LEAVES FROM MY DIARY DURING THE
ASHANTEE WAR.By ALBERT A. GORE, M.D., Surgeon-Major.
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IV.—EN ROUTE.

WE had adieu to the low alluvial shores of the Gambia on September 2nd, a sultry close morning, 80 and 82 deg. in the cabin, port open, at 7 A.M. A few mosquitoes had already made their appearance; and the deck was crowded with Sierra Leone women, returning to Freetown after having disposed of their baskets of Cola nuts to Mandingo traders, who pay a high price for this much coveted fruit, chewing it in their long journeys, a natural instinct leading them to its use. The purser and the "ladies of the period" were in angry dispute on the subject of the fare—the latter vowing that they could only afford a moiety of the amount, while the former stood upon his rights. Silence at last indicated that this grand palaver had been amicably settled. Shortly before, a number of African gentlemen had come on board to wish one of their friends adieu, and were scarcely less troublesome below, where Moselle corks were flying about in all directions. How pleasant they must have all felt next morning! We had had an addition to our number in the shape of an Aku lady from Sierra Leone, who appeared to regard us with sovereign contempt. Poor thing! she soon became very sea-sick, and did not again turn up until we anchored off her destination, the capital of the West African settlements. Not a breeze ruffled the still, calm, glassy river; a few cirri-cumuli dotted the otherwise bright sky, the hygrometer running up to 83 and 87 in the shade at 9 A.M.; shortly after which we began to move slowly past the church, barracks, Government House, military and colonial hospitals, and the dismal-looking cemetery crowded with graves. As we swept round to the westward, the sea-breeze was gently stealing up towards us, a few cat's paws indicating its presence in the distance. The sense of relief when it did arrive can scarcely be imagined by those who have not felt the oppressive damp heat of some of those tropical days, and the sense of exhaustion which accompanies it. The effect of the sea-breeze on this particular morning was the lowering of the mercury in the thermometer from 89 to 85—four degrees—and a perceptible feeling of already being in a cooler atmosphere. The sun set this evening at a quarter past 6 P.M.

Previously to leaving, I had heard on shore that, in the late epidemic of yellow fever, black vomit was entirely absent; and that, in the *Bonny*, the disease had made sad havoc in the hulks—one losing twenty-two out of twenty-four, and another twenty-two of thirty-six, Europeans on board. The steamer in which we were now had to throw the cargo for the hulk on the deck, there being no one to remove it. These Bights have always been hotbeds of yellow fever, the nidus from which it appears to spread upwards. In the evening, we had the usual lighting up of the eastern horizon with flashes of lightning.

The conditions which I have now been describing would shortly be succeeded by the Harmattan season, the winter of North-Western Africa. Commencing in May, the rains terminate in October, being ushered in and followed by tornadoes or thunder-storms; these last are succeeded by the Harmattan or north-easterly wind, which blows strongest during the months of December and January. On the northern coast, this wind is excessively dry and parching, and loaded with minute particles of sand, which cover everything during its continuance with a fine dust; furniture splits; books become curved and unshapely; and even glass cracks. Blowing continuously for three or four days at a time, it remits for periods more or less prolonged. The excessive dryness (on three occasions, I noted 17, 20, and 22 degrees between the wet and dry bulbs), leading to rapid evaporation, checks all cutaneous secretions, dries the skin, and, by thus throwing more work on internal organs, causes slight diarrhoea, and not unfrequently coryza. Pains in the hepatic region are also oftentimes felt. The chilling sensation of the surface approaches a feeling of actual cold. During its prevalence, pneumonia, bronchitis, lumbar and rheumatic pains, are then the diseases of the natives, who move about with their heads tied up in all sorts of fantastic manners. This peculiar wind, at its maximum force and dryness at the Gambia, becomes gradually less characteristic as it approaches the Bights, loses its dryness, and changes to a damp cold breeze, blowing, as on the Gold Coast, from the north or north-west. On the plateau some ninety miles inland, it approaches again more of its original nature, and in the early morning causes a decided sensation of chill, and a reduction in temperature as low as 65 to 62 degrees; when at the same moment on the coast-line it

is loaded with moisture, and the bulbs of the hygrometer only show a difference of from 2 to 5 degrees—no doubt due in part to its having to pass over so large a tract of water in its transit along the seaboard and the many intervening swamps and lagoons between the ocean and the Sahara. At the Gambia, it is considered a healthy wind, and is much enjoyed by the European residents, chiefly from the feeling of cold coming with it. While it is blowing, a faint yellow haze spreads through the atmosphere, and renders distant objects indistinct in outline; water is intensely cold, almost too much so for a bath; while the sun and moon appear in the heavens as lurid red orbs surrounded by yellow halos. In passing over the morasses in which West Africa abounds, it absorbs, owing to its excessive dryness, much malarial poison. From this cause, crews of ships lying immediately to leeward of mud-reaches, and subject to its influence as it passes over the latter, have frequently been attacked with very severe and fatal forms of remittent fever, differing only in degree from the much dreaded *vomito*.

After leaving the mouth of the river Gambia, the steamer has to make a long detour to the westward, to avoid the Billayos, a number of islands situated beyond the alluvial estuaries of the Rio Grande and Rio Jeba, inhabited by the Bijouyas, a tall, robust, warlike people, who have driven out the more peaceful Riaffras, the original tenants. Bismo, one of the largest of these, is inhabited by the Papels, equally warlike as the Rifrayas in their habits, much to the annoyance of the Portuguese, who are continually in apprehension for the safety of their African capital, which is encircled by a mud wall, and in possession of a large circular iron-stone fort, formerly a slave-barracoon. This settlement is garrisoned by the Creoles of the Cape Verde Islands, who are supplied with very ancient muskets, the usual brown jacket, and peculiar but pretty little Portuguese *kepi*, but neither garments of all colours and descriptions. Fowls abound, being obtainable for a "paticruy" or twopence each. This little Portuguese settlement is scarcely known; and the fine river at whose *embouchure* it is situated is practically unexplored, owing in great measure to the jealousy of its custodians, who, claiming to be the original discoverers, guard its mouth with a jealous care. A long way up are some fine falls, marking the rise to the great central tableland of Africa. The Rifruyas who inhabit the neighbouring islands are a most peculiar people, perfect savages, in addition to being warlike and well formed. In the more distant of the group, they are said to be cannibals. They have no idea whatever of the value of money, their produce being only obtainable from them by means of barter; a fowl being held up by the half-naked savage, while the would-be purchaser displays certain brass nails, leaves of tobacco, or charges of powder, until a nod of the head signifies that Nature's human animal is satisfied. Only those who have witnessed such scenes can form any idea of their grotesqueness. These people travel long distances in their peculiar canoes; the slaves who drive them using oars instead of paddles, rising at each stroke, and again descending to their seat—a movement most singular to look at from a distance. During these long journeys, not a garment of any kind is worn; and immense distances are travelled apparently without injury, under exposure to the powerful rays of a tropical sun, reflected from their shaved and shining heads. The women only wear a grass girdle round their loins, and the men a deer-skin profusely decorated with cowries. In 1792, an attempt was made to establish an English colony upon one of these islands by Captain Phil Beaver; in a year, nine-tenths of the colonists had died from the effects of fever and impure water largely impregnated with the milky juices of some poisonous euphorbias. The settlement was in consequence abandoned. Rulama was afterwards occupied as a military station. The name is now only interesting as being the spot where, in 1868, the cholera epidemic, which travelled down to Rissao from the Gambia, exhausted itself. Between the three places, there had been constant and frequent intercourse, large numbers of Mandingoes arriving here to purchase Cola nuts imported from Sierra Leone.

Along the banks of the Rio Grande, and between it and the Rio Jeba, is the important kingdom of Fouta Jollo, inhabited by Foulahs, whose marabouts are said to be of extensive learning. Some of the chiefs travelled a long way in 1865 to visit the English commandant at Rulama, bringing a present of some fine sheep and beautiful cloths for the manufacture of which the country is famed. They appeared to be fine, intelligent, well-formed men, and were most anxious to conclude a treaty of commerce with our people, in order to avoid the effects of the high tariff levied on imports by the Portuguese, the effect of which was largely to increase the price of European goods imported from the banks of the Jeba. From Timbo, the capital, large caravans go as far as Timbuctoo and Cassima; cotton cloths and very beautiful silver and leather work being exchanged or sold in the more interior towns. On the banks of the Jeba are extensive native mines of lead and iron, the latter being made into swords and daggers of curious workmanship. Below this is the Koorango country, inhabited by enterprising Man-

dingoes, who join the Timmanee country further to the south, the people of which are a depraved race, believing in witchcraft, wearing very coarse clothes, and holding large numbers of domestic slaves. Their system of agriculture is especially rude.

On the second morning after leaving Bathurst, we sighted the blue mountains of Sierra Leone, the highest of which, the Sugar Loaf, rises two thousand feet above the level of the sea, some three thousand miles distant from England. As we closed up, there was lying on the Carpenters the remains of one of the African steamers, wrecked in the previous July. Running by Cape Home and the light-tower, a convalescent station belonging to the Government, five miles from the mouth of the river, we dropped anchor opposite the capital of the West African settlements and seat of Government.

We had now arrived at one of the most beautiful of the West African stations, abounding in a tropical luxuriance, and with blue mountain summits rising in a succession of conical hills and ranges high above the sea, and extending along the coast to Cape Shilling in the south-east, a distance of twenty-one miles. The general appearance of this sierra, rising as it does into an irregular congeries of conical mountains tipped with forest-trees, gives it in the distance a beautiful, rich, and romantic aspect. We had arrived at Sierra Leone at the commencement of one of its most unpleasant months, when the days are, as a rule, close and oppressive, and refreshing breezes unfrequent. The mountains were a mass of luxuriant green, and covered with vapours until the rays of the all-powerful sun had dissipated them into "thin air"; then, and only then, did they shine forth in all their natural beauty. The day previous, shoals of porpoises were playing about us; a solitary swallow skimmed the sea in the wake of the steamer as she rolled unceasingly in the heavy swell from the south-west; the temperature rose from 81 at 7 A.M. to 92 deg. in the shade at 1.30 P.M., falling again at 3 P.M. to 89. We all felt more or less feverish, with headache, warm flushings of the feet, hands, and pains in the loins, with profuse perspiration at night—a series of unpleasantnesses, shortly dissipated by a few doses of quinine. A small tornado from the north-east about 3 P.M. had somewhat cooled the atmosphere. Scarcely had the gun fired signalling our arrival at 6.30 P.M., when we were surrounded with boatmen vociferating and struggling to gain the gangway, in their eagerness to be put on board. It was a marvel that some of them were not drowned. News had just arrived of the treacherous attack at Chamah on Commodore Commerell and the officers and crew of his barge, several of whom were wounded. It seemed that everywhere we were to be met with tales of disaster, disease, and death. An epidemic of yellow fever had recently visited the colony, carrying off nine of the eleven Europeans attacked. The Governor, Mr. Berkeley, had just returned in his pretty yacht, the *Thesbio*, from Cape Coast, bringing details of the outrage on the Prah, where one of our unfortunate seamen had his head hacked off on the beach by the savages, who were said to have been assisted by some Java pensioners. The wounds had been chiefly inflicted by brass and iron slugs cut off from long bars of the same material. All the towns had been bombarded by way of reprisal. The smallness of the present garrison was shown by the few lights twinkling high up in the barracks—so different from former days, when their number indicated a pleasant mess and social intercourse. We had brought with us from England a young African lady, who had been sent home two years previously for the purpose of being educated. The genuine affection shown in the meeting between the parent and child, untrammelled by the conventionalities of society, struck us all, and added an additional fervour to our adieus when we said good bye shortly afterwards. Her expressions of delight on arriving in her country were most amusing. Next morning, it was raining until 8 A.M., when the mists gradually drifted up the mountains, lying over only the grass-fields or rocky bottoms south-west of the town. We had already received invitations to breakfast, lunch, and dinner, with offers all round of beds and pafamas. Our stay was only to be for a day, so we could scarcely accept them all.

Before landing, we were treated to a second edition of last night's uproar, upon the arrival of a number of Kroomen, hired and sent on board by the agent on shore—men always picked up here, for the purpose of acting as stokers and working the ship in the warmer latitudes, and performing all menial duties during the steamer's six weeks' journey to the Camaroons and return to Sierra Leone; by which means much sickness is prevented. Although shipped from one of the worst ports in England for obtaining good seamen, the crews, who are of indifferent *physique*, remain fairly healthy during the three months' outward and homeward voyage, except when an occasional epidemic of fever occurs, usually contracted in the Bonny. The men are worked a good deal in stowing away and discharging cargo, live upon the usual ship's diet, pork, biscuit, and fresh vegetables and meat when obtainable; never take quinine except when ill; and have served out to them at

noon daily a ration of rum, which is swallowed undiluted and with evident gusto. After a long discussion with our captain, who treated them with the greatest nonchalance, the Krooboyes struck in a body for higher wages, squatting on the deck as if the whole ship belonged to them. Threatened with summary vengeance if they did not at once clear out, they soon came to their senses, and consented with a grimace all round to resume their work at the old rate of pay, one shilling and sixpence *per diem*. Some years before, they were quite satisfied with eightpence. Here, as elsewhere, the labourer's prospects were looking up, as those of his employers were descending in a corresponding degree. These curious people, rejoicing in such euphonious names as "Frying Pan", "Drum of Salt", and "Bottle of Beer", come originally from the country extending between Monrovia and Cape Palmas further to the southward; live chiefly upon rice, their rations on board ship being a pound and a half of this grain, with an occasional piece of pork, upon which food, with now and then a "tot" of rum, they can carry heavy loads and pull long distances, as much as forty miles at a stretch. A loin-cloth, coloured handkerchief, and very battered hat, constitute their not very elaborate toilet. Each gang is looked after by a head man, who obtains somewhat higher wages, and is responsible for the good behaviour of the others; a convenient rope's end adding much to his dignity and their appreciation of his authority. Muscular to a degree, they have a fault not very uncommon, a propensity to the theft of small articles lying about—a piece of useful knowledge to future travellers. They had initiated their arrival on board by the appropriation of one of the Portuguese groom's caps, who was naturally wrathful, especially when the new owner, who was jauntily strutting about the deck with the article in question, refused to surrender it until the head Krooman appealed to his feelings in a manner more disagreeable than persuasive. These gentlemen only remain at sea or in permanent employment until they have amassed sufficient to purchase two, three, or four wives—the *summum bonum* of their ambition, sunning themselves in whose smiles they remain until the little property becomes dissipated; the smiles disappear as a natural consequence, and another struggle for existence becomes necessary. These Coolies and Lascars of West Africa have been frequently employed in our bush-wars, during the continuance of which they have often done good service. Unfortunately, they never could be obtained in anything like sufficient numbers, owing in great measure to their dislike to having their bodies peppered by slugs and various other missiles of native warfare.

Two Sierra Leone policemen, dressed in blue serge suits with red facings and stripes, cleared the gangway from the motley crowd of Negroes who were rushing on deck as we descended into a boat. It is really wonderful how these native boatmen can withstand the tropical drenching to which they are subject. Often wet to the skin for hours, they do not seem to suffer at all while taking active exercise, and are only very occasionally attacked with pneumonia or bronchitis, the first of which affections, as well as phthisis, usually runs a rapid and fatal course among black soldiers and natives of Africa, especially when civilised and domiciled according to European customs. When attacked with any acute disease, they do not seem to have any rallying power whatever. This peculiar idiosyncrasy has been attributed to a variety of causes, among others, early sexual excesses, insufficiency of animal food, intemperance, and impoverishment of the blood and tissues from the constant breathing of the malarial poison. As far as it is possible to judge by experience, their only advantage over the European is their immunity from certain epidemic forms of African fever, and a capability of undergoing much exercise and exposure in the sun without danger to health. Neither do they suffer in the same degree from the effects of the malarial poison.

With us came the grooms, to look after fresh forage for the animals, one of which afterwards made the romantic journey from Accra to Obayoo, Duabin, Coomassie, and the Prah. Up to the present time, they had got on very well in their little wooden deck-houses. We landed at the new wharf and mole being constructed of iron-stone quarried from the immediate neighbourhood, much to the annoyance of passers by, as pieces of granite were flying about in all directions, and descending with a crash after each explosion. After paying our respects to the Governor-in-chief, Mr. Berkeley, and leaving Captain Glover to enjoy the atmosphere of the carefully closed rooms of Government House, we strolled through this metropolis of West Africa and one of the most beautiful of the settlements, whose mountain summits, rising 2,300 feet above the level of the sea, are covered in the rains with the ever varying tints of a blooming verdure. Sixty miles to the north, were looming in the distance the Isles de Los, three volcanic islets, tipping as it were the furthest extremity of the opposite Bullum shore; and further inland, to the north-east, the Sangaree mountains. Few spots can boast of so much grandeur and natural beauty. Yet the general want of wood, the absence of cultivation and animal life, are

great drawbacks. The estuary or river, on which the little *Volta* was lying placidly, is ten miles in breadth between Leopard's Island and Cape Sierra Leone; extends inland about twenty miles, where it divides into several arms, one of which, the Robelle, is said to have its source twenty miles from Fallaba, and two hundred from Sierra Leone, the usual rapids or falls intercepting fifty or sixty miles from Freetown.

[To be continued.]

THE PATHOLOGY OF CANCER.

By SAMUEL WILKS, M.D., F.R.S.,
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As an old member of the Pathological Society, I had hoped to be present at its last meeting, to offer my opinion on the subject of Cancer; but unfortunately, the examination at the College of Surgeons prevented me. It may now be forgotten that I had always advocated at the Society the views advanced by Mr. De Morgan in favour of what is called the "local" theory, in distinction to the "constitutional", and I did so, because I believed that the study of morbid anatomy had done much to upset the long prevalent teaching concerning the nature of cancer derived alone from clinical medicine and surgery. The opinions I was in the habit of expressing are contained in a paper* which I now forward, and of which the following is a summary.

It was the teaching of the schools that certain morbid growths were apt to spring up in the body; if these were removed, they would burst forth again and spread; moreover, since some of the victims' ancestry were subject to the same form of disease, it was clear that a deep-seated inherited vice existed in the constitution for its production. Works on medicine and surgery supported this view, and at the present time the nomenclature of the College of Physicians would lead us to believe that the different organs and tissues of the body are not only liable to inflammation and its consequences, but subject to the formation of tubercle, cancer, and other growths.

Now, I would say, in the first place, that this doctrine is not true. All parts of the body are not liable to undergo spontaneously these morbid changes, but the latter are strictly limited; in all probability each tissue has its own pathological deviations in a determined special direction; and, without mentioning other matters, I would say that cancer affects more especially the cellular tissue in connection with the skin and mucous membrane, and that the viscera, with many other tissues, are not primarily attacked. Thus, cancer of the lung is a disease of which I have no knowledge, and yet this organ affords an excellent soil for it when transplanted therein. Some structures of the body are seldom found diseased in any way, whilst others are not subject to cancer, nor others to tubercle. Those who will not advance with me as far as this, will admit that cancer of the lung and other viscera is generally secondary, and that all parts of the body are not prone alike to the disease. If, with me, it be conceded that cancer never springs up primarily in the lung, it must follow that the seeds of it have been conveyed from another source.

It is a remarkable fact that surgeons, ever since their art has recognised the possibility of removing cancerous tumours by operation, have assumed and acted upon the doctrine before mentioned; that is, the local origin of the disease. For, although the operator feared a repetition of the growth or its appearance within the body, yet, at the time of its removal, he regarded it as local. He never believed he had before him a patient possessing such a cancerous constitution that he was full of malignant disease, and that his own skill was useless on that account. His experience had, on the other hand, told him that the cancer he was about to remove was quite local, as it generally was when seen on the outside of the body. If this had not been so, but the cancer due to a deep constitutional cause springing up indiscriminately here, there and everywhere, there had been no occasion for any discussion as to the local or constitutional nature of the disease.

Now, if it be true that cancer, having so common an element as cell-structure, is limited in its growth, much more is it true of other malignant tumours which have a special nature. These clearly arise under a local influence; thus I have seen a few cases of osteoid disease, and have read of others, that is, cases where bony tumours have been found in the abdomen, lungs, and other parts. Now, in all these cases, the prime disease originated in a part of the bony skeleton. It was this which determined their growth, and, therefore, there is no disease of the system which can be strictly styled osteoid disease. In the same manner, melanosis is seen to arise in a mole, on the choroid of the eye, and then rapidly propagate over the skin where pigment prevails. Epithelial growths

have been met with in the lungs, liver, and suprarenal capsules; but no one has yet described primary epithelioma in these organs; it has been secondary to disease in the oesophagus. Other forms of cancer also vary with the structure in which they arise, as scirrhus in dense organs like the breast, and encephaloid in the softer parts. Here, then, we see various forms of disease springing up in the body; there may be some deep-seated cause transmitted by the ancestry, which sets the process in operation, or there may not; but, that their character is determined in part by local circumstances is clear, and in this way are produced the above-named osteoid, melanoid, epithelial, scirrhous, and encephaloid diseases. When, also, we find these growths presenting the same identical characters throughout the body, we recognise the local work.

It would follow that, if an osteoid tumour of an internal organ be not primary, but always follows the production of a local one on a bone, it must have been derived from the latter, and, therefore, there must have been a time in the history of the case when the primary growth was not sufficiently well developed to infect the system. Whether this time can be practically known to the surgeon, is another question. In epithelioma, where the seeds are sown as well as grow with more difficulty, a period in which eradication may be effected does exist. If a case be taken hypothetically, that a growth of cells has sprung up in a part of the body from a purely local cause, and that elementary particles of those cells are ever ready to pass into the lymphatic and venous circulation to be propagated in distant parts, the chances are immensely against any surgeon removing that growth in its entirety, at such a time when it has been first discovered, without leaving a cell behind. The whole theory of cancer, its terrible nature and malignancy, means that it propagates through the system. When the surgeon operates, he often knows that the adjacent parts are involved, or, if he do not, they may often be found (if the patient die after the operation) to be so by naked eye or microscopic inspection. In fact, it were about as impossible to remove a mass of cells, numbering millions in multitude, without leaving some behind, as it would be to endeavour to eradicate a mass of weeds from a garden so that not a single one should spring up again. With this almost supreme impossibility of a surgeon being able to remove a soft mass of cells without leaving some behind, I do not know why he should have recourse to a theory that the seeds of the disease are in the constitution; he does not say this when he fails to arrest the effects of a venomous bite by cauterisation, or the results of syphilis by excision of the chancre.

According to a prevailing view, there were different forms of cancer, possessing different degrees of malignancy, which, of course, imply different degrees of intensity of the cancerous diathesis; but it can be clearly shown that these varieties of malignancy are due to accidental causes alone. For let there be two persons, man and woman, exactly alike in every respect; let them be, in fact, twins, with the same predispositions, and let the one have a blow on the testis and the other a blow on the mamma; we know, from experience, that in the one case the cancer (if it occurred) would be scirrhous, and, in the other case, encephaloid, the differences being due to local causes, and yet the man might only survive the appearance of the disease six months, whereas the woman might live six years.

Then, again, the various degrees of malignancy, as described by some authors, are clearly due to the difficulties and facilities of removal; and, in consequence, malignant disease of the tongue is a worse form than malignant disease of the lip or scrotum.

Cancer may exist for years without any evidence of constitutional disturbance, as seen occasionally in the breast. It may also dry up, and be, in fact, cured, which is also sometimes seen in the breast, and occasionally in the internal organs.

A cancerous cachexia has been held by some as indicative of a prior constitutional cause operating in the system, but more careful observations show that the so-called malignant aspect attaches itself to internal cancers of vital organs and not to external tumours. With the latter, patients look fresh and fat, and with diseases other than cancerous affecting mortally the liver and stomach, the same cachectic aspect is apparent.

Hereditary tendency, as described by many authors, appears to be almost in proportion to the readiness with which disease is recognised. Thus it is said to be more easily traceable in insanity than any other disorder, but this may be owing to aberrations of intellect being more perceptible than aberrations of the functions of other organs, as the liver; and, so it is, that tubercle, cancer, etc., are picked out as evincing hereditary tendencies to develop themselves. At present I think we can say no more than that the question of diathesis is one of the utmost importance; that people are constituted differently, and have proclivities to particular morbid changes, but my own experience is that there is no more hereditary proclivity to cancer than any other morbid condition.

* On the Value of the Study of Morbid Anatomy (*Guy's Hospital Reports*, 1865).