## MASSAWAH:

HOW WE MANAGED TO LIVE AT MASSAWAH: THE NATIVES: DISEASES: NATIVE TREATMENT: PECULIAR CUSTOMS.

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## PART II.

OUR home ideas of comfort do not in the least agree with those of Eastern nations. The first, indeed, far from being welcome, would be quite ridiculous under such opposite and different circumstances; and when I say we endeavoured to make ourselves comfortable at Massawah, it implies that we did our best to protect ourselves against the fearful heat; to sleep at night and not faint during the day; to keep, in a word, body and soul together during those dreadful summer months. During the first three or four weeks, we remained on board the steamer. By dropping an anchor at the stern, the ship was made to swing round, so as to expose its breadth to the sea-breeze; and, with double awnings, we found living on deck, day and night, not so bad as we had expected. It is scarcely possible for the ordinary run of travellers to avail themselves of the same advantages; still, they can always make some arrangements with the native boats that bring them from Aden or Jiddah. The open sea is the only place where the intense heat is bearable; and as one and all must submit to make a more lengthened stay at Massawah, the best plan is to live on the boat (the same applies to any similar locality in the Red Sea), and only land in early morning, and late in the afternoon, to transact the necessary business.

However, our late friend Theodore not being in a hurry to reply to our letter, the time came when the steamer was ordered back to Aden. and ourselves were obliged to seek for lodgings elsewhere. We took up our abode on the island in a house near the sea, belonging to a native, but used during several years, as the British Consulate: rather clean, small, coral-built, composed of two go-downs on the ground-floor, and of a terrace and two small rooms above. The terrace we occupied as a bed-room, sleeping in the open air, as indeed we always did during our sojourn on the coast. The small rooms were our redid during our sojourn on the coast. The small rooms were our refuge during the day; luckily, one of them had a window looking towards the sea; and though we did not get quite as much of the seabreeze as we would have desired, still, now and then, a few delightful puffs soothed our throbbing brains, and cooled for awhile our well-

heated apartment.

Riding on the island was quite out of the question, and we soon had quite enough of our morning or evening strolls; the perfumes of the place had been too much for our olfactory organs, and, finding altogether time weighing very heavily upon us, we removed to the mainland, to some houses the property of actual or of former residents, about four miles inland, and in the vicinity of a village called Moncullah. We selected two of them, and, with a few repairs, rendered them more habitable. The weather was cooler, and, with riding and shooting, we enjoyed the change immensely. We spent there, Mr. Rassam and myself, the cold (?) weather of 1864-65; and, with the only novelty of the arrival or departure of a steamer, our days were passed very much alike. At daybreak, at the latest, we usually got up and strolled about, gun in hand, for a couple of hours; and, though game was not very abundant so near the sea, still frequently we would bring back a few hares, an antelope, or a few partridges. But, once half-past eight or nine, in the last, of time the last. in the best of time, the sun was not to be trifled with, so back we went to our huts, took our daily morning cold bath, a light breakfast, and spent the day in doors as best we could. In the afternoon, a good long ride; at dusk, we sat down to our frugal dinner, under some trees near the well, and in the evening we wiled away the time with a game of cards; or, when visitors came, chatting over our deceptions. we put up our quarters at the Europeans' country seats, near Muncollah, we found the wells there abandoned, the water being so very brackish as to be quite unfit for use. We had the deepest well emptied, several feet of mud and filth removed, and its original depth increased, until we came upon some hard rocks. The result was splendid. Our water, henceforth, was the best of the place. Nevertheless, we never used it unless filtered, and seldom, except boiled, in the shape of tea or coffee. Our Indian servants were made to submit to the same rules; and, with this and other precautionary measures, we had never, any of us, any serious sickness to deplore.

In May 1865, I was obliged to go to Aden, on account of a severe attack of ophthalmia. On my return, after my month's leave, the hot weather had begun to make itself felt, and the question naturally arose, where should we spend it. We thought, at one time, to repair to the highlands neighbouring on Abyssinia, but political reasons prevented us from following that plan. Our next idea, then, was to remain where we were, and try the system of tatties, so universal in the hot plains of India. I had seen serious illness in India resulting from their employ, and was rather against them; however, we thought we would try them for awhile at least. Mr. Rassam had wooden frames, filled with brushwood and grass, placed at the open doors and windows; water was constantly poured over them, and the hot, dry wind now reached us cool and pleasant. But, as I feared, the great difference in temperature between the cooled room and the exterior heated atmosphere proved unhealthy; and Mr. Rassam, who remained for some time faithful to his system, was seized with slight fever, and forced to abandon the place. Mr. Prideaux had, by that time, joined the mission, and we both pitched some large, double-roofed Indian tents on the sea-beach opposite the island of Massawah. Mr. Rassam made some very wise and important improvements in the first houses in which we had dwelt in the island, and he himself took up his quarters there.

The natives shook their heads when they saw us pitch our tents on the They all said that we would not be able to stand it: they were wrong; we had all the advantages of the sea-breeze, and our thermometer was generally one degree lower than in Mr. Rassam's house, though several degrees higher than on board the steamer. In that manner we spent the greater part of the hot weather of 1865. Occasionally we availed ourselves of the frequent visits of the steamer to take a trip to sea. We went also to the lower plateau of Ailat, and once spent a week amongst the Hababs, on the delightful hills of Azte Mariam; and, though by the time we left for Egypt to receive our instructions from Government we were all, more or less, exhausted, still no one of us was suffering from actual sickness; and we so much improved in health during that voyage, that on our return we all felt strong enough

to venture on the long journey that lay before us.

The natives of Massawah, and of the neighbourhood, have but few characteristics of the African races; they differ but slightly from the Arabs of the opposite coast; and, though the scale from the purest type, to the degraded offspring of the Shankalla slave, is large, and offers many varieties, still the origin of the race is everywhere apparent. Examining them in a medical point of view, they are essentially asthenic, unfit for any great exertion; and, under sickness, completely wanting in stamina. Old men are very seldom met with. The prime of life is short in both sexes; men of thirty-five are grey-headed; at forty they are twelve, decay at twenty! It is wonderful, the change that even a twelveold. In women, the span of life is even shorter; they bud at ten, bloom at month makes. Some of our water-girls, when we arrived, were mere children; before we left, they were already larky, saucy, beautifully made girls; and, no doubt, before this time, are already faded. But in those who marry, it can hardly be credited that the ugly-looking hags, with long, pendulous breasts, skinny faces, and slovenly appearance, are the same nimble, lightfooted, fresh-looking maidens—the only pleasing sight that charmed our eyes, the only bright spot on the ugly picture.

Not only do the natives step at once from youth to old age, but they are, also, a short-lived race. Mortality at all times is great. Burials were very frequent during our stay. It is true that the year was somewhat exceptional. Scarcity at first, and then almost the horrors of a famine, desolated the whole country: fever, diarrhoa, and dysentery were, in consequence, very common and fatal. Many applied to me; to those I gave very little medicine—a little quinine, or opium, as the case might be, but a good deal of araki and brandy, and some meat to eat, as they liked best. It was wonderful to witness how quickly they rallied; how soon the emaciated features, with death written upon them, would assume a more hopeful appearance. I remember the case of a man, very ill indeed, and greatly reduced by semi-starvation, who proceeded with the steamer to Aden, having engaged himself to look after some cattle. He did his work as well as he could, took no medicine, but was well fed on board; on his return, a fortnight afterwards, I was perfectly amazed at his appearance; the broken-down, old-looking man of a few weeks before, had been transformed into a fine-looking young fellow. Evidently the race does not thrive under that exceptionally hot climate; it does not suit them. They manage to live, it is true, but how? Premature old age, or an untimely death, is all they can expect. And when, to the many disadvantages of the climate, scarcity comes on, and adds its baneful influence, debility and exhaustion marks them as easy prey—a few days of fever, or some bowel-complaint, and all is over.

In the best of times, fever and bowel-complaints make great havoc after a few showers of rain. The natives have no knowledge whatever of medicine. When they are sick, they send for the mullah, or for some man

renowned for his sanctity. If the case be hopeless (I mean if there be no money in the house), the wise men take but little trouble, and satisfy their reputation for skill and knowledge, by merely predicting to the family the speedy release of the sufferer from this world's woes and troubles—a prognosis which, their experience has taught them, very seldom fails. But when a little hard-earned cash, carefully concealed, probably buried many days in the darkest corner of the hut, is, with many a sigh, dug up and made to shine before the greedy eyes of the saint, the case is then very different. Most wonderful prayers, on sacred parchment prepared in holy Mecca, are written by the good man; the ink, twice blessed by the words it has traced and the hand that held the pen, is carefully washed away with water, and this all-powerful remedy religiously drunk by the patient. Should, however, the mighty spell fail, stronger incantations, if possible, are again swallowed; others, bound up in leather, are tied around the forehead or arms of the dying person. does not abate, and perhaps a dollar still remains; the last and greatest charm is then applied. The saint, after muttering long and deep-sighed prayers, spits three times on the moribund; but after this, no hope can be entertained should the magic influence fail in its effects. Mussulman fatalism then takes the upper hand, and the last moanings meet with no sympathy; after so much has been done to save the patient, they must bow to the will of Allah. Has he not refused to withdraw the angel of death, when so strongly appealed to by his beloved saint: to try to avert death after the failure of the holy spittle, if not heresy, at least would it not be

Small-pox, the natives say, generally makes its appearance every ten years; but I believe that it only disappears from one locality to spread in another; and that at any time it will be found to be prevailing in some of the various tribes inhabiting the Samhar, the Bogos, the Soudan, etc. It is a greatly-dreaded and the most terrible scourge the inhabitants were aware of, as cholera only broke out for the first time in the autumn of 1866. The natives practise inoculation on the fore-arm; to that effect an incision, half an inch in length, is made with a razor, and in the wound some pus, taken from a mild case, is rubbed in. The success or failure depends, in great measure, on the character of the existing epidemic; if mild, the practice is not attended with much loss of life; but,

should it be severe, the mortality is considerable.

Many women die in childbirth, a result greatly brought on by the practice in use. There are no regular midwives; every old woman in the place is supposed to be a master of her art; and, as this consists but in a jumble of puerile and noxious practices, there is no doubt that she certainly is! Women are confined on all fours; the child is allowed to fall on the ground, and the woman made to remain in the same position until the after-birth follows of its own accord. Never is any interference allowed; and, as the same practice is also followed in Abyssinia, I saw there several women dying of hæmorrhage, all the bystanders howling and crying, when a few simple tractions and frictions on the abdomen were alone necessary. In such cases, amidst the screams and yells of a numerous assistance, I was fortunate enough to save several lives; but my responsibility was indeed great; as, had they died, I would have been held responsible; and in those lands responsibility is no myth, but involves a serious punishment, even death, if it cannot be compromised by a fine. As soon as the after-birth falls on the ground, the woman is placed on a small native bed (a rude wooden frame, lashed together with leather ropes), a dirty cotton cloth is thrown over her, and under the bed the midwife puts a large earthen jar, filled with burning char-coal, into which she now and then throws a handful of aromatic herbs, filling the well-closed hut, and half smothering the woman with a dense, suffocating smoke. As it not unfrequently occurs, should the recently delivered woman faint from great loss of blood, she is at once supported on her bed in a sitting posture, a string of amulets is tied as tight as possible around her forehead, and all the persons present rush around her, shout and scream, ring bells, beat together pieces of metal; in a word, do their best, if noise be the remedy, to bring back even the dead from the grave! No sooner does she show any signs of animation, than a looking-glass is held before her face. At this she is told to stare with all her might; the visitors cease in their noise; but, probably to cheer her up, moan and groan, as if in great pain themselves. patient is still seated, and, in consequence, before long she faints again; and as nothing can induce the spectators to withdraw, and allow the poor creature to breathe a little fresh air, nor to desist from keeping her bent in two, the only resource left, when all arguments have failed, is to turn every one bodily out, and force the relatives to allow the patient to lie down. Let us suppose these first accidents over; the next thing is to give her the *medicine*—a large tumblerful of a melted butter, honey, and spices. The woman, nolens volens, must swallow it. Luckily, it usually only acts as a mild emetic, and afterwards she is left to herself. When strong enough to run the gauntlet of the midwife's attendance, and the sympathy of her friends and neighbours, she rallies to a certain extent; and though in all probability broken down for life, a few days afterwards she can be seen painfully crawling about and resuming her domestic occupations. The child's first food is fresh butter. In young women, the breasts are so enormous after confinement that often for weeks the child cannot suckle. All this time it is fed only on butter; and even when it takes the breast a certain amount of butter is still given daily. The children seem to thrive well on this diet. They are not weaned before they are two, sometimes three years old. Until they can walk, the mother constantly carries her child on her back, where it is held by means of a square piece of leather, tied in front around the chest and waist.

A very curious fact occasionally met with in the lowlands, but more frequently still in the highlands, is the very fair colour of the new-born children. Some, indeed, have all the appearance of European children for a day or two; but soon, however, the darker colouration of the skin gradually makes its appearance; and if even for a while there may have been a suspicion, the true characters of the breed are too certain to allow even a doubt to remain.

I saw, whilst at Massawah, several cases of rheumatism-some of syphilitic origin, no doubt contracted in Abyssinia. One of my rheumatic patients was an old Mussulman merchant, a native of Abyssinia, who had fled to the coast when he heard that Theodore had taken a fancy to his wife. On his departure, she was confiscated and sent into the harem; the old man, lamenting his fate, and groaning over his rheumatism, remained under Turkish protection. I once gave him a prescription, telling him to go on board the steamer, where the apothecary would prepare it for him, as I had none of the required medicine with me; but from what followed, he must have misunderstood me. Meeting him some time afterwards, and inquiring as to his health, he replied that he had done what I had told him, but felt no better; "and I can assure you that I have made frictions very regularly with the medicine you gave me, but now hardly any remains." On saying that, he pulled from his pocket a small, dirty piece of paper. I could not well make out his meaning. I took the shreds of the paper, and was rather surprised on seeing on it my handwriting. A few words explained all. Under the belief that the curative power of the medicine dwelt in my written words, he had not carried the prescription on board, but had simply been frictioning his aching limbs, morning and evening, with the written paper I had given him—certainly a great compliment to my sanctity. I only saw a very few cases of syphilis, all contracted in Abyssinia. In the bazaar at Massawah, a certain number of wretched old hags cumulate the double profession of pimps and prostitutes, but their clientèle seems to be limited to the Turkish garrison. Gonorrhea, I heard, was not uncommon, and I attended several cases of stricture, due to that cause. I expected, on my first arrival, to meet with scurvy on a large scale, but was rather surprised to see but very few cases, and those almost all amongst strangers, or slaves from the Shankalla country. I suppose that the natives of the place, born and bred in that land of brackish water and no vegetables, grow up and gradually become accustomed to that mode of life; and that the effect of that regimen is more marked in their general constitution than in any actual morbid manifestation. We must also take into consideration the great amount of meat the people partake of; it is, in ordinary times, cheap, and even the poorest live partially on it.

Poor, badly clad, worse lodged, indifferently fed, we cannot expect people under those circumstances to be active, boisterous, and merry. We find, therefore, the natives of that region lazy, or rather apathetic. There is nothing lively about them except in their youth. Their songs are monotonous in the extreme, and their dances mere lascivious looks, a peculiar swinging of the head, accompanied by a hissing, labial sound. The wailing for the dead, though in some respects similar to the same customs on the highlands, is, in all its manifestations, something much more tame. The howling is more dreary, less expressive, and soon ceases, to give place to a quiet, regular moan. From the instant a death takes place, until the burial, all the relatives, friends, and neighbours, assemble in the house of the deceased, or in front, should it be too small. All cry, or at least pretend to do so. When a general silence occurs, a friend rises and relates, in a voice choked by tears, some anecdote concerning the one they mourn. "I remember," he will say, "that one day, feeling very tired, I longed for a pinch of snuff. As good luck would have it, I met him, and, with his generous heart, he at once complied with my request." Every such tale of the deceased's virtues is followed by the groaning being taken up in chorus, and on a higher key.

Not a bad test of the superiority or inferiority of a race is to be found in the appearance of the genital organs. There is, no doubt, that the less intellectual they are, the greater is the development of those parts; and those tribes remarkable for the preponderance of the basilar over the frontal conformation of the skull are not what can be called great in mental powers: and though somewhat less lascivious than the races of

the plateaux (a mere question of climate, I believe), their only aim in life is sensuality. In that resides their pride and happiness. Even life seems to wane when their procreative powers are less vigorous; and, as I have already mentioned, after a short prime of life in both sexes, the whole

frame seems to wither and decay.

From the Somali country to the banks of the Atbara, all the various tribes inhabiting that large tract of country practise a very peculiar operation on the females. Seven days after birth, the midwife, with a sharp knife, makes a deep incision on both sides of the vulva, removing a strip of the skin, and all the mucous membrane. The thighs are then firmly lashed together, and left bound for five days. The operation very seldom fails; the reunion is generally perfect, leaving only at the inferior part a small aperture for the passage of the urine, menses, etc.

It is hardly to be credited, but, nevertheless, true—cases of rape occur under those adverse circumstances. Several came to our knowledge during our residence at the coast: however, there can be little doubt that it must be a consented rape; and the woman, whatever her denials, must have been a willing party, or in her ignorance a willing

For weeks after marriage, the parts are lacerated and frightfully swollen. In some instances the laceration is such, that it would hardly be considered as produced by a simple cause, were it not that the unusual pro-

portions of the male's organ explained the mystery.

All these tribes are Mussulmans: and, however heretical it may read, their faith is their only redeeming feature. It is evidently the creed that suits them best; the one the better adapted for Africa. Mussulmans, no doubt, despise and inwardly curse the Christians; but after awhile, by considerate treatment and non-interference in their prejudices, they attach themselves to their masters, and turn out faithful followers. The *Eastern* Christian is an anomaly: all travellers who have visited those lands, however they may disagree on many points, at all events have but one opinion on that subject. All will say, like myself, that the European can, now and then, trust a Mussulman—an Eastern Christian, never!

One of the advantages of having to deal with Mussulmans, and no trifling matter, is, that they wash. They do not habitually drink; they can speak the truth; they are, towards their masters, more reserved and less demonstrative; they do not, in good times, lavish upon them the grossest adulation; nor, in the day of trouble, turn round upon the unfortunate with all the animosity of flattering menials. But I hope I shall not be misunderstood: Eastern Christians are not what we call Christians—a fact I trust to explain satisfactorily when we come to speak of our brethren of Abyssinia.

## PROFESSOR HUXLEY'S HUNTERIAN LEC-TURES ON THE ANATOMY OF THE VERTEBRATA.

Delivered at the Royal College of Surgeons of England.

## LECTURE V.

WITH regard to vertebrates above the class of Fishes, all the Amphibia, except the lowest, have a further regional differentiation of the spinal column, as, in addition to trunk vertebræ and caudal vertebræ, there is a sacral vertebra which is connected with the pelvis.

As to the long-tailed Amphibia, all have transverse processes which appear, at first sight, to be simple, but each of which has a longitudinal groove on each side of it, if it do not actually bifurcate so as to consist of two superimposed processes, as is the case in the Salamanders and Labyrinthodonts The proximal end of the rib, in such cases, likewise bifurcates, the two arms of the fork representing the head and the tubercle of the rib respectively. There is normally but one sacral vertebra, but its transverse process is large and broad, and the moveable rib which is attached to it is large and broad also. In some species one, two, or more caudal vertebræ are also furnished with moveable ribs.

The caudal vertebræ are generally provided with processes which have the same relation to certain of the soft parts as have the chevron bones of Fishes. These chevron-bone like processes certainly, however, do not answer to ribs, as they coexist with transverse processes,

to the extremities of which moveable ribs are articulated.

Although there can hardly be said to be any cervical region, yet in the Urodela there is a decided atlas vertebra with two facets to correspond with the two occipital condyles.

In the Anourous Amphibia a wonderfully different condition obtains. The vertebræ are very few in number—not more than nine free ones, and

not more than eleven altogether. They are generally proceelous, and are provided with long and simple transverse processes, to which, sometimes, rudiments of ribs are attached. There is one sacral vertebra with very elongated transverse processes, which appears to take the place of sacral The spine ends posteriorly in a coccygeal style, the nature of which can only be known by the study of its development. In the Tadpole, the notochord behind the sacrum never becomes divided into definite vertebræ, but becomes surrounded by cartilage like the end of the spinal column of osseous fishes. Ossification takes place in the cartilage, and also in the neural arches which anchylose with its upper surface towards its proximal end.

In the Vertebrata, generally, above the Ichthyopsida, a greater number of distinct regions can be defined. Taking the Crocodile as our type, we find five distinct regions; viz., cervical, dorsal, lumbar, sacral, and caudal. There are nine cervical vertebræ, the first dorsal being defined as the first vertebra, the ribs of which are connected, by sternal ribs, with the sternum. There are three or four lumbar vertebræ; and the vertebræ in front of the sacrum are, in all, twenty-four in number. There are two sacral vertebræ, and these have expanded ribs. caudal vertebræ are devoid of moveable ribs, and the chevron bones are attached to the intervals between the bodies of the caudal vertebræ. The crocodile has a distinct axis vertebra as well as an atlas: the latter consists of four pieces which remain separate throughout life. a large bone between what might be thought to be the body of the atlas and the body of the axis; this is the os odontoideum, and is probably the true body of the atlas; and the median inferior piece of the atlas is, probably, an ossification of the intermediate substance between the body of the atlas and the skull. The upper median piece of the atlas is no true vertebral part, and there is no bone like it in any other animal.

The third cervical vertebra has, on each side, two transverse processes like those before described as existing in some amphibians, and similarly a rib is annexed with a bifurcated proximal end. Further back in the neck the ribs become more elongated. In the trunk, as we pass backwards, the essential duality of the transverse process becomes more and more disguised, and simultaneously the tuberculum of the rib approaches the capitulum until both are on the same level. The apparently large transverse processes of the sacral vertebra are really large ribs attached to short transverse processes; the apparent caudal transverse processes are really ribs. In the Ichthyosaurus no region can be distinguished in the spinal column other than those existing in fishes. The structure of each vertebra in this animal is quite peculiar. The neural arch never unites with the centrum: there are no transverse processes, but only little tubercles. The atlas and the axis are both biconcave, and a small ossicle exists beneath and between them, and another larger one beneath the atlas between it and the occipital condyle.

In Ophidians there is no sacrum. The transverse processes are short;

and the vertebræ are not only articulated by a ball-and-socket joint, but their neural arches interlock by means of a special prominence (the Zygosphene) which fits into a corresponding concavity (the Zygantrum).

In Lizards there is generally a sacrum, also in the Plesiosauria, the vertebræ of which are provided with long but simple transverse processes. The Chelonia have quite peculiar vertebral characters; there are no transverse processes in the trunk, but the neural spines are widely expanded, horizontally, at their summits; the expanded ribs join by their heads the vertebral bodies, while their elongated and broadened capitula

unite with the margins of the expanded neural spines.

In the Dinosauria and Pterosauria all the vertebræ are formed more or less on the Crocodilian type, but the sacral vertebræ are five or six in number. In some Dinosauria the sacral ribs become thin, and are raised up on to the sides of bodies of the vertebræ, thus presenting an approximation to the structure of birds. The last named animals have their vertebræ in the main Crocodilian, but with many peculiarities. The atlas is a continuous ring of bone. The cervical ribs are distinct in the young; the articular surfaces of the vertebral bodies are generally cylindroidal, but in the Penguin they become spheroidal and opisthoccclous. The vertebre of the dorsal region in Birds become curiously fused together, and the sacrum is very singular, not merely from the extent of anchylosis but from a change in the characters of the vertebræ. Sometimes, as in the Ostrich, there are twenty-one vertebræ united with a sacrum, but of these some are really dorsal, others lumbar, and others Now, the transmission of the nerves of the sacral plexus is the only available character to determine which are the true sacral vertebræ, and not more than four or five such have been found in any bird. vertebræ in front of these are lumbar, and those behind are, of course, caudal. The true sacral vertebræ have no ribs, and in this circumstance birds differ from all other vertebrates. On the other hand, the caudal vertebræ anchylosed with the sacrum, have on each side of each vertebra two transverse processes which join the ilium. The lower of these transverse processes includes a costal element.