keep a good pace, even up the steep roads. Their costume is, white shirt and trousers, native leather boots, and straw hats with a ribbon round them, corresponding in colour with the trimmings of the *réde*.

On horseback, or in *réde*, you can travel over the whole island, if you can bear to rough it in the way of poor food and worse accommodation.

In the fine weather, a tent, with a mule or two to carry the tent and your food, might be taken anywhere; and thus you would be independent of delays and disappointments, and also of entomological pests, which are common in the refuges among the hills.

Principal
Productions

The principal productions are sugar, wine, fruits, vegetables, poultry, embroidery, basket work, wicker furniture, inlaid and other wood work, feather flowers, and filagree work in gold and silver, &c. Sugar and wine are the most celebrated, and have been so since a few years after the colonization of the island.

Sugar.

"The plant yielding sugar (*Saccharum officinarum*) was brought as early as the thirteenth century of our era, with much labour and difficulty, from transgangetic countries, to the banks of the Red Sea and to Egypt; thence it spread along the shores of the Mediterranean, Asiatic, African, and European. It was procured to be sent to Madeira, in the year 1425, by the renowned Prince Henry of Portugal, (the Infante Dom Henrique, the Navigator, son of El Rei Senhor Don João II)."

"It was found to thrive in this new soil, and, after it had become naturalized, was transmitted to the Canary Islands and to different places on the west coast of Africa; lastly it was carried to the West India Islands, Brazil, and the rest of the European Colonies of South and North America."

In the years from 1846 to 1852 the vines of Madeira were destroyed by the ravages of the *Oidium Tuckeri*. In consequence of this, the people devoted themselves with energy to the cultivation of the sugar-cane, which before that period, owing partly to the high value of their wine, and partly to the abundant supply and cheapness of the sugars from Brazil and other American countries, had been much neglected. The sugar industry again prospered, and meanwhile the vines recovered, or were replaced by fresh stocks, and for a time both good wine and good sugar were produced. A tax, however, was laid upon sugar imported into Portugal and the Azores from Madeira, and this embittered the commerce. Unfortunately, during the last few years the *Phylloxera vastatrix* has made its appearance and has been very inimical to the vines in many parts, and a remedy is wanted.

In 1871, it is said that there were in Madeira seven steam factories, nine machines worked by water power and others by oxen, employed in the manufacture of sugar; whilst in the winter of 1880-1, there was only one of

consequence in Funchal—that of Captain Hinton. This is worked by both steam and water power, and does nearly all the work of the district immediately round Funchal. Captain Hinton and his sons very kindly allow the works to be shown to visitors and the process to be explained to them. There are factories in other parts of the island.

The canes are ready for cutting at the end of February or beginning of March, after the winter rains. The matured stems are then cut off just above the root, the undeveloped ones left to grow, and to be reaped at a later time. In this way the harvest continues till the end of May, and even the beginning of June. The canes when cut are stripped of their leaves, and the green tops cut off and re-planted. The crops are brought to the factory on sledges, drawn by pairs of oxen, and loaded with canes in bundles, bound with iron hoops.

The canes are first crushed in a steam rolling mill. The abundant juice flows on to a sieve, which retains the coarse fibres. It is then pumped up into a reservoir, where it is purified, and its acid neutralized. The superfluous water is next evaporated, until the mass assumes the density of very thick syrup, and a dark, dirty looking aspect, and consists of crystallized sugar and uncrystallizable molasses. This mass is then put into circular vessels, or basins, having their walls studded with minute apertures, and made to revolve with extreme rapidity. The centrifugal force thus exerted causes the dark fluid—the molasses or treacle—to escape quickly through those apertures, and it falls into a receiver below, the crystallized sugar remaining in the basins dry, and of a whitey-brown colour. This is then scooped out, put into bags, and is ready for market.

The crushed canes, after being steeped in hot water and pressed again, are collected, with any other saccharine refuse, caused to ferment, and then distilled to extract the alcohol, or spirit called *Aguardente*. This clear, fiery spirit is consumed mainly on the island. It enters generally into the composition of Madeira wine, and is also drunk by the natives—diluted or not with water—as one of their *bebidas*, or drinks, for they are not teetotallers. It is probably a blessing to other countries that it is

“drunk on the premises.” It is, however, a rare thing to see a drunken man in Funchal.

The dry residuum from the distillation is mere woody fibre, from which everything saccharine and alcoholic has been extracted. It is, nevertheless, itself useful, for it is passed by shovelfuls into the furnaces under the boilers of the steam engine, and there, together with Welsh coal, produces an intense white heat. Thus the canes are entirely used up, and nothing is wasted.

“The quantity of sugar exported in 1854 barely amounted to 288 kilogrammes, whereas in 1871 it was increased to 527,883 kilogrammes; and the total production of sugar in the island at that date may be set down at 850,000 kilog.” The Madeira sugar is good, and not too much refined.

On the 14th of February, 1876, a law was passed by the Portuguese Cortes that the tax on sugar, exported from Madeira to Portugal and the Azores, should be abolished for five years; and as at the end of last year, 1880, that time was about to expire, great exertions were made by the Members for Madeira to procure a continuance of the exemption, chiefly on the ground that business generally was still very bad in the island. Their efforts were happily rewarded by the passing of a law, at the beginning of March last, to extend such relief for five years more.

It is said that the variety of the sugar cane at present cultivated in Madeira is not nearly the best; but no change, so far as I know, is contemplated.

Five sugar loaves (*pães de Assucar*) are not inappropriately the Arms of Madeira.

Wine.

It is probable that the first vines brought to Madeira were not only those that were sent at the instance of Prince Henry of Portugal, in about 1421, from Crete, &c., but also many of the ordinary kinds from Portugal, together with various grains and seeds on and after the colonization of the island.

The kind called *Malvasia*, or *Malmsey*, is said to have been brought by the Acciaïoli, Florentine Italians,

some of whose descendants still live at Sancta Anna, in Madeira. This once powerful family possessed, in the fourteenth and fifteenth centuries, a considerable part of Greece, including the Morea; and their power there was destroyed by the Turks in 1456, under Mahomet the Second. On the east side of the Morea is a small island called Minoa, and in it a city named Napoli di Malvasia, and it is believed that that island, which had long been famed for its generous wines, and for that variety called Malvasia, was once a part of the dominion of the Acciaioli. However that may be, it is certain that wine was made in Madeira before the end of the fifteenth century, and that the island has not, since that time, ceased to produce it.

Vines have from time to time been imported from Chios, Candia, Cyprus, and other places, celebrated for wine, in the Levant. The vines in Madeira are commonly propagated by cutting.

The principal wines of Madeira are, Verdelho, Sercial, Bual, Tinta, Bastardo, and Malmsey.

Verdelho is the common wine of the island, and varies considerably in quality and price. When it is of good quality it is an excellent table wine, and what is generally known in England as "Madeira."

Sercial is rare. It is made from grapes of the Riesling vines, introduced into Madeira from the Rhine. Is a dry white wine, combining the flavours of the Rhine and Madeira wines, with a pleasant bouquet, and requires age to bring it to perfection. I have tasted it, in his cellar, through the kindness of Mr. Leland Cossart.

Bual is a rich wine of delicate flavour and peculiar bouquet.

Tinta is made from black grapes grown chiefly on the north side of the island. It has a deep, almost port wine, colour, which fades with age. It is very astringent, and given in Madeira to visitors suffering from diarrhœa, but otherwise is not much drunk, except by the natives.

Bastardo is a sweet wine, with a somewhat astringent flavour and pleasant bouquet.

Malmsey has a dark Madeira wine colour, and is a rich sweet luscious wine, which, with age, becomes quite a liqueur.

The grape harvest (*vindima*) in Madeira is probably conducted very nearly in the same manner as the *vindemia* of the Romans in the time of Virgil.

When the grapes are ripe, the bunches are cut off by men and thrown into baskets (*cestos*), and taken to the wine press (*lagar*). In this they are trodden, to the sound of music, by men with bare, but clean-washed feet, till all the berries are broken; and the juice is run out into casks. The mass of skins, seeds, and stalks is next collected into a heap, bound with cords, and subjected to great pressure from blocks of wood placed on the heap; a heavy beam of wood (*vara*) is then screwed down tight upon the blocks. Thus the whole of the remaining juice is expressed and runs into the casks. The mass which is left is then spread about on the floor of the *lagar*, mixed with water, and trodden again. It is then pressed, and the resulting diluted juice is drunk by the work-people, and may be seen hawked about the streets in skins carried on the shoulders of men, and called *agua de pé*, or foot water.

A certain quantity of aguardente, or spirit, is put into the casks; the period at which this is done varies according to the judgment of the wine maker. Into the casks of juice, or *mosto*, is put a quantity of finely powdered wood charcoal, which carries down the colouring matter and other impurities as the fermentation subsides. After a time, the wine is by some transferred to another, and even a third, cask to get rid of sediment. When the casks have remained some months in the *armazem*, or store, they are placed in the *estufa* for a variable time, that is from two to four months. The *estufa* is a house heated by a furnace, or by the sun; and in it the wine is matured more rapidly than if it had remained in the *armazem*.

The wine of Madeira was known in England in Shakspeare's time, and probably much earlier. In his *Henry the Fourth, Part I.*, which appeared in 1598, Act 1, Scene 2, Poins asks Falstaff "What says Sir John Sack-and-Sugar? Jack, how agrees the devil and thee about thy soul, that thou soldest him on Good Friday last, for a cup

of Madeira and a cold capon's leg?" Also in Scene 4, the Drawer exclaims "Anon, anon, Sir! score a pint of Bastard in the Half Moon, or so!" And, "Why then, your brown Bastard is your only drink!" "Canaries" is also mentioned in Part II. of the same play.

To give an idea of the annual exportation of wine from Madeira, I quote the following statement from the Notes to the *Historia da Madeira*, from which a good part of the preceding information respecting sugar and wine has been taken: "The quantity of wine exported, having been reduced in 1830 to 5,994 *pipas*, or pipes, progressively increased, so that in 1840, 9,782 pipes were sent away, at a price from £30 to £44 each. In 1849, the exportation rose to 14,445 pipes. In 1850, the amount was 13,875; and in 1851, 12,356; whilst in 1852, owing to the ravages of the *Oidium Tuckeri*, only 5,676 pipes were dispatched." What the amount of later years has been I cannot state, except that during the first half of 1880, the export, according to Mr. Rendell's *Hand-book of Madeira*, was 2,200 pipes; the *Phylloxera* having succeeded the *Oidium* in the destruction, or deterioration, of the vines.

Grapes for eating are also grown and sold to ships that call at the island. There is a considerable export of onions to Europe, and especially to Denmark. Immense quantities of fruit, fresh vegetables, and poultry are supplied to the ships, which call nearly every day in passing to and fro between England, the Cape, and the West coast of Africa.

hat to do
on Arrival.

There is commonly a difficulty, on arriving at a foreign country, to know what to do, and specially for an invalid. Everything is strange; the language perhaps being incomprehensible, and no friend at hand. Now, on arriving at Madeira, a stranger cannot do better, as soon as the anchor is down and boats have come off from the beach, than put himself and baggage into the care of Mr. Reid or his son William, whose jolly faces he cannot fail to recognise, or who will speedily make themselves known, and who board every English Steamer. His baggage will soon be passed by the Custom House Officials, and he will be escorted on shore, relieved of every care as to boatmen's charges, &c. &c. If he has

Hotels.

no pre-arranged destination let him go, on landing, either on foot, or by bullock-car, or hammock, which will be ready for him on the beach, to the Sancta Clara Hotel, which is a little way uphill, being 150 feet above sea-level; or to "The Duke of Edinburgh"; or to the "Carmo" Hotel (late Miles'), which are near the sea, the former being situated near the west, the latter towards the east-end of the city. All three, as well as another much higher up than the Sancta Clara, are owned by Mr. Reid. Many people prefer the lower hotels for the winter. At any of these he can be well and comfortably lodged, at a cost of about £13 6s. 8d., or 60,000 Reis, and upwards, for four weeks.

There is a family hotel, kept by Mrs. Jones; a German one, Schlaff's; and several Portuguese. I believe that private lodgings are also to be had.

Quintas.

If it be desired to take a private house, or Quinta, the rents of which vary from £30 or £40, to £300 or £400, for the winter six months, it would be well to stay at the hotel for a week or two, so as to have time to go about and look for a suitable Quinta, and gain some idea of the city and neighbourhood. Quintas can be had furnished or unfurnished, and furniture can be hired, or bought at a sale. They are all out of the city, and it is best to go early to Madeira in the season for a good choice, and if you have an invalid, and are going to stay the winter, be sure to take one with fire-places in some of the rooms, to provide against the rainy season. Servants can be had—Portuguese, who speak more or less English; but whoever can, had better take their own from England—there is difficulty in either case.

Money.

A letter of credit on one of the bankers in Funchal is very advisable. The bankers are Mr. Haywood, Her Britannic Majesty's Consul; Messrs. Blandy, Brothers, & Co.; Messrs. Cossart, Gordon, & Co.; Messrs. Krohn, Brothers, & Co. (German); and the Agency of the Bank of Portugal. Some English sovereigns will be useful at first, as they can readily be changed for Portuguese money at the hotels or shops. You lose about elevenpence for each sovereign. A sovereign is worth 4500 Reis, or four and a half Dollars; and you get change in silver half Dollars of 500 Reis each.

Money is reckoned in Portugal by Reis, Milreis, and Contos of Reis. There is said to be a Portuguese gold piece, worth 5000 Reis; and another worth 2000 Reis, but these are scarce, and have not fallen under my notice. The English sovereign is worth 4500, half-sovereign 2250 Reis.

The Portuguese coins are :

The Milrei, or Mil, or Pataca, or Dollar, in silver, 1000 Reis.

The Meio Pataca, or half Dollar, 500 Reis.

The Piece of 200 Reis.

That of 100 Reis, called Tostão or Bit. = $5\frac{1}{2}$ d. English.

The Cruzado, or Piece of Four Bits.

That of 50 Reis, Half Bit.

The copper coins are old and new. The old are heavy and clumsy, on which the new are an immense improvement. The 40 Reis piece is called a Pataco. The 20 Reis piece, a Vintem; and there are pieces of ten, five, and three Reis—the last is rare. The real is an imaginary coin, estimated to be worth one-nineteenth of an English penny.

necessary
articles.

Linen, plate, books, writing paper for letters, &c., must be taken if a Quinta is to be hired for the year or the winter. English clothes, suitable for spring and summer in England; flannels for the rainy and cold season, and for all times for an invalid; umbrellas and parasols covered white. Clothes of many kinds can be got in Funchal, but it is best to take them from home. Native shoes and straw hats are good and suitable. A small chest of drawers in two parts, each of which goes into a wooden box, such as are supplied in an Indian outfit, will be found very useful, both drawers and boxes.

A series of photographic apparatus, and dry plates, to some, will afford amusement in taking views. Two or three certified registering thermometers, aneroid barometers, and hygrometers, with blank charts for entering observations, will give good and interesting employment to many; even a rain gauge. A lantern for dark nights may be

necessary. Every valuable or breakable article ought to be locked up, when not in every-day use.

Books on
Madeira.

Most of the English books on Madeira are out of print, as Dr. Mason's Treatise on The Climate and Meteorology of Madeira; and Dr. Grabham's and Mr. Johnson's edition of White. The books purchaseable at present are Dr. Goldschmidt's pamphlet of twenty-four pages, in French; and the concise Handbook of the Island of Madeira, by Mr. J. M. Rendell, in English.

The "Synopsis of the Fishes of Madeira," by the Rev. R. T. Lowe, and a supplement, were published in Vols. II. and III., 1837 and 1839, of the Transactions of the Zoological Society, London.

The great book on Madeirian Botany is that by the above author also, but only one Volume appeared.

Men from the hills call at Quintas in the Spring with bundles of ferns, and other plants, and ask for them two or three times the number of Reis that they will take.

Medicines.

Medicines, such as persons have been accustomed to at home, may be useful on board ship, and for a time after landing, or even for some time; and care should be taken not to indulge in too much fruit after arrival. The unusual heat, too, brings on bilious attacks. English medicines are easily obtained at the *Boticas*, or chemist's shops.

The Fauna.

The only indigenous land vertebrata are lizards, *lagartos*—these were noticed as such by the first discoverers of Madeira. Frogs (*rãas*) were introduced, I have been informed, by a French gentleman, not many years ago, who believed that he was bringing over the edible batrachian. This, however, he found to be a mistake; so the frogs were allowed to go their own way, and now their descendants, notwithstanding the rapidity of the flow of the water in the rivers, have greatly multiplied, and make themselves heard in the evenings by their peculiar croakings in chorus.

Seals, or sea-wolves, *lobos marinhos*, as they are called, were found in some of the small bays by Zargo and Vaz

when they first arrived ; and there is a village and valley about five miles west of Funchal, called *Camara de Lobos*, where they had been seen in the adjacent bay.

Sea birds, too, were numerous, and not afraid of man. They were taken in any quantity by the sailors, with the hand, at the time when the island was discovered ; but at the present day they behave like gulls of other parts.

All the farm-yard fowls are kept ; and there is no want of mongrel dogs of all kinds. Of wild land birds there is not a very great number.

I have seen a pair of the white-tailed eagle, *aguia* though it is said not to exist in Madeira, and the kestrel, *falcão*. The kite, *milhano*, is said to be a denizen. There are also, an owl, *mocha* ; and the following:—the thrush, *tordo* ; the blackbird, *melro* ; the wild canary, *canario* ; the robin, *pintaroxo* ; the black cap, *tintanegro* ; the chaffinch, *chamariz* ; the black and yellow wagtail, *lavandeira* ; the swift, *andorinha* ; the swallow, *andorinha* ; the skylark, *calhândra* ; the red-legged partridge, *perdix* ; the pheasant, *faisão* ; the quail, *codorniz* ; the goldfinch, *pintasilgo* ; the sparrow, *quincho* ; the cuckoo, *cuco* ; the rook, *corvo*.

The only indigenous fresh water fish is the broad-nosed Eel, *anguilla platyrostris*.

fishes. Sea fish are numerous. Many are of strange form, and of very brilliant and extraordinary colours, vying with the most highly coloured birds.

The fish most likely to come under the notice of visitors at table are :—

Cherné (*Polyprion cernium*)—Anglicé, Cherny.

Garoupa (*Serranus Cabrilla*)—Grouper.

Salmoneta (*Mullus surmuletus*)—Striped Red Mullet.

Tainha (*Mugil corrugatus*)—Grey Mullet.

Pargo (*Pagrus vulgaris*)—Braize, Becker, or Sea Bream.

Atum Rabilha (*Thynnus vulgaris*)—Tunny.

Cavalla (*Scomber Scomber*)—Mackerel.

Sardinha (*Clupea Sardina*)—Sardine.

Anchova (Temnodon Saltator)—Anchovy.

Peixe Gallo (Zeus Faber)—John Dory.

There are many more fishes than these; see Lowe's Fishes of Madeira.

Crustacea. Lobster; Crab; Cray Fish; Shrimp, or Prawn.

Insects. "It is said that there are 1,200 species of insects, exclusive of spiders." (Rendell). There are two kinds of flies, and gnats, which are numerous, and in hot weather very troublesome both to man and beast. Mosquitoes, fortunately, are not very numerous in the neighbourhood of Funchal, at least, in winter. A small species of ant is seen almost everywhere.

Mollusca. "The Rev. R. T. Lowe has enumerated 155 species of land and fresh-water shells. McAndrew, 156 species of marine shells, without exhausting the stock." (Rendell.) Mr. Johnson, an indefatigable naturalist, and an obliging gentleman, resident in Madeira, and who is studying marine zoology, has discovered several new and beautiful species of nudibranchiate mollusca living on the coast near Funchal.

Flora. The following list of Plants and their distribution is copied from Lowe's Manual Flora of Madeira. London, J. Van Voorst, 1868, vol. 1, p. iii.. Regions or Zones of Vegetation in Madeira.

I.—CACTUS AND BANANA.—Tropical, cultivated, reaching from the sea to the height of 700 feet, characterized by the following plants:—

Cultivated.—Banana, Palm, Sugar Cane, Arrowroot, Rose Apple, Custard Apple, Guava, Fig, Cypress, Bamboo, Oleander, Judas tree, Carob tree, Coral trees (*Erythrina*), *Brugmansia*, *Bignonia*, *Hybiscus*, *Poinsettia*, *Euphorbia*, *Duranta*, *Cæsalpinia*, *Alpinia*, *Hedychium*, *Hoya*, *Stephanotis*, *Cereus* (*triangularis* L. *speciosissimus* Desf., *phyllanthoides* D.C., &c.), *Passiflora* (*quadrangularis* L., *edulis* Ker., *Loweii* Heer., &c).

Naturalized.—Prickly Pear (*Opuntia Tuna* Mill), *Pelargonium inquinans* Ait., *Cassia bicapsularis* L., *Lantana Camara* L., *Ricinus communis* L., *Aloe arborescens* L., *A vulgaris* Lam.,

Ageratum conyzoides L., *Maurandia semperflorens* Jacq., *Mesembrianthemum cordifolium* L., *Solanum sodomæum* L., *Sol. auriculatum* Ait., *Sida carpinifolia* L., *Commelyna agraria* Kth., *Panicum repens* L., *Paspalum vaginatum* L., *Eleusine indica* Gaërtn, &c.

Indigenous.—Dragon tree, *Teucrium heterophyllum* Herit., *Jasminum odoratissimum* L., *Chamæmeles coriacea* Lindl., *Sideroxylon Mermulana* Lowe, *Celastrus* (*Catha* Forsk.) *cassinoides* Herit., *Gomphocarpus fruticosus* R. Br., *Helichrysum obconicum* D.C., *Euphorbia piscatoria* Ait., *Juniperus phænicea* L., *Ephedra alata* Decaisne, *Pedrosia glauca* Ait., *Frankenia lævis* L., *Lavandula pinnata* L., *Matthiola maderensis* Lowe, *Sonchus ustulatus* Lowe, *Musschia aurea* L. fil., *Echium nervosum* Ait., *Hyoscyamus canariensis* Ker., *Sempervivum glutinosum* Ait., *Pennisetum cenchroides* Rich., *Andropogon hirtus* L., *Piptatherum multiflorum* Beauv., *Cheilanthes suaveolens* Sw., *Nothochlæna Marantæ* L., *N. vellea* Sw., *Nephrodium molle* R. Br., &c.

II.—VINE AND CHESTNUT.—Temperate, cultivated, from 500 to 2500 feet. The Chestnut forms from 1500 to 2500 feet a sort of upper belt or border to this zone, below whose upper limit snow never lies longer than a few hours.

The chief characteristic plants are—

Cultivated and Naturalized.—The Vine, Cereals, Chestnut, Oak, Cork-tree, Orange, Lemon, Pomegranate, Fig, Mulberry, Peach, Almond, Apricot, Plum, Cherry, Apple, Pear, Quince, Japan Medlar, Walnut, American Aloe, Fuschias, Heliotrope, Pelargoniums, Australian Acacias and Eucalypti, Stone Pine and Pinaster, Roses, Honey-suckle, *Mesembrianthemum edule* L., *Passiflora cærulea* L., *Oxalis purpurea* Jacq., *Solanum pseudo-capsicum* L., *Hydrangea hortensis* Sm., *Rhus coriaria* L., *Ornithogalum arabicum* L., *Lilium candidum* L., *Arum italicum* L., and *A. Dracunculus* L., *Richardia æthiopica* L., *Amaryllis Bella Donna* L., Common Furze, Broom, and Bramble, &c.

Indigenous.—Dragon-Tree, Myrtle, Dog-Rose (*R. canina* L.), Madeira Holly (*Ilex Perado* Ait.), *Rhamnus glandulosa* Ait., *Myrica Faya* Ait., *Euphorbia mellifera* Ait., *Genista virgata* Ait., *Adenocarpus parvifolius* D.C., *Hypericum grandifolium* Chois., *H. glandulosum* Ait., *Teucrium betonicum* Herit., *Globularia salicina* Lam., *Phyllis nobla* L., *Lavandula viridis* Ait., *Viola odorata* L., *Fragaria vesca* L., *Agrimonia Eupatorium* L.,

Lobelia urens L., *Cynoglossum pictum* Ait., *Salvia clandestina* L., *Aristolochia longa* L., *Brachypodium pinnatum* Huds., *Melica ciliata* L., *Danthonia decumbens* L., *Arrhenatherum avenaceum* Beauv., *Agrostis canina* L., *Ceterach officinarum* Willd., &c.

III.—LAUREL AND HEATH.—Mountains; uncultivated, from 2500 to 5000 feet. The principal plants are—

Naturalized.—Common Broom and Mountain Ash (*Pyrus Aucuparia* L.): the latter perhaps indigenous.

Indigenous.—Laurels (*L. indica* L., *L. fætens* Ait., *canariensis* Willd.) Heaths (*Erica arborea* L., *scoparia* L.) Whortleberry (*Vaccinium maderense* Link.), *Clethra arborea* Ait., *Heberdenia excelsa* Ait., *Picconia excelsa* Ait., *Echium candicans* L. fil., *Sonchus squarrosus* D.C., *S. pinnatus* Ait., *Chrysanthemum pinnatifidum* L. fil., *Cheiranthus mutabilis* Herit., *Senecio maderensis* D.C., *Isoplexis sceptrum* L. fil., *Bystropogon punctatus* Herit., *piperitus* Lowe, *maderensis* Webb, *Teucrium abutiloides* Herit., *Mentha Pulegium* L., *Origanum virens* Hoffm., *Phyllis Nobla* L., *Fragaria vesca* L., *Viola sylvestris* Lam., *Saxifraga maderensis* Don., *Teesdalia nudicaulis* R. Br., *Sibthorpia peregrina* L., *Cedronella triphylla* Moench, &c.

IV.—HIGHEST Peaks.—Rocky crags and summits of the higher mountains, uncultivated, from 5500 to about 6000 feet. The only peculiar plants are—

Indigenous.—*Arenaria serpyllifolia* L., *Cerastium tetrandrum* Curt., *Erica cinerea* L., *Viola paradoxa* Lowe, *Armeria maderensis* Lowe, *Avena marginata* Lowe.

Mr. White gives 364 genera and 650 species of flowering plants. (Rendell, Handbook).

From what has been said in these two Lectures, I think it may be concluded that Madeira is an island of enchanting, magnificent scenery, preeminently remarkable for the mildness and uniformity of its climate and the purity of its air; and that it must bear the palm, in these respects, from the now fashionable health resorts of Europe. It must be confessed that it is not perfect, but where shall we look for perfection? The weather is not always fine in Madeira, and the inhabitants are not all living in a blissful state of primeval innocence, or of robust health. It is the change from the rigours of a Northumbrian

winter to the mildness of an Atlantic island, that is at once delightful, surprising, and beneficial. There is choice of a low situation, or one at a high level ; and exercise can be had in less than half an hour after rain, as the pavement dries rapidly.

Pulmonary invalids soon after arrival experience a soothing and pleasing change ; but it is a great mistake to send them out in the last stage, when hopelessly ill. They ought to go out at the earliest possible stage, when the body has still great resources of energy, actual and potential, and departure should not be delayed beyond the end of October or the beginning of November, unless in cases of necessity. The stay should be of at least six months, or until the cold spring winds of this part of England have ceased ; but it is still better that the invalid should, if possible, prolong his stay over another winter and spring, to allow of health being thoroughly established.

There are many instances of invalids who, having spent a winter in Madeira and found themselves wonderfully recruited, have returned home perhaps too early in spring or summer, taken cold in our changeable weather, and the still not quite extinct embers of disease have blazed up again, and produced either a speedy decease, or rendered recovery impossible. Such patients are those who are young and sanguine, put too much faith in their own sensations and hopes, and have not heeded the advice of wiser heads than their own, and have not allowed sufficient time to elapse for the necessary changes of tissue to be accomplished.

Those who have been overtasked in the battle of life, and who feel their strength failing from the operation of the many causes of mental strain in business ; those who are getting old and yet, having no disease, require rest, will find, in quiet and repose, that renewed vigour they stand in need of, during a six months' residence in the pure air of Madeira. There are few public amusements it is true, but an invalid will not care for them. Society can be had at the hotels, but better health up the hill sides.

The ethnologist, the philologist, the zoologist, the botanist, the geologist, and the astronomer may each find amusement in his own department. Excursions on horse-

back or in hammock to various parts of the island may be enjoyed, or trips to the Azores, the Canaries, or Cape Verde islands can be had by the numerous steamers that call at Funchal.

Food is good. Meat, vegetables, and fruit good and cheap. A knowledge of the Portuguese language is not at all essential, but would be useful.

For my own part, I have great reason to be most thankful for the blessing of recovery of health to my son, and to recommend the climate of Madeira to all those who require to escape from the rigours and changes of English winter, and who wish for a genial and equable temperature for the recovery of their health, or for mere pleasure.

I wish prosperity and happiness to all the inhabitants of the Queen of the Atlantic—*O Flor do Oceano*. May their wine and their sugar never fail!

ADDITIONS AND CORRECTIONS.

Emigration, page 31.—No one can leave the island without a police permit; many try to escape without, and some have been brought back and put in prison.

Dress, page 38.—There is a difference in colour of the dresses in different districts, by which the people (*gentes*) may be distinguished.

Anglican Church, page 59.—This is termed "The Becco Chapel," and the Curate in charge, this year, is the Rev. Charles Fairfax.

Cemeteries, page 60.—It is only of late years that Protestants have been allowed to be buried on the island. Formerly, when a Protestant died, the body had to be given up to the authorities of the city, by whom it was carried out in a shore boat, and launched into the ocean at some distance from the beach.

Schools, page 61.—Night schools for young men have lately been established.

Sugar Cane, page 78.—A smaller variety of the sugar cane is now being introduced (1882) from the East Indies; it yields a comparatively greater amount of sugar.

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