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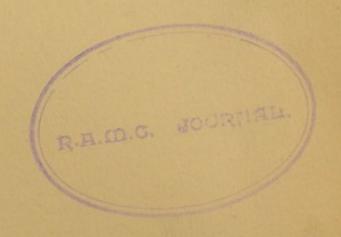
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# THE HISTORY OF SYPHILIS

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# THE HISTORY OF SYPHILIS

# CHAPTER I

# THE BEGINNING OF THE DISEASE IN THE OLD WORLD ITS INTRODUCTION FROM THE NEW WORLD

A QUARTER of a century has elapsed since the vexed question of the origin of syphilis was first critically discussed by Montejo y Robledo, a Spanish army surgeon, at the fourth meeting of the International American Congress held at Madrid in 1882. Dr. Montejo<sup>1</sup> had occupied himself for a long time in investigating the origin of syphilis, and he communicated the results at which he had arrived to the International American Congress because he recognized that the recent origin of this disease was especially connected with America.

The information gathered by Montejo was gained almost exclusively from Spanish sources. He made an exhaustive collection of his authorities, collated them carefully, and examined them critically. But his work might have remained in obscurity if attention had not been drawn to it by Professor Seler,<sup>2</sup> in 1895, who had arrived at substantially the same conclusions about the appearance of syphilis in Europe as had already been deduced by Dr. Montejo.

Professor Binz, of Bonn, ignorant of Montejo's work, published a paper on the occasion of the quater-centenary of Columbus in which he advocated the long-discredited view that syphilis in the Old World was a disease of comparatively modern origin which could be traced to America.

The admirable work of Montejo, Seler, and Binz deals with only one side of the question as to the origin of syphilis, their results being based mainly upon Spanish records. But the whole question to be answered is whether syphilis is a disease of modern origin or if it has always existed? Because if the modern origin is accepted and the antiquity of the disease be denied, the problem of its origin and introduction is solved at one and the same time. However much the interest of Americans may be bound up in the positive statements of Dr. Montejo, and whatever the amount of weight which should be attached to them, further consideration is necessary, as it is impossible to bring forward these alone as a complete and definite answer to the question. I have endeavoured in my work on the 'Origin of Syphilis' to discover the other links in the problem and to demonstrate their connexion with each other, and I would refer the reader to that work for more detailed information and for documentary evidence which can only be indicated briefly in the present article.

There are two chief reasons which have made it impossible to dispel entirely the obscurity which surrounds the origin and the first appearance of syphilis in the Old World, in spite of the endeavours of such men as Astruc, Girtanner, and Hensler in the eighteenth century. The first reason is that historical criticism had not advanced sufficiently to unmask the stupendous mistakes and misstatements which had arisen in the course of centuries about a disease so widely extended and so much talked about as syphilis. In the second place, it was only in the latter part of the nineteenth century that the progress of medical science made it possible to obtain an accurate knowledge of the different forms of venereal disease. The history of these diseases and the statements concerning them appear, therefore, in a very different light to us from that in which they presented themselves to our predecessors. Thanks to improvements in historical criticism and to advances in the science of pathology, I believe that it is now possible to give a definite and positive answer to the question of the recent origin of syphilis in the Old World. All available statements and facts point to the last decade of the fifteenth century-particularly the years 1493-1500—as the time when syphilis first appeared in the Old World. There is not a particle of evidence to show that the disease existed in Europe before that time.

This is not the place to enumerate all the theories, hypotheses,

superstitions, and fantastic conceptions which have been associated with the sudden appearance of this terrible disease. God,5 man, and beast,6 have been successively saddled with the responsibility for the scourge, and even the planets have been looked upon as the ultimate originators of syphilis, in accordance with the astrological superstition current in the science of the age 7 when the disease first attracted attention. Every form of incontinence, too, has been looked upon as the cause of the disease, in utter forgetfulness that unchastity was no new vice, and that it had long existed without giving rise to syphilis. Worse than these absurd fancies were those errors and halfconscious deceptions upon which was founded the belief that syphilis had existed in antiquity and during the earlier part of the Middle Ages-a belief which gradually assumed so dogmatic a form that it was subscribed to by such eminent medical historians as Heinrich Haeser and August Hirsch. It is now easy to expose the errors which led to the belief in the antiquity of syphilis in the Old World, and thus to demonstrate the futility of such a view. Conscious deceptions must be considered first, and, afterwards, that lack of definition which caused many different diseases to be classified together under a single general heading.

It has been said already that the first reliable information about syphilis dates its appearance to the year 1493, but certain contradictory statements appear in literature concerning its existence in earlier times. The most notable of these are the two communications of Franz Joseph Bodmann and Petrus Martyr, which considerably furthered the belief in the antiquity of syphilis.

Bodmann, in his 'Antiquities of the Rheingau' (Rheingauische Alterthümer), which appeared in 1819, reproduced a passage from the chapter records of St. Victor in Mainz which deals with a chorister who suffered from the 'mala Franzos'. These chapter records date presumably from the year 1472.

According to my investigations, which have been confirmed by Professor Karl von Hegel, this date, 1472, which has so long fascinated historians, was falsified by Bodmann, and was not originally contained in the document, which belongs to a much later epoch. It is known, indeed, that nearly the entire lifework of this strange man consists of forgeries in the most widely differing departments of science.

Within the last few months Dr. Herbert Meyer, lawyer and privat-docent of Breslau, has communicated the astonishing information that the so-called 'Provincial Law of the Rheingau' (Rheingauer Landrecht) has in reality never had any existence, but is one of the cleverest forgeries of this particular Bodmann, which for a century has duped lawyers and legal historians just as the falsified date 1472 has duped medical men—for in this year Bodmann asserted that syphilis was already known in Mainz.<sup>8</sup>

In the same category with Bodmann's forgery may be placed the celebrated letter which Petrus Martyr is said to have dispatched to his friend Pedro Arias Barbosa, Professor of Greek at Salamanca, and in which mention is already made of 'Morbus Gallicus'.

This letter, unlike Bodmann's forgery, was looked upon with mistrust even by earlier investigators. For Petrus Martyr describes as a layman, as early as the year 1489, symptoms of syphilis, and gives it the name with which the rest of the world only became familiar six years later.

The more recent critical investigators into the 'Opus episto-larum' of Petrus Martyr, from Leopold von Ranke to Jacob Bernays, have established the fact that the dating of the letters is purely arbitrary, that they are for the most part fictitious, and that, in particular, the letter to Barbosa could not have been written before 1508, since in this year a Chair of Greek was first founded in Salamanca.<sup>9</sup>

The second source of error was the lack of definition which for centuries prevailed in the conception of venereal contagion.

Up to the time of Ricord, i.e. at the beginning of the second half of the nineteenth century, the three venereal affections, syphilis, venereal ulcer, and gonorrhoea, were not clearly differentiated, but were thought to be fundamentally the same, whereas we now know that syphilis in particular, as a specific infectious disease with constitutional symptoms, has to be sharply distinguished from the other venereal disorders which only locally manifest themselves.

This early belief in the identity of all venereal affections was substantiated long afterwards, even by such an authority as John Hunter, who based his conclusions on experiments wrongly interpreted. This led to the historical side of the subject being treated from the same point of view.

If gonorrhoea and soft chancre were syphilitic in origin then syphilis had naturally always been in existence. Certain descriptions of and references to diseases of the genital organs by ancient and mediaeval authors could easily be taken as indicating syphilis. But a gradual recognition of the completely different natures of the three venereal affections showed these indications to be untenable. Their utter worthlessness can be realized in the light of modern dermatological development, which has made us familiar with a wholly new group of diseases, viz. the pseudo-venereal and pseudo-syphilitic. These skin diseases which in part imitate, with deceptive similarity, the syphilitic syndrome. I refer only to those peculiar infective complaints, which, like syphilis, manifest themselves at the same time upon the body, the genitals, and in the oral cavity; such as certain forms of pemphigus, impetigo, herpes, and erythema exudativum multiforme. Other chronic skin diseases, too, can simulate syphilis in respect of localisation and appearance. To these belong, for instance, lichen ruber, which is not uncommonly present on the buccal mucous membrane and genitals as well as upon the rest of the body; psoriasis with the same distribution, &c.

This group of pseudo-venereal and pseudo-syphilitic diseases is exceptionally large, and even sixty years ago the clinical physician, Canstatt, realized that it furnished all the reputed cases of syphilis described by the older authors. It may be remarked in this conjunction that nowhere is any indication found that a causal connexion was recognized between disease of the genitals and a skin affection of the rest of the body and oral cavity before the date I have given.<sup>10</sup>

The fact that, in the entire literature of the Old World, both occidental and oriental, no description of the syphilitic syndrome anterior to the year 1495 is to be met with, whilst only from this date onwards does it rank as an independent disease, is happily substantiated by the results of the disinterment of bones.

Since the bones are the only portions of the human body which withstand under favourable conditions the ravages of time and maintain their original form after death, these dumb, but necessarily infallible, witnesses were appealed to for proof of the existence in the Old World of syphilis both in prehistoric and in historic times up to 1493. One single skeleton found in the whole range of the Old World which could be referred indubitably to a period prior to 1493, and which bore undoubted traces of syphilitic disease, would at once put an end to the whole discussion upon the age and origin of this complaint.

According to the adherents of the theory of the ancient origin of syphilis, it was to be expected that not merely a few, but very many bones showing syphilitic changes, would have been found in the Old World. What a mass of such evidence must the unbridled licentiousness of Imperial Rome and the excesses of the Middle Ages have provided, since, according to the opinion of these investigators, the nature of the then-existing syphilis was not recognized, nor, moreover, was it rationally treated!

It is to be expected, too, that the severest forms of bone disease in the nose and palate would be seized on and described by the exponents of this theory.

In reality, despite the most painstaking research from amongst the unnumbered thousands of remains of human skeletons of prehistoric, antique, or mediaeval origin it has not been possible to discover a single bone showing undoubted signs of syphilitic changes.

Virchow has repeatedly declared that no such pre-Columbian or prehistoric bone was known to him, and it is quite certain that no such bone is contained in either English or German collections or museums.

I had the opportunity of searching the ample Hunterian collection in London with reference to this point. It contains,

amongst other things, numerous skeletal remains from mediaeval graves showing different pathological changes, but not a single bone with syphilitic lesions is amongst them. The same holds true of the collection in the Natural History and Anatomical Museums in Cambridge.

The statements of French investigators, notably of Parrot and Zambaco, upon the presence of syphilitic changes in prehistoric bones have not been verified by competent later investigators nor by those who are familiar with syphilitic bone-lesions, such as Virchow, Fournier, and Bayet. Parrot mistook rachitic for syphilitic changes, and Zambaco's case was a typical one of arthritis deformans.

It is, however, desirable that a thorough examination should be made of the morbid skeletons in the Paris museums. So far, Virchow's statement holds good, that no single undoubtedly syphilitic bone has yet been found, within the confines of the Old World, which dates from before the discovery of America.

'And yet', says the same authority, 'we frequently see bones from the uncivilized races in the most widely separated parts of the world, which prove most conclusively that syphilis spread amongst them after contact with Europeans. I need only call attention to bones from the Philippines, from New Caledonia, and from Australia.'

If we inquire when this first contact occurred, we are met with the surprising fact that it only dates from after the discovery of America, and, in particular, from after the outbreak of the great epidemic of syphilis at the end of the fifteenth century.<sup>11</sup>

This sudden outbreak of syphilis at the beginning of the last decade of the fifteenth century is the first undoubted fact, the starting-point from which investigation into the origin of syphilis can begin.

The campaign of Charles VIII of France during the year 1494-5, as a result of which many mercenary bands of considerable strength, accompanied by a great following of women, collected in Italy and there got into touch with one another, furnished the most favourable opportunity for the spread of such a disease as syphilis.

There can no longer be any doubt that syphilis first attracted attention in Europe when the French under Charles VIII sojourned in Italy.

The date thus determined for the first appearance of syphilis in epidemic form is that unanimously agreed upon by the contemporary chroniclers and medical authors of the most widely separated countries.

The greater number of contemporaries report that this occurrence took place during the stay of the French army in Naples, and therefore between February and May, 1495. Critical examination of reports of the period shows their unanimity in this, that they consider an invasion from without as having certainly occurred, and that they lay the blame upon the Spaniards. The Italian town chronicles enable one distinctly to follow the triumphal march of syphilis from town to town throughout Italy: everywhere the well-known dates 1495 and 1496 are given. By June, 1495, syphilis had already penetrated to the northernmost part of the Apennine peninsula, to the borders of France, Switzerland, and Germany.

The information as to the first appearance of this venereal disease is of the greatest weight, since it comes entirely from contemporaries who lived in contact with the sudden irruption of the complaint, and who must, in part, have borne traces of it upon their own bodies. Laymen and physicians are at one in asserting that the disease had previously been unknown in Italy; all, moreover, took it for granted that it had been introduced from abroad. Its sudden mysterious appearance and its unknown nature caused the disease to make a profound impression everywhere, and to strike all men with horror.

This horror sprang, not so much from the complete ignorance concerning the new disease as from the fear which its severity and virulence spread abroad. The contemporary writers of every nation always paint the disease in the darkest colours.<sup>12</sup>

This malignity of syphilis can only be explained, according to our modern views as to the nature and manifestations of the disorder, on the supposition that all those races that have been attacked with corresponding severity had hitherto been completely syphilis-free. How otherwise can the severe phenomena observed at that time be explained, together with the early occurrence of the so-called secondary symptoms,—often even after a few days—the high fever, the intensity of the pain, particularly the unbearable arthralgia, the severe secondary skin affections (the so-called syphilitic small-pox), the frequently-occurring bodily decline, and, finally, the undoubted frequency of a fatal ending? How could a reputedly ancient plague of mankind attack so many nations with such exaggerated intensity? Again, it was not the case of a pestilence limited to a definite area, for which special causes could be held responsible, The fact is that the outbreak of syphilis which occurred at the end of the fifteenth century involved all European races and nations in the same degree and with the same virulence.

Even to-day we see, wherever syphilis is introduced into a virgin country, the same acute course, the same intensity of its manifestations, as in its first appearance in Europe.

The connexion of the above facts and events is obvious, and it leads us at once to the questions—What is the explanation of the sudden appearance of syphilis in Italy? By what path did the scourge travel thither? These questions include those of the real origin and of the most ancient home of syphilis.

The answer to these has already been given by contemporaries. Two main sources have to be considered in this connexion; firstly, the reports of Spanish authors, to whom, as already mentioned, Montejo, Seler, and Binz have recently redirected attention; secondly, the communications of Italian chroniclers.

Each source supplements the other so that they eventually settle the whole question.

Amongst the most important of the authentic reports of the Spanish authors are those of Diaz de Isla, Oviedo, Las Casas, Roman Pane, and Hernandez. But the most important witness in favour of the recent origin of syphilis is Ruy Diaz de Isla (1462–1542?). At the time of the first appearance of syphilis in Europe he had already passed his thirtieth year, was a physician, indeed a physician of note, and—last and most

important fact of all, was himself a witness of the invasion of syphilis, which he observed to a certain extent upon its landing in Europe.

We know that Diaz de Isla was in practice in 1493 in Barcelona, later in Seville, and for ten years held the position of surgeon to the Hospital of All Saints in Lisbon. Here he acquired a large experience in syphilis, which he incorporated in a special work, the oldest edition of which, published between 1510 and 1520, was discovered by Montejo in the national library of Madrid. The title of this work runs: 'Tratado llamado Fruto de todos los Santos contra el mal de la ysla Española hecho por maestre Rodrigo de Isla cirujano vezino de lisboa para comun e general provecho de los pacientes Enfermos de la semejante Enfermedad que vulgarmente es llamado "Bubas",' i. e. 'Treatise, entitled, Fruit of All Saints against the disease of the island Española, by Master Rodrigo de Isla, surgeon and citizen of Lisbon, to the common and general good of those suffering from the disease in question, commonly called "Bubas".'

In the first chapter the origin and introduction of syphilis is exhaustively described.

This report contains facts of the author's own experience and own observation, and with one blow rends the veil which has covered the origin of syphilis.

The contents are briefly as follows:—

Syphilis was unknown in Europe before the year 1493. Its home is America, or, as far as Europe is concerned, the island of Española or Haïti, whence the crew of Columbus brought it after the latter's first voyage. Hence syphilis is called by Diaz de Isla 'Disease of the Island of Española'. By the Indians of Haïti, however, the disease is known as 'Guaynaras' or also 'Hipas', 'Taybas', and 'Icas'. The majority of Columbus's crew became infected there with syphilis and returned sick to Spain.

Diaz de Isla himself treated several syphilitic sailors from this squadron in Barcelona, and mentions amongst others the pilot Pinzon of Palos as one of those smitten with the new scourge. The complaint was quite unknown to the sailors themselves.

After the arrival in Barcelona of Columbus in the year 1493,

syphilis spread there amongst the inhabitants, whilst yet Ferdinand the Catholic and Isabella were present. In the following year, 1494, Charles VIII of France began preparations for a great campaign and attracted mercenaries from neighbouring countries. Amongst these were many Spaniards infected with syphilis. Thus it came about that syphilis spread during the stay of the French army in Italy, and finally, through the combination of so many circumstances favourable to an epidemic outbreak, achieved that sudden and terrible diffusion of which we have learnt. Syphilis had been known in Española from time immemorial. At the time of Columbus's arrival the Indians were already in possession of a highly complicated, rationally developed and deduced method of cure of this ailment, the details of which Diaz de Isla learnt in the year 1504 from a translation. This consisted chiefly in treatment by means of guaiacum and other vegetable beverages, in conjunction with hydrotherapeutic, dietetic, and climatic methods of treatment.13

This classical record of Diaz de Isla is fully borne out by the communications of Oviedo and Las Casas.

Oviedo, a distinguished courtier, and one of those scholars frequently met with at the time, who even in early youth had acquired a many-sided culture, also found himself in Barcelona at the time of the return of Columbus in the year 1493.

He struck up a friendship with the son of the discoverer and acquired much useful information concerning the New World from Columbus himself and from the brothers Pinzon. Later he was for some time in Italy, shortly after the campaign of Charles VIII, and moreover spent several periods of a year each, in the New World, in Haïti, and Central America.

His communications upon syphilis are chiefly to be found in the thirteenth chapter of the second book of his great 'Historia general y natural de las Indias' (vid. pp. 50–6 of the Madrid edition of 1853), and further in an interesting report which he drew up at the command of the Emperor Charles V, and which is printed in Barcia's well-known collection.<sup>14</sup>

These reports show the complete accord of Oviedo with Diaz de Isla in relation to the American origin of syphilis. Oviedo declares it to be a specific disease of the Antilles and Central American continent.

According to him, syphilis was communicated to the first Spaniards who came there with Columbus by the Indian women, and brought by them to Spain, whence it soon spread abroad upon the occasion of the campaign of Charles VIII. The name of the disorder should be West-Indian disease, rather than French or Neapolitan disease.

Amongst his informants, whom he questioned immediately after their return, Oviedo includes both those who accompanied Columbus upon his first journey and those who were with him on his second.

Amongst the first he mentions in particular the pilot Vicente Yañez Pinzon, one of the three brothers Pinzon. This is a remarkable and exceptionally valuable confirmation of the statement of Diaz de Isla, for the latter also mentions a Pinzon whom he saw with the first fleet of Columbus in Barcelona, to whom he spoke and who, like many other participants of the first voyage, brought back syphilis from the New World. It is highly probable that this Pinzon is identical with the one mentioned by Oviedo.

The preface to the report by Oviedo to the Emperor Charles V is noteworthy. He says there with emphasis: 'Your Majesty may take it as certain that this disease has originated in the West Indies and is common amongst the Indians, but in those regions is not so dangerous as with us.' 15

Oviedo in his large work upon the West Indies has, as is recognized, attempted, in the interests of the Spanish conquerors, to justify their terrible treatment of the natives. For this purpose, some historians suggest that he invented the fable of the American origin of syphilis.

The weakness of this argument is demonstrated by the obvious fact that the noble Las Casas, the opponent of Oviedo and the friend of the Indians, also testifies to the American origin of the disorder.

He, too, was contemporary with the introduction of syphilis, his father even accompanying Columbus on his second journey, whilst he himself, as early as 1498, at the age of twenty-four, went to Haïti, where, after many voyages in Central and South America, he took up permanent residence and wrote his famous 'Historia general de las Indias'.

In vol. v, chap. xix, of this work (Madrid edition of 1786, p. 233), he says of Haïti:—'There were, and still are, two things which at the beginning were very dangerous to the Spaniards. One is the disease syphilis, which in Italy is known as the French evil.

'It is, however, known for certain that it came from this island, either when, with the return of the Admiral Don Cristóbal Colón with the news of the discovery of the West Indies, the first Indians arrived, whom I saw myself in Seville, or it may be that certain Spaniards were already tainted with this disease at the time of their first return to Castile. And as at that period King Charles of France went with a great army to Italy to invade Naples, and this contagious disorder spread throughout the forces, the Italians believed that they had acquired the disease from these soldiers and therefore gave it the name of "French disease".

'I took the trouble upon several occasions to interrogate the Indians of this island as to whether this disease was of great antiquity, and they answered "Yes", that it dated from a period long before the advent of the Christians, the origin of it being beyond the memory of any man, and nobody can disbelieve this.

'It is also an undoubted fact that all Spaniards addicted to sexual excess, who did not in this island observe the virtue of continence, were attacked by the disease, not one in a hundred escaping, unless the woman was healthy.' Las Casas also draws attention to the severity of the symptoms of the disease in the Spaniards compared with its mild course in the natives.

We see, therefore, that the reports of three contemporaries, widely sundered in their spheres of life, and opposed in their political views, unanimously proclaim the fact that syphilis is of American origin. And it was the syphilis in Haïti which was the unhappy source from which the poison was shortly to stream throughout Europe and the Old World.

In relation to syphilis in Haïti there is an interesting record of the Hieronymist Father Roman Pane which has survived and is printed in the 'Historia del Almirante de las Indias Don Cristóbal Colón' (Madrid, 1749, p. 63, col. i). It deals with the syphilis of the Haïtian national hero, Guagajona, and describes the Indian sweating cure, which is carried out in a remote place.

This locality, set apart for the treatment of syphilis, is called by Roman Pane 'guanara'. This is the same word as that mentioned by Diaz de Isla as the designation of syphilis and of things connected with it. This agreement is a conclusive proof of the value of the two documents, since each author makes his record independently of the other.<sup>16</sup>

The pre-Columbian existence of syphilis in the Antilles makes its presence on the adjacent mainland of Central America, ipso facto, probable. The researches of Montejo and Seler have made us familiar with the communications of the Franciscan Father Bernardino de Sahagun and the physician Francisco Hernandez upon the existence of syphilis in Mexico.

Sahagun's records in his 'Historia general de las cosas de Nueva España' are founded upon the communications taken down by himself verbatim from the natives, and that in the Aztec language, since he always laid the greatest stress upon the confirmation of truth.

Two passages come specially under consideration. One is found in Book X, chap. xxviii, where syphilis is mentioned under the designation 'Nanavatl', two varieties of this being distinguished—'Tlacaçolnanavatl', and 'Tecpil-' or 'pochonanavatl', which Jourdanet translates as syphilis with large and small pustules. According to this, the ancient Mexicans had already correctly distinguished the severe form of large pustular syphilides from the less malignant variety with small pustules.

In the same place Sahagun makes interesting statements concerning the Aztec therapeutics of syphilis; it was mainly treated by them with certain internal remedies compounded of vegetable drugs.

Still more important is the second chapter of the seventh book of Sahagun's works. Here syphilis plays a part in the Mexican myths, which undoubtedly have come down from ancient heathen times. Seler rightly remarks that through this fact the above-quoted passage from Sahagun acquires a totally different connotation. This chapter deals with the illumination of the world by sun and moon, and the future sungod is here described as 'Nanavatzin', i.e. 'the little syphilitic', in Spanish 'el bubosito', who has a pustular eruption upon the whole body and who, in order to be turned into the sun, springs into the fire.

The interpretation of this remarkable myth cannot be gone into here. For us this one fact is of greatest importance, viz. that syphilis is mentioned in pre-Columbian tradition. 'Nanavatl' is syphilis; 'Nanavatzin' is 'the little syphilitic', and at the same time the name of the god. The main symptom, too, of syphilis as a constitutional disorder, viz. the skin eruption, is distinctly described.

According to the researches of Seler, the sun-god is looked upon by the Mexicans as the main cause of venereal disease in general, the different varieties of which were well known to them.

A welcome addition to this description by Sahagun is offered to us in the great work upon natural history of the physician Francisco Hernandez, which also is founded on observations made on the spot, and, for the greater part, on the statements of the Indians themselves. In folio 111 of the Mexican edition of 1615 of his work upon the Mexican vegetable, animal, and mineral kingdom, from the aspect of natural history and medicine, he makes mention of the 'Syphilis-medicine' of the ancient Mexicans, and uses for this a derivative of the same word 'Nanavatl' which we found recorded by Sahagun as the designation of syphilis. The 'Syphilis-medicine' is called 'Nanavapatli'.

For further traces of syphilis in Central America reference must be made to the detailed communications of Montejo and Seler as well as to my larger work.

Again this important fact may be added, that throughout

America definite names for syphilitic manifestations are met with, whilst it is recognized that, in the Old World, upon its first appearance, lack of familiarity with the disease was responsible for the absence of any designation, and countless appellations, many of them absurd, were artificially coined.

Each nation, too, named syphilis after the nation or country from which it first received the disease, e.g.—the Indians and Japanese called it the Portuguese disorder, from its introduction by the Portuguese; the Russians called it the Polish disease; the Turks, the Frank disease.

Montejo and Seler have therefore rightly ascribed a great importance to the definite nomenclature amongst the American aboriginal races as bearing upon the antiquity of syphilis in America.

Confirmation of the decisive narratives of Diaz de Isla, Oviedo, Las Casas, and others, concerning the origin of syphilis from America is obtainable from contemporary Spanish and Italian documents and chronicles.

Montejo was able to refer to documents in the Hospital archives of Seville bearing out the correctness of the statement of Las Casas that syphilis was introduced into Seville by the crews of Columbus, the most important point settled by him being that locally it was at once called 'Sarampion de las Indias', i.e. 'West Indian eruption'—a disease emanating from the West Indies.

The introduction of the complaint into Barcelona has been directly proved to us by Diaz de Isla and Oviedo.

We have, however, a third reliable witness of the propagation of syphilis in Barcelona even before the campaign of Charles VIII, in the person of the Italian humanist Nicolaus Scyllatius, who, in a letter of June, 1495, from Barcelona, gives intelligence of the syphilis epidemic which had existed for a long time in that place and as a result of which many inhabitants had been affected. This epidemic was stated to have existed for considerably more than a year in Barcelona.<sup>17</sup>

Finally many contemporary Italian chroniclers assure us of the introduction of syphilis from America by way of Spain.

Thus it is stated in the Sicilian annals, as early as 1498, that syphilis had broken out in Naples, which had been visited by Spaniards who brought the plague with them from the West Indies.

Senarega even states categorically, in his history of Genoa, that syphilis had appeared in Spain two years before the campaign of Charles VIII, i.e. in 1493, where it had been introduced from the Far West.

The contemporary Italian physicians, Alexander Benedictus and Antonio Benivieni, also declare that syphilis came to Italy from Spain. Many other chroniclers give the same information.

The circumstance is also illuminating that Spanish physicians were sent for to Italy for the cure of the disease, as possessing greater experience in the treatment of the new complaint than the Italian practitioners.<sup>18</sup>

### CHAPTER II

# ARGUMENTS AS TO THE PRE-COLUMBIAN ORIGIN OF SYPHILIS

Even if the facts enumerated above were not known to us, the mere examination of the oldest histories of syphilis in the individual countries of the Old World would amply suffice to prove its recent appearance in them, and hence to verify the fact of its introduction from the New World. Everywhere this disorder appears as a new disease, everywhere it is traced back to an invasion, and runs the characteristic malignant course already described. Since the era of its appearance coincided with that of the voyages of discovery it was soon carried into Africa and to the Far East, particularly by the Portuguese. It is a fact of great interest that the recent investigations of Okamura 19 and Susuki, 20 for China and Japan, as well as those of Jolly 21 and others for India, enable us to accept the recent introduction of syphilis into these countries as certain.

For the other European countries the years 1493–1500 are more or less accurately marked out as those which saw the introduction of syphilis, the same holding good for the individual towns. The great importance of the nomenclature of the new disease as bearing on the recognition of its recent origin has already been mentioned.<sup>22</sup>

As regards the introduction of syphilis into England and Scotland, the German writer, Grünpeck, as early as 1496, mentions the fact that English soldiers, fighting in Italy as mercenaries, acquired syphilis there, the probability being that some of them, on returning home, took the disease back with them. The first definite references to it are made in the year 1497.<sup>23</sup> The disease was introduced into Bristol in 1498 from Bordeaux and hence was called 'Morbus Burdigalensis'. An

Old English MS. upon syphilis, dating from the end of the fifteenth or beginning of the sixteenth century (Sloane, 389, 7) exists in the Sloane Collection in the British Museum. The MSS. 157, 1 and 1897, 1 of the Sloane Collection, dating from the middle or end of the sixteenth century, also deal with syphilis. On page 80 of the 'Breviarie of Health' by Andrew Bord (b. 1480) is found: 'In English Morbus Gallicus is called the French pocks, when that I was young they were named the Spanish pocks.'

It follows that at the end of the fifteenth century, i.e. upon its first appearance, the true origin of syphilis was known!

In Scotland syphilis is first known to have existed in 1497.

An edict published in this year by the town council of Aberdeen refers to the appearance of syphilis in that place.<sup>24</sup> King James IV displayed great interest in the new complaint, being fond of experimenting in medicine, and treating people gratuitously, even paying them if they were not willing to be treated by him.

These entries are made between September and April, 1498, and in them syphilis is called 'grantgore' (à la grande gorre = à la grande mode).<sup>25</sup> On September 22, James IV published a decree ordering all persons suffering from syphilis to leave Edinburgh. They were to be taken to an island opposite Leith and there to be treated. Any of them found in the town were to be branded on the cheek.<sup>26</sup>

The celebrated old Scottish poet, William Dunbar, was at the time of the introduction of syphilis in 1493 in the bloom of manhood, and about the year 1500 was attached to the court of James IV by means of a state pension.

In a poem dedicated to the queen he makes reference to the new disease, which he calls 'pockis' or 'spanyie pockis'.

In another passage he writes :-

'Bewar with that perillous play That men callis libbing of the Pockis.'

I have now to touch upon a question, the answering of which presents many difficulties, viz. that of bone discoveries in the New World.

A priori one would assume that syphilitic bones from pre-

Columbian times would necessarily be found there, whereby the diagnosis of syphilis as 'Morbus Americanus' could be established beyond all doubt.

I am of the conviction (which is shared by those who have an exhaustive knowledge of syphilis and its history, such as Unna, Scheube, Fournier, Liebermeister, Binz, and others) that the certain, irrefutable proof of the modern origin of syphilis rests upon nosological and epidemiological grounds; that the facts detailed amply suffice to prove its American origin; that the sudden transformation of the entire medical literature at the end of the fifteenth century furnishes the most complete explanation—but that positive bone discoveries would dispel every lingering and hidden doubt.

I cannot here discuss at length the extraordinary difficulties which present themselves in the diagnosis and differential diagnosis of syphilis from isolated bones; I have done this in the second part of my work on the origin of syphilis. To these difficulties in proving from bones the existence of syphilis in America in pre-Columbian times may be added the following.

In the first place, from climatic and other reasons, skeletal remains are hardly to be found in certain districts, which are precisely those under consideration. For instance, in Mexico only very few human remains have been discovered, with the exception of the north-west region, which is remote from centres of civilization. In the numerous graves of the province of Chiriqui in Colombia, according to Holmes,<sup>27</sup> 'human remains, almost without exception' were wanting. This is not only in accordance with the widespread custom of cremation, but may also be explained upon climatic grounds, e.g. the great humidity of Mexico.

Secondly, according to the records of Diaz de Isla, Oviedo, and Las Casas, it is certain that, in some districts at any rate, such as the Antilles, syphilis ran a mild course and bone lesions were rare.

Unna <sup>28</sup> and Scheube, <sup>29</sup> who have of late vigorously supported the recent American origin of syphilis, lay particular emphasis

upon this mild course of the disease. The Mexican descriptions prove, however, that severe cases also occurred.

Thirdly, it is nearly always difficult to establish with certainty the pre-Columbian origin of the graves and mounds in North, Central, and South America. The same methods of burial and forms of graves survived for centuries after the discovery of America, hence it is rarely possible to pronounce a decided judgement upon any individual grave, as to whether it is or is not pre-Columbian.

I have, unfortunately, so far been able to undertake only a purely literary examination into the records of discoveries of syphilitic bones in America, as I have not yet had the opportunity of investigating these myself.

Several such bones, probably affected by syphilis, are to be found in the Musée Broca in Paris. The four skulls of children from Arica in Peru, in which Parrot maintained syphilitic lesions were present, are, in the first place, probably not of pre-Columbian origin, and secondly, from Parrot's own description, show only rachitic changes. Two other skulls of Peruvian adults, examined by de Quatrefages and Parrot, would appear to be suspiciously like syphilitic ones; the date, however, is uncertain. In the year 1880 Moreno showed at the Anthropological Society of Paris prehistoric skulls from Patagonia with manifestations of syphilitic osteitis, which were not accurately described.

The real discussion upon pre-Columbian syphilis in the bones of American aborigines centres round the remarkable discoveries of Joseph Jones in the mounds and graves of Tennessee. Of all the bones hitherto described they are the ones which most distinctly indicate syphilis. Jones's report appeared in the year 1876 in the 'Smithsonian Contributions' (pp. 49, 61, 65–73, 85). It described pathological changes in the extremities through periostitis, osteitis, caries, necrosis, and exostosis, presenting for the most part nothing specific. One skull, however, he declared, showed all the signs characteristic of syphilitic caries, particularly the eburnation of the surrounding bone; moreover, he found in another skull the thickening of the nasal bones which is likewise typical of syphilis.

On the ground of these discoveries, which at least arouse strong suspicion of the syphilitic nature of the lesions in question, Jones comes to the conclusion that 'the diseased bones which I collected from the stone graves of Tennessee are probably the most ancient syphilitic bones in the world'. This is of the greatest importance in the history of syphilis, as well as in the proof of its origin in the Western Hemisphere.

It must, nevertheless, be stated that both Virchow and Putnam, the latter of whom himself inspected the skeletons disinterred by Jones, do not agree with this conclusion, and view it with great scepticism. The pathologist Klebs, on the other hand, who inspected Jones's collection in 1896, entirely endorses the latter's opinion as to the syphilitic nature of these bones.

The main point of the whole discussion is, in reality, the question of the age of the graves in Tennessee. Their pre-Columbian character is by no means definitely established.

The same uncertainty concerning their syphilitic nature surrounds the pathological changes found by Prudden in a large number of pre-Columbian bones from Kentucky, and this also holds true of Putnam and MacLean's demonstration of syphilitic changes in skulls from the Morton collection in Philadelphia.

The description also by Ganns of a tibia with syphilitic changes found in a mound opened by him in Northern British Honduras, which he connects with a clay figure found at the same time, representing an operation upon the genitals, can, according to a friendly communication from Seler, only be looked upon with distrust. To begin with, here again the pre-Columbian character of the grave is not beyond doubt.<sup>30</sup>

In the opinion of Boas, Brinton, Seler, and others, a continuity between pre- and post-Columbian Indian civilization is demonstrable. Future discoveries, therefore, like those of Jones, conclusions from which may point with great apparent probability to syphilis, will bring with them the same difficulties in the way of a chronological decision.

The case is quite otherwise with the Old World. Here we are fully familiar with the great antiquity of the barrows, lake dwellings, and cave dwellings; with the ancient Germanic and Slavonic cairns, even with the burial-places of the Middle Ages, and in none of them so far has a single syphilitic bone been found.

If, in the case of America, a verdict of 'Not Proven' must be entered, yet this difference between the Old and New Worlds seems to me essential. The opponents of the recent origin of syphilis, if they lay so much stress upon the osteological discoveries of the New World, are under compulsion to produce similar proofs from the Old. In this they have never succeeded and never will. But if we bring into relationship the above entirely unequivocal and well-established facts, the whole question is finally disposed of, for the historical investigator and historian of civilization, as well as for the thinking physician and pathologist. This, then, would appear to be the true solution of a 400-year-old problem, and one can say that, within the limits of scientific demonstration, it is the only possible one.

## CHAPTER III

## THE EARLY HISTORY OF SYPHILIS IN EUROPE

The appearance of syphilis was an epoch-making event for medicine and medical conceptions. Rousing the profession from the scholastic slumber of the Middle Ages, it confronted them with something new, which, because it arose so suddenly, called for comprehension and study of its peculiarities, while it made new demands upon clinical observation and diagnosis, and set a new task to practical therapeutics.

We recognize in the results of countless debates upon the nature of syphilis, and in the despairing attempts to bring its manifestations into line with the ancient schemes and rubrics of Galenical and Arabic medicine, how profoundly the appearance of this remarkable disease shook the theoretical and practical foundations and fundamental views of medicine as it had existed from ancient to mediaeval times. It checked the tendency to extravagant theorizing, and made unbiased observation a necessity.

Now for the first time began the really systematic study of 'venereal diseases', of which the purely local ones were known even to antiquity, such as gonorrhoea, local genital ulcers, condyloma acuminatum, &c. That their contagiousness was already recognized,<sup>31</sup> is proved by an interesting passage in the satires of Herondas, but this acquired a heightened importance in face of the appearance of a new constitutional venereal disease.

It must be emphasized that the earliest syphilographers separated the previously known venereal complaints entirely from syphilis. Gonorrhoea was at that time strictly defined. Paracelsus in 1530 first labelled it French gonorrhoea, and thus became the originator of the fatal error of the syphilitic nature of this disease, which lasted up to our own times. The gangrenous

form of soft chancre too, the 'ulcus molle' so often described by mediaeval writers, which seems to have been extraordinarily widespread in that epoch, was not described by the earliest syphilographers as a symptom of syphilis, but was differentiated from it. Magnus Hundt has an interesting enumeration of local venereal affections, having nothing in common with syphilis. He mentions bubo, ulcerations, gonorrhoea, priapism, pollutions, pruritus testiculorum, ruptura penis, dolor ex retentione urinae.<sup>32</sup>

The first appearance of syphilis in civilized Europe attracted, as has been mentioned, the attention of physicians in a high degree, and even in the earliest years called forth a number of writings upon the new disorder.33 No coherent description of the course of the disease, based upon accurate pathological knowledge, was possible, since prejudice in favour of the old theories concerning the nature of disease stood in the way. Already, however, most of the symptoms and appearances of syphilis had been described, such as the primary lesion, fever, pain, exanthem, alopecia, mouth and throat affections, disease of internal organs, of the nervous system, of bones and joints, &c. All authors dwell in particular upon the exaggerated intensity of the manifestations. This malignity of the disease, the early appearance of the secondary symptoms, the high fever, the severity of the pain, particularly the unbearable arthralgia, the appearance of the exanthem in the form of the severe 'variola syphilitica', and so on, can only be explained on the supposition that the scourge was a visitation upon nations hitherto syphilisfree. The heredity of syphilis was also observed by Paracelsus. Two methods of cure come under consideration: inunctions with mercury, and the wood-tea and guaiacum cures; mercurial fumigations were already employed, in addition to internal administration of mercury, mercurial plasters, sulphur baths, and hunger cures.

Only the earliest founders of the scientific study of syphilis can here be mentioned, in the order of their enumeration by Proksch; for further details the reader is referred to the latter's work and to that of the author: Marcellus Cumanus, Ulsenius, Grünpeck (1450–1531), Leoniceno (1428–1524), Torella, J. Wid-

mann (1440–1524), Gilinus, Bartholomew Steber (1506),\* Montesauro, Sebastian d'Aquila (1513–43), Villalobos (1473–1560), Schellig, Pintor (1423–1503), A. Benivieni (1440–1502), Brocardus (1500), Raut (1460–1508), Almenar, Cataneo, Alexander Seitz, H. Benedetti (1460–1525), John of Vigo (1460–1520?), G. Vella, L. Schmaus, Ulrich v. Hutten (1488–1523), G. Fracastori † (1483–1553), the originator of the name 'syphilis', J. Benedictus (1483–1564), J. de Béthencourt, P. Maynardus, M. Hundt (1449–1519), Paracelsus (1491–1534), Diaz de Isla (1462–1542), who treated the first cases of sickness in Barcelona in the year 1493, A. Ferri (1500–52), Rangonus (1470–1557), Roverelli, Summaripa, Thierry de Héry (1510–99), Brassavola (1500–55), Auger Ferrier (1513–88), Renner, and many others.<sup>34</sup>

The first correct views upon the syphilitic poison and its transference are found in the writings of Jean Fernel (1496?–1558), who was the first to insist upon the necessity of a lesion of the epidermis antecedent to a syphilitic infection and to deduce the general infection as occurring from the site of the primary inoculation.<sup>35</sup> The identification of local genital ulceration and gonorrhoea with syphilis dating from the middle of the sixteenth century prevented the pathological relations of the individual symptoms from being recognized.

This confusion is shown in the admirable writing 'De Morbo Gallico' (Padua, 1564), by Gabriel Fallopius (1523-62). He correctly distinguished, however, between syphilitic and non-syphilitic warts; bone-syphilis and gummata, as well as visceral syphilis, he referred to mercury. Fallopius was one of the first prominent opponents of mercury. He also recommended a variety of condom as a preventive of syphilitic infection. As a third eminent syphilologist of the second half of the sixteenth century must be mentioned Ambroise Paré (1510-90), who employed the speculum for examination of vaginal and uterine venereal affections, pointed out the indolence of the syphilitic bubo, and made the first detailed communication upon hereditary syphilis.

In studying the syphilology of the seventeenth and first half of

\* See Plate I. + See Plates III and IV.

the eighteenth century the tendency towards monographic treatment of individual portions of this subject becomes evident.<sup>36</sup>

Knowledge of the syphilitic infection and its mode of conveyance was increased by numerous observations. Gregory Horst (1575–1636), in 1628, reported nearly 100 cases of infection by cupping in Ulm, Bamberg, and Isny, and he, with the assistance of the Genevese surgeon Palfey, made the first communications on the inoculation of midwives and physicians from lying-in women and other patients (1718); Colle and Musitano (1635–1714) reported inoculation by kissing and from drinking-vessels.

So far as symptoms of syphilis are concerned, amongst the forms of primary affection were included at this time the so-called 'Crystallina' (bullae crystallinae), by which probably herpes genitalis was understood. S. Bazin and Peter Guenault described in the year 1628 induration as the surest sign of syphilis, and the significance of indolent buboes was also recognized. The different varieties of condylomata, on the other hand, were not yet clearly differentiated, and the knowledge of the syphilitic exanthem, of which Rondelet first described the 'corona veneris', was very imperfect.

In relation to the records of syphilitic affections of individual organs, may be mentioned the description by Musitano of chancre of the tonsil. Descriptions of nasal syphilis are particularly frequent (perforations, syphilitic ozaena). Schenk von Grafenberg and Severino by post-mortem examinations established the presence of specific syphilitic lesions of the larynx, windpipe, and lungs.

Of great interest are the investigations of Lancisi (1654–1720) upon the connexion between aneurysm of the heart and great vessels and syphilis, as presented by him in his work 'De motu cordis et aneurysmatibus'. Syphilis of the nervous system, also gummata of the brain, syphilitic neuralgias and diseases of the spinal cord were already at this epoch the objects of considerable attention,<sup>37</sup> whilst numerous descriptions of the manifestations and forms of bone syphilis were forthcoming.

Although to a certain extent it is only a compilation of current views upon syphilis, the celebrated work of Jean Astruc

(1684–1766) is valuable even to-day, because it constitutes an epitome of the knowledge of the period. It is entitled 'De morbis venereis' (1st edition, 1736; 2nd amplified edition, 1740, and numerous later editions and translations); it includes a discriminating bibliography of all previous writings upon syphilis and a critical historical examination into the American origin of the disease.

### CHAPTER IV

### THE LATER HISTORY OF SYPHILIS IN EUROPE

The history of venereal disease, which we have now followed down to the time of Astruc, is marked out into its principal stages from the middle of the eighteenth century to the year 1880 by the three names of John Hunter, Philippe Ricord, and Albert Neisser. The culminating point of the period of retrogression in scientific knowledge of syphilitic affections is certainly occupied by John Hunter, whilst the discoveries of Ricord and Neisser have paved the way for an exact knowledge of venereal disease which is in keeping with the general progress of medicine.

The doubts rightly cast upon the identity of the different venereal disorders in the eighteenth century, e.g. by Francis Balfour (1767), Charles Hales (1770), W. Ellis (1771), J. C. Tode (1774), Andrew Duncan, senior (1777), were unfortunately set aside for decades by the unhappy and misinterpreted experiment of the celebrated John Hunter (1767), which ushered in a period of decay in syphilology lasting until the appearance of Ricord.

Hunter inoculated himself on the prepuce and glans with the pus from a virulent gonorrhoea and produced a chancre as well as constitutional syphilis; from this he concluded that the secretion from a case of gonorrhoea was capable of producing both chancre and syphilis, and that the virus of all three diseases, gonorrhoea, chancre, and syphilis, was therefore identical.<sup>38</sup>

From further experiments <sup>39</sup> Hunter concluded that this single venereal poison could be transferred to the urethra and other mucous membranes as gonorrhoea, or to the skin as chancre, but that the blood and secretions of syphilities were incapable of transmitting such contagion.

As a result of this unfortunate theory, the heredity of syphilis and the possibility of extra-genital inoculation, as by sucking, through drinking-vessels, instruments, &c., was simply denied.

On the other hand, Hunter established the non-syphilitic nature of the so-called 'acuminate condylomata' and emphasized their strictly local character.

The description of the induration of the initial sclerosis, whence this obtained the name of 'Hunterian chancre', had, according to Proksch, already been far better given by John Andree, Surgeon to the Magdalene Hospital in London, a contemporary of Hunter.

'Hunter', says Proksch,40 'dealt the most terrible blow to the doctrine of the involvement of the internal organs by syphilis. With a few calmly written lines he annihilated a doctrine which for three centuries had been proved upon countless bodies and accepted by all the physicians in the world. This doctrine had already led the great Morgagni so far that he was able in a series of cases to describe, with masterly capacity, the syphilitic affection of the cerebral arteries. Hunter merely said superficially: "I have not seen that the brain, heart, stomach, liver, kidneys, and other viscera have been attacked by syphilis, although such cases have been described by authors;" but this amply sufficed to cause visceral syphilis almost completely to disappear for more than half a century from the text-books upon venereal diseases.'

In the second half of the eighteenth century the Danish physician J. C. Tode (1736–1805) published by far the best monograph upon gonorrhoea, wherein, in opposition to John Andree, he deprecated early injections.

The knowledge of the sequelae of gonorrhoea was chiefly advanced by Morgagni. He described the results of an investigation into the pathology of Cowper's glands, cystitis, prostatitis, &c. John Andree devoted a particularly detailed description to epididymitis.

The great Morgagni (1682-1771) also published numerous valuable pathological observations on the bodies of syphilitic patients, and, in spite of Hunter's theoretical denial, adduced much reliable material in favour of the existence of visceral syphilis. He was the first to discover syphilitic disease of the

cerebral vessels; described pulmonary syphilis, its complication with pulmonary tuberculosis, syphilitic bone affections, syphilitic laryngitis, syphilitic disease of the heart and great vessels, and 'lues cerebri.' Syphilis of the liver, spleen, and kidneys were also not unknown to him, as Valsalva, Baader, and others had already recorded cases.

Hereditary syphilis only found scientific recognition in the second half of the eighteenth century. Stoll, Plenck, and Nils Rosen von Rosenstein proved the existence of 'delayed hereditary syphilis', which to-day occupies so important a position; for the establishment of its recognition Sanchez<sup>41</sup> (1699–1783), Physician to the Court of Russia, laid down rules which guide us even to-day.

The therapeutics of syphilis was enriched by the internal use of sublimate, introduced by Van Swieten, after which the method of cure by salivation, hitherto employed, fell into discredit, a circumstance which ensures enduring honour for Van Swieten among all future observers. At the same time the so-called 'decoctum Zittmannei', after Johann Friedrich Zittmann (1671–1757), attained wide popularity, whilst opium, enthusiastically vaunted by J. D. Schöpff (1752–1800), had only a transient success.

In the history of syphilis, in addition to Sanchez, Girtanner, Gruner, and others, the name of Ph. G. Hensler <sup>42</sup> (1733–1805) stands out, his work being rich in interesting information on the venereal diseases of the Middle Ages.

Amongst the precursors of Ricord were many who, by unbiased and careful observation, paved the way for his conceptions, and who opposed, with criticism and scepticism, the erroneous teachings of Hunter, defended as they were by celebrated physicians and syphilologists such as Lagneau (1781–1868), Abernethy (1764–1831), Michel J. Cullerier (1758–1826), F. A. Walch (1780–1837), Petit-Radel (1749–1815), and A. G. Richter (1742–1812). Particularly to be mentioned are: Benjamin Bell (1749–1806), who maintained, in his work on gonorrhoea and syphilis, 43 the different nature of the gonorrhoeal and syphilitic viruses; F. X. Schwediauer (1748–1824), who enunciated the prophetic statement about the nature of the syphilitic poison: 'Fautil

regarder ces germes de poisons animaux et ces particules contagieuses comme des êtres vivants?'; Ernst Horn (1774–1848), with his decided declaration: 'Gonorrhoea in itself never produces chancre; chancre, on the other hand, never gonorrhoea.'

Richard Carmichael (1779–1849) should be mentioned as a rival to John Hunter; in contrast with the latter's single venereal virus, he imagined the existence of a large number, according to the skin affections they produced.<sup>44</sup> Thus, in his opinion, there existed a papular, a pustular, a phagedaenic, and other forms of virus.

The history of modern syphilology begins with Philippe Ricord <sup>45</sup> (1800–89), the great experimenter and pioneer. He began his researches early at the Hôpital du Midi, where he worked from 1831 to 1860, and in the years 1831–7 he performed 2,500 inoculations, by which he proved conclusively that inoculation of gonorrhoeal secretion in the most widely differing localities (urethra, vulva, vagina, uterus, rectum, conjunctiva) never succeeded in producing chancre or constitutional syphilis. He denied, however, the specific nature of the gonorrhoeal virus, and looked upon it merely as a simple catarrhal secretion, a point of view which was undoubtedly strengthened by the existence of what is now known as 'urethritis simplex'.

In syphilis Ricord distinguished three stages: firstly the primary stage, which begins with the chancre, auto-inoculable and in its ulcerating stage capable of giving rise to pustules, ulcers, or abscesses. The induration of the chancre is the expression of the passage of the poison into the organism, of the syphilis having become constitutional. In the second stage—the secondary—the syphilis, according to Ricord, is not contagious, but is already transmissible to the offspring. As the third stage, Ricord describes the encroachment of the syphilitic disease upon bones and viscera. Tertiary syphilis, he said, is neither contagious nor transmissible.

We are also indebted to Ricord for the important distinction between the 'chancre mou' (soft sore) and the 'chancre dur' (hard sore); for the discovery of the rarity of syphilitic re-infection; for the description of vaginal and uterine chancre, opportunity for which was frequently given him through the use of the speculum, which he introduced for the investigation of venereal disease in women; and for the establishment of the fact that in supposed cases of constitutional syphilis following gonorrhoea, a hard chancre had been present in the urethra.

Ricord's epoch-making doctrines were supplemented by the experiments of J. von Waller <sup>46</sup> (1811–80) who, following an observation by William Wallace <sup>47</sup> (obiit 1838) proved the contagiousness of secondary syphilis by the actual occurrence of inoculation from the fluid of pustules. This was confirmed by F. von Rinecker <sup>48</sup> (1811–33), the so-called 'Pfälzer Anonymus', <sup>49</sup> and by the experiments of Guyenot, <sup>50</sup> being finally recognized by Ricord's pupil, Bassereau. <sup>51</sup>

In the year 1859 the contagiousness of secondary syphilis was publicly pronounced in the statement of a commission of the Académie de Médecine convened by Auzias-Turenne, and to which belonged de Paul, Devergie, Gibert, Ricord, and Velpeau, the conclusion being based upon four successful inoculations.

Further investigations into the different kinds of chancre were undertaken by Clerc <sup>52</sup> and Rollet, <sup>53</sup> who established the possibility of a combination of the different venereal infections, gonorrhoea with syphilis; soft chancre with syphilis; gonorrhoea with soft chancre; gonorrhoea, syphilis, and soft chancre. Rollet's 'chancre mixte' was an important discovery.

These results of clinical observation led von Bärensprung <sup>54</sup> to a development of the doctrine of duality, which, in contrast with that of the 'unitarians', maintained the impossibility of a true soft chancre ever changing into a hard syphilitic one; also that the induration of the latter was not the cause, but the result, of the general infection.

Adherents to this doctrine of duality were Lindwurm,<sup>55</sup> Karl von Sigmund, H. von Zeissl, A. Reder, F. Hebra, Rosner, Pietro Pellizzari, and others.

The idea of the so-called 'syphilization' promulgated in 1849 by Diday (1812–94), i.e. the cure of syphilis by repeated inoculations of the same infected person with syphilitic virus until immunity is produced, was particularly studied by Auzias-Turenne, who dedicated his whole life-work to this subject.<sup>56</sup>

Like his successors, Karl W. Boeck, Lindmann, Daniellssen,

&c., he failed to obtain any therapeutically valuable results. These studies, however, resulted in the knowledge that the products of syphilis are only rarely inoculable upon the patient or upon other syphilitic individuals.

The scientific foundation laid by Ricord for the study of the external clinical manifestations of syphilis, was utilised by R. Virchow in his celebrated treatise 'Ueber die Natur der konstitutionellen syphilitischen Affektionen '.<sup>57</sup> He also shed the first light upon the peculiar periods of latency and recrudescence in syphilis, and established the fact of the passage of the syphilitic virus into the blood from the individual organs or tissues.<sup>58</sup>

The question, too, of the inherent difference between the soft and hard chancre could only be decided after the discovery of the specific micro-organism. Ducrey <sup>59</sup> had in 1889 isolated a bacillus from the secretion of the soft chancre which he regarded as its cause. Unna, <sup>60</sup> however, was the first to succeed in proving that Ducrey's bacillus was a transition-form of the real bacillus of soft chancre discovered by him, and which he named the 'Strepto-bacillus' from its arrangement in chain form.

Krefting <sup>61</sup> also found Ducrey's bacillus in pus from buboes. Later, Lenglet, <sup>62</sup> Besançon, Griffon, Le Sourd, <sup>63</sup> and Tomasczewski <sup>64</sup> succeeded in cultivating the streptobacilli artificially, and in producing soft chancres in man by inoculation with cultures of it.

Finally we have, in the last few years, arrived at the most important conclusions upon the nature and cause of syphilis. Metchnikoff and Roux <sup>65</sup> in 1903 succeeded in transmitting syphilis to monkeys, and on March 3, 1905, Fritz Schaudinn <sup>66</sup> discovered the origin of syphilis in a protozoon, the 'Spirochaete pallida', which numerous confirmations prove to be the undoubted cause.

These discoveries open entirely new prospects for the prophyaxis and treatment of syphilis, and the history of the disease herewith passes into a new and, it is to be hoped, a final phase.

Twan Alors

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- 10. Cf. the chapter 'Die pseudosyphilitischen Hautkrankheiten' in Part II of the author's 'Ursprung der Syphilis', now in the press, pp. 365 et seq.
  - 11. Cf. upon the question of discovery of bones, loc. cit., ii, pp. 317-64.
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## PLATE I

## A

The title-page of Bartholomew Steber's treatise on Syphilis, published in 1497 or 1498. A Doctor of Medicine is represented examining the urine of a woman with a syphilide whilst the surgeon is painting the leg of a man suffering from an eruption of the skin.

Steber was Professor of Medicine in the University of Vienna, Rector Magnificus in 1490 and Dean in 1492. He died in Vienna January 14, 1506, and is buried in the Stephanskirche in that city.

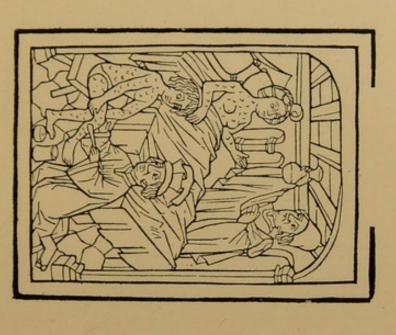
(This is probably the earliest illustration of Syphilis.)

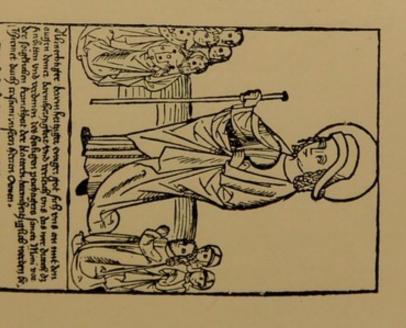
B

St. Minus (? Minias), the patron saint of those afflicted with Syphilis. The saint is represented staff in hand as a traveller, with his sleeve full of the healing roots he has cut with the sickle which he holds in his left hand. The patients he has healed, in the proportion of two women to one man, are kneeling behind him, whilst the sick, three women and one man, all with skin eruptions, kneel in front of him.

From a German print of the early part of the sixteenth century.

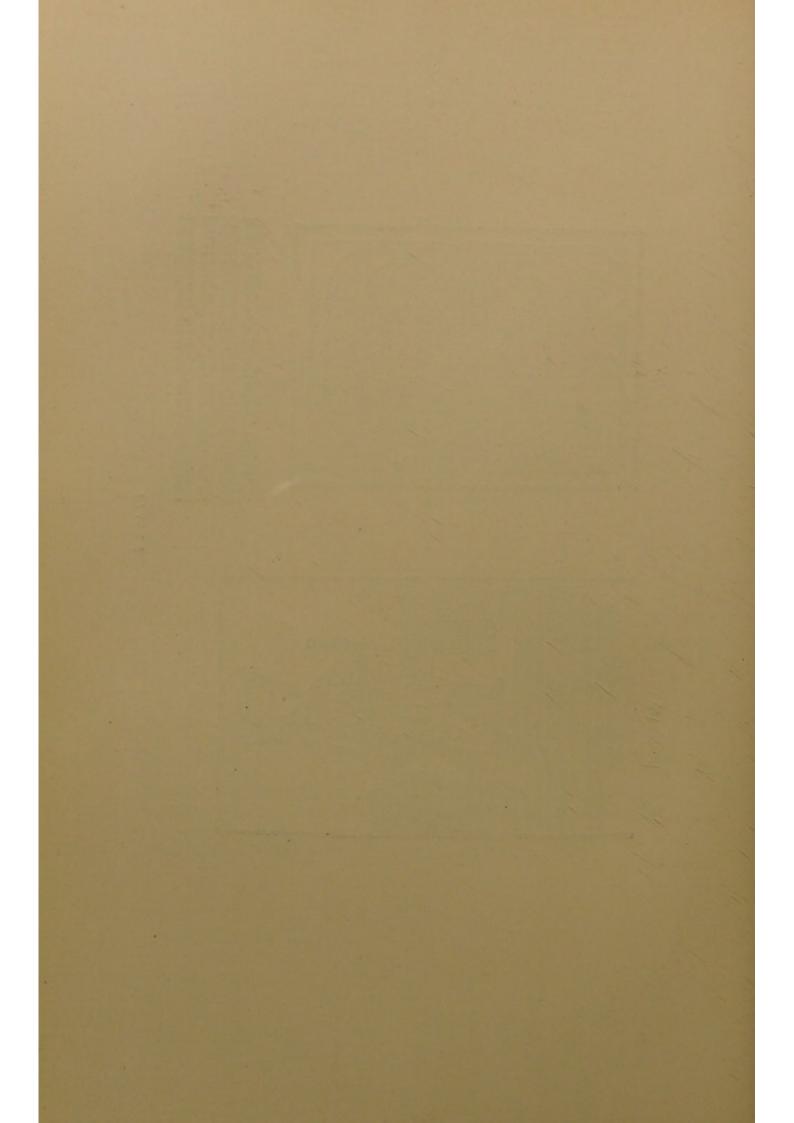
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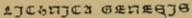




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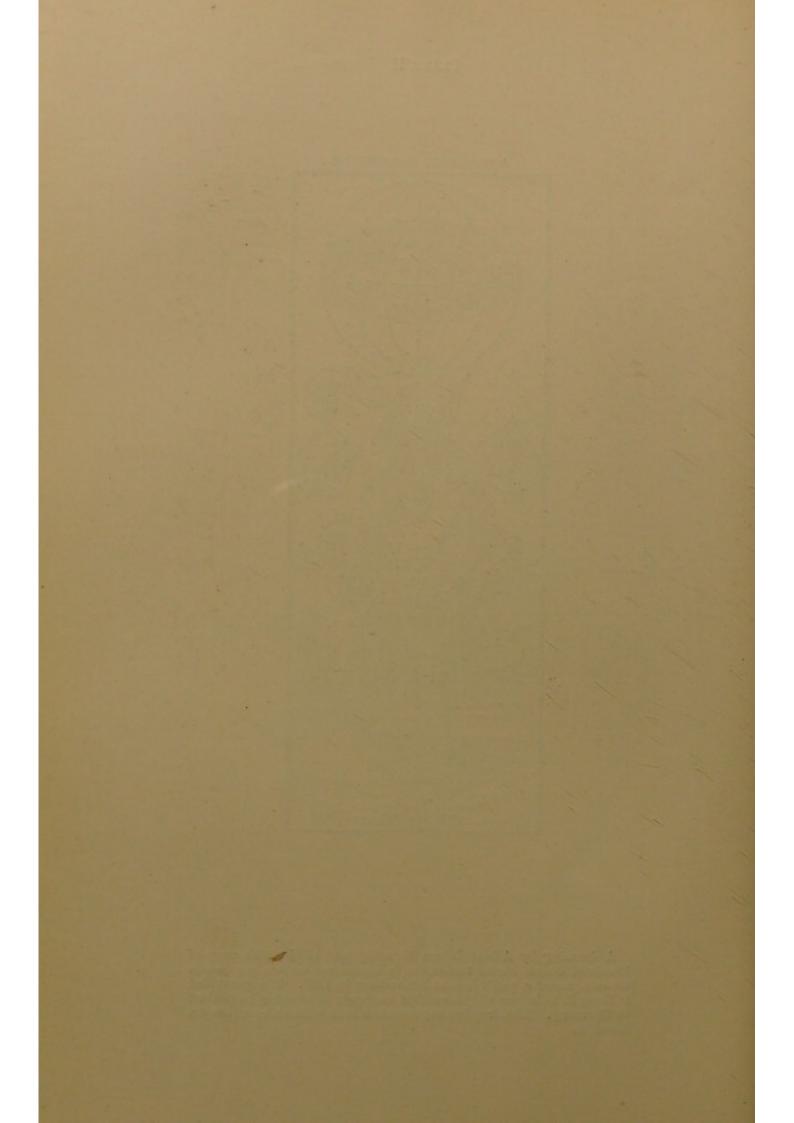
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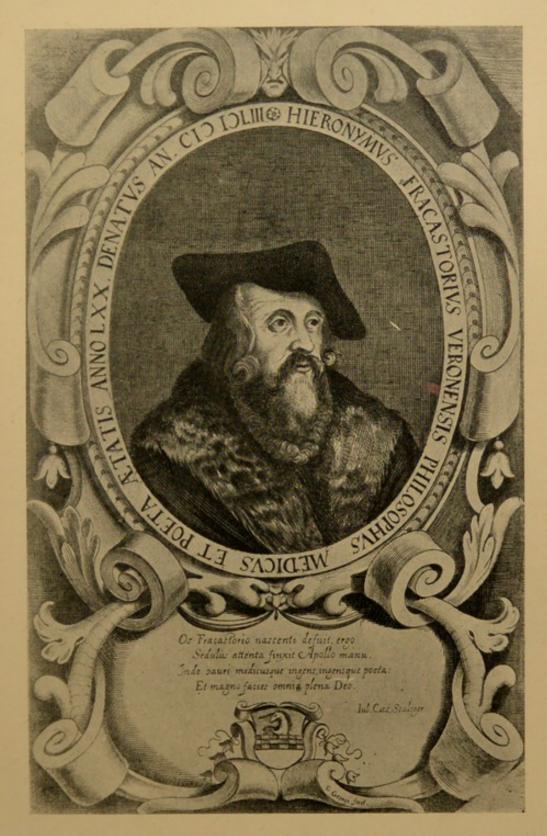






A drawing by Albert Dürer, forming part of the title-page of Theodorici Ulsenii Phrisei Vaticinium in epidemicam scabiem qua passim toto orbe grassatur, published at Nüremberg in 1496. The pamphlet is thought to be one of the earliest accounts of syphilis published in Germany. The drawing represents a man with an eruption on his skin.





Jerome Fracastoro [1483-1553], poet, scholar, and Professor of Logic at Padua. He published his poem 'Syphilis sive Morbus Gallicus' at Venice in 1530. The eloquence of the language, the melody of the rhythm, and the exquisite beauty of the digressions, stamped the poem a masterpiece, and quickly led to the general use of the word Syphilis to denote the new disease. The quatrain by J. C. Scaliger, printed below the portrait, refers to the fact that Fracastoro was born with his lips adherent to one another.





Tailpiece of Fracastoro's poem on 'Syphilis sive Morbus Gallicus' published in Venice, 1530. The poem rapidly ran through many editions, and was translated into French, Italian, English, and German. To the popularity of this poem we owe the general acceptation of Fracastoro's term 'Syphilis' for the disease.

