TRANSACTIONS

OF THE

ETHNOLOGICAL SOCIETY OF LONDON.

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OF LONDON.

VOL. V.

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T. RICHARDS, PRINTER, 37, GREAT QUEEN STREET.

Ethnological Society of London,

FOR THE

STUDY OF THE HUMAN RACE IN ALL ITS VARIETIES, AND IN ALL THE PHASES OF ITS HISTORY AND PROGRESS.

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[*Letter to the President, read January 9th*, 1866.]

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Niddry Lodge, Kensington, W.

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of Scotland; so this man is equivalent to a Barra Celt. The man was a little higher than my shoulder, eyes blue, hair light, cheek bones broad and square, eyes set with an upward turn in the corners; dress, a blue frock with a broad belt fastened round the loins. He speaks Lapp and Norse, and says he has fished cod for three winters off the islands. His tribe travel over the mountains to Sweden with a large herd of deer. A Fjeld Finn (mountain Lapp) of his acquaintance once came with his herd to the Loffotens, but the climate did not suit. There was little moss and much snow in winter, which, from alternating damp and warmth, and frost, freezes so hard, that the deer cannot clear it away with their feet and horns as they do elsewhere. The Lapp having got as far south as he could, moved back and swam his herd over all the sounds till he got to the narrows, where he crossed to Offoten. There the winter's snow is dry and dusty, and his beasts could scrape up a moss harvest. This range of wandering is equivalent in direction to a migration from Aberdeen to Barra, and back from Barra to Aberdeen; but the distance traversed is far greater. It is about equal to ten degrees on the meridian. He used no boat, but crossed on water "skidor," things like snow shoes, on which men stand and paddle themselves over narrow sounds. A considerable number of families wander about this tract, just within the Arctic circle, and close to the largest of the Norwegian glacier districts. I may remark that a tribe of Indians lately (1864) crossed the Straits of Belleisle, which are in the latitude of the Straits of Dover and about as wide, on sea ice. They landed in Newfoundland to hunt wild reindeer, which there abound. They used no boats, and some were armed with bows and arrows.

July 30.—Measured a Lapp on board, near Offoten: four feet eight, dark blueish eyes, small scanty beard, age fifty, strong, quick, active, very dark brown hair, slightly touched with grey high cheek bones, narrow chin.

July 31.—At Tromsö are many Lapps and a camp with deer. Did not visit them myself, as I had seen them more than once. An English party who visited the camp took the following heights:—

Man	...	...	4 ft. 11½ ins.
Do.	...	...	4 10
Woman	...	...	4 6

From this point northwards the population is scanty, and consists of three distinct races. 1. "Quains," who are Finlanders, and farmers, who have migrated westwards, and who still migrate in large numbers. They cross from Sweden and Russia in spring to fish in the open sea off Norway during the winter, and return in autumn to look after crops. Their yearly migration is equal to

about ten degrees of latitude. In this they resemble the Highlanders of the west of Scotland, who have fixed habitations, but nevertheless wander a great deal in search of employment. The Quains are a tall fair-haired race, very persevering, hard to move, but once started very hard to stop. Their language has a strong relationship to Lapp.

2. Norwegians, about whom nothing need be said. They and their language are very like Scotchmen and Scotch. They wander a great deal, but they use roads, carriages, and steam-boats.

3. Lapps or Finns, who are quick, active, clever, idle, and avaricious, very easily moved and turned aside. They will not work even for a high bribe unless they chance to fancy the job; but, when they choose, they can and do work hard. They carry heavy back loads for others, fish in the sea, in the rivers, and in the lakes, shoot with very bad rifles, snare birds, row and pole boats, and some even cultivate grass. The race is no longer pure, but the purest specimens of the breed are to be found amongst the mountain herdsmen. Along the coast, Lapps, Finns, Quains, and Norwegians, marry and cross, wear each other's costumes and speak each others language, but, with all this crossing, the Lapp characteristics are as easily recognised as the marked features of a Celt are in England.

At Hammerfest, August 2, saw a great many Lapps in full costume. All were little, most bandy legged, the women were shy and frightened, and ran away from the English party, who landed from the steamer and walked ten abreast through the town, followed by a mixed crowd of Russians, Quains, Lapps, and sailors from all parts.

August 3.—Saw a Lapp camp on Maggerö, the most northern land in Europe. Three smoked tents were pitched close to the sea beneath a cliff. This tribe have deer, and boats, and live partly by fishing. They winter on the main land, and swim their deer over the sounds. The temperature of the sea was 44°, air 46°, and snow lay in patches close to the water. Tropical beans are commonly found in this region, which proves the existence of a warm current, which makes winter fishing possible, and keeps the sea clear of ice at all times.

The steamer runs up a number of fjords hereabouts, and many natives come on board. They wore the Tana dress; square caps, blue frocks embroidered with stripes of many colours, tight leggings, and comagas. These are peaked shoes stuffed with hay. They were generally fair and tolerably well grown, being half breeds between Quains and Lapps. The water in these fjords was 52°, air, at 8 a.m. 13th, 48°.

A Lapp schoolmaster was on board this day. His father was a Nomad, who died at the age of ninety-four. He speaks Lapp,

Quain, and Norsk, and has a smattering of Greek, Latin, German, and French; he knows something of geography and "philosophy," and kept up a hot fire of words with a talking Norwegian who was on board. He gave as good as he got. Height five feet one, eyes set straight and blue, nose aquiline, forehead square and well made, not very high, cheek bones broad, chin small. Generally he looked rather like a dapper little Frenchman, and his manner was like that of a mercurial Gaul. He was formerly interpreter to the courts, but he never could be made to put questions or give answers accurately. His own chatter always broke in, and he was dismissed from that service. This trait broke out in his conversations with me. When I asked for a Lapp word, he answered with a long, rapid, rambling discourse upon the value of some letter in the word, and so I let him chatter, and bow, and grin, and watched him curiously. I was told that he had taken a vast fancy to me, probably as a good listener. He shook hands warmly at parting. Lector Friis, Professor of Lapp in the college at Christiania, was on board. He has more knowledge of Lapps than any man I ever met, and probably knows more about them than any one now living. He has a large collection of excellent photographs made this year, 1865, and he has also a large collection of popular tales in Lapp vernacular, which it is to be hoped he will publish. I mention him, as the President of the Ethnological Society may wish to cultivate the acquaintance of a scientific Norwegian gentleman. At Wardö, the town is built on a low isthmus between low islands of flagstone. The isthmus is made of coral sand and shells. The church is built on this bed, and graves are dug in coral. It is manifest that the whole coast is rising, and according to numerous records it has risen within historical times. In digging the foundation of a new house by the road-side, the men found a deer's horn, a whale's bone, and a horn spoon, about six feet under the surface, and about thirty above the sea. The upper ground is made of layers of earth and fish-bones, flesh-bones, and ashes. The fashion of the day is to build conical huts of turf and sticks, and to throw the debris of meals and fires on the floor. The hut is only occupied during part of the year, and it is easily damaged. The fall of a few huts and the debris of a few hungry generations would soon make a heap six feet deep, and a street of Lapps would make the "formation" under which the spoon was found. It was black as ebony from age and peat, and the fashion of it is the modern fashion. The fort has a stone with the date 1737. I mention the spoon as a case of modern kitchen-midden growth with a date marked by the rise of land, and recorded by written documents and oral tradition.

August 6, Sud Waranger, lots of Lapps came on board. Measured some:

5 ft.	1½ ins.	
5	1	
5	1	
5	4½	
5	4	
5	4	a mountaineer
4	5½	a woman

Hair black, dark brown and waving, fair and curled. Eyes blue, one man brown. All yellow-skinned. They were strong, square built, bandy-legged, quick and lively, full of fun, curiosity, and chaff. One of our party went up a rope hand over hand, the Lapps followed suit immediately, and did it well.

Pasvik, August 7.—Saw the Russian Ländsmand pass up the river with three boats manned by "Skoltter Finns." The men poled up the rapids with great skill and power, waded and dragged, and finally hauled boats and baggage over large stones to pass the fall. They were all little men, but very strongly built. One little fellow was forty-two inches round the chest, and made like a pocket Hercules. This tribe is generally fair, with light blue eyes. The Russian official paid nothing, but ordered whom he would to work for government; I could get nobody to work for me, though I offered double pay.

August 11.—On the shore of Enare Lake, fell in with a tribe of pure Lapps. The man had hardly any beard, his hair was long, black, straight, and shiny, his eyes dark brown, his face very marked, pointed cheek bones, angular eyes, and small chin; his figure slender, spare, stringy rather than muscular. The women were like him, but fatter and very ugly. They were well and neatly dressed in their costume. They had deer in the neighbourhood and boats on the lake shore. They sold dried fish to a party of Quains, who were travelling back to the Baltic side. The Quains were big, burly, noisy, hardy, fair men; the Lapps quiet and grave. The women kept quietly working at comagas, while the men sauntered about amongst the travellers, and we left them busily working and idling. Their only shelter was a sail. Along the banks of this lake are numerous Lapp camps and a few fixed houses; at the southern end are farms where corn is grown. These are probably the most northern of all corn fields, about 69° N.

From these settlements we crossed the watershed with a lot of porters and a reindeer with a pack-saddle. On the hill, a herd of deer came about us, and two were caught and harnessed. They were tamer than horses turned out to graze on a highland moor, and they worked as patiently as any ordinary beast of burden. We saw no more Lapps on the course of the Kemi river, which we followed to the sea. The Quains make their travelling diet of rye bread and butter, and sleep on the ground.

The climate in which Lapps flourish is that which suits deer and grows deer pasture. In this unusually fine summer, the frosts began in Kemi Lapp-mark as soon as the sun begun to set. Water was frozen in our kettle at the south end of the Enare lake, about lat. 69° N., on the 12th of August, and thenceforth it froze every night till we got to the Gulf of Bothnia, lat. 66° (August 27th). In the day, the heat was intense. Close to the sea, a day's march from the Waranger fjord, thermometer was 82° in the shade. On the 9th of August it was 78°; and 80° on the grass on the 8th, at the sea-side.

The vegetation on the high ground between Enare and the Baltic, at about 1200 to 1400 feet, is grey moss, three inches long at least; walking on it is like treading on brittle snow. Below this region is a zone of birch and scattered pines, and these lower down form vast forests with marshy ground. Travelling in summer is on foot, and by water on the rivers; in winter with deer over every thing in polks. It is said that the Russian government are about to make a road to Enare.* About 1000 Quains crossed and recrossed to and from the fishing this year, dragged by deer driven by Lapps. If the traffic is so great now, the road will be used. The country is made of drift, chiefly sand and rolled stones. Bare rocks are few and far between, and much weathered.

After travelling through Finland, it seems to me that the Lapps are a very different race, or that the Fins or Quains or Karelsk have been crossed with Scandinavians, Germans, or Russians. Any how, the Lapps are a marked race amongst Europeans, so marked that a good specimen could hardly escape notice anywhere.

The following extract from "Frost and Fire," vol. I., p. 312, (Edinburgh, 1865), gives some further information as to the habits of the Lapps, who wander from sea to sea about the Arctic circle in Scandinavia :—

"*Saturday, 25th.*—Heavy rain all day. For something to do, sketched the clerk's daughter, who was a very pretty Swedish maiden. In the evening, the parson told me his early history. How he lost his father when quite a child, and how his mother, 'like a sea-bird with her young, flitted to the coast to Pitea.' How, when he went to college, he struggled with poverty; and how, at last, having vanquished all difficulties, he returned to his native valley a priest. 'And when I saw the hills again that I remembered so well, and the peaks that I had not seen for so

* Enare träsk, or lake, is one of the largest in Europe. It is very incorrectly drawn on maps. It is full of large islands, and about a hundred miles long.

many years, I don't know how I felt,' said the worthy man, 'but I began to greet' (grota)."

"*August*, 1850, *Quickjok in Swedish Lappland.*—The natives are a strange race. They were coming down from their summer haunts at this season, and we went to visit them on the way to a famous fall and iron mountain, which we never reached.

"The last discovery, April 1864, which bears on "the antiquity of man," proves that tribes, which once lived in caves in Southern France, fed on large reindeer. Their bone implements have been found, and some are in the British Museum. The ashes of their fires remain; the debris of their meals are there—the bones of reindeer, cracked to get at the marrow, sucked, and then thrown to be gnawed by dogs. As these facts bear upon climate, the ways of living Lapps have some geological interest.

"According to Whalenberg, a famous Swedish naturalist quoted by Von Buch, the level at which a mean annual temperature of 34° prevails limits the growth of plants fit for reindeer pasture, so that Lapp camps are seldom found above this line. If so, the mean temperature in France was not lower than 34° when the old inhabitants ate reindeer venison.

"According to the same author, a mean temperature, estimated at 32⅔°, now prevails at a height of 4100 feet near Quickjok. A little further west, on the Norwegian side, 3100 feet is the level at which only a few spots of rock peer through snow in summer. Two thousand feet higher, at an estimated mean temperature of 30°, a very few lichens grow.*

"The low limit of the fjeld Finns is the sea-level, about the North Cape. In Sweden the deer only come down in winter. There is plenty of moss pasture near the sea, but a certain fly drives deer and men to the snow. Further south, wild reindeer keep on the high tops, about Romsdal. Tame deer are kept as far south as Bergen, but they do not flourish in that wet climate, and they are kept on the high fjeld. They never come down to the sea or to rich grass pasture, but seem to prefer cold, and moss which grows in cold regions. If the French deer were of the same nature, their existence proves a cold climate in France.

"There were plenty of deer, for they were eaten in large numbers. They could not flourish without plenty of moss. Moss does not grow abundantly without cold. The presence of reindeer seems to indicate a mean temperature of 36°, instead of 55°—the climate of Jockmok in central France. There must be a reason for the change in temperature. Whatever the past may have been, this is a sketch from the life, of a tribe of herdsmen whose herds are deer, whose châlets are tents, and whose summer

* Von Buch's "Travels", 308.

and winter pastures are never far from snow. Similar tribes may have come down from the snows of the Alps and Pyrenees.*

"By the time we got up to the kotas, we had passed through some sharp showers. The Lapps had now arrived, and a tent was pitched beside the conical hut. In the kota I found a dirty old woman and a lot of dirty children sitting round a fire made in the middle of a ring of stones, and looking very picturesque in the half light that streamed down through the chimney. There was a heap of gear and human creatures, iron pots and wooden bowls, dogs and deerskins, piled in admirable confusion; and the mother was engaged in a hunt amongst the tangled locks of the youngest of her brood. Not liking this neighbourhood, went out and made my own shelter, and got on a greatcoat, for it was cold and misty and comfortless after the warm glen. Tried the tent, and found a very fine-looking Lapp woman sitting on a heap of deerskins, serving out coffee and reindeer cream to the clocker with a quaint silver spoon. She had silver bracelets and a couple of silver rings; and altogether, with her black hair and dark brown eyes glancing in the firelight, she looked eastern and magnificent. Set to work with the paint-box instanter, but she would not sit still for a moment, and it was almost dark. Gave it up, and went out amongst the deer, which had gathered round the camp to be milked. There were about six hundred in the herd, and some old stags were quite magnificent. One had fourteen points on one brow antler, and about forty in all. He looked quite colossal in the evening mist. A small imp of a boy, about three feet high, and a child just able to toddle, were wandering about amongst the deer. The boy was amusing himself by catching the largest stags with a lasso, to pull the loose velvet from their antlers. He never missed his throw, and when he had the noose round the beast's neck, it was grand to see him set his heels on the ground and haul himself in, hand over hand, till he got the noose round the stag's nose. Then he had him safe and quiet, with the nose and neck tied together, and then they posed for a picture of savage life. The smaller imp was practising on the calves and hinds, and screaming at them in emulation of the bigger brother. He kept kicking the big stags which lay on the ground with the most perfect familiarity. After I got packed into my nest, the whole herd almost walked over me. I heard their heels clicking beside my head, as they went grunting like a herd of swine. A Lapp followed, shouting a deep guttural Ho! at intervals, and several dogs followed yelping at his heels. It was a queer feeling to lie there on the bare hill-side, and hear the rushing sound of

* Reindeer do live without moss in the present climate of London, at the Zoological Gardens, but they are prisoners.

their feet sweep through the low scrubby brush, and gradually fade away as they trotted off to the sound of Ho! Presently came the patter of rain, and the sough of a rushing wind that shook the willow-bushes, and swept moaning over the hill. My low shelter was warm and dry, and I slept soundly.

"27th.—Awakened by hearing the Lapps chattering; poked my head out, and found everything wrapped in thick mist. Pulled my head in again to brood over my ill luck, and gather courage for a plunge into air. Rolled out at last, and scrambled into a kota, where I found Marcus smoking as usual. All the children were scrambling about their mother, who was getting ready for milking the deer. Got some food, packed up, and talked about this unattainable place, Autsik. No one who was at home could find the way in such a mist; so there was nothing for it but to wait for clear weather, or the father of the family, who was away. Watched the day's proceedings till the mist changed into heavy rain; when I pitched my tent again, to keep a dry bed. Spent the day in sketching and studying Lapps.

"The rain came through the tent, and in the hut it was impossible even to sit on the ground without bending forward. The children would look over my shoulder, to my terror, so sketching was not easy. There were five dogs, three children, the old woman, Marcus, and myself; and all day long, the handsome lady from next door, and her husband, and a couple of quaint mangy looking old fellows, kept popping in to see how the stranger got on. The kota itself was a cone of birch sticks and green turf, about seven feet high, and twelve or fourteen in diameter. It was close quarters, but the scene was worth the discomfort. No one seemed to care a rap for rain, or fear colds, more than the deer. Breakfast consisted of milk and cheese and boiled fish; and whenever any dish had been used, the old dame carefully wiped it out with her crooked forefinger, and then licked the finger and every attainable place in the dish itself. It was wonderful to see her dexterity, and to hear her talk while she polished the dish. When one of the children spilt some milk on its deerskin dress, it was all gathered and licked up with the same tongue which found time to scold the offender.

"Dinner was reindeer's flesh boiled. The children cracked the bones on the stones after they had polished the outside, and they sucked up the marrow; then the dogs, who had not dared to steal, were called in their turn, and got the scraps. Wooden bowls were set apart for the dogs. There was an extra meal after dinner on the arrival of papa, who came dripping like a river-god, with a supply of bread, butter, and salt fish, stowed in a leathern-bag. This was evidently an unusual treat, so it was all consumed. The father was a fine man for a Lapp, forty years

old, and five feet high; he had walked fourteen miles in a deluge, but he only wrung his tall conical blue cap to keep the water from trickling down his nose, and then he sat down to watch his children enjoy the feast, while a brother and a young girl, who came with him, joined our circle. We were decidedly too thick, so I went next door. There I found nobody at home but a black dog. Seated myself on a heap of deerskins to have a quiet pipe, and was startled by a loud Lapp exclamation, which came from an old fellow on whom I had sat. Got up laughing, and made Marcus brew coffee for all hands.

"The tent was about as big as the kota, made of striped stuff, so coarse that I could almost see through it, as through a veil.

"It was patched here and there, and smoked brown near the top. It did not touch the ground anywhere, and at the smallest disturbance three dogs plunged out barking. They popped in when the row was over, and curled themselves up amongst the gear. The door was a canvas slip, like a boat's jib, with cross-sticks fastened to it; and it was to windward, so that it could not blow open. No one could come in without stooping, kneeling, and turning sideways, and I constantly stuck fast when I tried. The canvas was stretched by poles, which were joined at the top with considerable skill. This dwelling amounts to a large umbrella, for it gives little shelter from the wind. The life must be healthy; red blood was glowing under the brown skins of old and young, and they were bright-eyed, clear, healthy, flat-nosed, square-headed, black-haired, merry beings. The owners of the tent were married in winter, and had lots of gear, silver ornaments, bone contrivances, one of which was for weaving coloured woollen bands; baskets of ingenious shapes, very well made, of birch and fir roots variously coloured. They all wore long knives, and the newly-married coupled smoked and drank coffee at intervals all day.

"Slept in my own tent, nevertheless, and heard the rain pattering close to my nose, while the wind shook the wands till I thought the cover would fly off to Norway.

"28*th.*—Cold, wet, and nasty weather. Found the Lapps getting up, the old woman licking the dishes for breakfast, the father smoking while putting on the shoes of his youngest child. He first spread out a hatful of fine hay made from a particular kind of grass, and then he tossed it on the stones beside the fire till it was perfectly dry. Then the boy was seized by the leg and laid on his back, while foot and hay were crammed and stuffed into a miniature Lapp shoe. It was a work of some difficulty to make all fit nicely, and bind it all neatly round the leg and the leather leggings. They made a good group, the father and son, and a black puppy that would nibble the boy's rosy cheeks as he lay sprawling on the ground.

"After breakfast, gave up my trip to this fall, as the weather seemed fairly broken. Got under weigh at twelve in a fair blink, and walked a little to one side of my train, admiring. There were two Lapps and the man from Niavvi with my goods on their backs, and a picturesque old volunteer with a birch-bark knapsack strapped on the top of his deerskin shirt. We soon picked up a boy with a milk-barrel slung on his back, and each of us carried a long pole. We marched single file over the fjeld, plodding through bog and muir till we got to a second camp. Here were two tents and a portable larder pitched under a high rock for shelter, with the first of the birch trees close beside them for fire; a burn brawling past for water, and distant peeps of forest and lake, low hills and flat plains, peering through the edge of the mist, for a landscape.

"All our party laid down their loads, and one by one they slid into the largest tent. I followed, and sat down, and said, 'Puarist,' and lit my pipe like the rest. There were about a dozen of all ages seated round the fire besides our party. The tent was far larger than those which I had seen. The people were clean and well dressed, and they were enjoying a cup of coffee all round when we came in. The cream was served out with a silver spoon by a young lady, who carefully licked it, and tucked it into a bag which hung round her neck like a necklace. That done, she went on weaving a very pretty basket-work bottle. Another really pretty woman, with large dark eyes, sat in a corner making a garment of some sort, while a miniature Lapp, with its arms round her neck, peeped over her shoulder, and one a size larger stood beside her and stared. There was no time to draw, so took a mental picture, bid them Te-at-ast-ain, and slid out as we came. The whole of the black pack plunged out by their own way, and barked at us. The missus, sliding out after us, went to her travelling store—a bundle of clothes on a triangle of poles—took out some dainty, and gave it to the boy with a kiss. We took the same open order, and marched down hill to the old route.

"These Swedish Lapps are small of stature, very hardy, good sturdy walkers, utterly careless about wind and weather. They are curious, but not so curious as the Swedes. They are not free with their goods; they are not hospitable. No Lapp ever offered me milk or coffee when he helped himself. They gave what I asked for, and I paid; but other hill-folk offer their best to the stranger.

"After a pretty long experience of Lapps elsewhere, and after reading the accounts of other travellers, this first impression has been confirmed. No Lapp has ever offered me so much as a scrap of food, or a drop of milk; but every Lapp I know was ready to

sell anything, and greedy for silver, which is hoarded and hidden under ground.

"From this place dropped down to Lulea, where the usual life of a hard-drinking northern town seems to go on. Thence steamed to Sundsvall with a strange mixed crew—a Swede, Whalenburg, who had spent seven years in South Africa, a German butterfly-hunter from Berlin, who had been up to Quickjok before me, and many other travellers and travelled men."

It is somewhat remarkable that traditions still survive in the Highlands of Scotland which seem to be derived from the habits of Scotch tribes like Lapps in our day. Stories are told in Sutherland about a "witch" who milked deer:—a "ghost" once became acquainted with a forester, and at his suggestion packed all her plenishing on a herd of deer, when forced to flit by another and a bigger "ghost": the green mounds in which "fairies" are supposed to dwell closely resemble the outside of Lapp huts. The fairies themselves are not represented as airy creatures in gauze wings and spangles; but they appear in traditions as small cunning people, eating and drinking, living close at hand in their green mounds, stealing children and cattle, milk and food, from their bigger neighbours. They are uncanny, but so are Lapps. My own opinion is that these Scotch traditions relate to the tribes who made kitchen-middens and lake dwellings in Scotland, and that they were allied to Lapps.

II.—*On the History of the Burmah Race.* By LIEUT-COLONEL A. P. PHAYRE, C.B., Chief Commissioner of British Burmah.

[*Read Jan. 9th*, 1866.]

THE Chronicles of the Kings of Burma, called *Maha Radza Weng*, are preserved with great care. Some years ago, the present writer was presented by the king of Burma with a complete copy of this national work. His Majesty is himself a man of learning, and the edition from which the information now presented is derived, appears to have been compiled under his direction with careful research. Supposed errors of former editions are pointed out, and original authorities are in such cases quoted. All that part of the history, which refers to cosmogony, and the dynasties of kings in India, is derived from Pali books, and has no more real connection with Burmese history than the Hebrew annals have with British history. The object of the present paper is to make an epitome of the Burmese narrative, presenting only an outline of the main facts, yet omitting nothing which is necessary to be known to understand the history of the Burmese race as written by themselves.

The *Maha Radza Weng* commences with describing the self-development of the world, and the appearance of man therein. The system of cosmogony has, together with the Budhist philosophy and religion, been derived from India, and the Burmese kings profess to trace their descent from the Budhist kings of Kappilawot of the Sakya tribe, to which race Gautama Budha belonged. The history contains the Budhist account of the first formation of human society; the election of a king, and the grant to him of a share of the produce of the soil. These legends constitute to this day the foundation of the authority, temporal and spiritual, of the Burmese kings. The foundation of that authority they continually refer to, and it is ever present to the minds of their subjects. It is proper therefore briefly to record that portion of their national history.

The history opens with announcing that, after a cycle of the great revolutions of the universe, wherein worlds are destroyed by fire, by water, and by air, had elapsed, the present earth emerged from a deluge. A delicious substance, like the ambrosia of the gods, was left by the subsiding water spread over the earth. The throne of Gautama first appeared above the water. At the same time, the beings called Brahma, who live in the upper world or heavenly regions, had accomplished their destinies. They then changed their state, and became beings with corporeal frames,

but without sex.* Their bodies shone with their own light, and full of joy they soared like birds in the expanse of heaven. From eating of the ambrosia, the light of the bodies of these beings gradually declined, and, because of the darkness, they became sore afraid. Because of the glory of those beings, and because also of the eternally established order of nature, the sun, of gold within and glass without, fifty yoodzanas† in diameter, and one hundred and fifty in circumference, appeared above the great Eastern island (of the solar system), and threw forth his light. The inhabitants of the world were then relieved from fear and called the sun (in Pali) Thoo-ree-ya.

In like manner the first appearance of the moon and stars is described; the central mount Myenmo (Meru), and the whole sekya or solar system. The history then proceeds:—

"Of the world's first inhabitants, some were handsome, some not handsome. As the handsome ones despised the others, in consequence of the haughty evil thoughts thus engendered, the ambrosia of the earth disappeared, and they ate of the crust of the earth. Then, in process of time, selfishness and desire increasing, the earth's surface crust disappeared. They then ate of a sweet creeping plant; when that disappeared, the Thalay rice came up, which, as they gathered, it was renewed morning and evening. Placing it in a stone jar, flames issued and it was prepared for food. Its flavour was whatever the eater desired. From eating of this food, human passions were developed, and the beings became men and women. Then, as evil deeds began to prevail, the wise censured and severely treated the others. The latter, wishing to hide their evil deeds, built houses. Then, the lazy among them having stored up the food, the Thalay rice acquired husk, with a coating of coarse and fine bran, and where it once had appeared, it did not sprout again. They then said, 'It is good for us to divide among us the Thalay rice plants, to possess each his own.' Then they distributed the Thalay rice plants. After that, an unprincipled one among them, fearing that his own share would not suffice, stole the share of another. Once and twice he was warned; in the third offence he was beaten. From that time theft, falsehood, and punishment existed."

The world's first inhabitants then assembled and thus consulted together: "Now wicked times have come; therefore let us select an upright religious man, one having the name and authority of a ruler, to reprove those who deserve reproof, and

* It is from these beings that the people called by Europeans Burmas, Burmans, or Burmese, take their name. In the Burmese language, the name is written *Mran-má* or *Mram-ma*, and is generally pronounced by themselves *Ba-má*. See note at the end.

† A modern *yoodzana* equals about thirteen English miles.

to expel those who deserve to be expelled, and let us give him a tenth share of our Thalay rice." This was agreed to, and an excellent man, full of glory and authority, the embryo of our Gautama Phra, being entreated to save them, was elected king, and was called Maha-tha-ma-dá. In verse it is sung that he was of pure nature, of exalted authority, and of the race of the sun.

"Like a second sun, he dispelled darkness or ignorance; his good qualities shone as the light, and from his power and authority, and from being the first of kings in acts of great diligence, he is called Manoo.* After this, men of wisdom, who desired to destroy wickedness, lived in huts in the forest, and ate only what they received in charity; they were called Brahmans. Others tilled the ground and traded; they were called wealthy men and merchants. The rest, being poor persons in humble employments, were called Soodras, or poor people. Such were the four classes of men."†

This history represents king Maha-tha-ma-dá as reigning for an *athen-khye*, being a period represented by a unit and one hundred and forty cyphers. He had twenty-eight successors who reigned in the countries of Malla and Kotha-wattee. The next dynasty, which numbered fifty-six kings, reigned in Ayooza-poora. The next, of sixty kings, reigned in Bara-na-thee, or Benares. Then eighty-four thousand kings reigned in Kap-pi-la, the native country of Gautama, in distant after times. Next, thirty-six kings reigned in Hat-li-poora. Numerous other dynasties are mentioned, which are represented as established in various countries of India, and as lasting for many millions of years.

The first king after Maha-tha-ma-dá whose history is brought in as directly connected with subsequent events, is Auk-ká-kareet, king of Bara-na-thee, or Benares. It is related that this king had five queens. The eldest, named Hat-ta, had four sons and five daughters. Having given birth to these children, Hat-ta died. The king then married a young princess, who gave birth to a son, named Dzandoo. The king highly pleased, promised to confer any favour on the young queen which she might ask. Prompted by her own kindred, she asked that her son might be declared heir to the throne. After much entreaty, the king consented, and, calling his sons and daughters, gave them a retinue of followers, with elephants and horses, and they went forth to establish a country, and search for a place to build a city.

* The word appears to mean generally lawgiver or king. The word is Indian, not Burman.

† Among the four classes, it will be observed that the ruling power is placed first, according to the Budhist system. The Brahmans appear as literati and ascetics.

At this time, the embryo of Gautama Phra, a wealthy Kap-pi-la Brahman, having abandoned his house, had become a hermit in a teak forest* in the Himalaya jungles or mountains. In the *Radza-Weng-gyee*, it is called an En-gyeen forest. There the hermit had built his lodge. The princes came to the place in search of a site for a city. The hermit foresaw that a city built there would, in after time, be of great fame in Dzam-bu-dee-pa, the world of man, and advised them to build their city there and to call it Kap-pi-la-wot.† Then the princes consulted together, saying, "There are with us no king's daughters of our own race, nor are there any king's sons for our sisters; if marriages are made with other races, the children become impure; in order to preserve our race, let us put aside our eldest sister as a mother,‡ and we four marry our four younger sisters." It was done so. From that time the race became known as the Tha-kya-tha-kee race of Kap-pi-la-wot.

Regarding the origin of the Kau-le-yá princes, the elder of these four brothers, named Auk-ka-mok-kha, and the others, had put aside their elder sister Pee-yá as a mother. She was afflicted with leprosy, or a similar disease, and they determined to place her apart in a secluded spot. They had her conveyed to a cave with a dwelling covered by branches of trees., and she was left there. At that time, in Bara-na-thee, there reigned Ráma, the son of Brah-ma-dat. He being afflicted with leprosy, gave over his kingdom to his eldest son, and went into the forest in search of herbs to cure himself. He established himself in a hollow tree, and, before long, was by the use of herbs restored to health. Not far from this was the place where the princess Pee-yá was shut up. One day the princess, being alarmed by a tiger, cried aloud, and king Ráma heard her. He came to the place, made himself known, and they were married. The princess bore thirty-two sons, who were instructed by their father in all the accomplishments fit for princes. When the king of Bara-na-thee heard what had happened, he offered to resign the kingdom to his father Ráma. But Ráma refused, saying, "Here, leaving my Kalan tree, I have built a city," and from that, the city came to be called Kau-la-na-ga-rá, and thence Kau-le-ya. When the sons of king Ráma and queen Pee-yá had grown up, their mother

* The national chronicler discusses whether the forest in question consisted of sal or of teak trees. He finally decides in favour of the teak as the more dignified tree of the two, but appears to have come to a wrong conclusion.

† This appears to signify "the Kap-pi-la Brahman's place of religious duty."

‡ In Burma to this day the king's eldest daughter is not given in marriage, but remains unmarried, at least during the life of her parents.

said thus to them: "The princes of the Tha-kee race of Kap-pi-la-wot are your uncles; their daughters are fond of dress and perfumes; when they come to bathe in the river Rau-ha-nee,* you go the river bank, and, seeing your comeliness, they will love you." Their mother having said thus, the sons went to the river bank, and when the Tha-kee princesses were drying their hair after bathing, they listened to the words of the princes and followed them. When the Tha-kee princes heard this, as the race of the young men was not different, they acquiesced. Thus, commencing with king Ráma and queen Pee-yá, the Kau-le-ya tribe originated.

The Dewá-da-há kings began thus. The Tha-kee princes of Kap-pi-la-wot had a small lake where they built a pleasure-house. When the country increased, the place was called Dewá-da-há. The prince who lived there was called the Tha-kee prince of Dewá-da-há. So the three kings of Dewá-da-há, Kap-pi-la-wot, and Kau-le-ya, with numerous elephants, horses, and soldiers, carried white umbrellas, and attained to the dignity of kings of a great country.

From Auk-ka-moo-kha, king of Kap-pi-la-wot, descended, after many thousand years, king Dza-ya-the-na. His son was Thee-ha-ha-noo, and the latter's son was Thoo-dau-da-na. The sister of Thee-ha-ha-noo was Ya-thau-dha-ra. The son and daughter of Auk-ka-ka, the king of Dewá-da-há, were married to the daughter and son of king Dza-ya-the-na, of Kap-pi-la-wot. The children of the Dewá-da-ha chief were Inzana the son and Kinzana the daughter. Thee-ha-ha-noo the son of Dza-ya-the-na married Zinzana, and they had five sons, named, Thoo-dau-da-na, Dau-tau-da-na, Thek-kau-da-na, Thook-kau-da-na, and A-mee-tau-da-na; and two daughters, Amee-tá and Pa-lee-tá. Dza-ya-the-na's daughter, Ya-thau-da-ya, married Inzana, the son of the king of De-wá-da-ha, and had two sons, Dan-da-ba-nee and Thob-ba-bood-dha; and two daughters, Thi-ri-ma-há-má-ya and Pa-za-pa-tee-gaw-da-mee. The elder daughter gave birth to the Phrá Loung,† prince Theiddatta; the younger daughter gave birth to Dza-na-pa-da-ka-lya-nee, called also Roo-pa-nan-da and Nanda. Ameeta, the daughter of Thee-há-

* This appears to be the Rohini, one of the feeders of the Rapti.

† Phrá loung, *i.e.* the embryo Phrá, a term for Gautama Budha. The word *Phrá*, now adopted into the Burmese language, is, according to Professor Wilson, a corruption of the Sanscrit *Prabhu*, Lord or Master. This appears to be the most probable origin of the word. It certainly is not a pure Burmese word. The orthography of it in ancient stone inscriptions at Pugân is Bu-rhá and Pú-rhá. The Burmese have used the original much as European nations have the Pali word *Da-go-ba*. The modern word is written *Phu-rá*.

ha-noo, married Thob-ba-bood-dha, the son of In-za-na, and had a daughter Bad-da-kin-za-ná, and a son De-wa-dat.* The prince or Phra Loung Theid-dat-ta-kooma-ra, the son of king Thood-dau-da-na, married Bad-dha-kin-za-ná, called also Ya-thou-dha-ra, the daughter of Thob-ba-bood-dha, king of De-wá-da-há. They had one son, Ya-hoo-la.

The maternal grandfather of the Phra, named king In-za-na, corrected the Calendar in the year 8645, and in 67 (of the new era) the Phra Loung entered the womb of Thi-ri-ma-há-má-ya, and, when ten months were completed, he was born in the year 68, on the full of the moon, Ka-tshon. At sixteen years of age, he married Ya-thau-dha-ra, the daughter of Thob-ba-bood-dha, and for thirteen years enjoyed the life of a prince in the palace. At twenty-nine years old he went forth from the palace, and having attained Brodhahood, and preached the law during fifty-one years, he, in the year 148,† at the age of eighty, passed to Neib-ban, or in common language, died. He died in the country of Koo-thi-na-yoon, where the Malla tribe ruled. In the month Wagoung of the same year, the first Thenggá-ya-ná, or great council, was called by A-dzá-ta-that, the king of Radzagyo, and it was then agreed that that year should be counted as the year one of religion.‡

As the kings of Burma claim to be descended from the Tha-kya race of Kap-pi-la-wot to which Gautama belonged, the intermarriages of the chiefs of that tribe are thus carefully detailed in the history.

Having brought down the narrative of events to the death of Budha Gautama, the first volume of the work proceeds to give an account of the geography of the world of Dzam-boo-dee-pa, where the Budhist kings reigned. In this mythological geography, Dzam-boo-dee-pa refers to the earth generally, but that term is constantly confused by being sometimes applied to the continent of India only, the other parts of the world being considered as too insignificant, whether in extent or civilisation, to be mentioned. Dzam-boo-dee-pa, therefore, frequently represents India prominently, and the world remotely.

The great earth, or substratum of rock on which Dzam-boo-dee-pa rests, is represented as being 82,000 yoozanas in depth. On this rock rests Dzam-boo-de-pa, or the island of the Dzam-boo or Eugenia tree. It is broad at the north side, and to the south

* This De-wa-dat was the great opponent of Budha Gautama. They were first cousins by birth, and Gautama had married De-wa-dat's sister.

† This refers to the era established by king In-za-na.

‡ According to the Burmese Calendar, the year 2406 of religion commenced on the 13th of April, 1862, when the year 1224 of the common era commenced.

narrows like the forepart of a cart. This represents roughly the form of the continent of India, which shows that the ancient books followed by the history, frequently by the term Dzam-boo-dee-pa, referred to India only. From north to south it is ten thousand yoozanas long, and the same from east to west.

In the great ocean outside and which surrounds it, are five hundred small surrounding islands. Ceylon is a prominent island to the westward. At the northern extremity of Dzam-boo-dee-pa, grows the Eugenia tree with golden fruit, the size of globular waterpots.

In the Himalaya, it is stated, there are seven great lakes. From one, named Anau-tat-ta, proceed four great aqueducts. By one of these, a river issues through the elephant mouth into the western sea; by another, a river falls through the horse-mouth to the northern sea; one through the lion-mouth to the eastern sea; and one through the cow-mouth into the southern sea.

All the countries of India as mentioned in the *Maha Raza Weng*, are enumerated below, but there appears to be some confusion, resulting apparently from some states having, in the course of time, subdued others, and from the historian not knowing that some small states appear sometimes as members of a confederacy, in an extensive country occasionally called by one general name; and at other times are lost in the establishment of a monarchy.

The region of Meets-tree-ma-detha or the central land, is bounded to the east by Ga-dzeng-ga-la-ne-gon village; to the south-east by Thal-la-wa-tee river; to the south by Thé-ta-kau-nee-ka-nee-gon village; to the west by the Brahman village Dho-na; to the north by Oothi-rid-da-dza hill. In the centre is the great Bau-di tree. Around are the sixteen great countries, which are as follows:—

1. En-ga
2. Ma-ga-dá
3. Ka-thee
4. Kaw-tha-lá
5. Wits-tsee
6. Mál-lá
7. Tsé-ti-ra
8. Wan-tha
9. Koo-roo
10. Pin-tsa-la
11. Mits-tsa
12. Thoo-ra-the-na
13. A-tha-ka
14. A-wan-tee
15. Gan-dá-ra
16. Kam-bau-dza

There are also twenty-one great countries:—

1. Koo-roo
2. Thek-ka
3. Kau-tha-la
4. Ma-ga-da
5. Thee-wee
6. Ka-lin-ga
7. A-wan-tee
8. Pin-tsa-la
9. Wits-tsee
10. Gan-dá-ra
11. Tse-ti-ra
12. Weng-ga
13. Wee-dé-ha
14. Kam-bau-dza
15. Mad-da
16. Beg-ga

17. Eng-ga
18. Thee-ha-la
19. Kath-mi-ra
20. Ka-thee
21. Ban-da-wa

The great kingdoms are twenty :—

1. Ba-ra-na-thee
2. Tha-wat-tee
3. We-tha-li
4. Mi-hti-la
5. Aa-la-wi
6. Kau-tham-bee
7. Oodz-dzé-nee
8. Tek-ka-shyo-la
9. Tsam-ba
10. Tha-ga-la
11. Than-thoo-ma-ra-gi-ri
12. Ra-dza-gyo
13. Kap-pi-la-wot
14. Tha-ké-ta
15. In-da-pa-ta-na-go
16. Ook-ka-ta
17. Pa-ta-li-poot
18. Dze-loot-ta-ra
19. Theng-kath-tha-na-go
20. Koo-thee-na-yon

Such were the countries in the time of Gautama.

The countries reigned over by all the great kings, commencing from Maha-tha-ma-dá, and numbering three hundred and thirty-four thousand five hundred and sixty-nine kings, were :—

1. Ko-tha-wa-tee
2. Ra-dza-gyo
3. Mi-hti-la
4. Bá-ra-na-thee
5. Kappi-la
6. Hat-ti-poo-ra
7. E-ka-tsek-khoo
8. Wa-tsee-ra-wot-tee
9. Ma-dhoo-ra
10. Aree-ta-poo-ra
11. In-da-pa-ta-na-go
12. Kau-thamb-bee
13. Kan-na-gantz-tsha
14. Raw-tsa-na
15. Tsam-ba
16. Tek-ka-so
17. Ko-thi-na-yon
18. Ma-lit-ti-ya
19. Kap-pi-la-wot
20. Kau-li-ya
21. De-wa-da-há

The first volume of the history then concludes with maxims for kings and people which need not be entered here.

The second volume opens with the following words :—

"In the first part we have narrated the history of the kings, commencing from Mahá Thama-dá up to the time of the excellent Phra Gautama, there being three hundred and thirty-four thousand five hundred and sixty-nine kings in lineal succession. In this second portion we shall relate the history of thirty kings commencing from Peim-ba-tha-ra up to King Dham-ma-thau-ka."

Of these princes it will not be necessary to relate more than what is essential in order to understand the history of Burmah. The history first refers to the country of Ra-dza-gyo, and then follows the stream of Budhist religion and authority, until it widens into the broad channel of sovereignty under Dham-ma-thau-ka, whose seat of empire was at Pa-ti-li-poot.

Thoodhau-dha-na, King of the Thek-ka state, in the country of Kap-pi-la-wot, had a great friendship for Bha-gee-nee-ya, King of Ra-dza-gyo in Magadha. The Prince Theid-dhat-ta had also a great friendship for the Prince of Ra-dza-gyo, Beem-ba-thá-ya. The latter died eight years before Guatama attained *neibban*,

and his son A-dzá-ta-that succeeded. A-dzá-ta-that reigned thirty-two years, until the year 24 of religion, (B.C. 519,) when he was succeeded by his son Oo-da-ya-bad-da.

A-dza-ta-that formed a friendship with that base man De-wa-dat, and, having murdered his father, was condemned to hell; but, after a long term of suffering, he was to be permitted to be born as a Pits-tsi-ka-Budha. He was succeeded by his son Oo-da-ya-bad-da, who reigned until the year 40 of religion, when his son A-noo-rood-da conspired and reigned in his stead.

In the year 72 of religion, his descendant Na-ga-da-tha was set aside by the people as one of a parricide race, and a nobleman named Thoo-thoo-na-ga succeeded him. His history is as follows. In the country of We-tha-li,* the Leitz-tsha-wee princes assembled and consulted thus: "Our country has all the elements of greatness, yet is quiet when exertion is called for. Why are other countries constantly stirred up?" They decided that the country was quiet because there were no courtezans; they therefore caused the daughter of a wealthy man, one of their own race, to be so appointed. One of the Leitz-tsha-wee princes took her to his own house. She gave birth to a son. The child was put into a jar and thrown outside the city. The jar was found by some of the citizens, opened, and the child was taken and brought up by a noble. He was named Thoo-thoo-na-ga, because the city Naga had uttered a sound like *thoo-thoo*, which led to the discovery of the jar.

At a time when King A-dza-ta-that meditated an attack against We-tha-li, he sent the Brahman Wa-tha-ka-ya to Gautama, who replied that the We-tha-li princes observed the law, and were destined to long greatness. The king said to the Brahman, "What shall we do?" The Brahman replied, "Make show of banishing me from the country; I will first go and destroy the unanimity of the We-tha-li princes, and you can then march and conquer the country." In three years the plan was accomplished, and, by this means, the child Thoo-thoo-na-ga, who had become a noble, was brought to Ra-dza-gyo, and eventually became king.

King Thoo-thoo-na-ga lived in We-tha-li. After a reign of eighteen years, he died in the year of religion 90.

He was succeeded by his son Ka-la-thau-ka. In his reign, in the year of religion 100, the second great Council was held in We-tha-li, under Shen-ya-tha-tay, with 700 Rahandas; he died in the year of religion 118. On his death, his son Bad-da-thé-na, with nine younger brothers, reigned for twenty-two years. In

* We-tha-li appears to have been one of the states of the Leitz-tsha-we princes.

the year 140, the last of these ten brothers, named Pin-za-ma-ka, was king. He was killed by one Kho-mhoo-nan-da, who became king, with the name of Oog-ga-the-na. His history was as follows: On the border of the country of We-tha-li, there lived a robber chief, who, at the head of a large band, plundered the country. Once, in plundering a party of merchants, a porter belonging to them joined the robbers. He in time became the captain of the band, and was called Kho-thoo-nan-da. Gradually he acquired power, and at length usurped the throne, putting to death the king, Pin-za-ma-ka.

Oog-ga-thé-na did not live long. His eight younger brothers succeeded him. The last of them was Da-na-nan-da-meng. He was murdered by Dza-nek-ka the Brahman, and Prince Tsan-da-got-ta of the Mau-re-ya line was placed on the throne. He was king of all Dzam-bu-dee-pa.

The history of Mau-re-ya is thus: "In the time of the Phra, some of the Tha-kee princes went and built a city in the Himalaya forests. It was called Mau-re-ya, from peacocks being numerous there, or from the city being in the shape of a peacock's neck. Dza-nek-ka, the Brahman, was an inhabitant of the country of Tek-ka-tho. His father died early, and he was brought up under the care of his mother. He, when young, was noted for his learning and accomplishments. It was predicted that he would become a king, but at the request of his mother, he broke his canine teeth and vowed never to become a king. He came to the country of Pa-ti-li-poot, in the reign of Da-na-nan-da. He became acquainted with the king's son, Pap-pa-ta, and persuaded him to leave the city and live in the forest. He endeavoured to find a person to substitute for prince Pap-pa-ta as successor to the throne, and he found Tsan-da-got-ta. His history is thus related. Once the country of Mau-re-ya was attacked and subdued. The queen, being pregnant, fled to the country of Pa-ti-li-poot, and there gave birth to a son. The child was put in an earthen vessel and placed near a cow enclosure. The cowherd found him, and brought him up with his own children. A friend of the cowherd, a hunter, loved the child and asked for him. The child then was made over to the hunter. He displayed great power and ability, and the Brahman Dza-nek-ka, hearing thereof, gained possession of him from the hunter. The Brahman brought him up until he was full grown. He was named Tsan-da-got-ta. By an artifice Tsan-da-got-ta was induced to murder prince Pap-pa-ta. Tsan-da-got-ta, then under the influence of Dza-nek-ka, gradually collected forces, attacked villages, and at last expelled king Da-na-nan-da from Pa-ti-li-poot.

Tsan-da-got-ta then was consecrated king. He had a son born

to him who was named Bein-du-tha-ya. Tsan-da-got-ta died after a reign of twenty-four years, in the year of religion 186 = B.C. 357.

His son, Bein-doo-tha-ya, married a princess of the Mau-re-ya race, who gave birth to Dham-ma-thau-ka. This prince appears to have murdered all his father's sons by other mothers than his own. Bein-doo-tha-ya either died naturally or was murdered in 214 of religion.

Dham-ma-thau-ka attended to the internal affairs of the country for four years before he was crowned, and in the year 218* of religion he received the *abeit theit.* His brother Tei-tha he appointed Crown Prince. Four years after being consecrated as king, he sincerely entered religion. The history of Dham-ma-thau-ka, as the great supporter of Budhism, the founder and encourager of missions, is narrated at considerable length. He discovered and opened the under-ground building in which the relics of Gautama had been deposited by A-dza-ta-that; he took them out, and distributed them. In the year 234† of religion, he assembled the third general council, presided over by Mang-ga-lee-poot-ta-tee-tha-tay, and consisting of one thousand selected Rahans. He then turned his attention to the great object of establishing religion all over the world, or in all countries contiguous to India. For the present history, it is only necessary to notice two out of the nine missionaries then sent forth. They are Yau-na-ka-dham-ma-rek-khee-ta to A-pa-ran-ta, or Burma, according to this history; and Oot-ta-rá and Thau-na to Thoo-wan-na Bhoom-mee or the Talaing country. In both those countries the missions were successful, and multitudes of men and women became Rahans. King Dham-ma-thau-ka died in the year 255 of religion.

The second volume of the history ends with the death of this king.

The third volume of the *Maha Radza Weng* commences with the direct history of the Burmese kings in the following words: "We shall now relate the first commencement of the long line of the Mran-má kings in the great country of Tagoung; the origin of all the kings who have reigned in the land; and also treat of the first foundation and the progress of divine religion in the Mran-má country, under the Mran-má kings."

The country which in the time of our lord Gautama is called Tagoung, was originally established by Abhi Radza. His history

* B.C. 325. On this subject, see Cunningham's "Bhilsa Topes", p. 74. He applies a correction of sixty-six years to this Buddhistical date, and gives good reason for doing so.

† B.C. 309. This is not the date of the third general council, as given in Cunningham's "Bhilsa Topes", p. 116, and to which the correction must be applied.

is as follows:—Before the appearance of the lord Gautama, the King of Kau-tha-la and Pin-za-la-reet, wishing to ally himself with the King of Kau-lee-ya, sent a noble to demand one of the daughters of that sovereign The Kau-lee-ya king, from pride of race, did not send a satisfactory answer. A war then arose, and the King of Pin-za-la-reet was victorious, The three Tha-kee Kings of Kau-lee-ya, De-wa-da-ha, and Kap-pi-la-wot, being conquered, their countries were destroyed. Afterwards they were once more restored to prosperity. At the time when the Tha-kee kings were thus depressed, Abhi Radza the King of Tha-kya Tha-kee race in Kap-pi-la-wot, in consequence of the disturbed state of Mitz-tzi-ma-de-tha, took with him his army, and went and established the country called Then-ga-tha-ra-ta, or Tagoung.* Abhi Radza, at his death, left two sons, the elder named Kan Radza gyee, and the younger Kan Radza ngay. They quarrelled regarding their succession to the throne. By the advice of the wise men of the nation, they agreed to abide by the result of a rivalry in good works, and not of war. It was arranged that each was to commence at nightfall to erect an *alhoo mandât*, or religious building, and the prince who first finished his building was to succeed to the place of the father. Each selected a hill on which to erect a building. The elder brother commenced his building with heavy timbers and bamboos; the younger brother commenced with light timbers, and covered it with white cloth and plaster, so it was finished in one night. In the morning when the elder brother saw that he had lost, he collected his followers and went down the Irrawaddy river. He then ascended the Tha-la-watee, or Khyen-dween river, and established himself at Ka-lé doung.† At that time the tribes called Pyoo kam yan and Thek asked for a king, and the Prince made his son Mood-doo-tseit-ta king over the Pyoo tribe. "Kan Radza gyee went westward, and established himself on the mountain called Kyouk pan toung,‡ east of the river Gits-tsha-bá. He then became king of the country."

Kan Radza ngay reigned in Tagoung, the country of his father. He had thirty-one descendants, who reigned successively in Tagoung. In the time of Bhein-na-ká, the last king of that race, Chinese and Tartars from Gan-da-la-reet province, in the country of Tsein, invaded the kingdom. The king was obliged to retire

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* Tagoung is an ancient city, now in ruins, situated on the Irrawaddy river, in about 23° 30′ north latitude.

† This lies west of the Khyeng-dwen, in about 23° north latitude.

‡ This is a mountain in the northern part of Arakan. The story here related is found also in the history of Arakan. Vide Journal of the Asiatic Society, vol. xiii, p. 34.

with his army to the Ma-lé khyoung,* where he died. From thence his force was divided into three parts; one went eastward and established the nineteen Shan states; another division went down the Irrawaddy river, and remained in the country of the Pyoo-kan-ran and Thek tribes, where the Tha-kee Prince Moo-doo-Tseit-ta had formerly established himself in Thoo-na-pa-ran-ta. A portion remained in Ma-lé, with the chief Queen Na-ga-tshein.

At this time Gautama appeared in Mitz-tsee-ma-detha. The King of Tha-wat-tee, Pa-the-na-dee, Kau-tha-la, demanded a daughter in marriage from Mahá-ná-ma,† King of Kap-pi-la-wot. The king did not give him a pure daughter, but one born from a a slave girl, and named Wa-tha-bha-Khat-ti-ya. She gave birth to a son named Wee-ta-thoo-pa. When he had grown up, he went to see his relations in Kap-pi-la-wot. As they insulted him on account of his inferior birth, he determined on revenge. After his father's death he thrice led his armies against Kap-pi-la-wot, but was restrained by the expostulations of the lord Gautama. A fourth time Gautama, seeing inevitable punishment due to the demerit of the Sakee Princes, forbade him not. The Tha-kee race of Kap-pi-la-wot, of which Mahá-ná-ma was then king, was either destroyed, or dispersed among the neighbouring states of Maure-ya and We-dee-tha-gi-ra-kza. Thus was that great country of Kap-pi-la-wot twice destroyed; once in the time of King Kau-le-ya, and once in the time of King Mahá-na-má.

At the time of this last destruction, one of the Tha-kee princes named Daza Radza left Mits-tshee-ma-de-tha with many followers, and first established himself at Mau-re-ya,‡ called also Mauringa, and now Mwé-yeng. From thence he removed and established himself in the country of Theng-dwai. From thence he removed to Malé, where he met the Queen Na-ga-tshein, and, as they were of the same Tha-kee-ya race, they were married. They then built the city of upper Pugân. There a son named Wee-ra-ga was born to them. They once more removed to the ancient capital of the Tha-kee race of kings called Ta-goung, or Theng-ga-tha-ra-ta, and called it Pin-tsa-la-reet, and hence the country is also called Pin-tsa-ta-goung. This king established regular government. By his two chief queens, he had twenty sons and twenty daughters, and the sons married their half sisters.

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* Malé is on the Irrawaddy river, about eighty miles above Amerapoora.

† It is presumed that after the death of Thoo-dau-daná, the father of Budha Gautama, Mahá-ná-ma, one of the same family, succeeded to the throne.

‡ By this name is meant the country west of the Khyeng-dweng river, now called the Kubo valley.

To this king there succeeded seventeen kings in regular succession, but their reigns were very short. The last of them was named Tha-do-má-há-radza. The king had no son. The chief queen, Kein na-ree De-wee, had a brother named La-bá-doo-há, and he was appointed Ein-Shé-men, or Crown prince.

At that time, in the country of the Pyoo tribe, the race of kings descended from Moo-doo-tseit-ta, the son of Kan Radza-gyee, as above related, was represented by Tap-boo-la. He was disturbed by attacks from Dhi-ngya-wa-tée, or Arakan, and went with his people to the Tha-gya lake.

"As then we have related the first dawning of the Burmese country of Ta-goung, before the lord Gautama appeared, now we shall proceed to narrate the history of Tha-re-khet-ta-ya."*

"In the fifth year after the lord Gautama attained to the state of Budha, two brothers, named Maha-poon and Tsoo-la-poon, asking leave from the Phra, built a monastery called Tsan-da-koo-nan-tha, at the village of Say-gaing in the country of Thoo-na-pa-ran-ta.† The Phra also prophesied (that) 'hereafter in the Mran-má country my religion will be long established," and accompanied by five hundred Rahandas he frequently came through the air before the monastery was finished; when the monastery was finished, he received it in gift, and remained there seven days, and preached. At that time five hundred men and five hundred women in Thoo-na-pa-ran-ta became Rahandas. At that place was a hermit named Theet-tsa-ban-da, who had attained the state of an Areeya. At his intercession, the Phra left the impression of one foot on the Theet-tsa-pan hill, and, at the intercession of the Na-man-da Na-ga, he left the impression of the other on the bank of the Mán stream. Thus two firmly founded pagodas were fixed in the rock, as if sealed down, and the Lord said:—'Hereafter my religion shall be long established in the countries of Thoo-na-pa-ran-ta and Tampa-dena.'‡ From thence the Phra went and arrived at the Pho-eoo hill.§ To the south-east was the sea. On

* This is the name of the ancient city to the east of Prome. It appears to refer to the Khatri or Rajpoot caste.

† This is on the Mán river, which runs into the Irrawaddy from the westward, near the town of Menboo.

‡ Tampa-dena is one of the ancient names for Ceylon. According to the practice of the Budhist nations of Indo-Chinese to transfer to their own countries the name of Budhist lands in the west, this name was given to Pugân and the surrounding country. The name was probably given after the books were brought from them, and a reformation made in religion. Pugân was more anciently called A-rimad-da-na. This history, however, intimates that Tampa-dee-pa was the more ancient name. Thoo-na-pa-ran-ta is mentioned as a country in the Budhist Scriptures. See Hardy's "Budhism", p. 259.

§ This is the name of a peak on the west bank of the Irrawaddy, near to

the water was the appearance of something floating and just appearing above the surface. A little *pwé*, or bamboo rat, lifted up its nose and did homage to the omniscient Phra. The Phra smiled at these two omens, and, in reply to his younger brother, who asked for explanation, said, 'Beloved Anan-da, in the year 101, after I shall have entered into the rest of *pa-ree-neib-ban*, five great omens shall be manifested here. They are, first, a violent earthquake shall shake the whole land; second, where the Bhoo peak now rises there shall be a lake; third, the Tsa-moon-than-my-eit river shall be formed; fourth, the earth shall rise and form Poop-pa-toung;* fifth, in the country to become Tha-re-khet-te-ya, the sea shall be dried up. In the time when those omens shall be manifested and fulfilled, that little *pwé*, removed from his existing body, and become a man, shall be king over a great country under the name of Dwot-ta-boung. In that king's reign, in the Mran-má country, my divine religion shall flourish and shall exist throughout long ages.'"

According to that divine prediction, the Phra went to Nareeneib-ban, and in the year 40 of religion, in the reign of Tha-do-ma-ha Radza, king of Pin-tsa-ta-goung before mentioned, a mighty boar twelve cubits high ravaged the country. The crown prince La-ba-doo-ha went forth armed to destroy him. The boar fled to the Shan country, and the prince followed. The glen where he entered the mountains east of the Irrawaddy is called Wet-weng (boar entrance) to this day. The prince chased him down the west bank of the Irrawaddy, though how the boar arrived there is not stated, and he crossed again to the east bank. As from his great height his belly was not wet by the water, the place he reached is still called Wet-ma-tswot† (boar not wet). The boar then continued his flight down the east bank of the river until he came to an island near to Tha-re-khet-ta-ya. There the prince overtook him. The place is called Wet-hto-kuyen to this day.

The prince now reflected that he was far from the country of Ta-goung, and that his story of having killed the boar would not be believed; and wearied with the world, he determined to become a hermit in the place where he was. There were then no inhabitants near at hand, except wild animals. In the jungle a doe produced a young one in the form of a human female child.

Prome. Great changes no doubt have occurred in the course of the Irrawaddy river, probably within the historical period, about Prome. The rocks around Prome contain large deposits of marine shells, so that the Burmese had evidence of the sea having once reached there.

* The name of an extinct volcano about two hundred miles north from Prome.

† This is a place below the petroleum wells in the Irrawaddy river.

The doe, startled by the cry of the infant, fled, and the hermit coming to the spot was astonished at the sight. The hermit carried the child to his cell, and brought her up as his own daughter. When she was grown up, he gave her the name of Bhe-da-ree. "Such is the story of the first establishment of the city of Tharé-khet-ta-ya by the hermit who was the brother-in-law of the king of Ta-goung."

In the very year when the crown prince La-ba-doo-há went forth to slay the boar, the queen of Ta-goung gave birth to twin sons. They were both born blind, and named Mahá-Tham-ba-wá and Tsoo-la-tham-ba-wá. The king, from shame, ordered them to be killed; but the queen, loving the children of her own bosom, concealed them until they were nineteen years of age. The king then having discovered that they were alive, again ordered them to be killed; but the queen had them put into a boat, with many days' provisions, and set them afloat on the Irrawaddy river. As they floated down the river, the boat struck against the branch of a *tseet* tree. At that spot, in after times, was built the city of Tseet Kaing. As they proceeded down, they met with a Bee-looma, who gave them some medicine to restore their eye-sight. The cure was effected, and looking up and seeing the sky for the first time, they said, "The sky is as a cover; the earth is underneath," and hence the place that they were passing was called Myé-daí. At length they reached the place at Prome* where their uncle the hermit dwelt. There they beheld the hermit's daughter, Bhe-da-ree, drawing water from the stream with a gourd. As the water would not flow readily into the gourd, they opened it. Bhe-da-ree then filled it, and returned to her father's cell. She told him the cause of her quick return, and the young princes being called, they told their story, and the hermit learned then that they were the sons of his sister, the queen Kein-naree-de-wee. After this the elder brother, prince Mahá-Tham-ba-wá, was married to the hermit's daughter Bhe-da-ree. This was in year 60 of religion, according to the *Maha Radza Weng;* or, by the Burmese reckoning of the period of Gautama's death, 483 years before Christ. From this time commences the history of the monarchy established at Thare-khet-ta-ya, and no futher notice is taken of Tagoung and the upper country of the Irrawaddy until some centuries later.

Note on the Etymology of the word Myan-ma or Mran-má.—In the *Journal of the Asiatic Society,* No. I, of 1853, is an interesting paper by Mr. B. H. Hodgson, on the languages of the Indo-Chinese borderers, compared with the Thibetan and Himá-

* See "Journal of the Asiatic Society", vol. xxv, p. 173, for an account of the pagoda built upon that spot.

layan tongues. In that paper, Mr. Hodgson appears to conclude that the term Burma or Burmese, which is the Europeanised form of the name by which that people call themselves, can be traced to the native name for man. This, however, is open to some doubt; but Mr. Hodgson's general conclusion that the languages of the Himálayan, Indo-Chinese, and Thibetan tribes, are of one family, is fully justified.

The name by which the people known to Europeans as Burmans or Burmese call themselves, is written by them Mran-ma, and sometimes Mram-ma, and is pronounced Ba-má. The Arakanese call themselves Ma-ra-má, which is a variation of the same word. The questions involved are:—

I. Does the word Mran-ma contain the root signifying man in some of the Indo-Chinese dialects?

II. Is the word Mran-ma directly derived from the name for man generally, and on that account used as the national designation of the Burma?

III. Can any other origin for the term Mran-ma be found, from which it is more likely to be derived?

It is shown by Mr. Hodgson, that in many of the above languages *ma* and *mi* mean *I*, and *man* (pp. 5, 34, 36 and 63), and hence it is concluded that the etymology of *Burma* or Burmese is recovered. The word Burma or Burmese no doubt is the European form of Ba-má. Is the written form *Mran-ma* the original, of which the spoken form *Ba-má* is a mere colloquialism? or is the latter the real original expression of the name for the race? The Arakanese, it may be noted, do not use the form *Ba-má*, and therefore are never called by Europeans Burmans or Burmese.

The root *mi* in the Burmese language has now no known reference to the pronoun *I*, or to *man*, as a general term, whatever it may formerly have had. It now means female; with the prefix *a*, it means mother, and sometimes a daughter. As an affix to the word *tha* or *sa*, *child*, it signifies a female child. The root *ma* has the same general meaning, *female;* but has a more dignified signification than *mi*. It is also applied to female animals. The word for woman, *Mien-ma*, or *Mi-ma*, is probably the union of the two forms of the root representing female, and is applied to women as the female *par excellence* (see p. 66 of Mr. Hodgson's paper). The personal pronoun *Nga=I*, is both masculine and feminine. But though I cannot agree that the root *mi* or *ma* appears in the word *Mran-má*, that root may possibly appear in the Burmese word *myo, mro*, or in its Arakanese form *mru= race*, and *seed;* possibly also this word may originally have signified *man*, in the Burmese, as now in the Mrú language (see p. 34). Mr. J. R. Logan, in the *Journal of the Ind. Arch.* for 1857, vol. ii, observes, "The root of Mran-má is *ran*, one of the

forms of a widely-spread Himalaic name for man. Karen has the same root, with the guttural in place of the lateral prefix." I have not been able to satisfy myself as to the grounds on which this observation is founded.

The question still remains, whence the word *Mran-má*, which is pronounced *Ba-má*, and in the Arakanese form *Ma-ra-má*, is derived?

I believed it to be a modern appellation adopted by the people since they became Budhist, and derived from the Pali word Brahma, signifying celestial beings, as shown in the text. Hence it really has only an accidental similarity to the word for man in some of the Indo-Chinese dialects. It is as much as if the *Angli* had adopted the national name *Angeli* with their Christianity, with this difference, that we know for certain that the *Angli* originally so called themselves, but we do not know for certain what the Burmese called themselves before they adopted the name *Mran-má*. The pride of the people caused them to assume this as their national designation. The only names for the ancient tribes which may have become the *Mran-ma* nation, which we are acquainted with, are *Pyoo*, *Kan-yan* or *Kan-ran*, and *Thek* or *Sak*.

Is it possible that in adopting the word Brah-ma as their national name they kept in view also their native root *ma*, as Mr. Hodgson would appear to conclude? This I will not venture to affirm; but of the direct origin of the present national name I have no doubt. Nor need it cause surprise that a people should have adopted a foreign term to designate themselves. With their religious instructors they received knowledge of every kind. The districts of their country were named after the countries of their teachers. Even their great river, known in the vernacular as *Myit-gyi*, received an equivalent term in Pali—*E-ra-wa-ti*; and their capital city always has a Pali name. From the history it is evident that the name Mran-má was not adopted until after several tribes had been united under one powerful chief, by whose fiat the name would readily have been adopted.

With reference, however, to the root *mi* and its appearance in the word *Mien-na* or *Mim-ma* (woman), it is curious that the Chinese of Yunan call the Burmese *Mien* or *loung-mien*, and that is the name given to them by Marco Polo. I cannot say how the Chinese got the word, but it is possible that *Mien* was the original name for the race, and contains the root meaning man. However that may be, the word in this or any similar sense is now entirely lost among the Burmese, excepting as above noted in the term for women, and it may be in *Mru* (race). It does not appear as the name of any of the tribes with which the Burmese might be supposed to be immediately connected.

Observations.—Having traced thus far the legends of the Burmese race from the earliest period, down to the time when a new dynasty was established near Prome, about three hundred miles lower down the Irrawaddy than the ancient capital Tagoung, it will be convenient to pause, and inquire how far we can discern any true historical basis in the legends and tales which have been narrated.

The physiognomy and the language of the Burmese people, as well as those of the adjoining tribes, proclaim them all to belong to the same family of nations as the tribes of Thibet and the Eastern Himalaya, Whence did they come? and how did they arrive at their present country? The theory of Prichard in his *Natural History of Man* on this subject is probable, is supported by existing facts, and accords with the physical geography of the regions north of the countries now occupied by the Indo-Chinese races. That author thus refers to those peoples. "The vast region of Asia forming the south-eastern corner of that Continent, which reaches in the sea-border from the common mouth of the Ganges and the Brahmaputra, to the Hoang-ho, or Yellow River of China, and even further northward towards the mouth of the Amur or Selinga, is inhabited by races of people who resemble each other so strongly in moral and physical peculiaritics, and in the general character of their languages, as to give rise to a suspicion that they all belong to one stock. With the rivers which descend from the high country of Central Asia, and pour their diverging waters on all sides, after traversing extensive regions of lower elevation, into the remote ocean, these nations appear also to have come down, at various periods, from the south-eastern border of the Great Plateau; in different parts of which, tribes are still recognised who resemble them in feature and language."

To the great central region of high Asia, Prichard traces what he terms the five nomadic races, namely the Ugrian, the Turkish, the Mongolian, the Tungusian, and, on the south-east, the Bhotiya, "the mountain people who on the northern boundary of Hindustan have appropriated the name of Tartars, though they have no right to that celebrated appellation, which belonged originally to the Mongolian tribe who inhabited the bank of the lake Bougir." And again, "If we were at liberty to hazard a conjecture as to the origin of their nation, it would be, that all the people who inhabit the low countries of south-eastern Asia, from the mouth of the Amur, or at least from that of the Hoang-ho, southward and westward as far as the Brahmaputra, are offsets from one of the great nomadic races of high Asia, namely from the Bhotiya, who occupy the southern margin of the great central upland." This conjecture is in a great measure confirmed by the researches of Mr. B. H. Hodgson, who, in the paper already quoted, observes

that "One type of language prevails from the Kali to the Kuladan, and from Ladakh to Malacca, so as to bring the Himalyans, the Indo-Chinese, and Thibetans into one family."

It is reasonable to conclude that tribes leaving the south-eastern margin of the great plateau of central Asia, early in the existence of the human race, would naturally follow the downward course of streams and rivers. Among the earlier emigrants from that part of Asia towards the south, as far as we can now discover, were the ancestors of the present Mon or Talaing people, the aborigines, so to speak, of Pegu. It is also probable that the Karens left their ancient dwelling-place at an early period. They have remained for the most part down to the present time uninfluenced by Budhism, and with their language unwritten, until about the year 1830 A.D. Their traditions of their own origin, or at least of the route by which they arrived at their present seats, are therefore more trustworthy than those of the Burmese, or of the Talaings, are regarding themselves. Many of these traditions are preserved in a small volume written by the Rev. Dr. Mason, Missionary to the Karen people. It is entitled "Traditions of the Elders." While the traditions or legends of the Burmese, influenced by the source whence they derived their religion, and by the ambition of their kings to trace descent from the Budhist sovereigns of their holy land, refer to India as the cradle of the royal race, and almost seem to derive the great body of the people from the same country, the more trustworthy traditions of the Karens point to central Asia as their ancient home.

Their traditions say, "We anciently came from beyond the river of running sand, and having marked out Zimmay (two hundred and fifty miles north-east of Maulmain) for ourselves, returned. Afterwards when we came to dwell there, we found the Shans occupying the country. Then the Karens cursed them, saying, 'Dwell ye in the dividing of countries.'"

The countries in which Europeans first came in contact with Karens have only lately been occupied by them, but the mountain country between the Salween and Sitang rivers, has probably been theirs for many ages.

Dr. Mason points out that Fa-Hian, the Chinese pilgrim to India of the fourth century, also speaks of crossing the "river of sand" or great desert between China and Thibet. Further it is stated, "Their traditious point unequivocally to an ancient connection with China; for Tie, or Tien, is spoken of as a god inferior to Jehovah,* and offering to the manes of their ancestors is as common among the Karens as it is among the Chinese." It is evident that "the river of sand" of the Karens must be the great sandy desert

* Or Yu-wa, the name given by the Karens to God.

of Mongolia, stretching for many hundreds of miles along either side of the 40° of North latitude. The story of coming to Zimmay under a chief to inspect the country and then returning, must be accepted as the modern version of the fact, that about Zimmay they were stopped in their progress south along the water-shed range, between the Salween and Menam rivers, by the previous occupation of the Shan race. The Karens are mentioned by Marco Polo, and appear then to have occupied the country east of Bamo on the upper Irrawaddy.

Some of the religious traditions of the Karens are remarkable. They are distinguished from all the Indo-Chinese tribes with which I am acquainted, by the knowledge they have of the existence of one eternal God. He is not worshipped, because, as they appear to suppose, he is angry with them. It is impossible to conjecture with probability how they acquired this knowledge. They believe also that they once possessed books. Notwithstanding what has been said by some writers as to the "Caucasian countenances," the long faces, and "straight noses" of the Karens, I must uphold that their national physiognomy is essentially Indo-Chinese, and their speech connects them with the same family. In every Indo-Chinese tribe, occasional exceptions to the general flat physiognomy are met with. These are almost always among the men. The women have more frequently the true type of Mongolian or Bhotiya face.

Such tribes as the Burmese, the Karens, and the Mon, would readily find their way from central Asia by the courses of the rivers Salween and Mee-nam towards the south. Some would be led westerly, and so gain the valley of the Irrawaddy in the upper course of that river. This the Talaings and Burmese probably did at an early period,* while the Karens kept for ages to the

* Mr. J. R. Logan remarks upon this subject as follows:—"The present position of the Mon-Anam nations might lead us to suppose that they moved into Ultra-India, and thence into India. But the relation of the Mon-Anam to the Vindyan dialects shows, that the Dravirian traits of the former were wholly or chiefly acquired in Bengal, and renders it probable that they did not reach the south by the basin of the Irrawaddy, but by that of the Tsang-po Brahamputra, like the later Tibeto-Burman tribes. How far Ultra-India was then inhabited, and what languages were there spoken, cannot therefore be ascertained from the character of the Mon-Anam languages." Again: "The Simang and Anda-manni are the present remnants of a pre-Himalaic colony, and it is probable that similar Draviro-Australian tribes occupied it, so far as it was inhabited, before the Mon-Anam race entered the region." (*Journal Indian Arch.*, pp. 156, 157.) Among the traditions of the Mran-má race in Arakan, are traces of the existence of a hateful race of men, which existed on the sea coast, when the Mran-mas entered the country. They are called in the vernacular *Bee-loo*, which implies a monster or cannibal in human shape. It is from these beings that the country received its Pali name of *Rek-khaik*, and hence its

mountains bordering east and west of the Salween and Mee-nam rivers, and only lately came into the Irrawaddy valley and along the mountains bordering the sea-coast as far as the 12° north latitude. They may be classed in three great divisions, having numerous tribes and dialects, but all possessing the same characteristics as far as they have been observed, up to the 20th degree of north latitude.

It has already been mentioned that the people called by Europeans Burman, or Burmese, called themselves Mran-ma, a name which is generally pronounced by them Ba-má. This word, as has also been stated, is of foreign origin. From the history we learn that at an early period there were three tribes in the valley of the Irrawaddy, who appear to have been the progenitors of the present nation. These tribes are called Byoo or Pyoo, Kam-yan or Kan-ran, and Thek or, by the Arakanese, Sak.* They probably were three allied tribes, more closely connected with each other than were others of the same original stock, settled in the upper Irrawaddy valley, or on the adjoining mountains. I see no reason for doubting that they had found their way to the valley of the Irrawaddy by what is now the track of the Chinese caravans from Yunan, which track debouches at Bamo on the river. There they probably remained for many ages without being disturbed by any superior tribe. The history of the Burmese being written under the direct influence of the kings, it is not surprising that every effort should therein be made to show, that the royal race is descended from the kings of those people who brought to the Burmese letters, science, and religion; whereby the savage Indo-Chinese tribes of the Irrawaddy were civilised and made into a nation. Accordingly we find that the foundation of the state of Kap-pi-la-wot by a tribe of Rajpoots is carefully described, and as it appears to be admitted to be a historical fact that Kap-pi-la-wot was attacked, and the people dispersed, even during the life of Gautama, a previous emigration from thence to Burmah under Abhi Radza is invented for the national history. This name Abhi is native not Pali, signifying an ancestor in the fourth generation, and the names of his two sons, both called Kan, with the Pali word for king and the native terms elder and younger added, appear to refer to them as acknowledged chiefs of the Kan-ran tribe. Under the two sons of Abhi Radza, a separation of the

present name Ra-khaing. Rek-khaik appears to have the same general signification as the vernacular Bee-loo. The Pali name being given to the country, would seem to show that some Bee-loos were still there when the Budhist missionaries entered Arakan. The word Bee-loo appears to answer generally in popular meaning to the English ogre. There are no traces of the Mon people ever having passed through Arakan.

* Sák is still the name of a small hill-tribe in Arakan. It is similar in sound to the name of the tribe Gautama belonged to.

tribes or of the people under their sway takes place; the elder branch going westward and settling in the country now called Arakan; the younger remaining in the valley of the Irrawaddy. In this legend there appears to be a germ of truth. The Arakanese also have the national name of Mran-ma. The country they inhabit received the Budhist name of Rek-khaik from the monsters believed to inhabit that wild unknown coast, and hence the modern native name Ra-khaing and the European Arakan. But this name has no connection with the race of the people. The Arakanese, being of the same stock as the Burmese, and still acknowledged to be the elder branch of the family, undoubtedly entered their present country from the eastward, that is from the upper valley of the Irrawaddy, as their own traditions attest; and it appears not improbable that this movement may have been made by the mountain passes which Kan Radza-gyee described as having traversed to go westward. But, according to the history, this event occurred thirty-one generations of kings before the time of Gautama. That race, at the end of the thirty-first king's reign, died out in Tagoung, or rather was driven out by an invasion of northern hordes. A female descendant of the kings was preserved, and, when the Sakya race of Kap-pi-la-wot was destroyed in the time of Gautama, or about the middle of the sixth century B.C., one of the princes of that tribe named Dazá Radza is again described as coming from Kap-pi-la-wot to the Irrawaddy, to continue the ancient race in that region. That wild Indo-Chinese tribes should find their way from the bleak north, down to warmer and more fertile climates of the south, is credible; and that, after reaching the Irrawaddy, they should proceed westward across the mountains, and so reach the sea, is not improbable, as the more direct route down the Irrawaddy was already occupied by the Mon. That such indeed was their course, is borne out by existing facts. But if we consider the present state of the countries lying between Bengal and Burmah, from Cachar eastward to the valley of the Irrawaddy, and consider also the difficulties for travelling over that route which must have been presented twenty-five centuries ago, the supposed emigration, either for conquest or colonisation, by the comparatively civilised tribes of India, to the barbarous wilds lying east of Tipperah and Cachar, will appear very improbable. On the other hand it is highly probable that religious zeal would carry missionaries wherever a route for trade existed, however wild and dangerous that route might have been. It appears probable that a trade did exist from early times through eastern Bengal viâ the upper Irrawaddy to China.* Traffic is frequently carried on by

* The part of China bordering on Burma is called Tsein by the Burmese. Was the Indian name Cheen derived from this source?

very difficult routes, and by paths which people well advanced in civilisation, in a fertile and extensive country, would not follow in search of a land to colonise. Merchants will venture into such countries, as is exemplified in the way the wild tribes east and north-east of Arakan are now supplied with salt and other necessaries of life. Where traders go for love of gain, missionaries will go from religious zeal. From these considerations then, while the passage of Budhist Missionaries to Burma by the difficult paths in question might be accepted, the supposed immigration of any of the royal races of Gangetic India to the Irrawaddy by the same route, in the sixth century B.C., or even later, will appear very improbable. Those tribes appear to have regarded Gangetic India as the favoured land of the earth, and would scarcely have emigrated to the savage country east of Bengal. There is indeed no good reason for supposing that any missionaries went to any part of the country now called Burma before the year 234 of religion,* when sent in the reign of Dham-ma Asoka, as related in this history. But is the record of Yau-na-ka-dhamma-rek-khee-ta being deputed by the third great council as missionary to Burma true? It appears not. The Budhist writings preserved in Ceylon inform us that Oot-ta-ra and Thau-na were deputed as missionaries to Thoo-wan-na-bhoomee. By that name no doubt is meant the country inhabited by the Mon or Talaing race, and their chief city then was on the site of the present Tha-tung, lying between the mouths of the Salween and Sittang rivers. No doubt the missionaries reached it by sea. That gold was anciently found in that vicinity is testified from the Burmese name of Shwe-gyeen, literally "gold washing," now borne by a town on the Sittang, and gold is still found there, though probably in diminished quantity to what it was anciently. This, no doubt, was the origin of the name "Aurea regio" of Ptolemy. This history assumes that the Pali name A-pa-ranta means Burma. There is not the slightest reason for this conclusion. The word means western country, and we must look westward from Gangetic India to find it. The fact is, the modern Burmese, jealous of the Talaing people having beyond all doubt received a Budhist missionary in the time of the great Dhamma Athauka, determined to appropriate a great missionary to themselves. Portions of their country were also, after the fashion of all the Indo-Chinese countries, named from the Budhist scriptures, one province being called Thoo-na-pa-ran-ta, and this name lent a specious support to the modern fraud or delusion of A-pa-ran-ta signifying Burma. But many other circumstances seem to show that the Mon or Talaing race received Budhism before the Burmese did. Although

* B.C. 308, or twelve years before Alexander crossed the Indus.

the conversion of the people of Suvanna Bhumi was planned by people in Gangetic India, it is not probable that so essentially a sea-hating people had their own ships to convey the missionaries across the Bay of Bengal. Then how did they arrive at their destination?

We may be sure that the mission to Suvanna Bhumi was not planned like a voyage of discovery to an unknown land, but was determined on as a mission to extend religion to a country already known at least on its sea-coast, and the inhabitants of which were considered to offer a fair field for success. It is probable that the people of the Coromandel Coast already had settlements on the Arakanese and Talaing coasts as places of trade, and the Budhists of Gangetic India would in all probability resort to some of the ports on the east coast of the Continent, and not far from the head of the Bay of Bengal. At that time it is probable that the people of Telingana carried on commerce with Suvanna Bhumi, and the Budhist missionaries would embark in their ships.

It has already been mentioned that the Talaing people call themselves Mon.* They are called Talaing by the Burmese. How came the latter to give them this designation? Certainly it does not bear the sound of an Indo-Chinese word. It is probably derived from the word Telinga, and hence it appears that the tribes of the upper Irrawaddy, separated during long ages from the kindred tribes to the south of them, only came to know the Mon after these latter had settlements of Telingas on their coast.† These people no doubt extended their commerce into the interior, and hence the name, easily changed into Talaing, came to be given to the whole population. The same result of a partial knowledge of a leading race may still be seen. Until comparatively of late years, the Burmese mixed up English and all Europeans with the natives of India in the one common appellation of Kulá or western foreigners; and it is only since the war with the British of 1825-26 that they have learnt to distinguish between the more prominent of the nations lying west of them.

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* The Rev. Dr. Mason, in his work on Burmah, states his opinion that the Mon language is entirely distinct from all the Indo-Chinese languages of the tribes adjoining, and considers that Mon comes nearer to the Kole or Ho language, as depicted by Major Tickell in the "Journal of the Asiatic Society", vols. ix and x, than any other. Mr. J. R. Logan considers "the radical identity of the native pronouns, definitives, and numerals of the Kol with those of the Mon-Anam group as established." Both "groups in their glossarial basis, are branches of one formation, much more akin to Tibeto-Burman than to Dravirian." ("Jour. Ind. Arch.," 1859, p. 66.) For the connection between all the languages of the southern division of the Turanian family, see table No. iv, in Max Müller's "Science of Language".

† There is said to have been a Hindu colony at Maulmain, the site of which was called Ramapoora; vide Crawfurd.

But the fact still remains, that the Burmese received religion and letters from India. Did they receive these through the Talaings, or from an independent source? It is certain that they had no direct intercourse with the sea probably until the second century of the Christian era. Their alphabet differs in some degree from that of the Talaings, though both are formed on the Deva Nagri model. The circular form of the letters of both indicates the influence of the Tamulic letters. The Burmese appears the more perfect of the two, and has probably been formed at a later period than the other. It does not appear that the Burmese people received their religion and letters through the medium of their cousins the Arakanese, for that people refer to the eastward as their own source of both. The passage of Indian Budhist missionaries therefore from Gangetic India, through Bengal and Munnipore to Burma, is a probable event, but it took place much later than has been represented. The only direct evidence we yet have on this subject is the discovery of a Budhist image at the ancient capital Tagoung, bearing an inscription in the Deva Nagri character, as described by Colonel Burney in the 5th volume of the *Journal of the Asiatic Society of Bengal*, page 157. This image was found to have a Sanscrit inscription, being the well-known text of Ye-dham-ma, etc. This is not the only inscription of the same kind that has been found at Tagoung, and the fact appears to indicate that Tagoung received missionaries direct from northern India. The character in which the above text is written on the base of the image is considered by Prinsep as coinciding with the letters of the inscription No. 2 on the Allahabad Budhist pillar.

We may then conclude that the rude tribes inhabiting the valley of the upper Irrawaddy, who at that time, like the hill tribes of to-day, worshipped only the spirits of the woods, the hills, and the streams, were converted and civilised by Budhist missionaries from Gangetic India. A monarchy was then established at Tagoung, which gradually extended its authority, and appears from the history to have been overturned by an irruption of (so-called) Tartars and Chinese. The names given to the invaders are Ta-ret and Ta-rook. The latter word is evidently the same as Turk, and is applied at the present day by the Burmese to the Chinese generally. The destruction of the kingdom of Tagoung led to the establishment of a monarchy at Tha-re-khet-te-ya, near the modern Prome. There, according to the history, a descendant of the ancient kings of Tagoung, after a series of wonderful events, succeeded to the throne of the king of the Pyoo tribe, which people was down to that time dominant in the country round Prome. Whatever this event, as told, may really mean, we may consider it as certain, that the tribes dwelling in the country

round Tagoung, where Budhism and some degree of civilisation had been established under a powerful dynasty, were overwhelmed by a horde of invaders from the north-east, and that many of them found a refuge among their kinsmen the Pyoos.

The present kings of Burma, as has already been stated, claim descent from the ancient Budhist sovereigns of Kap-pi-la-wot. It may not be out of place here to mention some of the Indian and Sakyan customs preserved by the Burmese royal family. Among these are the marriages of half-brothers with half-sisters, a practice which does not exist in any other family in the kingdom; the ceremonial called a-beit-theik, or pouring out of water on the accession of a new sovereign; preserving unmarried the king's eldest daughter; the figures of a peacock and of a hare, symbolical of the sun and moon, and typifying descent from the solar and lunar races, being painted on the king's throne. For the same reason the figure of a peacock is borne on the royal standard. One of the royal titles is "sun-descent monarch," and a title of honour frequently bestowed even on foreigners is that of "Member of the race of the sun;" while the badge of nobility is the caste-thread of the Brahman and Rajpoot tribes, represented by golden chains worn, slung from the left shoulder across the breast and back to the right hip. These and some other customs are tenaciously adhered to by the royal family of Burmah, who consider themselves as ethnologically and religiously the descendants of the Budhist kings of Kap-pi-la-wot.

III.—*Notes on the Andaman Islands.* By Admiral Sir Edward Belcher. (From Notes by Lieut. S. A. St. John, H.M. 60th Regiment.)

[*Read January 23rd*, 1866.]

In the year 1862 a paper on this subject was read before, and published by, the Geographical Society, under the title of "A Narrative of an Expedition to the Andaman Islands in 1857," by F. J. Mouat, Esq. On that occasion, the author of the paper had not himself been in personal or friendly communication with the natives, but obtained his information, as to their habits, from Doodnath Fewarny and another convict, who lived some time with them.

The notes which I have the honour of submitting to you were made by my nephew, Mr. St. Andrew St. John, lieutenant in Her Majesty's 60th regiment, stationed there, and who, from his assiduity in acquiring the Eastern languages, has obtained the post of Assistant Commissioner at Tongoo, in Burmah, under Colonel Phayre. His company was stationed at Ross Island, on the South Andaman, from whence he was in the habit of making excursions.

In bringing to your recollection what the state of the Andamans was, perhaps you will excuse my recapitulating the leading points of the able paper by Dr. Mouat, which will be found *in extenso* in the *Proceedings* of the Royal Geographical Society for January 1862. "Further Remarks on the Surface Currents of the Bay of Bengal," by J. A. Heathcote, Indian navy, which will be found in the same volume, treats on the Andaman Islands.

The Andaman Islands are situated between the 10° and 15° of north latitude and 92° and 94° of east longitude, a direct line from the western strait of Singapore and the outer reefs off Calcutta, cutting their northern extremity. They were first carefully surveyed by Lieutenant Archibald Blair, of the Indian navy, in 1789 and the following year. About the same time they were visited and examined by Colonel Colebrooke, Surveyor-General of India, who published an account of the islands in the fourth volume of the *Asiatic Researches*.

In 1789 formal possession was taken of the Andaman Islands by the Indian Government, and a small penal settlement, under the charge of Lieutenant Blair, was established at Port Cornwallis, near the southern extremity of the Great Andaman on its eastern coast.

For three years this colony had been healthy and prosperous when, in 1792, it was removed to a larger harbour nearly two degrees to the northward, on the eastern shore of the same island, in 13° 28′ north and 93° 12′ east. This harbour was also named Port Cornwallis, when the former was changed to Old Harbour, now Port Chatham or Blair.

In 1795 the settlement was visited by Colonel Syme. Port Cornwallis was subsequently visited in 1814, and selected as the rendezvous of the Ava expedition in 1824.

The Andamans were chiefly known to navigators from frequent wrecks, as well as for the noted hostile and savage propensities of the natives, defying every effort made to enter into friendly communication.

In 1840, the islands were visited by Dr. Helfer, for scientific purposes, but he was unfortunately murdered by a native immediately on his arrival. By a note in the narrative, we learn that "The widow of Dr. Helfer was the niece of Field Marshal Baron Bülow. Accompanied by Madame Helfer he landed, when a savage, concealed behind a bush, transfixed him with a spear. His lady, armed like her husband, drew a pistol from her girdle and shot the murderer on the spot."

On the 23rd November, 1857, the islands were visited by a commission sent from Calcutta, with the view of providing for the mutineers connected with the sepoy insurrection. Of this expedition, Dr. Mouat had the direction. They were conveyed in the Pluto iron steamer of light draught, of the Nemesis class, and well known in the Straits and Borneon transactions.

The author, Dr. Mouat, informs us of the difficulties he had to contend with in making progress; of the impenetrable thickets, jungles, etc., and of his complete failure in getting into communication with these people. . . . The narrative is very interesting, very short, and well worth reperusal. I wish I could promise as much for the digest I have been able to form from the various letters of Lieutenant St. John. But the latest, distinctly drawn up on the occasion of a steam trip for official purposes, will be given in his own words. Lieutenant St. John, without preamble, sends me "Notes on the Andaman Islands, taken during a three days' steam trip", which run thus:—

1. The following notes were taken at the request of the Superintendent of Port Blair (Major Ford, M.S.C.), on the occasion of a geological *reconnaissance*, made in the settlement steamer *Diana*, along the eastern shores of the Andaman Islands, the main object being the search for limestone among the islands of the Archipelago and Diligent Straits (as mentioned by Dr. Mouat), also for pasture or fodder for cattle, and to open communications with a tribe called Bullawadders, said to inhabit the islands of the

Archipelago. To assist in this work, a few Burman and Malay convicts were taken with us, also some friendly Andamanese.

II. The expedition started at 11 A.M., on Monday, the 15th of May, 1865, and, after steaming quietly during the night, arrived off the south end of Strait Island (*vide* Lieut. Blair and Mouat's Chart), about 5 A.M. on the following morning, when we anchored.

III. The very southernmost extreme of this island is terminated by a light-coloured sandstone cliff. It is known to the Malays as the "White Rock", and contains a cave where the noted "birds' nests"* are procured. The boats were lowered, and we proceeded to the examination of this cave; but, although the water was sufficiently deep within the cave, we did not care to risk the boats; but, climbing up on the outside, made our way into it on hands and knees, over a ledge running along the side of the cave. Inside we found plenty of nests, but in bad condition, as they were full of young birds. The proper time, it appears, for taking the nests, is early in the year, when they are beautifully white and hard. We afterwards landed on the beach to the westward. No traces of Andamanese were observed, though there was a fine stream of water; but doubtless they cross over from the main island, as many traces of pigs were noticed. We examined another cave in an isolated rock, but found it possessed by bats.† Killed a beautiful green tree snake.

IV. Weighed anchor and steamed to the north, making a curve to the eastward, in order to avoid a coral reef which runs out from Strait Island (which from the peculiar growth, in patches, of some peculiar tree has the appearance of having been cleared), and passed into the channel between Guitar and Long Island, when, observing marks placed in the water on both sides (viz., bunches of cane leaves on stakes), dropped the kedge and landed to examine. The two stakes on the Long Island side had evidently been placed to mark a sandy bottom between two reefs of rocks. There were no traces of the Malays having been on the shore, but deserted camping spots and an old Andamanese canoe were noticed. A little to the westward, the skeleton of a man bound up in cane leaves was discovered. It was lying on its back on a platform of sticks placed across the forks of a tree, about twelve feet above the ground, and had a wooden dish bound over the chest. From the absence of hair and clothes, we concluded that he must have been some Andamanese chief, who was now awaiting until having put off his coat of flesh, he might be restored

* Piedra Branca. Most of those so termed on coast of Borneo, from dung of birds.

† Do these bats prevent the swallows from building, or destroy their young? All the caves similarly examined by myself, in Borneo, were never inhabited by both together.—E. B.

to the bosom of his tribe. This mode of burial has never been observed in the immediate neighbourhood of Port Blair, as there the bodies are generally concealed in the earth until the bones are fit for use. Possibly the Andamanese may have changed their custom to avoid European sacrilege? The skulls, when clean, are painted red and slung around the neck, being used as a box for such small articles as can be put in through the spinal aperture; the smaller bones are made into necklaces, and the leg and arm bones are often stuck into the waist belts of the women. On steaming further into the channel, we observed four Andamans in a canoe fishing; but, although both we and our tame Andamanese asserted most loudly that we were mīos (friends), and held out great inducement in the way of "rogo" (pork), they would not approach us, but quietly poled the canoe away into the mangrove swamp. We anchored for the night in a small bay in the middle Andaman, about three miles north of Long Island.

V. In the morning, we commenced the examination of the southern point of the bay, where a steep and rocky shore seemed to offer promise of limestone; but, much to our disappointment, it proved to be the common igneous rock of former acquaintance, which, from its light colour, probably may have been mistaken by a person, who did not land and examine it, for limestone. We noticed the fresh footprints of natives in the mud, but were unable to draw them from their cover. An old camp was found, with a broken canoe and fishing net; search was also made for water, but without success. So, weighing anchor, we proceeded to the northward.

VI. The shore was found to be flat for about two miles, but succeeded by some rounded hills rising to an elevation of about fifteen hundred feet. They lie to the north-west of the little bay and are terminated abruptly at the sea-coast, and though steep, as cliffs, are yet thickly wooded. A little further to the northward the rocks begin to peep out from the dense foliage; and from an amphitheatre, near the summit of the hill, springs a beautiful limpid stream, which, leaping from rock to rock in its descent, forms, even in the dry season, a pretty little cascade. Landing about half a mile to the north, we discovered a large but deserted encampment, with a fine creek running between the hills into the interior. At the foot of the cascade some rocks were found which effervesced with muriatic acid, but Mr. Prince (our engineer) would not pronounce them limestone until he had examined them more satisfactorily.

VII. On awaking next morning, I found that we had been under steam for two or three hours and were nearing the Archipelago and South Button, ere reaching which the sharp eyes of our Andamanese discovered smoke to proceed from Outram Island, which

they immediately pronounced to indicate the presence of the ferocious Bullawadders; but, as we wished to examine the South Button first, we merely took its bearings, anchoring close to the Button, a mere rock which does not deserve the term of island.

VIII. Here is a bird's nest cave, but it cannot be entered from the sea on account of the smallness of the aperture; but it is entered at the summit of the island by sliding down the tendrils of a *ficus*, and thence by an inclined wedge-shaped rock that seems to threaten to fall on one momently. The interior is narrow, but branches out in many directions, the swallows' nests occurring in every nook and cranny. The floor is covered with guano. This island has long been known to the Malays and Burmese as the "Split Rock". Tamarinds, plantains, and other productions, were found growing.

IX. Quitting the South Button, our course was directed for the spot where the smoke had been noticed on Outram Island. As we neared it, natives were observed on the beach, also a canoe lying off the edge of the coral reef. They did not evince as much alarm as is usual, but reconnoitred us from behind the rocks; and having anchored the steamer, and stored the boat with provisions, we made for the shore. As we neared the shore, they motioned us to keep off, exhibiting, by their bows and arrows, no wish to communicate; but upon our making them comprehend that we had food for them, a woman, afterwards found to have visited Ross before, came out from their concealment, and, desiring the men to lay down their bows and arrows, made signs for us to approach. On our landing, they at first exhibited a little shyness, but soon getting more friendly, took us to their encampment, when, as customary, we found most of their valuables and children removed to the bush. We discovered that they belonged to the race which inhabits the South Andaman, being recognised by our own Andamanese, and also having in their possession an iron pot. We were unable to induce them to accompany us; so, having given them plenty of food, we returned to the steamer and pursued our homeward route along the coast, without discovering any further traces of natives.

As these notes were accompanied by short descriptions, and I would not introduce any matters which were not literally derived from personal observation, I wrote to his parents to give me a decided answer before I committed myself. And I am happy to say, that several other very interesting matters were extracted from his correspondence. Indeed, it occurred to me that, even if they were indirectly the cause of further question, resulting from discussion here, that it might evoke from others who succeed him distinct replies. I say others, because he has now gone to Burmah. He describes the climate as very healthy, although at first

relaxing to Europeans. "The day's march" was merely an expedition of his own, as he states, "he has been the only one to go into the interior"; and "he *saw* the dances performed". "These dances were performed when he went on shore with the friendly natives during the steam trip." He observes, "I dare say it would have delighted you to see me walking arm in arm on the beach with a savage naked as he was born? These natives are very funny fellows and clever, but not to be trusted: their character being exactly that of a spoiled child, so that you must always go about armed."

NOTES FROM A DAY'S MARCH INTO THE INTERIOR.

The People.—The Andamans are a short, thick-set race (about five feet high), and of a jet-black hue. Their features are generally those of the Negrillo, but vary in a most extraordinary manner, some having almost hooked noses. Their hair, when allowed to grow, is short and woolly, but the head is always kept closely shaved; some few allow a little on the upper lip. They possess no clothing beyond belts and cords made from twisted bark; the women wearing a leaf in front and a bunch of bark behind. They paint their persons in patterns with red and white paints; and when sick, cut the part affected all over with a sharp shell or bit of glass. Very little has been ascertained as to their marriage laws; but, as far as we have been able to make out, the man only remains with a woman until a child is born, and weaned, and then seeks another wife. They are excessively quick and clever, delighting in a hoax, so as to enjoy a good laugh over it. In disposition very affectionate, but, like children, angry when thwarted. They are passionately fond of tobacco, although in their wild state they do not smoke. They are not addicted to drinking spirits.

The South Island is believed to belong to four tribes under separate chiefs; these have their own districts round which they wander, never remaining long in one place, keeping generally to the sea-shore, and entering the jungle only to cross from one side to another. Their camps consist of a circle of huts under the trees just above high water mark; and these huts, at the best, consist merely of four upright sticks, two long in front and two short behind, just high enough for a man to sit under, and slightly thatched with cane leaves. Their food consists of fish, turtle, dugongs, shell-fish, cuttle-fish, and wild pigs. The latter abound throughout the islands, and are very good eating. They are small and peculiar to these islands. No larger animals are likely to exist, or their bones would most certainly have been found in their camps.

The Andamanese have always described four races, viz. :—
The Bullawadders, inhabiting the Archipelago
The Eāri-wadders, inhabiting the Middle Andaman.
The Jerriwadders, inhabiting the Rutland Island;
The Bojan-ee-jidah, inhabiting the South Island.

The latter always describe the Bullawadders as friendly, but Eā-ri-wadders and Jerri-wadders as hostile, savage, and terrible with the bow.

On a voyage in the steamer round Rutland Island, the only Andaman native we saw belonged to the Bojan-ee-jedah tribe (the same as our tame Andamanese). We constantly questioned them on the subject, and they remarked, whenever a nice position for a camp was noticed, that they attributed it to the Bojan-ee-jidahs, all the bad places to the Jerri-wadders; and from this we concluded that the true meaning of this latter term was as yet obscure, or that they had a tradition of a tribe coming from the Little Andamans or Nicobar Islands. He observes that, "The accounts of the natives of Tierra del Feugo resemble these people in many respects."

One of the most peculiar features in the character of the Andamans is their custom of dancing. As yet only two kinds have been observed—the common friendly dance, called jig-dah-dah (dah being only the noun termination, the real word is jig), which is generally performed at a meeting between the tribes; and another (the name of which I have forgotten), which is performed every night. These dances consist in hopping violently on one foot, and swinging the arms backwards and forwards to the time of a song which is kept up by one man, the women clapping their hands loudly and joining in chorus. The time is very often beaten on what we call a dancing board; that is, a hollow piece of hard wood in the form of an ancient shield, which being placed on the ground with the hollow downward, is stamped on by one of the party who keeps it steady by placing the other foot on the pointed end.

Places are changed constantly during these performances much after the manner of our country dances. The night dance seems to partake more of a religious character, and is kept up nearly the whole night, the song being always led by one of the chiefs or elders. The chiefs are always young or middle-aged men; the old ones apparently retiring from office, and never partaking in the dance. On several occasions I have partially seen these dances; but, on one occasion, had the opportunity of witnessing the complete performance.

We were in search of runaway convicts, and had anchored for the night in Macpherson's Strait. On the shore were several fires, which indicated the presence of Andamans. These we in-

tended visiting in the morning, with the view of inducing them to go with us to Ross. But we had scarcely made everything secure for the night before we heard shouts from the shore, which, as our own Andamanese declared, denoted their wish to come on board. Manning our boat, I pulled in the direction of the sound, and soon descried some dim outlines in the water at the edge of the mangroves; they were natives, who, immediately crowding into the boat, seemed delighted to make our acquaintance.

On returning to the vessel, we found that they were all men in a delightful state of nature, not even carrying a bow or arrow. They were soon engaged tucking into the food we offered them, and when replete, of course went in for a dance, greatly to our disgust, as we were much tired. Next morning we were visited by two of their own canoes, who requested us to visit their camp. I believe the invitation was intended for several days, but, as that would have proved too much of a good thing, we merely accepted it for a morning entertainment. I won their hearts by getting into one of their canoes and paddling about—in all probability the first exhibition they had witnessed of an European so engaged.

On reaching their camp we were each taken in charge. I was led off by one of the "swells" to his shed, and made to sit in the bosom of his family. I afterwards presented him with my shirt —then tinted of a lovely red, resulting from their frequent embraces. This red is the only thing one has to fear from them, as they are quite free from parasites, not having a stitch of clothes or a hair on their bodies. It is composed of a red kind of clay mixed with grease. The dance was soon commenced by the head man of our party of Andamanese, with a bow and arrow in his hand; the others sitting under their huts; myself in the middle, looking on and clapping hands. Our Andaman finished by leading out the women of the other party, who carried on the dance, which was finished by chiefs of the encampment. The dancing finished, two chiefs standing in the centre grasped each other by their right hands, and for a few minutes gazed steadily into each other's eyes.

On our arrival, no articles whatever could be observed in the camp; but, by means of presents, we obtained some bows, arrows, earthen pots, and adzes. Their custom is to hide, on the approach of strangers, women, children and effects in the jungle.

Then follows a list of articles obtained, of which a small photograph was made, which will be given separately at the conclusion.

By his latest communication he observes that: —

They find it necessary to retain us here more as a moral than physical force, as there is little chance of any outbreak from the convicts, of which there are about 3500, Indians and Burmans,

living in a more comfortable manner than they would at home, gradually clearing the jungle and making gardens. The progress in this direction has been so successful, that, on the 12th of March last, he mentions "a grand vegetable show". It is a lovely spot and very healthy.

We live on Ross Island at the mouth of the bay, but it has been too well cleared of trees to be pretty. The other two islands are cleared and inhabited, as well as sundry points. The jungle on the main island is so dense, that it is impenetrable. The natives are not so bad now as formerly, and the clergyman, Mr. Corbyn, has learned a little of their language. They are very ugly, not unlike Hottentots. Major Ford is the superintendent, and there are about ten different officers. Their houses are first-rate and food good; in fact, *I* find it too civilised. There are no ladies at Ross Island, and only one at Viper Island, the wife of the native infantry officer.

I have been in the jungle frequently, but find it hopeless, on account of its density and the height of the trees; there are plenty of birds, if you could only shoot them. I go out frequently pig hunting in the jungle, and find it better for one's health than remaining at home: the sport is good, we run them with dogs, and then spear them. It is the only sport we have, and I have the honour to be the only Englishman who has taken to it. Excepting the Burmans, probably no one has seen so much of the interior as myself. It is a curious fact, that these savages make beautiful baskets, nets, and earthen pots, though the latter are rare. They are made like the ancient British, but thinner; and I also think it will be found that they are used for burial purposes, though very little at present is known of the habits of these people. I feel convinced that when thoroughly investigated some light will be thrown on the ancient remains in Europe.

Of the animals, he observes—at present a peculiar kind of pig and rats are found, although there were some footprints, supposed to be those of the tapir, observed some years ago. The bones of a recent dugong were found some short time since in an Andaman camp. He concludes with—an Andaman camp is composed of just two or three little huts perched between two or three trees above high-water mark, and near a water course. On the ground you will find old baskets beautifully made of cane, nautilus shells, skulls of pigs and turtle, a heap of cockle and other marine shells, and perhaps a dancing board, as described. They go quite naked, with the exception of a belt of cord round the loins and cords also round the wrists and ankles, frequently or generally a necklace of human bones round the neck. But they are not cannibals, as formerly supposed.

Arrows are of four kinds, viz.—

I. Broad iron head, moveable and attached to wooden shaft by a cord; no feathers.

II. Long bamboo shaft, wooden head, with iron point, barbed; no feathers.

III. Bamboo shaft, wooden point; no feathers.

IV. Bamboo shaft, four wooden points; no feathers.

Bows.—Very strong, broad, and flat inside, always in the shape of line of beauty; *i. e.*, the lower part bent backwards (S shape).

The cord is made of twisted inner bark of trees.

A cord is worn on the left wrist to prevent the bowstring cutting it, as it snaps very close to the bow.

The arrow is held between the thumb and the second joint of the forefinger.

Pot.—Earthen; not strong; carried when travelling in a sling of cane.

Fishing Net.—Mesh similar to our landing net.

Fish Basket.—Constructed of cane beautifully woven; it is carried over the shoulder, to collect shell-fish.

Adze.—A piece of iron secured into a wooden handle. No iron is found on the islands, except that which may be obtained from wrecks.

Shells are generally used for knives as well as shaving purposes.

Water Vessels.—Large cylinders hollowed out of wood.

Canoes.—Hollowed out of light trees (*Sterculiaceæ*), propelled in shore by long bamboos; off shore, by small roughly-made paddles, similar to the sand-spade of children at watering-places. These canoes easily upset; but all Andamanese swim like fish; they soon right them again.

The nautilus-pompilius is used for drinking cups, and also for baling the canoes.

IV.—*Notices of the Mendoza Earthquake. Visit to the Patagonians.* By Dr. CADDY, Surgeon Royal Navy.

[*Read Jan. 23rd*, 1866.]

THE 13th of April, 1861, Her Majesty's screw corvette *Pylades*, of twenty-one guns, reached the open roadstead of Valparaiso, being homeward bound, in the fourth year of the ship's commission.

The great absorbing topic of the day was the destruction by earthquake of the picturesque city of Mendoza, in the eastern slope of the Andes, a distance in a direct line of a hundred leagues from Valparaiso.

The few particulars gleaned of the Mendoza calamity have their ethnological value, and may teach us how to anticipate and provide against such contingencies, in so far as human foresight can. A hurried dispatch from Mendoza had been received by the Chilian authorities, for all the medical men and surgical appliances at command. Mr. Leahy, then assistant-surgeon of Her Majesty's storeship *Nereus*, at Valparaiso, had gallantly volunteered his services, and started on his humane mission in concert with other medical men. The inhabitants of Valparaiso, numbering 100,000, were under serious alarm at the frequent warnings of earthquakes on this coast. The storehouses of this rapidly rising commercial city are built very lofty, from the increased value of building ground. The residences of the merchants and the well-to-do have a pretty suburban appearance on the hills, overlooking the lowland or commercial streets. Every information was anxiously looked for at this period. Two letters from Mr. Leahy are here inserted.

"Mendoza, 7th April, 1861.

"We arrived here at daylight, on Saturday morning, after a most tedious journey,—cold, snow, subsequently heat, dust, and hunger enough to damp one's ardour. In the Cordilleras we experienced shocks of earthquakes almost daily. Here at Mendoza they occur severely several times a day, but we do not fear much, as we are living in the open air; not a single house, even a wall being left standing. The very ground in this locality has large fissures and holes in it from the recent convulsion. There is a report of a volcano having burst forth from one of the hills three leagues distant.

"Before this terrible earthquake, the city of Mendoza and the

surrounding neighbourhood had a population of fifteen thousand, of whom between eight and nine thousand are dead. There are about one thousand wounded, many serious cases, chiefly compound fractures of the legs. We are establishing a field hospital close to the town. The situation we have chosen is salubrious, but we have many difficulties to contend with, there being no government resident, the person holding that office having fled, through fear of being shot on account of his disgraceful conduct. We have some little assistance from the very few respectable inhabitants left. Drs. Dias, Bates, and myself, have divided the city into districts, but we cannot attend to all. There are over twenty cases awaiting operation to-morrow, by which time there will have arrived as many more. We are sent for in all directions, but cannot go far on account of the loss of time involved. We have an apothecary and three dressers, who behave admirably. In the hurry of leaving Valparaiso, I wholly forgot my own personal wants, namely, bed, soap, and towels. Nothing here is to be had. I am content to rough it, and to be useful with so much suffering and disaster around me."

"Mendoza, 12th April, 1861.

"I take the opportunity of a special post leaving to-morrow morning for Santiago, to state that we are heavily pressed with hard work. The wounded are coming in every hour. Since my last letter of the 7th of April, I have been early and late constantly at work. It is almost incredible, the multitude of dead and dying who surround us on all sides. I am writing by moonlight for want of candles."

Mendoza is in south latitude 32° 52′ and west longitude 69° 60′, at an altitude of 4,891 feet above the level of the sea, and in a small sheltered plain at the foot of the snowy Andes, where thrive vineyards, wheat crops, potatoes, and tobacco.

Her Majesty's ship *Pylades* left Valparaiso the 1st of May, having experienced rather early in the season a severe northerly wind with a heavy swell, rendering the anchorage, from its mass of shipping, anything but secure. Luckily I met Mr. Leahy the last day of April, and he kindly favoured my numerous queries, general and professional. There was abundant medical assistance at Mendoza, medical men having come from Buenos Ayres. Mr. Leahy had returned as soon as he could be spared; for a few days in advance of his leaving Mendoza, the Cordilleras would have been impassable from the fall of snow, and he would have been cut off from Valparaiso for some months.

Mendoza by road is 327 miles from Valparaiso. The first impression of Mendoza was a level of ruins with croppings out of trees and shrubs from various gardens. The shaking destroyed the buildings most completely, but patches of garden land re-

mained where there had not been rents or fissures through the convulsion. Mendoza, before this calamity, was a pretty city, with its streets built at right angles, and having its array of church steeples and lofty buildings. The resting-place of the survivors was in the suburbs of the city under the shade of the trees, the majority being severely wounded. With injury of the head, there was one case of locked-jaw. There were very many fractured collar-bones, some with much displacement, partial union having taken place. These injuries followed from the exposed position of the clavicles to the falling of the masonry and the timber of the buildings. In some of the compound fractures of the lower extremities, the protruding bones were seen, from long exposure, as white as a scrubbed deal board. There was no pyæmia with these injuries, and during Mr. Leahy's tour of duty but one case of secondary hæmorrhage after amputation. The dry climate and season of the year favoured the healing process and did not court erysipelas and allied blood ailments. In this earthquake there was a terrible destruction of little children and of females, as the former were in bed, and the adult women in their houses, when the city was levelled at half-past nine at night, the 20th of March, 1861.

Some six hundred young ladies are said to have perished; so say the surviving young men, who mourn the loss of their dearest relatives and many of them their sweethearts and intended wives. Numbers are said to have been buried alive and there to have died miserably. Had the authorities at first commenced lifting the ruins, searching out these underground prisons, many lives would have been saved. The circumstances were new to the people in power, and the governor not the right man in the right place.

The accidental circumstances of getting reliable observations and clear weather enabled the *Pylades* to enter the Straits of Magellan, bidding our adieu to the South Pacific Ocean. The difficulty is in foggy weather to hit the passage; if this is made out, inside will be found smooth water and clear weather. The straits are about three hundred miles long, and vary in width from one and a half to thirty miles; at the entrance from the Pacific, about eleven miles in width; and our first anchorage was at Point Palmer, somewhat horse-shoe shaped. The land on either side was one irregular mass of barren, weather-beaten, rounded-looking rocky hills of granite and sandstone, with generally a precipitous cliff to the water's edge. Behind these rocky barriers were seen deposits of snow, in a few places glaciers. But few birds were to be seen on the wing. We were well protected from the prevailing squalls, which came over the tops of the bare mountains with great fierceness. A boat from the *Pylades* was pulled around this anchorage. Some seals and divers were

seen; the water-side jungle found very thick, and the common holly in plenty with its well-known red berries. From the ship the stunted vegetation appeared to clothe for a short distance the sides of the mountain spurs, leaving their semi-rounded or irregular summits bare and bleak looking.

From Point Palmer, the next anchorage was at Fortescue Bay which, like the former, was on the mainland, the northern side of the Straits. A Chilian Government schooner was here at anchor awaiting a fair wind to the Pacific Ocean for Valparaiso, her freight being Chilian soldiers and their families. These, however, had landed on the beach and had their tents and camp fires. Here the hills and mountains to the north were clothed with what appeared cedar trees of small size. An inlet from the straits passed up to a morass, through which ran three small fresh-water rivulets. Here wild duck were found in numbers, reminding the visitors of the chorus of a farm yard. A gun in some little ambush at each stream would have kept the birds on the wing and procured a good bag, the ducks usually flying from one rivulet to the other but not relinquishing the morass.

Late in the dark, thick, misty evening, some Tierra-del-Fuegians visited the *Pylades*; they had a fire burning in their canoe, three undersized men and one woman constituting the party. Poor souls, they came on board for what they could get, and their creature comforts were well cared for. They were speedily dressed in cast off uniform, the glitter of tarnished gold lace by candlelight not escaping notice. The lady of the party was clothed by the sailors and marines in pantaloons and jacket, the headdress being an uniform cap from the gunner. She was more than pleased at having her toilet adjusted,—affording some merriment in her attempts, whilst hopping on one leg, to pass the other limb down the leg of the trousers, which garment was too long, the entire Indian party laughing most heartily at the exhibition. The finale being that the sable lady tired of the goose-step, sat on the deck, when two gallant men of war's men, kindly and with every propriety, passed her legs through the trousers, extemporised suspenders, and enabled her to parade in her new costume, in which she appeared perfectly at her ease.

The features and general appearance of these Indian visitors reminded me much of those Indians I had seen at Vancouver's Island, on the west coast of Mexico, and at Nova Scotia. They had nothing to barter, their craving being for rum, biscuit, and tobacco. Their primitive clothing being deer-skins over the shoulders and loins; their legs were bare; their hair long, straight, and coal-black; their eyes jet-black. They had a decided talent for imitation, repeating words addressed to them. They knew a little Spanish, which they had picked up in their intercourse

with the Chilians. One of our officers bawled in the ear of an Indian, which the Indian immediately returned with a two-fold vocal blast. At a former visit of one of our ships of war, some of this tribe of Indians ventured within the midshipmen's mess. One of the midshipmen, as the Indian interpreted it, was ridiculing him, when the Indian immediately threw one of Her Majesty's hard biscuits at his head.

From Fortescue Bay, the next move was to the Chilian settlement at Sandy Point. We here observed, as we anchored about one mile and a half from this northern shore, a cluster of white-washed wooden houses, a church, the ground on a belt of lowland bearing evidence of cultivation. The governor at this station was a Danish gentleman in the Chilian service, and came on board to call on the captain, being rowed off by four Chilian soldiers. I visited the shore, the establishment consisting of the governor, a surgeon, a lieutenant in command of some fifty soldiers, their wives and children, some artisans; there was a good assemblage of boats at the water-side under cover. Three very tractable llamas were shown me within a high fence: they had been brought there very young by the Patagonian Indians.

Dr. Burns, the resident surgeon, informed me that the settlement was very healthy, that infants and older children did well. That the highest of the thermometer in the shade was 75°, the lowest in the winter months 22°. That the agriculture of the settlement was in its infancy, barley and oats ripened, but wheat was most capricious. The potatoes were large, but a little watery. Garden produce succeeded, wild currants and raspberries were plentiful. Nearly everything that had been tried gave promise and encouragement, and having such a rich black mould on which to experiment was in favour of future excellent supplies. There was grass throughout the year, the sheep, cows, and horses kept in good condition. The prevailing timber around and to the north of the settlement was white cedar. The small river streams from the melting snow fluctuated with the changes of the seasons, but contained no fish. Deer were very plentiful in the woods, and were easily captured with the aid of dogs and the lassoo. The nature of the soil here, and the general features of the lowlands, reminded me of Burnard's Inlet, to the north of the Fraser River, which at the period of our visit in 1839, had been but little known to the woodman's axe. In the months of February and March, Dr. Burns told me there was excellent snipe shooting. I had hoped the month of May not too late for a few birds; but I was much disappointed in walking the finest sporting land I had ever fallen in with, not being too wet nor treacherous travelling. I had traversed similar looking ground skirting the harbour of Petropolousky in 1855, the year after the disastrous attack of

the French and English forces on this fur-trading and fishing settlement.

The future of the Chilian settlement in the Straits of Magellan is to be considered as most favourable. Within two leagues from the shore is coal (lignite) in abundance, fit for steamers. From this depôt of wealth, there is a gradual incline to the water-side, well fitted for a tramway. No gold had been discovered, though from the geological formation its presence is conjectured. If the precious metals are found, it will bring forward this hitherto but little frequented region. The wild flowers in the spring are very numerous, with sweet perfume, the colour of yellow prevailing.

The next and last anchorage visited before entering the Atlantic was at Point Gregory, where there was a camp of some five hundred Patagonians, who had hoisted the Chilian flag. The governor at Sandy Point had informed me, that in the measurement of a hundred of these aborigines, their average height was six feet four inches by Spanish measure, which is in each foot a little beneath the English twelve inches. At Point Gregory commence those vast grassy plains, or pampas, which extend more or less to Buenos Ayres, the Chilian Government claiming territory up to the Rio Negro.

The Rev. Samuel Beal, Chaplain of the *Pylades*, who had visited Japan, recognised in the manner, stature, and physiognomy of the Patagonians, a very marked resemblance to the Ainoes of Japan. The Ainoes being the large muscular men (a distinct race in Japan) who are called on to perform those feats of strength in the presence of foreigners, the general part of a Japanese entertainment.*

The Patagonian men ride on horseback with much ease, and pursue the chase in this way—getting on horseback by vaulting on the saddle. The women ride as the men do, and some of them exhibited the facility with which they could leap from behind the horse to its back. Primitive spurs were worn on both heels, these being used to quicken the pace of the animal, but not the whip.

The camp tents were covered with the skins of animals. The usual clothing of the upper part of the body were the skins of young llamas stitched into robes of six feet square. Their great cravings were for biscuit and rum. The men had on Hessian-looking boots of untanned leather; the ladies paraded barelegged.

At first view of the ship visitors, as they entered the wardroom,

* . . . "The attention of all was suddenly riveted upon a body of monstrous fellows—professional wrestlers; they were men enormously tall in stature, and immense in weight of flesh. Their great muscles rose with the distinct outlines of the sculptured form of a colossal Hercules."—Commodore Perry's "Expedition to Japan and the China Seas", p. 430.

they looked the giants, the monsters of men, my boyish days had depicted, in reading the fictions of *Jack the Giant-Killer*. The chief of the party had strongly-marked Indian features with expanded nostrils and thick lips, a blacker skin than his companions. Some of the other men had pleasing profiles, with dark copper-coloured complexions; their hands and feet were well formed; their straight, long hair, and eyes the coal-black of the Indian; their voices were deep and sonorous; their chests very capacious; their arms long and very powerful at the shoulder-joints; their teeth white and good, though living constantly on flesh. The chief understood Spanish, so that the party was soon at home. His headdress was a cloth cap, the substitute for a gold band being the polished brass hoop of some water firkin.

The women seen were, in proportion, as large as the men, the elder ladies being very corpulent; only one of the lean kind was remarked, she being very tall and antique-looking: these veteran dames preserved their full complement of white visible teeth. Both men and women were observed to be very dirty. A missionary (German by birth) had been among these aborigines, from some London society, and had been kindly treated and respected. I had hoped to meet him, but this gentleman was at the Falkland Islands waiting an opportunity again to join them. These people said they numbered between two and three thousand. They moved from one hunting ground to another on their horses. I was informed that the painting of their faces was a protection against the cold. Firearms were among them, and numerous dogs, but their native way of procuring their supplies of Guanacha meat was by the "bolos" or balls, which bolos being united by about two feet in length of the dried and twisted tendons of the ostrich, are slung at the llama, the object being to entangle the legs of the animal. One of the balls is of lead about the size of a duck's egg, of a similar oval shape; the other about the same diameter, of hard wood.

15th May, 1861. We were once more in the South Atlantic, our position at noon being in south latitude 50° 24′, west longitude 64° 41′, bound for the beautiful harbour of Rio Janeiro.

Our visit to the South American continent suggests some reflections on the future of the colonies of old Spain. Since their independence, the emigration from the mother country has been very limited. In these colonists there is a great admixture of Indian blood with a large majority of the population. Their unsettled governments, as is evidenced by recurrent revolutions, are against a progressive nationality. With the progress, the intelligence, the resources of the Anglo-Saxon race, its yearly tide of European emigration, the Spanish descendants cannot be expected to compete. At present, in the New World, inclusive of the New

Hebrides, there are over thirty millions of the first commercial race in the world speaking the English language, destined to people and govern from north to south.

In the centre of the Straits of Magellan has been laid the first gatherings of a young colony. The earth can here furnish its supplies and the sea its fishes. With the view of multiplying man's resources, it has appeared to me that these land-protected straits are fitted for introducing members of the salmonidæ family south of the equator, and such a project would be worthy of our enterprising Californian cousins with the youthful republic of Chili. The progress of this settlement is essential to the existence and elevation of the aborigines to be found here.

In the writings of the Old Testament it is recorded that giants existed, and it is certain that an interesting race of very large men are isolated in Japan and in Patagonia. Their historical antecedents are almost unknown. The nomadic state of the Patagonians cannot be much lower. Some of the Indian tribes of the west coast of America, especially under the Hudson Bay Company's humane guidance, have furnished trusty servants, artizans, and agricultural labourers.

The future of these red races bordering the Straits of Magellan is intimately linked with missionary influence and commercial progress, whereby they may be hoped to have the security of some settled industry, and become, according to their capacity and means of grace, worthy members of the Christian community.

V.—*On the Physical and Mental Characteristics of the European and Asiatic Races of Man.* By JOHN CRAWFURD, ESQ., F.R.S.

[*Read February 13th*, 1866.]

THE principal races of man in Europe may be considered as of nearly equal quality, and as having attained nearly the same state of civilisation. The races of Asia, on the contrary, differ greatly among themselves in quality, and are in very diverse states of civilisation. Thus, in physical and mental quality and in social status, there exists no broad difference between a German and a Spaniard, or between a Slave and an Italian, while virtually the same religious opinions prevail over all the people of Europe. It is very different with the people of Asia, as we see in the examples of the Arab and Hindoo, in the Burmese and Chinese, and in the Mongol and the Japanese. In comparing the races of Asia with those of Europe, I shall therefore refer only to those characters that are common to them.

In instituting a comparison between different races of the human family, we must, since we know nothing to the contrary, consider them all as of equal antiquity, or, in other words, as having had, in so far as mere time is concerned, an equal opportunity of social advancement. Conditions of physical geography, as they are favourable or adverse, will make a great difference in the progress made by races even of equal quality; but, due allowance made for these, the amount of civilisation reached must evidently depend wholly on the degree of natural capacity.

With the races of Europe I shall compare those of Asia which, at one epoch or another, have attained the highest civilisation. These are the Egyptians, essentially an Asiatic people, although by the accident of geographical position an African one; the Assyrians or Chaldeans, the Persians, the Hindus, the Chinese, the Hindu-Chinese, the Japanese, and the Malays as exemplified by the people of Java.

The physical geography of Europe affords few examples of localities so favourable to an early social development as the sites in which the civilisation of the Asiatic races just enumerated sprang up. These sites were the valley of the Nile, of the Tigris and Euphrates, of the Ganges, of the Blue and Yellow Rivers in China, of the well-watered and fertile valleys of Japan, of the valleys of the Irawadi and Menam in Burmah and Siam, and of the fertile

valleys of the volcanic island of Java. To these Asiatic sites of ancient civilisation there is nothing comparable in Europe, unless it be the Italian Peninsula.

All the Asiatic localities here enumerated were distinguished by their extent, by the fertility of their soil, by facility for irrigation, and even by facility of intercommunication. They were probably also, like the American prairies, unencumbered with forest, and hence free from what we know by experience to be one of the main obstacles to progress with early and therefore rude and feeble man. In all these localities, too, we may well believe that the plants and animals amenable to culture and domestication, and indispensable to civilisation, existed in the wild state.

For the development of early civilisation, Europe possessed but few of the advantages of the Asiatic countries referred to. The greater part of it was covered with forest; instead of a mild climate it had a rigorous one. It had probably in the wild state several of the animals amenable to domestication, but few of the plants capable of culture. The only advantage which it possessed over the Asiatic countries with which I am comparing it consisted in its greater extent of sea-coast, which would have yielded to its inhabitants an ample supply of fish, and some advantages of intercommunication. Greece and Italy, from their fertile well-watered lands and mild climates, were the portions of Europe which bore the nearest resemblance to the seats of early Asiatic civilisation, and it was in these that civilisation was first developed.

The differences in physical form between the European and Asiatic races of man are broad and clear, and may be thus stated: The European is a larger animal, possessing more bodily strength, with a great capacity for enduring toil. The limbs of the European are larger than those of the Asiatic, more especially the hands. The muscular fibres and joints of the European are comparatively rigid, while those of the Asiatic are supple and flexible. The most natural attitude of the European is to stand erect, that of the Asiatic to sit, and when he sits his flexible legs are tucked under him, a position of the body irksome or painful to the European. The flexibility of fibre which thus distinguishes the Asiatic from the European has been supposed by some to be the result of a warm climate; but this notion is contradicted by the fact that it belongs equally to the Chinese in the fortieth degree of latitude and in the eighteenth, to the Japanese under the thirtieth and under the fortieth parallel, to the Hindu within and beyond the tropic, and to the Malay under the Equator, as well as to the same people twenty degrees beyond it.

When the European walks he does so with a free and elastic

step, as if he had enjoyment in the very movement. When the Asiatic walks, he seems as if he did so only from necessity. The very dance of the European is a comparatively gay and active movement, while that of the Asiatic is ever a solemn measured strut. The late Mr. Mill, the distinguished philosophical historian of India, hazarded an opinion that the delicacy of some of the manipulations of the Hindus, as in the example of their fine muslins, was attributable to the delicate softness of their hands; but this is a mistake, for many works of such exquisite delicacy, as neither Hindu nor Chinese can reach, are executed by the large, coarse, rigid hand of the European artizan.

The complexion of the European is a white of various tints; that of the Asiatic always more or less swarthy, varying from the brownish-yellow of the Chinese up to the black of the majority of Hindus. The hair of the head with the European is fine in texture, disposed to buckle or curl, and is of every shade of colour from flaxen to black. With the Asiatic the hair of the head is lank, coarse in texture, and, with few exceptions, of the one black colour. The colour of the eye with the European is various, following that of the hair—grey, brown, blue, hazel, black. It is, with rare exceptions, black only with all the Asiatic races.

Beauty and symmetry of person would seem to decrease as we proceed from West to East. The Persians are less handsome than the Georgians and Mingrelians, and the Hindus much inferior in this respect to the Persians. The Hindus, again, far surpass the Chinese, who, ill-favoured as they are, are exceeded by the Coreans, Kamtschadales, and Curile islanders.

The differences in the intellectual and moral qualities of the European and Asiatic races are of far more importance than those in their mere bodily structures, and deserve to be considered at greater length. In understanding, in judgment, in taste, in invention, in reach of imagination, in enterprise, in perseverance, and in the moral sense, the European, placed under equally favourable conditions, is greatly superior to the Asiatic. But the Asiatic is far more precocious than the European. He emanates sooner from savagery and barbarism; but, having reached a certain point of civilisation, his progress becomes nearly stationary. This character, which belongs to the Asiatic races collectively, is found in the individual; and ample means have been found, in our endeavours to educate our Indian subjects, of bringing this fact to the proof. In our seminaries, in which native and European children are educated together, it has been found that the natives advance as rapidly as Europeans, if not indeed more so, up to the age of puberty, after which the equality or superiority of the native ceases, and at eighteen he is left far behind, and never after recovers his lost ground.

A rapid sketch of the progress made by the two classes of races in arts, in arms, and in letters, will best illustrate the positions which I have now assumed. I begin with agriculture. When Greeks were yet but fishermen, and the inhabitants of Gaul, Germany, and Britain little better than hunters practising a rude husbandry, much, indeed, below Mexicans and Peruvians, the Egyptians, the Assyrians, the Hindus, and the Chinese possessed an agriculture which fed those millions who constructed gigantic tombs, temples, and fortifications. The agriculture of Egypt, of India, and of China has probably undergone little change for at least 3,000 years. We can speak most confidently of that of the Egyptians, since the cattle, the implements, and processes represented on their monuments are the same with those in use at the present day. The Asiatic plough consists of a single crooked beam, with a sock, but without coulter or earthboard. It is drawn by the slow ox, and never by the horse. In Asiatic husbandry the Chinese and Japanese adopted manures certainly unknown to the rude inhabitants of early Europe. The Hindus were the discoverers of cotton as a textile material, the discoverers of the indigo dye, and among the first to discover the art, never invented by Greek or Romans, of extracting a crystallised saccharine matter from the sap of plants. Either they or the Chinese were also the first cultivators of rice, that corn which now nourishes, perhaps, one-half the human race; yet even here, in so far as quality is concerned, they are excelled by Europeans, as in the example of Italy and Anglo-America. The Chinese were the discoverers of raw silk, and the curious fabrics made from it. But in the production of every one of the commodities now enumerated, both Hindus and Chinese are far surpassed by Europeans —in some cases even on their own soil, and before their very faces.

That the Asiatic races had made a very early progress in the mechanic arts is attested by the remains of their architectural monuments, which imply the existence at the time they were built of skilful quarriers, of brickmakers, of masons, of carpenters, and of ropemakers. Some of the Egyptian monuments, for example, have been estimated to be 5,000 years old, which would carry us three-and-twenty centuries beyond the time of Homer, when even the art of writing was unknown to the Greeks. All the ordinary metals seem to have been early known to the principal Asiatic races. Thus, the immemorially obsolete Sanskrit has indigenous names for gold, silver, copper, iron, tin, mercury, and lead. China possessed even zinc, a metal unknown to Greeks and Romans. All the other metals, either long known or recently discovered by Europeans, such as antimony, bismuth, and manganese, are, to the present day, wholly unknown to all the nations

of Asia. The state in which iron, the most useful of all the metals, and without which, unless we except Egypt, no effective civilisation has ever existed, is found among the people of Asia, is a striking example of the stationary condition of the arts among them. They probably invented the art of making iron malleable for ages before it was known to the nations of Europe; but it is probably at present nearly what it was when first discovered, and there is not a hundred weight of good malleable iron in all Asia, which is at present largely supplied from Europe. A Hindu furnace will yield in a year little more than twenty tons of malleable iron, while an English one, in the same time, yields about 7,800 tons. The Hindu furnace is so rude that it is easy to believe that no material improvement has been effected in it since its first construction.

In manufacturing industry the Chinese are far ahead of all other Asiatic people. They were the inventors of silk, of porcelain, and of paper; and all these inventions are of such antiquity that there is no record of their first discovery. The Chinese were clothed in silk when Greeks and Romans had no other textile fabric than a coarse one made of wool. They were in possession of porcelain when the most civilised people of Europe had nothing but unglazed earthenware; and they had true paper when Europeans were obliged to put up with imperfect and expensive papyrus. In every one of these fabrics they are now far surpassed by Europeans. The Hindus were the discoverers of the cotton manufacture and of calico-printing; but in both arts they have been far excelled by Europeans, who now supply the inventors with a large portion of the cotton fabrics which they consume. The Arabs were the discoverers of the singular process by which an agreeable stimulating beverage is extracted from the berries of the coffee plant; but, notwithstanding the wide scope of their adventures, they never extended the culture of that plant beyond their own national limits. But the plant has been conveyed to the colonies of European nations; and the once obscure Arabian berry has become, through the enterprise of Europeans, one of the great staples of the commerce of nations.

In no department of industry are the superior skill and enterprise of the European over the Asiatic races more striking than in trade and navigation. With the exception of the Phœnicians, who were, as I have on former occasions noticed, Asiatics only geographically, the active spirit of maritime enterprise never actuated the great races of Asia. It did not exist among the Egyptians, the Persians, or the Assyrians, and it was but very feebly displayed by the Hindus and Chinese. It never actuated the Arabs until they were driven onward by the enthusiasm of a new religion, and after conquest had brought them into commu-

nication with Europeans, who imparted to them some portion of their own enterprise and knowledge.

Down to the present time there is nothing in Asiatic history to be compared to the trade and colonies which Greece, a country not larger than Portugal, established twenty-five years ago over the coasts of the Mediterranean and Euxine. I need not contrast the present condition of trade and navigation between the two classes of race. Europeans, and not Asiatics, were the discoverers of the mariner's compass, of the pump, of the processes and instruments for determining latitude and estimating longitude—of the means, in a word, of enabling the mariner to cross broad seas in safety without the guidance of the dry land. At present by far the greater part of the external trade of the nations of Asia from the Bosphorus to Japan is carried on by the mariners and shipping of Europe. Such external trade as the sluggish races of Asia carried on with each other before the advent of Europeans, they owed to the monsoons alone, which once a year gave them a steady fair wind in their outward and homeward voyages.

Letters and literature afford perhaps the most striking illustrations of the broad disparity which exists in the intellectual characters of the European and Asiatic races. It was only the two most forward people of Europe, the Greeks and Italians, that invented letters, and even the Greeks are supposed to have received the first rudiments of theirs from the Phœnicians. The Greeks, indeed, are believed to have been unacquainted with written language until two centuries after the time of Homer, or 600 years before the birth of Christ. The precociousness of the Asiatic races is shown by the earlier invention of written language among them, and the frequency with which the discovery was made at many independent points. By those who have given their attention to the subject, written language was practised by the Egyptians, not by hundreds, but by thousands of years before it was known to the Greeks. We have, then, and of immemorial antiquity, the Phœnician or Hebrew alphabet, the cuneiform letters of the Chaldeans, the many distinct alphabets of India Proper, of the Indo-Chinese countries, and of the Malay and Philippine Archipelagos, with the symbolic characters of China adopted by the adjacent countries of Anam and Japan. Such is the antiquity of all these inventions, and the rudeness of the times in which they were made, that in no instance can we assign a date to their origin any more than we can to the first discovery of the art of kindling a fire or of fashioning a stone axe. We judge them, however, to be separate and distinct inventions by the totally distinct form of the letters of the different alphabets, and by the opposite principles on which many of them are constructed.

The art of printing with movable types is a European invention that has been in general use by all the nations of Europe for four centuries; but up to the present time it has not been adopted by any Asiatic people, except under the presence or influence of Europeans. They prefer to it, and this is quite Asiatic, the tedious and uncertain penmanship of their ancestors, so that in this matter their literature is in the same condition as was our own five centuries ago. The Chinese, as they were the inventors of paper, were so also of stereotype printing, executed with wooden blocks. Beyond this first step they have not advanced either in the manufacture of paper or in the art of printing, both of which are of immemorial existence in China, whence they have been extended to Anam and Japan.

As to literature, the most enthusiastic oriental scholar will not deny the immeasureable superiority of that of Europe over that of Asia. With the exception of their mere possession of the art of writing, there exists no evidence to show that the ancient Egyptians, Assyrians, and Persians had any literature at all: indeed, but for the relics of their monuments, the hints we have of them in the Hebrew Scriptures, and the narratives of the Greeks and Romans, we should not now have known that such people ever existed. The true history of Persia begins with the conquest of the country by the Arabians in the seventh century of our own time, and the greatest and oldest work in Persian literature, the *Shahnameh*, or *Book of Kings*, dates only from the eleventh century. This consists of a series of wild romances of imaginary heroes, and is of such slender merit that no orientalist has ever ventured on presenting it in a European translation. The Arabs were an obscure people until, under the inspiration of a new religion, borrowed from the Jewish and Christian, they were impelled to migration and conquest in the beginning of the seventh century of our time. They produced almost at once the Koran, considered by themselves the best production of their literature; so that in twelve centuries' time they cannot be said to have made any material literary advance.

The oldest work of the Hindus is the earliest of their Vedas, or collection of hymns, and European scholars have estimated this production as not less than 3,000 years old, that is, 1,200 years before the birth of Christ, which would make it about three centuries older than the poems of Homer. The Hindus have produced besides two bulky poems, which have been called epics, the *Mahabarata* and *Ramayana*. These are of great antiquity, but of unascertained date, and among Hindus, and all who have received religion from the Hindus, are as famous as are the *Iliad* and *Odyssey* among the nations of Europe; but it is needless to add that these wild, incongruous, and preternatural fictions bear little analogy to the poems of Homer.

The Hindus have also produced dramas admitted by the best judges to be of higher merit than their "epics," and of some of these we have English translations. The originals of both epics and dramas are written in the dead Sanskrit. Works of fiction such as these must have been written for a people who understood them—that is, by a nation whose current language was Sanskrit immemorially obsolete—for we cannot suppose that works of imagination should have been written in India in a dead tongue, any more than we can suppose Virgil and the Roman dramatists writing in Greek, or Dante and Chaucer in Latin. We can indeed readily suppose that treatises on law, religion, and science might have been written by the Hindus in a dead tongue as the nations of Europe did in Latin, but surely not writings meant for the people. This fact carries us back to a period of great antiquity in the history of the Hindus, although we can assign no date to it.

In corroboration of this antiquity, and as further evidence of the stationary character of Hindu civilisation, a striking fact may be added. In none of the many vulgar tongues of India has any work been produced of equal merit with those written in Sanskrit; and, indeed, the literature of the vernacular languages consists only of translations or paraphrases of Sanskrit works. The Sanskrit is admitted to have been the language of a foreign people, and it will follow that ever since it ceased to be a spoken language, Hindu literature has been stationary.

The earliest literary production of the Chinese dates 500 years before the birth of Christ. This is a treatise on ethics, the work of Confucius, and is considered by the Chinese themselves to be their greatest literary achievement, so that we must consider them, in so far as letters are concerned, as having remained stationary for near five-and-twenty centuries. It was at the time that Confucius wrote the treatise in question, that Herodotus, who was ignorant of the existence of the Chinese, began to write true history.

There is, however, it ought to be observed, one notable exception to the inferiority of Asiatic literature. This consists in certain portions of the Hebrew Scriptures, which, for pathos and sublimity, are at least equal to the greatest productions of ancient or modern Europe. The inspiration in this case proceeded from a Phœnician people, one of mental qualification very different from, and of a far higher type than, that of Egyptians, Assyrians, Persians, Arabs, Hindus, or Chinese—a people, indeed, that for vigour and strength of character were more European than Asiatic, although partaking of the character of both.

As to the fine arts, sculpture, painting, and music, they exist among the races of Asia only in the rudest and most rudimentary

form. Three-and-twenty centuries ago, the Greeks carried statuary to perfection, and they have been imitated, although not equalled, by the various races of Europe, down to our own time, nature being always the model aimed at. The statuary of Egypt, of Assyria, and of India Braminical and Buddhist, is formed on conventional models which admit of neither variety nor improvement. For the most part, the objects represented are mythological personages, or living kings nearly as much worshipped as gods. In Hindu statuary, for example, one Hindu deity is represented with three eyes, another with four arms, and a third has an elephant's head on the body of a man. Buddha, in ninety-nine cases out of a hundred, sits cross-legged, in the attitude of a European tailor. These forms are invariable. Asiatic painting is on a yet lower footing than sculpture, and has the same conventional character: it is, indeed, miserable daubing, of which a village sign-painter in Europe would be ashamed. Among those who have adopted the Mahomedan religion, and they are nearly all of Asiatic blood, statuary and painting, can, indeed, have no proper place at all; for, in imitation of the Jews, not only the representation of the human form, but of all animal life whatsoever, is expressly forbidden as sheer impious idolatry. Music, as a science, is wholly unknown to the races of Asia. The Persians have a few pleasing melodies, but the Hindus and Chinese have the musical faculty in so low a degree as to amount to a physical defect; and, civilised as they are, it may be safely asserted that their music does not surpass that of African Negros, and is certainly much inferior to that of the Malayan race, in civilisation so much below them.

There is no department of art which exhibits in so striking and satisfactory a light the contrast between the genius of Europe and of Asia as architecture, with the allied arts of road-making, canals, bridges, and fortifications. We have in this case the advantage in many instances of having the monuments themselves before us, and this over a range of thousands of years. The Pyramids of Egypt were seen and described by Herodotus some 2500 years ago, and they were then considered, as they now are, of fathomless antiquity. If we but double the period which has elapsed since the time of Herodotus, some of the Egyptian Pyramids must approach an antiquity of 5000 years.

The characteristics of European architecture are beauty of form and proportion, with design to some purpose of use or ornament. Those of Asiatic consist of magnitude, solidity, and durability, often without any purpose of usefulness or ornament. Of this we have examples in the Pyramids and temples of Egypt, in the palaces and walls of Babylon and Nineveh, in the huge caves and other temples of the Hindus, and in the monster wall of China.

The pyramid of Cheops occupies a space of thirteen acres, or twice the area of St. Peter's. Modern engineers have estimated the value of the labour expended on it at £2,000,000, which is about threefold the estimated cost of all the Athenian buildings and structures of Pericles in an adminstration of between forty and fifty years. The pyramid of Cheops may have been intended for the tomb of the despot who built it, or for a less mischievous animal, a deified ox.

The Great Wall of China, built 200 years before the Christian era, is 1200 miles in length, from 20 to 25 feet in height, and 15 to 20 feet in breadth. The object which it aimed at, but never effected, was to protect the industrious but timid Chinese from the inroads of the hardy shepherds of Tartary. On it, probably, was wasted as much labour as was expended on all the Pyramids and temples of Egypt put together. Let the Pyramids of Cheops or the Chinese wall be compared with a Roman aqueduct or a modern railway, or even a modern canal, and we have emblems of the respective genius of the European and Asiatic races of man. The comparison would not, indeed, be a fair one if the Egyptians and Chinese had made great progress since the building of the structures in question; but, although they have not been absolutely stationary, there is little evidence of material advancement. They existed then an ingenious people skilled in the arts according to the standard of Asiatic civilisation, and the utmost that can be predicated is that their descendants are now a little more skilful.

As to the architecture of the Arabs, it is unquestionably of a far higher type than that of any other Asiatic people. But the Arabs had no architecture of their own, and what goes under their name originated in an imitation, not indeed of the pure Greek, but of the Byzantine, that is, of the art of Greeks whose taste had been vitiated by intermixture with Asiatic races. In time they made it their own, such as it now exists in Rumelia, in Spain, and in India. For this view of Arabian architecture I have the highest living authority, that of my friend James Fergusson, the well-known author of the *Handbook of Architecture.*

Of science, or of arts founded on ascertained principles, it cannot be said that it has any existence at all among the nations of Asia. With them everything is empirical and traditional. The nations of Europe owe to the Hindus their numerals, and their system of numeral notation. Probably, also, they owe to them the week of seven days; but these discoveries came to those who received them, not by immediate communication, but through indirect and obscure channels, the recipients being unconscious of their obligations. The Greeks are stated to have received their weights, measures, and moneys from their more precocious

Asiatic neighbours, the Lydians and Phœnicians. I am aware that a certain acquaintance with geometry, algebra, and astronomy has been ascribed to the Hindus as their own special discoveries. On the last of these topics, certain tables have been found in India, implying an advance in astronomy equal to what was reached in Europe in the twelfth century. European astronomers are divided in opinion respecting their origin, some considering them as borrowed directly or indirectly from the Greeks, and others concluding them of native origin. It seems to me that the first of these views is the most reasonable. The astronomical observations recorded could not have been made without such instruments as the Greeks certainly possessed two centuries before the Christian era, but no such instruments are asserted ever to have been found among the Hindus—a people, indeed, whose mechanical skill, even at the present day, and after acquiring much from their conquerors, is so poor that they are even incapable of fabricating a common time-keeper.

But, besides this, the Hindu astronomical tables have neither date nor authorship. That the European and Hindu astronomy had a common origin, seems to be certain, even from the arbitrary division of the Zodiac into twelve parts, the figures representing them, with the order of their arrangement, being the same, and even their names being but translations. I have in my possession Hindu sacrificial bronze cups, found in the ruins of ancient Hindu temples of the remote island of Java, on which the signs of the Zodiac are represented, such as I now describe them. These cups contain authentic dates in figures, which carry us back to the beginning of the fourteenth century.

If the astronomy of the Hindus was borrowed from strangers, the Greeks of Bactria seem to be the most likely source from which it was derived Their kingdom lasted for two centuries after the death of its founder; its sovereigns coined Greek money, and had possessions even in India, while the colonists maintained an occasional intercourse with their parent country. But whether the geometry and astronomy found among the Hindus were of native or of foreign origin seems very immaterial, since, buried in a dead language, and confined to a small number of the priesthood, they could have exercised no influence on the mass of society. As to the argument founded on the exclusiveness of the Hindus, and their reluctance to borrow from strangers, I think it must be of the smallest value when we consider how much of foreign languages, and consequently of foreign ideas, they have admitted within the last seven centuries, to say nothing of what they could not fail to have received in earlier times from intercommunication with Persian and Greek settlers not remote from their borders.

With regard to the indigenous astronomy of China, it was so

imperfect, that ever since the Chinese have had intercourse with Europeans, they have found it necessary to employ the latter in the construction of their almanacs. The geometry and astronomy of the Arabians were confessedly derived from the Greeks: the Arabs did, in fact, no more than translate or paraphrase Greek writings, to obtain their information.

But of all subjects the art of war is that which proclaims the loudest the incomparable superiority, both physical and intellectual, of the European over the Asiatic races. It was displayed from the earliest time that they came into collision, and has continued to be so down to our own time. The ancient Persians, at the time a warlike and conquering people, had subdued all the nations of Asia from India to the Mediterranean, but were driven back and routed by a few small Greek states, which had by good fortune united for this exclusive purpose. In the Greek victories of Marathon, Platea, and Salamis, the Persians are reckoned to have been to the Greeks as five to one. Such was the result of the encounter of the two races some five-and-twenty centuries ago.

When the Greeks came to be united and under an able leader, they not only conquered the Persians, but all the nations which Persia had subdued from the Bosphorus to the Indus. In all these cases, the achievements of the Greeks were accomplished by mere handfuls of men compared with such hosts as those with which Xerxes and Darius had invaded the little territory of Greece. "In this comparison," says Mr. Grote, "between the invasion of Xerxes and that of Alexander, we contrast the progressive spirit of Greece, serving as a herald and stimulus to the like spirit in Europe, with the stationary mind of Asia, occasionally roused by some splendid individual, but never appropriating to itself new social ideas or powers, either for war or for peace."

The Russians are by race Europeans, but not in the van of European civilisation, and yet they have won easy and great victories over the most warlike of the Asiatic nations, the Turks and Persians, wresting from both large and valuable portions of their dominions, their conquests being arrested only by the interference of the other nations of Europe.

A small combined French and English army lately captured the capital of the Chinese Empire, and dictated treaties to the lord of reputedly 400 millions of subjects. The Chinese are at least six times as numerous as the French and English put together, and they were a civilised people when their European conquerors were sheer barbarians. To place Asiatics on a parity with Europeans, we must fancy a Chinese fleet and army capturing Paris and London, and dictating peace to France and England.

But our own conquest of Hindustan, with its 200 millions of people, with substantially its peaceable possession for the century

which has elapsed since the first effectual conquest, affords the most signal example of the superiority of the European races over the Asiatic. The battle of Plassy was gained by a much smaller proportion of the conquerors to the vanquished than were those of Marathon and Platea. Since that battle our means of carrying on war have vastly increased, for we have invented the steam engine, steam navigation, and the electric telegraph, while compared to our present cannon the artillery of Clive were but popguns. What have the nations of Asia done in the century which has elapsed? They have increased in numbers, but in all else stood stock still, and are nearly the same now as they were in the sixteenth century.

I do not know of a more signal example of the military superiority of Europeans over Asiatics than is to be found in the history of the Mamelooks. This force consisted originally of Georgians, Circassians, and Mingrelians—that is, of an European race, although dwelling within the geographical limits of Asia. In course of time, they came to be occasionally recruited from the nations of Southern Europe. A sultan of Egypt, who had noted the superior military virtues of the European races, instituted the corps of Mamelooks in 1230; and although their number never exceeded 14,000, they may be said to have virtually governed Egypt and Syria until destroyed by the great Napoleon in the last years of the past century—that is, for 570 years. In the curious travels of Ludovico Barthema at the beginning of the sixteenth century, there is a striking instance of the superiority of these Mamelooks worth transcribing. The traveller is on his way to Mecca with the pilgrim caravan, and is himself enrolled in the Mamelook guard which was its escort. "When we halted," says he, "at the said waters, we had to fight with a vast number of Arabs (Bedouins), but they never killed more than one man and one lady, for such is the baseness of their minds that our sixty Mamelooks were sufficient defence against 40,000 or 50,000 Arabs: for pagans, there are no better people with arms in their hands than are the Mamelooks."

Gunpowder and fire-arms, European inventions of comparatively rude times, became known to the nations of Asia some three centuries after they had been in use in Europe, but their introduction has by no means improved the relative position of the races adopting them. The Hindus and Persians have imitated the tactics and organisation of the armies of Europe to little purpose. Forty thousand Sepoys, disciplined by ourselves, but deprived of the European officers who alone gave them spirit, cohesion, and confidence, got by chance possession of a well-provided and fortified arsenal; but Delhi was besieged, stormed, and captured by a European force which did not exceed one-eighth part of the number of the mutineer garrison. The battalions of Persia with European or-

ganisation have been easily overthrown by the Russian, and those of the Princes of India by the English infantry.

The favourite arm of Asiatic nations is artillery; for to stand behind great guns inspires the Asiatic soldiery with a confidence which discipline refuses to confer. They have, indeed, often shown themselves expert artillerymen, and their cannoneers have always been the last to give way before an European force. The Indian artillery in our service used to be a fine-looking body of men, equal in stature to Europeans. The late General Macleod, a skilful and experienced officer of the Indian artillery, told me that, in so far as speed of firing was concerned, he had tried an equal number of Indian against English artillerymen, and the result was that for the first quarter of an hour the Indians fired shot for shot with the English, but that before half an hour was completed the English fired two shots to one of the Indians. A tall Indian horse will at least keep up with a small Arab for a quarter of a mile in a heat of two miles, but will probably be distanced before the race is over. Something very similar to this is the disparity between the Asiatic and the European.

In the matter of government there has ever existed a wide difference between Europe and Asia. In Europe there have existed republics, aristocracies, mixed monarchies, and monarchies, always with more or less of responsibility on the part of the governors to the governed. With the principal nations of Asia the only form of government which has ever existed has been a pure despotism, in which the sovereign is, in theory at least, the absolute master of the life, liberty, labour, and property of the people; the only checks on his power being religion, vague custom, and fear of insurrection. A tyrant is dethroned for flagrant and intolerable misgovernment, and some temporary amelioration follows, but he is in due time sure to be succeeded by another tyrant, to be in his turn dethroned in a bloody revolution.

I have no doubt but that the greatest improvements which have taken place in the governments of Asia have proceeded from foreign conquest. Thus, there can be little hesitation in believing that the conquests of the Greeks under Alexander and his successors improved the administration of the countries which the Greeks subverted. The conquest of Persia and Turkomania by the Arabs improved the governments of those countries, and upon the whole the dominion of the Caliphs was the most enlightened which Asia had hitherto experienced. There is abundant evidence to show that the governments of the Hindus were improved even by the tribes of Persians, Turks, and Afghans who subdued them. It may be said without presumption or the indulgence of national vanity, that, with all its shortcomings, the best government which Asia has ever witnessed is that which has

resulted from our own conquests in Hindustan. Next to it are the governments established in the great Asiatic islands by two other European people, the Dutch and Spaniards. In every direction, then, we see evidence of the immeasurable superiority of the European races.

The gigantic monuments raised to pride, superstition, or folly, erected by the principal, and indeed often even by second-rate Asiatic nations, attest the uncontrolled despotism of Asiatic sovereigns and the virtual slavery of their subjects. The great pyramid of Cheops took twenty years to build, and 100,000 labourers were all the time constantly employed upon it. The canal of Necho, as illusory as the canal of Lesseps, and which was to have connected the Pelusian branch of the Nile with the Red Sea, is stated to have been executed at the cost of 120,000 lives. The periphery of the outer wall of Babylon, for it had also an inner one, was 130 miles; its height from 300 to 400 feet, and its width eighty feet; so that we can readily understand how much labour it must have cost. Yet Babylon was conquered by the rude Persians in the first flush of their conquests, and the capture of the city was the same thing as the conquest of the Assyrian empire. The 1200 miles wall of China, with its many towers and many gates, was a greater work than any of these, which implies only a greater waste of labour. The people of Europe who in matters of government most resemble Asiatics, the Russians, are the only one who have a despotic command over the labour of its subjects. In laying the foundations of St. Petersburg in a marsh, Peter the Great is said to have wasted the lives of 100,000 of his subjects, collected from every corner of his empire; but even here there was at least a pretence of utility. "That," observes Mr. Grote, in his *History of Greece*, "which strikes us most, and which must have struck the first Grecian visitors much more, both in Assyria and Egypt, is the unbounded command of naked human strength possessed by their early kings, and the effect of mere mass and indefatigable perseverance, unaided by theory or by artifice in the accomplishment of gigantic works."

Among the disparities in matters of government which exist between the races of Europe and Asia, the vigilant jealousy of strangers entertained by the latter is especially remarkable. This is a feeling evidently arising from distrust in themselves and apprehension of loss of power through innovation, with an inward consciousness of the superiority of strangers. It was not until the seventh century before Christ, and long after the Egyptians had attained the summit of their civilisation, that they permitted the Greeks and Phœnicians to carry on trade with them; and even then it was tolerated only under stringent restrictions as to time and residence. The same jealousy exists even now among all the

nations of Asia to the eastward of Bengal, and has indeed been but partially overcome by force of European arms. The Chinese and Japanese governments, while they are only apprehensive of the loss of their own power, veil their fears by an affected contempt of foreign trade, by no means shared by their subjects.

Among the salient results of Asiatic despotism may be mentioned the general absence of individuality of character. Private character seems to be absorbed and lost in the common mass of servility, so that an Asiatic commonwealth may to some degree be compared to a troop of gregarious animals, in which the whole power is possessed by a few of the stronger males. The names of only a small number of conquerors, of lawgivers, and of founders of religious sects are known even in their own country, and still fewer in the outer world. The architects and engineers who built the pyramids and temples of Egypt, the walls and palaces of Babylon and Nineveh, the temples of India, and the monster wall of China, are wholly unknown. In literature the names of but a small number of authors are known, and this characteristic seems aggravated after quitting Persia and European influence. With the Hindus it is very general: we are ignorant, for example, of the names of the authors of their two greatest poems. It is needless to insist how different has been the case in ancient, in modern, and even in medieval Europe. Ever since the nations of Europe acquired the art of recording their own transactions, the names of illustrious persons, with regard to their social position, have been commemorated. Occasionally, tradition alone has sufficed to hand them down to posterity. It will not, indeed, be too much to say that Europe has produced more known illustrious women than Asia has of known illustrious men.

To Asiatic misrule, joined to Asiatic apathy, must, I think, be ascribed the dislike of innovation which resists improvement and proved an obstacle to the introduction of those discoveries which have enlightened the nations of Europe and increased their power. Among the nations of Europe, ever since the establishment of their present polity, a common understanding—a kind of public European opinion—has existed. There is a quick intercommunication and an adoption of each other's inventions and discoveries. One discovers the true theory of the planetary system; another, the telescope, the mariner's compass, the quarter-staff, and the quadrant; a third, the steam-engine, the improved machinery for spinning and weaving, steam navigation, the railroad, and the electric telegraph. Quickly these inventions become the common property of all.

No such community exists among the nations of Asia. Jealousy of each other confines their intercourse to a petty traffic at each other's borders, and, in general, whatever change one nation

effects in the social condition of another has been chiefly the result of conquest or religious conversion. The exceptions are but few. There is good reason to believe that the Chinese were the inventors of silk and paper. Silently, in unknown times, and by unknown agents, these discoveries were communicated to the nations of Central and Western Asia. The Chinese were the inventors of porcelain, but, excepting the Japanese, not a single people of Asia has even attempted to imitate them; their own rude unglazed earthenware being now in shape and in quality most probably little different from what it was 4000 years ago. Not so with Europeans, who have not only imitated, but far excelled, the porcelain of China. The Arabs were the discoverers of coffee and the curious process by which it is prepared for use, and in two brief centuries' time it became a common beverage among all the nations of Europe, while to this day it is as an article of consumption unknown to any nation of Asia east of Persia. Tea was a discovery of the Chinese, and in about the same length of time as coffee its use has become general among all the nations of Europe, while to all the nations west of China and Anam, Persia excepted, it is either very little known or altogether unknown. There are but two commodities of any importance that the Asiatic nations have adopted from America in the long course of time now approaching to four centuries. These, and they acquired them only through Europeans, are maize and tobacco, coarse easily-grown plants suited to many varieties of climate. The American potato, which sustains millions of the people of Europe, has hardly reached the nations of Asia at all, save where Europeans have settled.

In morals there has ever existed a wide difference between Europeans and Asiatics. Truth, the basis of all morality, has never distinguished the races of Asia. In Europe fidelity to engagements has been in esteem even in rude times, and increased with the advance of civilisation. Not so in Asia, for it may safely be asserted that there the most civilised nations are found to be the least truthful, among whom may be named the Persians, the Hindus, and the Chinese. Integrity is most prevalent among the educated classes in Europe; but, with the more civilised, the want of it pervades all classes in Asia. The European maxim that "honesty is the best policy" is not recognised by the more civilised people of Asia; on the contrary, finesse is substituted. It is only among Asiatic nations of the second order of civilisation, such as Burmese, Malays, etc., that we find an adherence to truth, and even they become demoralised on the attainment of power.

The difference in morals between Europeans and Asiatics seems to have belonged to all ages. The Romans prided themselves on

fidelity to their engagements in their best times, but lost this reputation for an opposite one, under the Lower Empire, when they came to be mixed with Asiatic races. The Carthaginians were a people of Asiatic origin; and, from the experience which the Romans had of them, "Punic faith" became a byword in their language for perfidy.

There is at least one example of integrity among Asiatic nations which deserves to be noticed. This refers to some of the higher mercantile classes, to whom the utility and even necessity of a strict integrity is directly brought home by their own experience. Hindu bankers belong to this category, as do merchants engaged largely in the foreign trade. Among the Parsee, Hindu, and Mahomedan merchants of Bombay and Calcutta, and the Chinese merchants of Singapore, of Canton, and of Shanghai, there are to be found many men of exemplary integrity.

It may be pleaded that the untruthfulness of Asia has been the result of ages of bad government. This is, in a good measure, true; but, as the bad government sprang from themselves and was a creature of their own creation, they alone are answerable for its results. No good government ever arose in Asia from which good morals could have sprung, and therefore the infidelity of Asia must be considered as an affair more or less of race.

No better test of the state of morals among a people can be adduced than the relative condition of women to the stronger sex. From the earliest recorded times, women have, among the people of Europe, been on as near an equality with men as strength of body and mind and the different duties assigned to them by nature would allow, and this equality has always increased with the increase of civilisation. It has been the reverse in Asia, where women have ever been looked upon as but handmaids, the mere objects of sense, and the indispensable mothers of sons. The ancient laws of the Hindus spoke contemptuously of women, and Mahomed excluded them from his paradise, his prurient imagination supplying substitutes for them.

From this difference in the treatment of women have flowed the monogamy of Europe and the polygamy and legal concubinage of Asia. "Marriage," says Tacitus, speaking of the Germans, "is considered as a strict and sacred institution. In the national character there is nothing so truly commendable. To be contented with one wife is peculiar to the Germans. They differ in this respect from all other savage nations." What other savage nations Tacitus refers to here it is not easy to conjecture, for in his account of the Gauls and the Britons, he does not say that they differed in this respect from the Germans. "Lest," says he, continuing his account of the same people, "the wife should think her sex an exemption from the rigours of the severest virtue and

the toils of war, she is informed of her duty by the marriage ceremony, and thence she learns that she is received by her husband to be his partner in toil and danger, to dare with him in war, and suffer with him in peace." Monogamy was equally the rule among the civilised Greeks and Romans, the liberty of the fair sex, indeed, sometimes amounting to licentiousness.

In Europe, marriages have, for the most part, been contracted only when both parties to them have attained maturity, and the wife has had always more or less the power to choose a husband. In Asia marriages are entered into when the bride is a child under puberty and when the husband may be fifty, a condition which renders all approach to equality impossible. In Europe women have always appeared in public as the companions and equals of the stronger sex, and without attempt at jealous concealment. Among the ruder nations they have even accompanied their male relatives to the field of battle to encourage them by their voice and presence. They have distinguished themselves as authors, painters, and sculptors; they have even sat on thrones and distinguished themselves by their skill in government. Among the civilised nations of Asia, nothing of all this can happen. The women even in the domestic circle are not on an equality with the male sex, and among the upper and middle classes are immured, and would be so by the lower orders if it were practicable. They can not only not be seen by strangers, but it would amount to an insult to ask directly even after their health. The seclusion of women belongs to all the nations of Asia, from Persia to China and Japan, although with some relaxation with those of the second order of civilisation, such as the Burmese, the Javanese, the Anamites, and the Japanese. That this was the case in early times, just as it is now, we have information that is entirely authentic. Even the Greeks, who were less liberal in their treatment of women than the western and northern people of Europe, were surprised at the jealousy of the Asiatics. This is well expressed in the following passage of Plutarch:—"The barbarians in general," says he in his life of Themistocles, "especially the Persians, are jealous of their women even to madness, not only of their wives, but of their slaves and concubines; for besides the care they take that they be seen by none but their own family, they treat them like prisoners in their houses, and when they take a journey they are put in carriages closely covered on all sides." The account thus given of the treatment of women by Asiatics is as literally true at the present day as when it was written 1800 years ago, and without doubt as true as it was at the time it refers to—that is, some 2500 years back.

As to polygamy, there is no civilised country of Asia in which it does not exist, and no civilised country of Europe in which it

has ever had a general permanent existence. Christianity itself did not suffice to put an end to it in Asia, for in its first ages nearly all its votaries were Asiatic. It was only when it extended to the nations of Europe that polygamy incompatible with the frame of society ceased to be legal. When it is asserted that polygamy is the rule among Asiatic nations, it is needless to add that it is an institution which in its nature cannot pervade a whole society. The natural equality in the number of the sexes would make this impossible, unless we are to imagine that the majority of the men would be content to live without wives. If every man were to have no more than two wives, it is obvious that two females must exist for one male, which is contrary to the well-established fact of the close equality of the sexes. Polygamy is but the vicious indulgence of a small number, and limited by necessity to the very few who can afford to rear two or more families instead of one.

Among the evils of polygamy and concubinage are to be reckoned disputed successions, civil wars, and wholesale fratricides. In rude times we have had examples of these calamities in Europe, but they have been exceptions, while in Asia they have been the rule—a fact of which the Turks, Persians, and Mahomedans of India have afforded the most authentic examples. Thus, Aurungzebe, one of the wisest and ablest of the Moghul sovereigns of India, the cotemporary of all our Stuarts, of Cromwell, and of William of Orange, ascended the throne by the defeat and murder of three brothers, two of them his seniors, and by the incarceration for life of his father.

The different forms which the same religion takes among the races of Europe and of Asia show the wide and essential difference which exists in their characters. There are but three religions which are common to the races of Europe and Asia, and they all directly or indirectly originated with the same singular and highly endowed race, the Phœnician, a people, as already stated, physically and intellectually at least as much European as Asiatic. These religions, it is almost superfluous to add, are the Jewish, the Christian, and the Mahomedan. In social advancement the Jews of Europe are on a parity with the people of the communities among which they dwell. The Jews of Asia are substantially Persians among Persians, Arabs among Arabs, and difficult to distinguish from Hindus among Hindus. The Jews of Europe have advanced with the civilisation of Europe, while the Jews of Asia have remained stationary in conformity with the stationary civilisation of Asia.

The Christianity of Europe has kept pace with its civilisation, and varied in its character with that civilisation. The Christianity of the sixteenth century was a very different form of belief from

that of the fourth and of the tenth century; while the Christianity of our times differs very widely from that even of the sixteenth century—more humane, liberal, and beneficent. The Christians of Armenia, on the contrary, differ in social condition from the neighbouring Mahomedans of the Caucasus only in a few immaterial rites and tenets. The Christians of India, of Anam and China are not distinguishable from the Hindus, Anamites, and Chinese, among whom they live. The Spaniards have converted some five millions of the inhabitants of the Philippines to Christianity; but, after the lapse of three centuries, they are still essentially Malays.

The followers of the religion of Mahomed are nearly all Asiatics, and therefore we have no means of making a fair comparison of the effects of Mahomedanism on the European and Asiatic races. I may observe, however, that, at the first burst of its enthusiasm, Mahomedanism seems to have improved some races, and evidently deteriorated others. It improved the Arabs themselves, perhaps the Persians, certainly the Turks, and eminently so all the African Negros who have adopted it. But it deteriorated the Syrians and Egyptians, while it has certainly done no good to the fair race of the Caucasus.

There is one matter connected with this subject in which the races of Asia would seem, at first view, to have an advantage over those of Europe. This is religious toleration. The bitter persecutions on account of difference of religious opinions which have characterised the people of Europe since the adoption of their present religion are unknown to the nations of Asia—to the Hindus, Chinese, and Japanese—in so far as religion is unconnected with politics. We have, at least, no authentic record of such persecutions. The spirit of proselytism, as far as we know, has never assumed an active character with the people of Asia: on the contrary, religion with them is considered a social hereditary privilege of which strangers are not to partake. But the same toleration prevailed with the ancient nations of civilised Europe; and the Romans, more especially, are described as adding to the worship of their own gods not only those of Greece, but even of Egypt. Religious persecution may safely be said to have commenced with that singular and energetic people, the Jews, who, in their zeal for the unity of the Deity, considered it a sacred duty not only to persecute but to destroy all idolaters. It was from the Jews that religious tolerance infected the people of Europe first, and some six centuries later the Arabs, who before appear to have been imbued with the same religious tolerance or indifference as the rest of the people of Asia. Even after the conversion of the Asiatic nations to Mahomedanism, their religious zeal has never carried them to the same lengths that once charac-

terised the nations of Europe. Among the Mahomedan sects thousands were not burned alive for differences of doctrine; and even heathens and idolaters had the option of conversion or paying tribute. Apostates alone were punished with death, and even this was inflicted only by simple decapitation. Smithfield fires and Spanish *auto-da-fés* may safely be said to have had no place in the history of Mahomedanism.

Allied to this question is that of sorcery, or demonology. In one form or another it has prevailed among the races of Asia as it did at no very remote time among those of Europe. But the temporary madness which induced the people of Europe to condemn innocent old women to be burnt alive by thousands for an imaginary crime has never been known to the races of Asia. The real murders under the name of executions, both under this head and on account of differences in matters of religious doctrine, are to be ascribed, I imagine, to the greater intensity of the religious sentiment in the European races.

I shall conclude this paper by producing two examples of European and Asiatic races, placed under conditions of physical geography equally favourable, and these, I think it will be admitted, strikingly illustrate the dissimilitude which exists in the physical, intellectual, and moral characters of the peoples of Europe and Asia. The first of these will be a comparison between the inhabitants of the British and Japanese islands. These are of about the same extent, and reckoned to have about the same number of inhabitants. Both are extra-tropical, with winters, springs, summers, and autumns; the Japanese Islands having the advantage of being some ten degrees nearer to the tropic, and hence capable of yielding commodities which the British Islands refuse to produce—such as rice, tea, cotton, and silk—while, at the same time, they yield all the staple products of the British climate. The Japanese Islands have immemorially possessed all the most useful of the domestic animals. Like the British Islands, the Japanese have mines of iron, copper, lead, and coal, and what the British Islands can scarcely be said to have, mines of gold and silver. Like the British, the Japanese Islands abound in good harbours, open throughout the year, and the seas which surround them are tempestuous, like the British, and therefore fit to exercise the skill, the courage, and the enterprise of a seafaring population. The Japanese seas and estuaries abound in fish, like the British; the more northern parts of them, to make the resemblance in this respect the more complete, including the salmon and the herring.

So far the parallel is tolerably complete. The only essential difference lies in the races of man, and the results are shown in the very dissimilar states of the parties compared. We cannot

go back 2000 years in the history of Japan, because the Japanese have no authentic record of such antiquity; but if as precocious as other Asiatic people, and there is no reason to believe that they are less so, they must have been a tolerably civilised people when our own ancestors were shepherds and huntsmen with less knowledge of agriculture and the useful arts than was possessed by the Mexicans and Peruvians when the Spaniards first saw them. The Japanese first became known to Europeans 322 years ago, and do not appear then to have differed in any appreciable respect from what they are at the present day. This is exactly the same thing as if in England no change whatever had taken place in arts, sciences, manners, customs, and government since the last year of the reign of King Henry VIII. The Japanese isolated themselves from the rest of the world for above 200 years, but even this made no change in them. The Japanese are, in short, an example of the stationary character of the Eastern races carried to the last extremity. We can readily imagine such a people undergoing very little change in thousands instead of hundreds of years.

It may, indeed, be said that the civilisation of the people of the British Islands has been in a great measure owing to the example and instruction of other European nations more advanced than themselves. This has no doubt been the case, but, on the other hand, the Japanese have had a corresponding advantage, as far as the most civilised Asiatic people could bestow it; for they have certainly derived some of their arts, the most esteemed of their religions, and the whole of their literature from the Chinese.

The second example which I shall adduce will consist of a comparison between the people of Continental Greece and those of the Island of Java. Their countries are very nearly of the same extent. Their climates are indeed widely different, but we have a right to believe that they are equally suited to the well-being of the races that respectively inhabit them, and who, since we know nothing to the contrary, must be deemed their aborigines, for we have no evidence of their being otherwise. Java, in point of fertility, far surpasses most countries, equalling even those which are fertilised by the periodical inundations of great rivers, such as Egypt and Bengal. Greece, a mountainous country of narrow valleys and narrow plains, is not eminent for fertility. Java at least equals Greece even in point of the picturesque, for it has many mountains far higher than Olympus, volcanos in action, and forest-clad valleys of eminent beauty. It does not, like Greece, produce wheat and flax, or the vine and the olive, but it produces their equivalents, rice and cotton, palms, and the sugar-cane. Its coasts, like those of Greece, abound in fish, which, as it did with the Greeks, forms the chief animal food of its inhabitants.

For the fostering of maritime enterprise, Java seems to be on a level with Greece. The sea which surrounds it is not vexed even with such tempests as those of the Mediterranean, and it has the advantage of the monsoons, which enable the mariner, even without the compass, to make a long and rapid voyage by dispensing with the necessity of creeping tediously in sight of the shore. If Greece had the benefit of the neighbourhood of the many islands of the Grecian Archipelago, Java has that of a far superior one in the countless islands of the greater Archipelago to which it belongs, and even of the neighbouring Philippines.

Nothing was wanting to complete, not the equality, but the superiority of Java as a locality for fostering civilisation but the race of man, and here the superiority of Greece was more than enough to counterbalance its disadvantages of physical geography, as evinced by its arts, its literature, and its spirit of enterprise. The Greeks colonised all the islands of the Grecian Archipelago; while Java has not done so with any one island of the Malayan Archipelago, not even with those in the immediate vicinity. The Greeks planted colonies along all the coasts of the Mediterranean and Euxine, while the remote settlements and trade of the Javanese are only to be discovered by the existence of a few words of their language in the languages of less cultivated tribes, reaching indeed to a great distance, since we discover them without difficulty, on one side in the language of the remotest of the isles of the Pacific, and on the other in the languages of distant Madagascar.

From the facts stated in the course of this paper, the inevitable conclusion to which we must come is that between the European and Asiatic races of man there is a broad innate difference, physical, intellectual, and moral; that such difference has existed from the earliest authentic records, and is most probably coeval with the first creation of man.

VI.—*Notes and Sketches on the Niger.* By T. VALENTINE ROBINS, Esq.

[*Read Feb. 13th*, 1866.]

WE, forming the Niger Expedition on board H.M.S.S. *Investigator* for 1864, entered the mouth of the Nun and dropped anchor close to the mission house, which looked like a small cottage which had strayed from its dear old home, and by misfortune drifted to the poisoned shores of Akassa. We were soon visited by Francisco, king of Akassa, and his followers, Moako, Opunam, and Depagara, together with a score of rascally-looking fellows.

Steam up, anchor weighed, and now commences the real Niger expedition, for the Nun is the mouth of the Niger. The order "full speed ahead?" soon moved us steadily onward towards the interior, from whence the mighty river rushes with a strong current, supplied by thousands of streams, extending over a course of nearly four thousand miles. This grand river passes through regions untrod by civilised man; regions of desolation, rapine, and cruelty; regions of jungle, morass, swamp, and pestilence; and not only regions, but legions, of wild ferocious beasts, preying upon each other; and these, in their turn, are paralysed in the powerful folds of myriads of snakes, who seem to hold dominion over all flesh, even striking terror into the hearts of those wild demons bearing the human form; for here the despoiled "marvellous work" drags out his existence amidst every species of wild ungoverned cruelty, surpassing the prowling wolf in his unnatural cannibalism and brutality to the opposite sex. Nor are these latter at all deficient in appetite, when some luckless prisoner is to be cooked for supper. At these feasts the guests drink large quantities of palm wine, and become intoxicated; and in this state they dance, howl, and fight until the meal is finished. Their villages, on the banks of the river, have the appearance of a score or two of squalid looking "pigsties"; many of the huts are built upon stakes just above the water, the natives paddling between the huts, as there is frequently no earth visible. The natives were painted like demons, having the body first coloured a blood-red, daubed with yellow, white, indigo, and mud; from the right shoulder to the wrist is a broad stripe of white, the left being yellow, the right eye and temple patched with white, the skulls either shaved quite bare, or a few tufts projecting like rats' tails, realising to the life demons of dark and bloody purpose. The women are brutal looking, and generally in a state of nature; the hair is

plaited into a number of horns sticking up straight from the head; they wear large ivory rings on the arms and legs. Some of the women have the head shaved, which causes it to glisten in the sunlight like a piece of polished mahogany.

Passing these villages, we glide along, as it were, in the stillness of death. Here the river is not very wide, but singularly picturesque, with numerous islands covered with dense foliage, the giant "Baobab", or monkey bread-fruit tree, towering above millions of palms, cocoanut, umbrella, mango, plantain, and banana, jungle shrub, and brushwood. Many of the trees are supplied with suckers reaching from the upper branches into the water. We are surprised at the absence of earth-bank to support so much foliage; yet, when it is remembered that the river rises thirty or forty feet, the strange appearance is accounted for; and, in reality, we were floating in a manner half way amongst the trees, for, even when some of the boughs came on board, the man at the lead-line would sound from five to nine fathoms. The scenery is not, properly speaking, "landscape", as the eye can never penetrate beyond the first few yards, the foliage being so dense that it prevents that great charm "aërial perspective".

As our course now lay entirely through hostile cannibal districts, who had fired upon former expeditions, our commander took the precaution to have the boarding-nettings triced up from the bulwarks to the top of the sun-housing, which, although it shut us all within a large net, would prevent us being taken by surprise at night time as we lay at anchor.

Our first communication with the natives was at Oloberi. The chief, formerly hostile, came alongside in his canoe, and wished to be friendly. He wore an old dressing-gown and a battered hat, no doubt obtained from the traders at the Brass or Benin rivers; and these poor articles of finery had travelled a long distance before they came to the base use of a robe and crown for a cannibal. After receiving an addition to his wardrobe in the shape of a cocked hat, he went on shore looking as proud as Lucifer.

Sunday, 4th September, Bishop Crowther read his first sermon as "bishop" on the Niger. He is well known to all the natives, and is much liked. In the afternoon we stopped at Onitsha, one of the mission stations. Onitsha is not now in a state of cannibalism: it is about a hundred and seventy miles from the mouth of the river. Hitherto we have passed through nothing but cannibal districts, but here the people have been induced to leave off their disgusting practices. Still, they have a banquet with a friendly tribe some two or three miles distant when a prisoner is caught; and only this very morning a poor wretch was captured whilst passing in a canoe, dragged on shore, cut to pieces, and eaten. Our informant, who could speak broken English, saw the

affair, and seemed to think it great sport; he denied having eaten any of the delicacy, but stated that his friends were very fond of fresh meat. Here some of the women wore the largest ivory rings that I have seen; one woman in particular, had on a pair of ivory leggings that looked like top-boots, and were estimated to weigh twenty pounds; after walking a short distance, the poor creature would sit down quite exhausted. These ivory leggings are often presented to the bride by her husband; but when the fickle swain is tired of the one, and takes unto him a new wife, the first wife has to give up her expensive and weighty ornaments, and the new bride, as it were, slips into the other one's boots.

We now push forward to the English settlement at the confluence. After leaving Onitsha, the river becomes greatly diversified; the palm and cocoanut trees are very scarce. Mountains are seen ranging along in the extreme background, vast forests and hunting grounds form the mid-distance—a wild yet beautiful landscape. One can scarcely realise the contrast in so fine a picture, for death surrounds us on every side. Supposing the savages allowed you to pass unmolested, and you escape from every fierce monster ready to grapple with you, there are still the heavy sickly-malaria by night, and the maddening sunstroke by day.

Arriving at Bebe, another mission station, we are within sight of the African home of Dr. Baikie, called Lukoja. I shall speak of the Bebe mission station hereafter, because time and acquaintance will enable me to form a more correct judgment. We were all anxiety to arrive and see Dr. Baikie, he being the only white man living in these distant regions. Some evil-minded persons had represented him as a niggardly, penurious being, who was quite in his element living in a half and-half sort of civilisation; and had reported that he had turned Mohammedan; that he kept a harem of women; in fact, we all expected to see a dried-up, wizen-looking piece of humanity. But our ideas were agreeably changed when the boat came alongside, and in a moment on the deck stood the man. Dr. Baikie was dressed in the cool loose country style, and very well he looked, both in the point of the picturesque, and in health and strength; he was powerfully built, was well tanned by the sun, and stood slightly above the medium height.

I need not detain you with an account of our journey two hundred miles into the interior to see king Massaba, but will return to Lukoja, our home—that is, of Lieut. Bourchier and myself, who are to remain here whilst Dr. Baikie returns to England for a change, after his long stay of seven years. The steamer has left us, and dropped down the river to await the doctor, who followed in a canoe, we accompanying him to the river side, deeply regretting to part with so excellent and brave a man.

We both returned to our residence, neither daring to utter his thoughts with respect to the task and desolate banishment that we had undertaken; for, come weal or come woe, there was no chance of any white man visiting us before twelve months, at least, nor had we a chance of returning to civilisation by river or road.

Lukoja is situated on the western side of the river Niger, at the confluence of the rivers Kwara and Binne, about eight days' steaming from the mouth of the Nun, the Nun and the Kwara forming the one river Niger. The river also receives the additional name of Joliba, which I have ascertained from Mohammedans who have come from the interior, and which is mentioned by Mungo Park. Dr. Baikie selected this place for an English settlement, and resided here with his followers from Lagos until our arrival, his stay having extended over seven years. Of course he saw white faces during that long period, but they all returned to the coast, with the exception of Lieut. Bedford, who volunteered last year to remain here, but died on the 22nd February, 1864, after being here between four and five months; and, in consequence of the necessity of there being more than one white man in case of sickness, I volunteered to remain with Lieut. Bourchier, who was sent to relieve Dr. Baikie.

Our settlement might all be enclosed in a moderate sized farmyard, but its position shows great judgment and taste in its founder; seen from the river, it looks like a score or two of small round hayricks with painted tops; it lies about one hundred and fifty yards from the river-side, in a small though highly verdant plain at the foot of a table mountain wrongly called "Mount Patte", as the Nupi word for mountain is patte. The place contains about two hundred inhabitants, composed of the Fula, Hausa, Nupi, Bunn, Bernu, Ganagano, Quoto, Gwari, Giwuri, Gandi, Birra, Goruba, Woro, Koha, Magi, Gugotsi, Numi, etc., also Kukuruku, Bassa, Kakanda, and Igbirra. The Fulas or Fulani are the highest caste, the Quoto, perhaps, the lowest type, of Central Africa. These tribes, of course, are distinct and superior to the cannibal regions. The Hausa language is the French of Central Africa, and that is again subdivided into seven kinds. The Nupi people are the rulers, and are supported by the Hausas, as King Massaba's mother was Hausa, and his father Nupi.

Lukoja has no produce of its own, but its position at the junction of the two mighty rivers affords a good market for the surrounding tribes, who bring ivory of a splendid quality and size, also cotton, saltpetre, lead ore, Shea butter, and palm oil, the latter in small quantities. Our subjects are composed of Mohammedans and heathens. The latter are farmers, fishers, and hunters, doing all the work; the Mohammedans are a lazy, idle set. These

are strong terms, but true; the men think it a disgrace to work, yet they will beg or steal, or live by the work of their women. On passing through heathen villages, they take everything they can lay hands on; and, should the luckless heathen show fight, the poor fellows are taken before the king, who levies heavy fines, thus keeping them in constant terror and subjection. To beg is their pride; to lie is their profession; to get something for nothing is all they live for. He who gets the most out of a white man laughs the loudest, and calls you a fool for giving. Yet, with all these failings, they have two great redeeming points; these are, hospitality and temperance. The first cannot be too highly valued in a country like this, where, unlike most countries, one may starve by the road from the absence of even wild fruits. Upon reaching a village, the first thought is to provide refreshments for the weary traveller, which is very welcome. These dishes are nearly all alike, whether made of fish, flesh, or fowl; and for each dish, though they are freely given, custom requires you to give a few cowries to the bearer, amounting to about one-fourth of the value. This fee is called tukutsi.

The temperance of the Mohammedan is a part of his religion; and, although compulsory from necessity, yet I believe it to be habitual from nature. Still there are some who like a small taste of brandy. They are great gamblers, which is their chief amusement.

After the Mohammedans, we will examine another group, composed of women and children. The women wear but one cloth round the waist; their faces, arms, and bodies, are cut and slashed with their tribal marks; they also wear many strings of beads, and leather grees or charms around the hips: these charms are for or against children. Of all the tribal marks, the Bunn is perhaps the most severe, it being three slashes from the crown of the head, extending down the face, and curving towards the mouth, the ridges of flesh standing out from the face in bold relief. This painful operation is performed by cutting the skin open, and then cutting out a long thin strip of flesh; into this wound palm oil and wood ash is rubbed, thus causing a thick ridge when healed up. Some of the women are elaborately cut all over the body in well formed designs. The barber is generally the man of cunning hand. He first places a small cow's horn on the part to be cut, and with his mouth sucks the air out through a small hole at the end of the horn, which performance of course cups the flesh, whilst with his tongue he places a cotton plug upon the small hole. The horns, five or six in number, remain standing out from the body, sustained by the flesh cupped into them; they are then removed, and the pattern cut with a very poor knife; the flesh is recupped, and after five minutes removed, each containing a clot

of blood the size of the yolk of a duck's egg; the horns are again replaced, and a second yolk of blood is drawn; the operator then with his finger rubs into the cuts a little palm oil and soot, causing very little pain to the girl. During the operation, several girls sing to keep up the courage of the vain one, who thinks her attractions are greatly enhanced. The charge is twenty cowries each horn, equal to our farthing. According to this ratio, a woman can be highly illustrated with cuts for one thousand cowries, equal to one shilling. Some of the women have the hair dressed in a very tasteful manner, often terminating in long tufts sticking out from the head; some are painted red, wearing rings on the fingers and toes, arms, and ankles. Perhaps three or four of these women belong to one husband; yet a woman does not object to any number of co-wives, providing the man does not forget her. Here is an instance. A man entices a woman and gives her "picken", and when told he had better keep the woman, the first wife goes to the giver and returns thanks on her knees because the man was a wife the richer; and further, if a woman bears a child to another man, her husband makes no complaint, but is rather pleased at getting "something for nothing", as they say. Near to the women is a group of India rubber looking "pickens", quite naked, with strings of beads around their loins; their little skulls are shining in the blazing sunlight: some have a ridge of hair over the top of the head, trimmed in various styles; others have small round patches of wool left at the sides of the head to enhance their charms.

Leaving these interesting groups, we will ascend and examine the top of the mountain. The zigzag path brings us up to an enormous baobab tree. These trees might be styled the elephants of the forest. In colour they resemble our beech tree; the fruit is in appearance like the cocoanut stripped of its outer coating, suspended by long stems from the boughs; one may measure fifteen inches in length, and the suspender two feet long. On breaking the shell, we find the interior arranged into compartments containing the seeds, which are like small tamarind-stones covered with a cream coloured acid, very pleasant to the taste; from one fruit, I counted over nine hundred seeds. The fruit is ripe when the leaves are cast in December. The leaves appear in March, and in April a delicate white blossom hangs by the long suspenders, and gives to the tree a charming appearance. Turning from the tree, let us give our attention to the grand view before and below us, as we are now supposed to be eleven hundred feet above the Niger. Nearly touching our feet are the tops of large trees, whilst hundreds of trees descend lower and lower until lost in the morning mist down the mountain side; then right and left stretches the plain of English ground, and this ex-

tends inland for three days' march. In the centre between us and the mighty rival rivers is our little dotted settlement, containing perhaps sixty huts, the government huts being enclosed within a mud wall. The Stirling Hill looks now but a mound scratched at its base by fowls, yet these scratches are called farms. A few specks may be seen moving towards the river; these are women going to fetch water. At sunrise, the old Red King seems to come up all of a hurry some fifty miles away, up the Binne or "black water", casting a long glowing reflection right down across the wild country into the Binne, across the point at the confluence into the Niger, until it draws up the morning mists settled in the valley. At the confluence, the two great rivers run nearly east and west, north and south; and, in consequence of our geographical position being so near the equator, I have seen from this mountain-top (whilst watching at night for elephants) the northern and southern constellations of Ursa Major and the Southern Cross.

This mountain runs parallel with the Niger, and is three-quarters of a mile long, being perfectly flat, and quite narrow at the ends; from each end the sides curve inland, and join it to another mountain parallel to the first, the junction forming a narrow belt between the two; the level presenting five points, two to the south, and three towards the north. Formerly upon this mountain was "Lukoja proper", and the entire surface was under cultivation by the Igbina people. The walls of many huts are still standing; they are built of red stones, that present the appearance of being small shot or metal, so melted by the action of fire. King Massaba stormed this place for five months, and at length succeeded in driving the people out. I may mention that when Trotter's expedition selected the Stirling Hill for their residence in 1841, the Igbinas lived upon the mountain, and held friendly intercourse with our people. Passing over to the north side, we see at a great distance a range of table-mountains closely resembling our own; these extend ten or fifteen miles further north, having villages, farms, and market-towns upon the top. It may not be unlikely that our own and these mountains were all in one at some distant period, more especially as great slices of our mountains are detached, leaving gullies of great depth over which we can step. Looking over the country from the back of the mountain, we see still English ground, and we can scarcely realise the fact that man is seldom to be met with in these wild jungles. Within three days' march, a small river called Odokodo winds through the landscape and falls into the Niger three miles below Lukoja, and nearly opposite the mission station Bebe glebe.

Bebe is a dirty, foul smelling place. It has a tolerably good market, in which the following articles are offered for sale: corn,

yams, rice, salt, onions, fish, fowls, elephant and hippotami flesh, the hides being also boiled for soup. You may also purchase English cotton prints in small quantities, together with looking-glasses, gunpowder, shot, iron implements, mats, beads, and country beer. Yet Bebe is as bad for brutal scenes as Dahomy, only on a smaller scale. They are constantly putting some poor wretch to torture upon the plea of witchcraft. When a person dies, some one is sure to be accused of witchcraft, and must prove her innocence by drinking poison without its having a deadly effect. Whether just or unjust matters not, the ordeal must be gone through; and, for this purpose, the accused is brought to the market-place, where the poison, "sasswood", is boiled ready for use. These scenes occur nearly every month, and in one instance two women were accused of the death of a third. The first poor victim drank the contents of a third calabash of poison, and died in frightful agonies, accompanied with the sticks and kicks of the lookers on. The other woman, having drunk a similar quantity, withstood its effects, and claimed to be released on the ground of innocence. But the friends wanted more sensation; yelling and shouting that, as one woman had died, the other must, they compelled the miserable creature to empty a fifth calabash, when she sank writhing in the greatest torment, the mob meanwhile spitting on her, yelling, and shouting like demons. Ropes were then tied to the feet, and the bodies dragged naked through the mud to the river side, and pitched into the Niger. The Glebe people are mostly Igbina and Bassa; they are good traders, and very industrious.

Leaving this place, we take canoe and paddle back to the confluence, some five miles off, and land on the same side of the river, directly opposite to Lukoja, and visit the king of Gandia. The king of Gandia is a fat burly man, middle aged, and very dirty. His sable majesty had a pig's tooth stuck in each ear, five rows of beads on the wrist, with brass rings on the thumb, and a penny brass bell attached to his elbow; his throne was an English hearth-rug placed upon a cow-hide; behind him were some "fetish fixings", such as a rudely cut pagoda, ornamented with cowries, and the pen-feathers (as the god's portion) of the birds. Gandi is a poor place; the people are hard livers, and contented with very little. In like manner, all the towns are poor in appearance, owing to the fact that, if any man should become rich, he would be plundered and sold into slavery. Perhaps a few words about slavery in Central Africa may not be out of place.

I will describe slavery as it really is, not as people in England think it to be. Slavery, as we continually find it here, means belonging to a family group. There is no compulsory labour. The owner and the slave work together, eat the same food, wear

the same clothing, and sleep in the same huts. Some slaves have more wives than their masters. Then where is the slavery so called? It certainly is property to the owner, but it is protection and everything necessary to the slave. He is sure of his food, work or no work; his master gives him a cloth, his only want in the way of clothing, and will protect him against oppression from other parties. A man may own any number of slaves, and he himself be a slave to somebody else. When a heathen is sold to a Mohammedan, the former assumes all the swagger and pomposity of his master, and very often *vice versâ*. A free man is worse off than a slave. He cannot claim his food from anyone; and, as idling is a virtue here, the free man is always a beggar or hanger-on, living upon charity, or more often cunning and stealing. These remarks, although diametrically opposite to all received ideas of slavery, are nevertheless in perfect keeping with society here; and such is my sketch of slavery, taken on the spot.

Having taken a passing glance at the subjects mentioned, we will return to Lukoja. It is the dry season, the river has fallen thirty-five feet, the heat is very great, the thermometer stands at 128° in the shade; we think it cool and nice when the glass falls to 100°. The river abounds with fish and wild ducks; the woods are well stocked with elephants, buffalo, hippopotami, deer, leopards, wolves, hyænas, and monkeys; our huts are well visited by mosquitoes, scorpions, centipedes, sandflies, snakes, etc.

And now a glance at the moonlight before closing these notes. Most people think that moonlight in a tropical country is something very grand to look at, but this is erroneous; the sky is all light, and the earth all dark; the moon is very clear and brilliant, yet the absence of secondary or half-lights on shore, gives a dark, dismal effect, sleeping, as it were, in the stillness of death; the mountains form a large sombre mass in the landscape. Yet, amidst all this solitude, we are imperceptibly travelling in thought back to the land where, from every nook and corner, the queen of night is seen in such exquisite beauty.

VII.—*On the Origin of the Somali Race, which inhabits the North-eastern portion of Africa.* By Col. C. P. Rigby.

[*Read Feb. 27th*, 1866.]

The north-eastern portion of Africa, which is embraced between the Straits of Bab-el-Mandel and Cape Guardafui, and thence as far south as the equator, is inhabited by tribes composing the great Somali race, which differs from all other African races in feature, language, and customs. The origin of this race, and the question as to what family it belongs, is, I think, worthy of discussion.

Previous to the occupation of Aden by the British, Europeans had very little intercourse with the Somali, and very little was known concerning them. No European traveller had ever penetrated into their country, and to this day the greater portion of it remains unvisited.

The Somali are a pastoral race, possessing large herds of cattle, and flocks of the Doomba or fat-tailed sheep. They subsist chiefly on the produce of their flocks and herds. On the east coast they cultivate a great deal of grain, and lead a more settled life, dwelling in towns and villages. Those tribes which inhabit this part are much taller and more robust than the inhabitants of the comparatively barren country further north. The men are generally six feet in height, and all have the most regular white teeth.

The Somali are generally tall and well made, with a very dark smooth skin; their features express great intelligence and animation, and are of a Grecian type, with thin lips and aquiline noses; their hair is long, and very thick. They have none of the characteristic features of the Negro race, which they affect to despise. The men comb out their hair into little ringlets, having the appearance of a thick mop; they wear no head-dress, and bestow much time and care in the arrangement of their luxuriant hair, and, in order not to derange it at night, they rest their head on a small wooden pillow scooped out to support the cheek. They also frequently change the colour of the hair by applying a preparation of quick lime. They have also a custom of shaving their own hair off, and substituting a large bushy sheep-skin wig dyed a bright red colour. On the top of their hair or wig they wear two thin sticks bound together, which they use as a comb to twist out their ringlets. Those who have slain an enemy in battle, wear an ostrich feather stuck upright in their hair. They have generally very scanty beards and moustache, and these they frequently pluck out.

The women are generally tall and well formed; when young, they are very good looking. They are not secluded, and are under no restraint, being treated as the equals of the men. They are always merry and good-humoured. The unmarried girls wear their hair in small ringlets hanging loosely all over the head; after marriage it is drawn tightly over the back of the head, and inclosed in a bag of network, or in a black or blue handkerchief. Many of the girls, although jet black, possess features of classic beauty, but the rough life they lead causes them to fade early; yet their brilliant eyes and white teeth always give a pleasing expression to their goodnatured faces.

When the English first occupied Aden, the dress of the Somali females usually consisted of goat skins tied over the left shoulder and hanging loosely in front; but they soon became ashamed of this primitive costume, and their dress now consists of a white or coloured cotton cloth bound round the waist, with both ends fastened in a knot across the breast. Their ornaments consist of large necklaces called "audulli", composed of glass and coral beads and pieces of amber, with bracelets of the same.

The dress of the men is very graceful. It consists of a flowing white robe, exactly resembling the old Roman costume, wrapt loosely round the body, and one end thrown over the left shoulder. Their legs are bare, and on their feet they wear sandals of cow-hide. They are very fond of wearing charms and amulets made of silver or amber, or a small leather bag, containing sentences from the Koran, hung round the neck, or fastened on the right arm.

Both sexes pay great attention to their teeth. The tooth-brush, consisting of a fibrous twig of a tree, is in constant use; and I have never seen any race of people possessing such white, regular, and perfect sets of teeth.

They are bigoted Mohammedans, and very strict in the observance of the ceremonies of their religion; yet, strange to say, they do not seclude their females, and both sexes join together in merry dances and other amusements. In addition to the Mohammedan festivals and fasts, they observe some which have probably an earlier origin than their present faith. The chief of these is the festival of "Dubsheed" or new year's day — literally the Bonfire,—which they celebrate with feasting and dancing round large bonfires. They are passionately fond of singing, dancing, and mirth in every form. They attach great importance to the rite of circumcision, which they consider the most important observance of their religion; it is usually performed between the ages of four and eight years.

A very singular custom prevails amongst the Somali, which I have never heard of as existing amongst any other race. "Hac

in gente ad castitatem servandam hujusmodi mos est. Puellarum vulvas filo ex corio confecto constringunt; has, cum connubiale jugum ferre poterunt, magno cum apparatu solvunt."

The Somali are a pastoral race, but also carry on a considerable trade. Large caravans from the interior of their country visit the great annual fair at Berbera, bringing for sale coffee, ivory, gum-arabic, myrrh, frankincense, ostrich feathers, ghee, etc. Since the occupation of Aden by the British, the Somali have continued to visit it, and furnish the chief supply of sheep, glue, etc. On the east coast they carry on a considerable trade from the ports of Brava, Merka, and Magadesho. The frankincense country is inhabited by the Magarthein tribe of Somalis. It is situated in the range of limestone mountains, which extends for about one hundred and fifty miles from Cape Guardafui to Bunder Cassim. Along this coast are many towns and villages inhabited by the people of this powerful tribe. Many Banians from Kutch, and Arabs, reside here, and carry on a considerable trade in gums, hides, etc. The frankincense tree grows upon the limestone rock; the gum is collected by making a deep incision into the stem.

The Somali have a tradition that their ancestors emigrated from the Arabian province of Hadramaut to Med, on the African coast; from which place their descendants gradually spread over the country they now occupy, having driven out the original Galla inhabitants. They ascribe the origin of the present tribes to three persons, named Isacc, Tir, and Tarood. Isacc they consider to be the progenitor of the three principal tribes—the Habr gir Hajis, Habr Awul, and Habr tul Jaitah. According to this tradition, Tarood was originally from Africa; and they consider that the tribes descended from him are of Negro origin. These are the Majertein, Wur Sungulli, Dhol Bahanta, and Wogadin.

The Somali tribes differ much in feature and general appearance, some being much lighter in colour than others; but all speak the same language, and differ but slightly in manners and customs. Each tribe is quite independent, and is governed by its own sultan or girad, whose authority is little more than nominal. Feuds constantly occur between the various tribes; and, being a very warlike, independent race, bloody fights often occur. Their arms consist of a light spear about six feet in length, a shield of rhinoceros hide, a long, straight, two-edged dagger, and a bow with arrows poisoned with the juice of a tree called "gergalla". Firearms are scarce, and seldom used by them. In addition to the long heavy spear, they usually carry a short light one for throwing.

They generally marry between fifteen and twenty years of age. When a man is desirous of marrying, his parents or friends apply to the relatives of the girl, and, if their consent is obtained, the

girl is seldom consulted on the subject. They next arrange the marriage portion which the young man is to pay, and which is generally fixed at fifty sheep, or a few camels or cows, when in their own country. When residing in Arabia, the dowry is from twenty to twenty-five dollars in silver, according to the custom of the Arabs. The girl is not expected to contribute anything. A man can divorce his wife whenever he chooses. Polygamy is common among them, but the women are always treated as equals by the men. When a man dies, his property is divided amongst his children, the daughters receiving only a small portion. The widow either marries one of her former husband's relations, or returns to her own family. When a man dies leaving no children, his widow receives no share of his property, which is divided amongst his nearest male relations, one of whom usually marries the widow.

The houses of the Somali are generally built in the usual African fashion, circular, constructed with leaves and reeds covered with skins and mats. These are, however, generally used by the wandering tribes; when settled in towns, they construct stone houses in the Arab fashion, with flat roofs. The furniture consists of a mat couch, a few brass or earthen cooking utensils, large earthen jars for holding milk, a prayer carpet, and a wooden rest for the head when sleeping. The same custom of female circumcision prevails among the Somali as among the Abyssinians. According to their own tradition, they were converted to the Mohammedan faith by a messenger from Umr, one of the chiefs of the Koreish tribe.

Travellers or merchants, when visiting the Somali country, are obliged to engage a person called an "Aban", who becomes responsible for their security during their residence in the country, and also acts as broker, agent, and interpreter. The aban is usually selected from among the elders of one of the principal tribes. He is remunerated by a percentage on all purchases by traders, and presents by travellers. Should any violence or insult be offered to a stranger when under the guardianship of an aban, his tribe is bound to resent it.

The Somali language has not the slightest resemblance to either the Arabic, Amharic, Galla, or Sowahili languages. From the intercourse with the Arabs, many Arabic words have been added to it; but the construction of the language is not influenced by them. The language affords no aid in determining the question as to the probable origin of the Somali race. If they are descended from the Abyssinian conquerors of Arabia Felix, we might expect to find some affinity between the Amharic, or Abyssinian, and the Somali languages. The Somalis themselves have no grammatical rules for the formation of words; but their language is remarkable for its regular construction, particularly when it is

considered that it has no written character. It possesses two genders of nouns; the plural is regularly formed from the singular. The verb has four tenses, corresponding to the present, past, future, and conditional; also an imperative and prohibitive form. The verb is always the last word in a sentence. The definite article is expressed by the affixes *ka, ki;* or *ga, gi; da, di;* as

Agal, *a house*	Agalka, *the house*
Nin, *a man*	Ninki, *the man*
Mindi, *a knife*	Mindida, *the knife*
Dŭr, *cloth*	Dŭrka, *the cloth*

Animals of different sexes have generally different names; as

Furus, *a horse*	Gehyen, *a mare*
Dibi, *a bull*	Saha, *a cow*
Awur, *a male camel*	Hūb, *a female camel*
Wil, *a son*	Ghubr, *a daughter*

The plural is usually formed by the addition of *o, go, od,* to the singular; as

Bor, *a hill*	Boro, *hills*
Nāg, *a woman*	Nago, *women*
Mindi, *a knife*	Mindigo, *knives*

The numerals are as follows:—

1, Mid or kau	7, Tuddoba
2, Lŭbah	8, Sided
3, Sadah	9, Suggal
4, Afarr	10, Tobun
5, Shun	11, Kaubi ya tobun
6, Liyah	12, Lubah ya tobun

100, Bughul

The personal pronoun is as follows:—

Aneka, *I*	Anaga, *we*
Adeka, *thou*	Idinka, *you*
Husuggu, *he*	Naka, *they*

The salutation on meeting is

Ma burre din. *The reply*, Burre na
How do you do? Adeka wa siddi
Ans. *Quite well.* Aneka wa sisun
Good night! Nubdee
Answer. Wa nubdee

Although the country of the Somali is bordered on the south by the Negro or Sowahili races, I have not found a single word which is common to the two languages.

If the Somali are descended from the Abyssinian invaders of Arabia Felix, who were driven out by the tribe of Hamyar, assisted by an army sent by Khusru Anushirwan, king of Persia, it is remarkable that they have not preserved any knowledge of a written character. I consider that the Somali are an original unmixed African race.

VIII.—*On the Origin and History of Written Language.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read Feb. 27th*, 1866.]

IT is my intention in this paper to consider the question of the Origin and Progress of Written Language, in so far only as the subject tends to illustrate the character of the different races of man, and to indicate their capacity for advancement.

The first attempts of man towards making a visible record of ideas must have consisted of pictorial representations of natural objects, as the most obvious and easy method. Of this we have examples in its rudest form in the scratchings on trees and roots of the savages of America, and in a more improved state in the pictorial writing of the Aztecs or Mexicans.

The imperfect and intractable nature of symbolic writing must, however, have early presented itself to most nations, and accordingly two people only appear ever to have persevered in it, and reduced it to a workable system—the ancient Egyptians and the Chinese of all known ages, two wholly different races of man, far away from each other, and certainly ignorant of each other's existence when they adopted this clumsy and cumbrous form of writing. The Chinese symbolic writing—and the Egyptian must have been the same—is a language to the eye only, like the Indian numeral characters. It represents no oral tongue, but equally any oral tongue. The Chinese read by it several monosyllabic languages, and the Japanese a polysyllabic language. A lively French writer truly describes the symbolic language of China as one apparently invented for the use of the "deaf and dumb."*

The difficulty and transparent imperfection of pictorial writing must have early occurred to most of the races of man, and probably soon contributed to its abandonment, stimulating perhaps to the invention of phonetic or vocal writing. This discovery supposes, of course, an analysis of the sounds of which a language is composed—the appropriation of a distinct written character for each of those sounds, and their combination towards the formation of words. The difficulty of this process is thought by some parties so insuperably great, that nothing short of a miracle or subversion of the laws of nature could have achieved it. This

* Those who desire more detailed information on this subject, will find it in an ingenious, learned, and elaborate work, "Researches into the Early History of Mankind," by Edward Burnet Tylor.

extravagant notion, however, is contradicted by the frequency with which the invention has been made by many different races of men speaking languages wholly different from one another, and by nations even now in a very rude state. Whatever the difficulty, it is surely less than that of the invention of language itself—made at many different and independent points, and in a far ruder state of society. It is not greater than the invention of the figures of notation by the Hindoos, while yet a comparatively rude people: it is not greater than the discovery of the art of converting a rough mineral, unfit even for fashioning into a stone axe, into malleable iron; and perhaps not even greater than the discovery of the art of kindling a fire by the friction of two pieces of dried wood.

Among the more precocious races of man, gifted with a fair share of intellectual capacity, vocal or phonetic writing seems to have been invented as soon as such a state of society had been reached as allowed of the existence of a class of society which had leisure for meditation. The party that would soonest enjoy such leisure would naturally be that which had the spiritual direction of a people; and if we suppose letters to have been the invention of a priesthood, the art was in all likelihood at first confined to religious purposes, and came in time only to be extended to secular ones.

There exists hardly a nation of Asia, from the Mediterranean to the western confines of China, that had not reached the ripeness of society indispensable for the invention of phonetic writing, and hence the invention among them of many different and independent alphabets.

But the imagined difficulty of framing a phonetic alphabet is most effectively refuted by the fact that such alphabets have been actually invented even within the historic period, and, indeed, in comparatively modern times. The Japanese, according to their own account, adopted the Chinese symbolic writing in the third century of our time, or from the years 285 to 290. In a Grammar of the Japanese Language, prepared and edited by my friend Sir Rutherford Alcock, Her Majesty's present Ambassador in China, he has the following notice on this curious subject:—"Several centuries after the adoption of the Chinese written language and the complete system of idiographic symbols, the Japanese appear to have invented, without any foreign aid, a phonetic system of writing adapted to their own use, with a syllabic alphabet of 47 characters (or 48, if the nasal ng be included) now in use, conveying all the sounds required, called the Hiragana, and more familiarly the Ireha, equivalent to our A B C." The author of this invention was Hobodaise, a priest or monk of the sect Singoboao, and the date given to the invention corresponds with

A.D. 810. That the Japanese phonetic alphabet is of later date than that of the adoption of the symbolical Chinese writing, is sufficiently proved by the fact, that some of the phonetic letters are formed on the model, or are, indeed, copies of emblematical Chinese characters.

Of one thing we may be sure, that no people ever invented phonetic writing, or even adopted that of strangers, who had not made a considerable advance in civilisation. Thus, the rude wild tribes of Hindustan, of the Indo-Chinese countries, and of the Malay and Philippine Archipelagos, have, down to the present day, neither invented letters themselves, nor adopted those of their more civilised neighbours, although the civilised and uncivilised be in all those cases of one and the same race, and live side by side. No phonetic alphabet has ever been invented in any of the numerous islands of the Pacific, and, indeed, all writing ceases just before reaching the island of Timor, still within the Malay Archipelago, from which it may be presumed that the inhabitants of these islands had never attained the requisite measure of civilisation for its accomplishment.

No native phonetic system of writing has ever been invented by any people of America; for even the most civilised of them had not, like the Egyptians and Chinese, reached to the length even of reducing picture-writing to a system. The natives of America, in fact had either not attained the necessary civilisation for the invention of phonetic writing, or they wanted the genius to accomplish it.

No mere shepherd or nomadic people seems ever to have invented the art of writing, and we can readily believe that the nomadic state of society would afford no leisure or opportunity for such an invention. After quitting that roaming life, and assuming a settled one, they have, as in the examples of the Tartar tribes that follow a nomadic life, from the Yellow Sea to the Caspian, adopted, as will afterwards be seen, the inventions of more advanced nations.

There is one remarkable instance of a race of man which seems to have reached that state of society in which other races of man have discovered either symbolic or vocalic writing, but who, yet, have never invented either the one or the other. This is the African negro, who, possessed for ages of corn and cattle, of metals and good materials for clothing, has never invented an alphabet. Egyptians, Numidians, Nubians, and Abyssinians, on their own continent, have invented written language, but never a negro people. We must come, therefore, to the inevitable conclusion that the negro is an exception, arising from a peculiar stolidity. Even in their own country, it is but rarely that negroes have adopted the letters of strangers; and beyond it they have

done so only when under some degree of constraint or compulsion.

But by far the most remarkable instance of a people who have failed to invent either symbolic or phonetic writing is afforded by the races of Europe. No race from the Euxine to the Atlantic, or from Greece to Scandinavia, has ever invented an alphabet. It may be presumed that this may have arisen from the fact that no European race had reached that point of civilisation at which written language is invented—before the time in which a foreign phonetic writing was presented to them and adopted. This, however, is a subject to which I shall have to recur in the sequel of this paper.

That written language was the separate and independent discovery of many different nations, seems sufficiently proved by the difference in the forms of the characters which represent them, the differences in the sounds which the letters represent, arising from the necessities of the languages for which they were originally framed; and often even by the disparity of their order or arrangement. As languages, however, have often superseded other languages, so have foreign alphabets superseded native ones, while people who have not invented letters themselves have frequently adopted the letters of strangers. Of these cases we have many examples. Thus, the cuneiform alphabet, sometimes literal and sometimes syllabic, must, from its singularity of form, have been the invention of a single people, yet it was the writing of Persians, Medes, and Assyrians; and Sir Henry Rawlinson tells me altogether of eight separate languages—different in words, sound, and construction.

In Hindustan, the same alphabet, after undergoing many modifications, arising, it is asserted, out of the nature of the materials on which it was written—was sometimes stone, sometimes copper, sometimes palm-leaf—assisted by time and by difference of phonetic character in the languages which it came in time to represent, from that, most probably the Sanskrit, for which it was originally framed. In this alphabet, called the Dewanagari—literally, the writing of the 'city of the gods'—are written the Hindi, the Bengali, the Mahratta, the Gujrati, the Urya or language of Orissa, the Concani, the Sikim, the Bhoteah, and the Tibitan. It is easy to believe how such an alphabet may have come to supersede, or more probably to have been amalgamated with, previously existing local alphabets; but I can see no ground for the theory maintained by the eminent orientalists Prinsep, Norris, and my friend Edward Thomas, that the Dewanagari was the source not only of all the alphabets of India itself, but alse of those of the Hindu-Chinese countries and Indian islands.

My own conviction is, that for the sweeping hypothesis of the

very learned men in question there is no standing ground. During the time of a Hindu sovereign of Northern India, named Asoka, whose era is reckoned with some certainty as having preceded the birth of Christ by about two hundred and fifty years, the people whom this prince ruled, and of whom the Sanskrit, or a derivative of it, was the language, appear to have been the most civilised and potent of the nations ef India. By conquest, or propagandism, they spread their religion, and to a considerable extent also their language, over the whole Indian continent. We need not, therefore, be surprised to find that ancient Indian inscriptions should be in the characters of the language of the dominant nation, as in fact they are found to be. It is to be observed, moreover, that in India nearly all monumental inscriptions are and have at all times been written, not in the popular character of the country in which they are found, but in one modification or another of the Dewanagari or alphabet sacred to the scriptural Sanskrit. A similar practice prevails in the Hindu Chinese countries, where monumental inscriptions are with few exceptions written, not in the ordinary Burmese, Siamese, or Cambodian alphabets, but in the Pali character—a supposed derivative of the Sanskrit, and the sacred writing of all the Buddhist nations from Ceylon to Cambodia. The learned writers whose names I have above quoted have certainly, by an adroit manipulation, adding a limb here, and subtracting a limb there, from letters which they imagine to have been the original ones of the primitive alphabet, contrived to give the semblance of a common origin to all the Indian alphabets. I am, notwithstanding this exercise of philological ingenuity, satisfied that India had many original alphabets, and that at least the present ones of its southern parts, including the alphabet of Ceylon, are local and independent inventions.

In the Hindu-Chinese countries we have three separate and independent alphabets—the Burmese, the Siamese, and the Cambodian. These are utterly unlike each other in form, and equally unlike any Hindu alphabet. Side by side with them is the Pali, said to have been taken from the Dewanagari, but far more likely, in my opinion, to have been an independent alphabet of India—probably of Behar, the native country of the founder of Buddhism and imported with the Buddhist religion. The Pali character is the same in Burmah, in Siam, and in Cambodia, and seems so to have been for the many centuries since its introduction into the Hindu-Chinese countries.

If we go to the Indian islands, we shall find that Sumatra had four distinct alphabets, one of which has been superseded by the Arabic alphabet, with supplemental letters to express sounds which the Arabian language wants. Java has one current alphabet, besides an ancient one confined to stone and copper inscriptions,

and the remains of several obsolete alphabets found on inscriptions on stone in the western part of the island. The Javanese alphabet, wholly different in form, construction, and arrangement from every other writing of the Malay Archipelago, is that of two languages in Java itself, and of the languages of the two islands lying immediately to the east of it—Bali and Lomboc. It certainly bears no resemblance whatever to the Dewanagari or to any other Hindu alphabet. Yet ancient inscriptions in the veritable Dewanagari itself have been found in Java, and for centuries Hindus familiar with the alphabets of Southern India have frequented the island, settled in it, built temples in it, and converted the natives to their religion, leaving patent impressions of their sacred tongue on the Javanese language.

Proceeding eastward, the next insular alphabet which we find is on the Island of Sumbawa, the third in a direct line east of Java. This peculiar alphabet has been long obsolete, having been superseded by that of Celebes. On Celebes we have one alphabet, representing at least five languages with a literature, and so wholly different in its construction from all the other alphabets of India, whether continental or insular, that it is impossible to imagine it other than an original local invention. In the great group of the Philippines, we find a single alphabet, the rudest which I have had occasion to examine, but corresponding in this respect with the rudeness of the people who used it, and, I make no doubt, who also invented it. It is now in a great measure superseded by the Roman alphabet, introduced by the Spaniards.

There is one character common to most, but not to all the alphabets of continental and insular India: this consists in the arrangement of their letters into what is call an organic classification—that is, according to the organ of speech chiefly engaged in their pronunciation, as into gutturals, labials, palatals, dentals, cerebrals, sibilants, liquids, and so forth. No doubt this grammatical refinement originated with those who spoke the Sanskrit language, of which the wide compass of sounds afforded the fullest scope for its application. What may be called the provincial alphabets of India itself borrowed this arrangement directly from the Dewanagari, and through the Pali it was imposed on all the alphabets of the Buddhist nations. It extended also to the insular alphabets, but here there are exceptions, the most remarkable of which is the Javanese—the most copious and cultivated of all the insular languages, and that which has received the largest infusion of Sanskrit, while its alphabet is incomparably more perfect than any other. I am disposed from all this to conclude that the people of Java were possessed of an independent literature before they had any intercourse with the Hindus, and that in all the cases in which the Hindu classification was adopted,

it was a mere matter of arrangement subsequent to the invention of letters.

As already stated, the nomadic people who roam from the Yellow Sea to the Caspian invented themselves no writing; but the Igours, or ancient Turks are said to have received the gift of letters from the Nestorian Christians; and if this was the case, the letters must have been Greek. From the Turks they reached the Mongols, and from the Mongols the Manchoos. If this was so, the Greek alphabet has undergone a strange change, for the letters of the Tartar alphabet bear no resemblance to the Greek letters; and the order of writing, instead of being horizontal, is like that of the Chinese, written from the top to the bottom of the page: in opposition, however, to the practice of the Chinese, the writing is from left to right.

Even the settled Arabs do not appear to have invented letters, and it was no more to be expected from the Bedouins than from wandering Tartars. What is called the Cufic alphabet is supposed to have been borrowed from a Syrian character called the Estrangheld, and when the existing letters were adopted is uncertain. A papyrus, however, not long ago discovered in Egypt, and bearing the date of the first century of the Mahomedan era, is written in nearly the same characters as that of the present day, which makes it probable that it prevailed in the time of Mahomed himself. My authority for this is the learned grammar of Silvestre de Sacy.

The Arabic alphabet, whatever may have been its origin, has superseded the writings of the Turks of Europe and of Asia; of the Persians and of the Affghans; and, through the conquests effected by these, made a considerable inroad in Hindustan, without, however, superseding any Hindu alphabet. Some six centuries ago it even reached the remote Malays, superseding their native alphabets.

As before stated, the invention of letters, which early took place at many different points among many of the precocious races of Asia, never took place among any of the races of Europe destined in time so greatly to outstrip the most civilised of the races of Asia. The Greeks, from their genius, and perhaps also from being geographically so near to, and in some points even in actual contact with, Asiatics, were the first European people to adopt letters from the latter. The Greeks themselves believed that they derived their letters from the Phœnicians, and from the early civilisation of this Asiatic people they are likely to have been among the earliest discoverers of phonetic writing, while from their commercial enterprise they are the most likely people to have disseminated a knowledge of it among the people inhabiting the European coasts and islands of the Mediterranean. The

names, the arrangement, and, to some extent, the form of the letters of the Greek alphabet, tend to corroborate the assertion of their Phœnician origin.

The Phœnicians, however, would seem in this matter to have done little more than furnishing the Greeks with a hint for the formation of a suitable alphabet. Thus the Phœnician alphabet supplied to the Greeks is asserted to have consisted of no more than thirteen letters, exclusive of the vowel points. For these last the Greeks had to substitute substantive letters, while they had to add consonants expressing sounds peculiar to their own language, thus raising the meagre Phœnician alphabet to twenty-four letters.

At what time the Greeks received their letters from the Phœnicians is unascertained. At the time of the Homeric poems, however, it appears, from no allusion to them being made, that the Greeks were still ignorant of letters, and this is reckoned to have been eight centuries before the birth of Christ. The Jews, like the Greeks, are asserted to have borrowed their letters from the Phœnicians, but at a much earlier time; for they are familiarly referred to at the time of the Exodus—an event computed to have taken place 1,500 years before the birth of Christ. But we may go still further back; for the Jews must have brought their phonetic writing with them into Egypt, and could not have acquired a knowledge of it in that country, which had nothing but hieroglyphic writing to give them, and they are thought to have been in Egypt for three centuries before their departure from it. In so far, then, as these estimates can be trusted, the Jews were in possession of the Phœnician alphabet for 1,000 years before the time of the Homeric poems.

The natives of Italy were the only European people who, besides the Greeks, possessed in early times a knowledge of letters, and their acquaintance with them was, directly or indirectly, derived from the same Phœnician source. The Umbrian, the Etruscan, the Latin, and the Oscan letters, in all of which inscriptions still exist, must have been derived from the Greeks who settled in Italy, or from the Phœnicians of Tyre and Sidon, who frequented it for trade, and who, from the nature of their employment, would naturally be familiar with letters—more for business than superstition. If this last was the manner in which the Phœnicians letters were introduced among the nations of Italy, it is rather singular that the Carthaginians—a Phœnician people, who had extensive possessions in Spain—had not introduced a knowledge of letters among the Iberians. As they did not do so, we must infer that, contrary to what was the case in Italy, the ancient inhabitants of Spain must have been in a state so rude as to be unfit to receive them.

All the letters of mediæval and modern Europe, under whatever name or whatever modification of form, are derived from the Latin alphabet. They have no high antiquity to boast of. The forefathers of the Montaignes, of the Corneilles, of the Voltaires, and the Laplaces, had just begun to use the Greek alphabet in the time of Julius Cæsar; but the forefathers of the Shakespeares and Miltons, of the Bacons and Newtons, whose posterity was predestined to spread letters over the best part of America, the whole of Australia and the islands of New Zealand, were as yet as illiterate as are now the negroes of Ashantee, or as were the cannibals of New Zealand when Cook first described them.

IX.—*On the True Assignation of the Bronze Weapons, etc., found in Northern and Western Europe.* An answer to Mr. Wright's paper on the same subject. By SIR JOHN LUBBOCK, BART., F.R.S., V.P. Ethno. Soc., V.P. Linn. Soc., Pres. Ent. Soc., and FREDERIC LUBBOCK, Esq.*

[*Read March 13th*, 1866.]

AT a recent meeting of this Society, the learned Secretary brought forward a communication "On the true Assignation of the Bronze Weapons, etc., supposed to indicate a bronze age in Western and Northern Europe." In this memoir Mr. Wright has attempted to prove that these weapons were of Roman origin. We do not propose in the present paper to enter into the whole question of the bronze age, but shall confine ourselves almost entirely to the consideration of the arguments brought forward by Mr. Wright, and recapitulate briefly at the close the principal facts which lead us to a conclusion very different from his.

Mr. Wright admits that bronze weapons have seldom been found in Roman graves, but the reason, he says, "is a very simple

* I take this opportunity of expressing my pleasure at the complimentary terms in which Mr. Wright, while criticising one portion of it, has spoken of my book as a whole. Praise from so high an authority is doubly welcome. Nor must I omit to acknowledge the friendly tone which is evident throughout his paper. In one respect he, no doubt unintentionally, misrepresents my meaning. "To me," he says, "these finds alone are sufficient to explain a fact which Sir John hardly, or only feebly, denies, the identity of forms, and not mere similarity, of all these bronze swords, in whatever part of Europe they are found." So far from denying this, however, I selected several of my illustrations expressly to establish the fact, and beg to call Mr. Wright's attention to the following passage in p. 33 of my work, which no doubt he has overlooked. Arguing against the theory which supposes that a knowledge of metallurgy may have been independently acquired in several parts of Europe, I said, "There is, however, another circumstance which strongly militates against this theory; and that is the fact which has been broadly stated by Mr. Wright, ... 'that wherever we find the bronze swords or celts, whether in Ireland, in the far west, in Scotland, in distant Scandinavia, in Germany, or still further east in the Sclavonic countries, they are the same—not similar in character, but identical." The great resemblance of stone implements in different parts of the world may be satisfactorily accounted for by the similarity of the material and the simplicity of the forms. But this argument cannot be applied to the bronze arms and implements. Not only are several varieties of celts found throughout Europe, but some of the swords, knives, daggers, etc., are so similar that they seem as if they must have been cast by the same maker." —J. L.

one, easily explained, and applies to iron swords equally with bronze swords. The Romans did not bury their weapons with the dead." But surely Mr. Wright must have forgotten that if bronze swords are uncommon in graves, this is by no means the case with bronze daggers; these are far from being rare, and have been repeatedly found in tumuli, not however in Roman graves, or associated with any objects suggestive of Roman influence.

It is not that bronze weapons and implements are not found in graves, but that they are not found in Roman graves. The statement which we have quoted from Mr. Wright by no means meets the case. We know how deeply the Roman influence was impressed on the country, and surely in all the numerous instances in which bronze weapons have been found in tumuli, some traces of this influence, some coins, some ornaments—at any rate, some Roman pottery, would have been met with; this, however, is not the case. On the contrary, the objects met with in tumuli containing bronze weapons have quite a different character. In support of this assertion we submit to the Society a list detailing the contents of more than a hundred graves which contained objects of bronze. Many of these, as will be observed, contained urns, etc., which are of a rude character, and very different from Roman pottery.

The cases taken from Sir R. Colt Hoare's work appear to us particularly instructive, because the tumuli examined by him were in the vicinity of several Roman thoroughfares; if, therefore, they had belonged to the Roman period, surely we may reasonably conclude that they would have contained some evidences of Roman influence and some traces of Roman art. We will now examine the cases cited by Mr. Wright, in which bronze weapons have been found in association with Roman remains.

The fact that bronze weapons have been found in the bed of the Thames at London must be taken for what it is worth. To us it appears to be worth very little. A thousand years hence coins of Queen Victoria will be found in the same place, with bronze weapons, and stone implements, but this will not prove that bronze weapons, stone implements, and sovereigns were all in use at the same period. Mr. Wright mentions another case which, if proved, would be more important. A bronze sword, he tells us, "is stated to have been found at the Roman station of Ardoch in Scotland, on the wall of Antoninus," and he gives the reference, "Stuart's *Caledonia Antiqua*, second edition, pl. v." It will be observed that Mr. Wright refers only to the plate, nor have we ourselves been able to find any mention of the sword in the letter-press.

In the description of the plate, it is stated to contain "Roman

remains from Ardoch, et cetera;" and as the other objects are *all* Roman remains from Ardoch, it is to be presumed that the bronze weapons are the "et cetera", and consequently not from Ardoch—at any rate, no particulars are given as to the exact place in, or circumstances under which this sword was discovered. The case, therefore, seems to us anything but conclusive; and it is literally the only instance cited in which bronze weapons have in Great Britain been found associated with Roman remains.

Nor do we think Mr. Wright more happy in the French cases which he has brought forward. He commences by an appeal to the authority of Mons. De Caumont, and quotes him correctly as saying, "But we find also very frequently these bronze axes in places covered with Roman ruins. I have acquired the certainty of this by my own observations, and by the information I have collected in my travels." Here Mr. Wright stops, but Mons. De Caumont goes on to say:—"The fact that the Gauls may have inhabited the same places previous to the conquest of Gaul may to a certain extent explain this mixture."* He sums up the whole question as follows:—"These instruments may then in part be classed among the Gallo-Roman antiquities, and it is a reason for reminding you, that the Gauls, even after becoming Roman, may have long retained a part of their ancient customs."†

In fact, therefore, it will be seen, that Mons. De Caumont by no means regards these weapons as being of Roman origin, but is disposed to consider them as the national weapons of the Gauls. It is true that he does not look upon this as proved, and in fact expressly warns his readers that the "origin of these objects is very uncertain;" but so far as his opinion goes, it is by no means in favour of the view advocated by Mr. Wright.

The next authority quoted by Mr. Wright is that of Mongez, "one of the most celebrated members of the Institute of France, a man distinguished for his science and learning, and for his judicious use of them. On the 16th of Prairial, an 9 (for we are still in the days of the Republic), according to our reckoning the 5th of June, 1801, the 'citoyen' Mongez read at the Institute, before what was then called the Class of Literature and Fine Arts, but which is now represented by the Académie des Inscriptions et Belles Lettres, a memoir on an ancient bronze sword,

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* "Le séjour que les peuplades Gauloises ont pu faire dans les mêmes lieux antérieurement à la conquête de la Gaule, expliquera jusqu'à un certain point ce mélange."

† "Ces instruments pourraient donc en partie être classés parmi les antiquités Gallo-Romaines, et c'est un motif pour vous rappeler que le Gaulois devenu Romain à pu conserver longtemps encore une partie de ses anciennes coûtumes."—*Cours d'Antiquités Monumentales*, vol. i, p. 232.

which had been found with the skeleton of a man and horse, in a turbary (*tourbière*) near Corbie et Heilly, in the valley of the Albert, a tributary of the Somme."* * * *

"The object of Mongez was chiefly to analyse the bronze of which this sword was made, but he also enters into the question of what manufacture it might be, and after careful discussion he arrives at the conclusion that these bronze swords were all Roman." * * * * * *

"After Mongez had read his memoirs on the bronze swords before the Institute, his opinion received a singularly remarkable confirmation in the more exact and complete account of the circumstances of the discoveries, which he obtained from a very zealous and able antiquary of Abbeville, M. Traullé. The bronze sword, as just stated, was found in the turbary at Heilly along with the skeletons of a man and a horse, and by the sword were four brass coins of the Emperor Caracalla, who, as is well known, reigned from A.D. 211 to 217. This sword, therefore, was that of a Roman cavalry soldier, not older, and perhaps a little later, than this reign, who had sunk in the bog to which this turbary had succeeded."

Mongez, on the contrary, concluded that the skeleton could not have been that of a cavalry soldier at all, because a cavalry soldier would not have been armed with a short sword; and so far from regarding the sword as Roman, "on ne pourroit," he says, "également pas l'attribuer aux Romains, si l'on ne raisonnoit que d'après la matière dont elle est faite."† And in the next page he adds, "We are therefore certain, that after the second Punic war, the Roman swords were made of iron."‡

It is true that five months later he altered his opinion, and came to the conclusion that, after all, the bronze swords were Roman, but we cannot consider that much weight should be attached to this opinion, which was in direct opposition to that entertained by the same learned antiquary a few months previously.

Finally, Mr. Wright cites one more case of a bronze sword found with some Roman coins of Maxentius, who reigned from 306 to 312 A.D. This sword was discovered in a turbary at Piquigny, near Abbeville, in a large boat, which had evidently been sunk, and in which were several skeletons. The reason for referring this bronze sword to the Roman epoch, was the presence in this

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* "Mémoires de l'Institut Nationale des Sciences et Arts," Littérature et Beaux Arts, tom. v, p. 187.

† Loc. cit., p. 193.

‡ "Nous voilà donc certains que l'épée des Romains, depuis la seconde guerre Punique, fut fabriquée en fer," p. 194.

case, as in the last, of Roman coins. But it is somewhat remarkable, that in both instances, the antiquaries who recorded the discovery, attributed so little importance to the presence of these coins, that they did not take the trouble to specify the exact position which they occupied with reference to the bronze weapons; and in fact they only mention them casually, and as it were by an afterthought, in a foot-note. We may be pardoned, then, if we do not ourselves look upon these coins as being certainly of the same date as the weapons near which they are said to have been discovered. Others may be of a different opinion, but even if it be admitted that in these two cases bronze weapons were actually discovered in association with Roman coins, and in such a position that the weapons and the coins must certainly have been embedded together, still, when we consider the great abundance of Roman coins on the one hand, and of bronze weapons on the other, we cannot be surprised that there should be one or two cases upon record in which they have been found associated together.

Mr. Wright indeed states that, "instead of our not finding the bronze swords in juxta-position with Roman remains, in every case where they have been found in Britain or Gaul, where the details of the discovery have been carefully observed, it has occurred under circumstances which lead to the strongest presumption of their being Roman." Yet we have seen that, in spite of his great acquaintance with archæological literature, he has only been able to bring forward one more than doubtful case as regards Great Britain, and two which seem hardly more satisfactorily established in France.

Mr. Wright next proceeds to compare the figures of weapons found upon Roman coinage with the actual weapons of bronze. We might argue that these figures, like the weapons with which Britannia is armed on the English coinage, might be allegorical; but we will for the moment admit that, as stated by Mr. Wright, the figures do actually represent weapons used by the Romans. This evidence, however, is unfortunately both scanty and inconclusive. The sword is generally represented in its sheath, and Mr. Wright himself admits, that the sheath bears no great resemblance to the form and characteristics of the bronze swords. He accounts for this, indeed, by reminding us that, "if the sheath were made of the form of the blade of a leaf-shaped sword, of course the blade could not be drawn out; it is therefore represented in one uniform shape, distinguished only from the ordinary scabbard by being short." However this may be, it is at least therefore admitted by Mr. Wright, that the form of the sword sheaths represented on the Roman coinage is in direct opposition to his theory; nor, we think, are the figures of the drawn swords

much more in his favour. Of those given by Mr. Wright, there is only one, namely, No. 4, in which swords are represented, at all resembling in form those which are typical of the bronze period. It is, however, hardly necessary to remind the cautious reader, that the evidence derived from the coinage is indicative only of the form of the weapon; it is impossible to decide whether the material was iron or bronze, and leaf-shaped swords of iron, though rare, are not absolutely unknown.

As regards the daggers, Mr. Wright gives a figure of a coin of Junius Brutus, on the reverse of which are two daggers, which he compares with one of those figured in *Prehistoric Times.* We do not ourselves, however, perceive any resemblance in the handles of these daggers, and as regards the blades, all daggers are necessarily more or less alike.

As regards the coin of Quintus Thermus, however, we certainly think that the swords thereon represented are of iron, both on account of their form, and also because the soldiers are using them to cut one another down, whereas the bronze swords appear to have been used, not so much for cutting as for thrusting.

Finally, Mr. Wright appeals to some Roman swords represented on monuments found at Constantine in Algeria, which in his opinion very much resemble, and indeed are in some points identical with, certain figures of bronze swords which he has given from *Prehistoric Times.* We can only request the members to compare these drawings for themselves; as far as we are concerned we fail to perceive the similarity on which Mr. Wright relies.

Mr. Wright next proceeds to consider the allusions to the implements of war, which are found in Roman writings. It is true that Virgil in several passages alludes to arms and implements made of bronze; but it appears to us that this is by no means an argument in favour of the view advocated by Mr. Wright; we think, on the contrary, that the poet, in his allusions to bronze weapons, was rather anxious to give the impression of antiquity—at any rate, it is certain that these allusions all bear reference to a period far more ancient than the conquest of Great Britain by the Romans.

In the discussion which followed Mr. Wright's paper, our President made use of the argument that as iron is much more generally distributed and more easily worked than bronze, bronze swords must have been more expensive and difficult to obtain than iron ones. From this he inferred that the use of iron must have preceded that of bronze, and not *vice versâ.* We should on the contrary draw the opposite inference; since it is surely more likely that a scarce and dear substance should be replaced by a common and cheap one, than that the reverse should have

taken place. Mr. Crawfurd will admit that either iron or bronze were first discovered, and that subsequently both were known. On the other hand we are ready to confess the *à priori* improbability that so scarce, and in some respects so inappropriate, a metal as bronze should ever have been used for weapons. But as bronze *was* used, it is surely more probable that this was before, than after, the discovery of a more abundant, more generally distributed, and therefore much cheaper, metal.

Mr. Wright claims for his views the weight of authority. On the other hand, among the believers in a bronze age, are many archæologists—in our own country, Evans and Franks; abroad, Nilsson, Thomsen, Morlot and many others, whose names are not altogether unknown in science. We prefer, however, to rely on the facts themselves, and we only refer to this portion of Mr. Wright's paper, inasmuch as he claims the support of our great metallurgist, Dr. Percy. Dr. Percy does indeed point out that "from metallurgical reasons it is reasonable to suppose that the so-called age of iron would have preceded the age of bronze." This we readily admit, but it is well known that "le vraisemblable n'est pas toujours le vrai." And we believe that Dr. Percy himself does not profess to have investigated the archæological evidence, but speaks only of *à priori* probabilities. Moreover, it is somewhat remarkable that our President, Mr. Crawfurd, in his paper, "On the Supposed Stone, Bronze, and Iron Ages of Society,"* which classification he, as it is well known, rejects, and regards as "refuted by the stubborn facts of history," is yet compelled by his candour and love of truth to make some remarkable admissions.

In the first place he says: "As respects Denmark and Switzerland, and most probably several other parts of Western Europe, in which the advance of civilisation was very slow, there can be little doubt but that the three ages above indicated did really exist." It is well known that the powerful states of Mexico and Peru, when discovered by the Europeans, were in an age of bronze; all their weapons and cutting instruments being made of that metal, while iron was entirely unknown. Mr. Crawfurd of course admits this, and says that, "in the case of America, there can be no question, but that an age of bronze preceded that of iron."

In Egypt, again, we find the same thing. "Ancient Egypt" is admitted by Mr. Crawfurd, to "offer a case in which a bronze age clearly preceded an iron one; or, at least, in which cutting instruments of bronze preceded those of iron."

As regards Japan, Kæmpfer, the earliest authority quoted by

* Transactions of the Ethnological Society, new series, vol. iv, p. 1.

Mr. Crawfurd, but who only wrote about a hundred and fifty years ago, tells us, in the words of Mr. Crawfurd, that "Such household goods as hooks, cramps in buildings and ships, with other such instruments as are in other countries made of iron, are made in Japan of copper or brass."

In Assyria, India, and China, bronze, as Mr. Crawfurd himself tells us, has been known from time immemorial.

Finally, he admits that "in the time of the Homeric poems and of the early Greeks, the sword was of bronze, but as the Greeks advanced in civilisation it was of hard iron."

These actual facts, thus extracted from an unwilling witness, go far to remove the *à priori* improbability that in northern and western Europe, as well as probably along the shores of the Mediterranean, the use of bronze for weapons was anterior to that of iron.

Now, finally, let us state very briefly the reasons which induce us to believe in the existence of a bronze age, in the sense of the Danish antiquaries.

I. We have the united testimony of ancient writers. Hesiod, the most ancient of European authors, expressly tells us that the ancients used bronze, and were ignorant of iron.

"Τοῖς δ' ἦν χάλκεα μὲν τεύχεα· χαλκέοι δέ τε οἶκοι
Χαλκῷ τ' ἠργάζοντο; μέλας δ' οὐχ ἔσκε σίδηρος."

Agatharchides, who lived in the reign of Ptolemy IV., gives an account of certain old and abandoned mines in Egypt, in which he says that bronze implements are occasionally found, "the use of iron being then unknown." In the Pentateuch, copper is mentioned no less than forty times, iron, we believe, only twice. Lucretius even anticipated the Danish antiquaries, in dividing the epochs of man into three distinct periods, in the following well known lines—

"Arma antiqua, manus, ungues, dentesque fuerunt
Et lapides, et item sylvarum fragmina rami,
Posterius ferri vis est, ærisque reperta,
Sed prior æris erat, quam ferri cognitus usus."

II. It must be remembered that throughout Europe, bronze weapons are found of identical forms, and these forms are quite different from those of the corresponding weapons in iron. Now we know that the inhabitants of northern and western Europe were well acquainted with the use of iron in the time of the Cæsars. This is proved both by history and also by the discovery in various places, but more particularly in Denmark and Switzerland, of large numbers of iron instruments and weapons, belonging to this period. Perhaps the most remarkable case is that of Nydam, near Flensborg, where more than seven hundred instruments and weapons of various kinds were discovered together.

These, without a single exception, were all of iron, and as nearly fifty Roman coins dating from about A.D. 50 to 150 were found with them, there can be no doubt as to the date to which they belong.

III. Similar "finds" (though not perhaps on so large a scale) of bronze objects, have also been discovered, and, as bronze weapons are not found with those of iron, neither, on the other hand, do we meet with iron weapons in the finds of the bronze age.

An attempt has been made to account for the absence of iron in the bronze finds, by the fact that iron is so perishable; but this will evidently not account for the absence of bronze weapons in the finds of the iron age.

IV. The forms of the ornaments, instruments, and weapons of the bronze age are quite unlike those of later periods.

V. The same may be said of the character of the ornamentation prevalent in the bronze age. We find various combinations of spirals, circles, and zigzag lines, and geometrical patterns of a more or less simple character, but rarely, if ever, any representations of animals or plants.

VI. The pottery of the bronze age was all made by hand, the ornamentation on it is of the same character as that upon the weapons, and it differs both in form and material from that of the Roman period.

VII. Lead, zinc, and silver appear to have been unknown in the bronze age. A remarkable proof of this is obtained from the interesting researches in the ancient cemetery of Hallstadt. At this place Mr. Ramsauer has examined no less than nine hundred and eighty tombs, which evidently belonged to a colony of rich miners, who lived at the close of the bronze, and the commencement of the iron period. They possessed amber, which they must have obtained from the Baltic, gold, ivory, iron, and even glass, but appear to have been entirely ignorant of both silver and lead. We know that Philip of Macedon, in the fourth century B.C., struck coins of silver, and when we consider therefore the number and richness of the tombs opened at Hallstadt, together with the proofs of an extended commerce carried on by the people to whom they belonged, we appear to be justified in concluding, that neither silver nor lead were known in the bronze age.*

VIII. The bronze of the bronze age differs materially from that in use among the Romans. The former contains mere traces of lead or zinc; which are evidently present, not as a component part, but as mere impurities, while in the Roman bronze they often form a considerable percentage of the whole.

IX. The Romans used the word *ferrum*, iron, to denote a sword,

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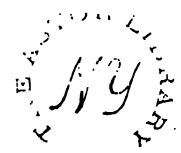
x. Bronze weapons are perhaps even more common in Scandinavia and in Ireland, than in any other parts of Europe, and it is well known that the Romans did not occupy either of these countries.

It may be added that the handles of the swords and daggers, the rings and bracelets, belonging to the bronze age, are peculiarly small, and evidently cannot have belonged to a tall race.

Finally, the arms and ornaments of post-Roman times are pretty well known to us through researches in various cemeteries, and no antiquary will pretend that the bronze weapons now under discussion, can be referred to any post-Roman period.

Until the publication of Mr. Wright's memoir, cautious archæologists may well have had their doubts as to the existence of a bronze age. A fortification cannot be regarded as safe, until it has undergone the test of an attack. Now, however, we have heard what there is to be said against the Danish theory. We may safely assume that the learned Secretary of the Ethnological Society will have overlooked no weak point, no fatal fact. In the earlier part of this reply to his valuable paper, we have shown that there are only one or two cases upon record, in which bronze weapons are supposed to have been found in conjunction with Roman remains. In the following table we give a list of about 100 bronze-containing tombs, opened by two careful antiquaries, in order to show the character of the objects which are usually associated with bronze implements and weapons. In the latter part of this memoir, we have very briefly recapitulated the principal reasons which appear to us to prove that the use of bronze weapons was anterior to the conquest of Great Britain by the Romans, and we confidently leave the verdict in the hands of the Society.

Ancient Wiltshire.	CORPSE.				IMPLEMENTS OF					REMARKS.
	Contracted.	Burnt.	Extended.	Position Uncertain.	STONE.	BONE.	BRONZE.	POTTERY.		
Do. 189 ...	—	...	—	—	... ...	[illegible]	[illegible]	... ...	[illegible]	[illegible]
Do. 18 ...	—	—	—	...	Hammer & whetstone	Tube, &c. ...	Celt, etc. ...	... ...	Primary	A very curious brass instrument
Do. 8 ...	—	...	—	—	Whetstone ...	... ...	Dagger ...	... ...	Primary	Cist. In a wooden box.
Do. 15 ...	—	...	—	—	... ...	... ...	Pin	... ...	Primary	Cist. 4 pulley beads of glass, 1 of stone, and 2 of amber.
Do. 16 ...	—	...	—	—	... ...	... ...	Lance ...	... ...	Primary	?
Do. 17 ...	—	...	—	—	... ...	... ...	Lance ...	... ...	Primary	?
Do. 18 ...	—	...	—	—	... ...	... ...	Lance ...	... ...	Primary	?
Do. 20 ...	—	...	—	—	... ...	Four articles	Lance ...	... ...	Primary	?
Wilbury House...	—	...	—	—	... ...	... ...	Pin	... ...	Primary	Cist, with the skeleton of a dog.
Fripsbury	—	...	—	—	... ...	... ...	Pin	Cup ...	? ...	Many amber beads.
Woodyates 4 ...	—	—	—	...	... ...	... ...	Spearhead ...	Vase ...	Secondary	Black bead.
Do. 8 ...	—	...	—	—	... ...	... ...	Pin and arrow ...	... ...	Primary	Cist. Beads of amber. [jet.
Do. „ ...	—	...	—	—	... ...	... ...	Pin	Cup ...	Primary	Cist. Beads of amber, glass, &
Do. 9 ...	...	—	—	—	Four arrows ...	... ...	Dagger and pin ...	Urn ...	Primary	With ornaments of jet.
Do. 20 ...	—	...	—	—	... ...	Pin and arrow	Spear ...	Urn ...	Primary	Bits of linen cloth.
Antiq. of Wilts., v, 2.										
Hewish Hill	—	...	—	—	... ...	Pin ...	Pin	Urn and cup	Primary	
Overton Hill	...	—	—	—	... ...	... ...	Lance, pin, and celt	... ...	Primary	Cist.
Do.	—	...	—	—	... ...	... ...	Lance ...	... ...	Primary	



X.—*Aptitudes of Races.* By the Rev. FREDERIC W. FARRAR, M.A., F.R.S.

Read March 27th, 1866.

THE great Linnæus, in his *Systema Naturæ*, discriminates, with his usual acuteness, the intellectual and moral characteristics of four great human families. The Homo Americanus he describes as obstinate, contented, free; the Homo Europæus as fickle, keen, inventive; the Homo Asiaticus as grave, dignified, avaricious; the Homo Afer as cunning, lazy, careless. The American, he said, was governed by habit; the European by institutions (?); the Asiatic by opinions; the African by caprice. Undoubtedly some of these remarks show an insight into national character not unworthy of a mind as keen in its intuitions as it was laborious and patient in research; but the part of it which seems most liable to exception is the sweeping geographic generalisation involved in the term Homo Asiaticus. It is true that America from north to south appears to be inhabited mainly by one race of aborigines, who, with but single exception, speak a variety of languages all characterised by a cumbrous and peculiar polysynthetic structure. It is also true that the whole of Europe, with the comparatively insignificant exception of Finns, Lapps, Turks, and probably a few scattered remnants of other races, is occupied by the descendants of one great family of mankind. But it is certain that in Africa we find several deeply, and, to all appearance, primordially distinct varieties of man; and it is certain that we find in Asia the representatives of human species, who are now, and have been for immemorial years, as distinct from each other as every physical, intellectual, and moral difference can possibly make them.

A modern writer has expressed a wish that a map should be constructed sufficiently pictorial to pourtray at a glance the many-coloured interchanges of the earth's surface, and to give "such a view as the stork and the swallow might see far off as they lean upon the Sirocco wind." Such a map, representing the pale circles of Arctic and Antarctic snow, the green sunlit expanse of the temperate region, and the gorgeous colourings of fauna and flora in the torrid zone, would indeed be beautiful. Yet how valueless it would be in comparison with one so drawn up as to represent the habits and peculiarities of the human tribes who inhabit these widely-sundered regions; which should enable us to catch a glimpse of the stunted Esquimaux cowering in his igloo

of snow,—of which he seems to have borrowed the conception from the seals on which he feeds,—or tossed on the spray in his coracle of skin; of the hideous Bosjesman chasing the ostrich on foot over the burning desert, or, like the ostrich, scraping his miserable lair out of the sands of the parched karoo; of the quivered Indian hunting the buffalo over his immeasurable pampas, and requiring many square miles for the sustenance of every individual of his race; of the squalid Fuegian, "a poor wretch, stunted in growth, his hideous face bedaubed with white paint, his body filthy and greasy, his hair tangled, his voice discordant, his gestures violent;" of the depraved, muddaubed, lark-heeled inhabitant of the greater Andaman; of the placid, sensual, conservative Chinese; and side by side with these, of the handsome, highly-civilised, richly-endowed, divinely-ennobled races, who, emerging from their mountain cradle in Asia, have occupied, as the natural lords and masters, the fairest portions in every quarter of the globe.

Yet we believe that these and all other races may be reduced to *Three* great classes or divisions; and it is to establish, or rather, I should say, to recal the antique and deep-lying distinctions between these three classes that the present paper is written. I do not for a moment say how the members of these classes may be supposed to be mutually related; I do not for a moment wish to infer that each great class sprang from an original pair; indeed it must be admitted that Ethnology has not yet obtained sufficient evidence to give a final decision on any such questions. All that I want to establish is that they seem to belong to three distinct and different *strata or stages of humanity;* and that they appeared (to use the vaguest possible word which can conceal our necessary ignorance as to the beginning of every creative act) that they appeared at different chronological epochs upon the surface of the earth. Those three classes are the Savage races, the Semi-civilised races; and finally the two Civilised races. The facts on which I shall dwell, tend to show that these races have always been as distinct as they now are, and that it is impossible for their limits to be confused either by degeneracy on the one hand, or progress on the other. Of course if an unlimited series of years be postulated, the difficulties are lessened, though they are even then by no means removed. But at any rate *the only scientific choice* appears to be between the doctrine of development on the one hand, or a polygenism on the other, which admits the existence not of Cuvier's three races, or Blumenbach's five, or St. Vincent's fifteen, but of a much larger number of primitive species falling under three well-marked groups.

First, then, by the Savage races, I mean those that are *irreclaimably* savage; and I hope that, from what I say of them,

the word "irreclaimably" will not be found to involve any *petitio principii.* I do not apply it to *all* savages; but I think it must be admitted as being applicable to by far the largest number of savage races who have hitherto had the chance of rising from their abject condition.

With the exception of Madeira, the Azores, and a few other islands, there is hardly a single country which, when first discovered, was found destitute of inhabitants; and it is a very remarkable fact that every race, including even some of the semi-barbarous, tell us, in their far-reaching traditions, of other races who preceded them, and whom they found inhabiting the countries to which they came. The Greeks and the Romans never attempted to conceal that their lands were won by victorious immigration. The Egyptians spoke of the gigantic and shadowy races, the Νέκυες, or dead ones, as they called them, who preceded that line of demigods which reigned before the first Pharaoh. The Arabians regarded themselves as successors of the genii. The Canaanites, as we know from Scripture, ousted and almost exterminated the Nephilim, Rephaim, Anakim, and other antediluvian races. The Aryans confessedly won Hindostan by expelling from it those previous tribes whom they contemptuously represent as monkeys, demons, or savages, with whom however they probably intermarried, and of whom traces are still to be found. According to Fa Hian, the Chinese traveller, the first people in Ceylon were demons and dragons, who are probably intended for the original Yakkahs. The North American Indians do not claim to have made the vast mound-temples and tumuli which occur on many of their plains and river valleys, but attribute them to an antecedent race. The natives of New Zealand say that, on arriving, they found there an inferior people, whom they hunted down like wild beasts. Britain was once occupied by cannibal savages who were ousted by the Kelt, and who appear in various early traditions as ghosts or giants. Even the all-but-immemorial Chinese, the least likely of all nations to make any such admission, freely acknowledge that they were not the first possessors of the vast plains which they have held from unknown centuries, but that when their mysterious king Fo-hi appeared, circled with a rainbow, from the north-west, they drove out an aboriginal race who still survive in Formosa, in Hainan, and in the mountainous regions, under the significant name of Miautszee, or children of the soil. Who, then, were these races, who appear in the traditions of all but the most barbarous nations? I believe the answer to be that they were the squalid, primeval allophylian races, whose ghastly relics, consisting of half-gnawed bones and coarse implements of flint, have been found so abundantly of late years in fluviatile deposits, and stalactite flooring of deep caves, but

respecting whose origin nothing is known, except that they lived on the earth with the mamoth and the elk, the cave-hyæna and the cave-bear, for long ages before the first civilised races had appeared upon the globe.

If it be asked whether any *representatives* of such tribes still survive, we may point to many. Such are the tallow-coloured Bosjesmen who, when not living on worms and pismires, are glad to squabble for the putrid carcase of the hyæna and the antelope; the leather-skinned Hottentot, whose hair grows in short tufts like a worn out shoe-brush, with spaces of scalp between; the degraded, gibbering Yamparico, whose food consists of vermin; the aborigines of Victoria, among whom new-born babes are, when convenient, killed and eaten by their parents and brothers; the Alforese of Ceram, who live in families in the trees; the Banaks, who wear lumps of fat meat ornamentally in the cartilage of the nose; the forest tribes of Malacca; the wild people of Borneo, whom the Dayaks hunt as though they were monkeys; the hairy Ainos of Yesso, who annually pay their tribute of fish and skin to the Japanese; the pigmy Dokos, south of Abyssynia, whose nails are grown long, like vultures' talons, that they may dig up ants, and tear the skins of serpents, which they devour raw; the Veddahs of Ceylon, who have gutturals and grimaces instead of languages, who have no God, no notions of time or distance, no name for hours, days, and years, and who cannot count beyond five upon their fingers. Many tribes like these, in the lowest mud of barbarism, so far from having traditions or traces of preceding tribes, attribute their origin directly to lions (like the Sahos), to goats (like the Dagalis), or with contented unanimity to the ape, on whose deformed resemblance to themselves they look without any particle of horror and repugnance, as on a type to which they are assimilated by their own abject degradation, fierce squalor, and protuberant jaws.

A picture of some such race of primeval troglodytes may be found in a very ancient document, the 30th chapter of the Book of Job. Famine, darkness, solitude—a life in the desolate wilderness—a squalid subsistence upon roots and mallows, expulsion as criminals and outcasts from human society and human sympathy, idiotic and semi-bestial noises as they crouched among bushes and under the nettles,—these are the lineaments of that repulsive portraiture. And how does Job speak of them? as "children of nothing;" as "viler than the earth;" as wretches "whose father he would have disdained to set with the dogs of his flock." The description reads like that of a Bosjesman or an Australian, and it is hard to believe that the writer of Job, or the Jews generally, could have regarded people, of whom they could thus speak, as members with themselves of the same original stock. Indeed it

would be easy to adduce direct proofs that, in spite of the apparent teaching of Genesis, they did not so regard them. Yet the picture is not half so revolting as that photograph of modern savages, with which several modern travellers have presented us. Take Sir George Grey's picture of an Australian,—"altogether a disgusting spectacle, stepping out of the carcase of a putrid whale, ill-tempered, violent, rubbed from head to feet with stinking oil, gorged to repletion with putrid meat, and suffering from cutaneous disorders, brought on by high feeding." Or take Dr. Mouatt's picture of dead Andamaners. "Their expression as it had been settled by the hand of death was truly repulsive and frightful. Their features distorted by the most violent passions were too horrible for anything of human mould, and I could regard them only as the types of the most ferocious and relentless fiends. Their aspect was really that of demons. I doubt whether Fuseli in depicting the worst and most violent passions of humanity ever imagined anything so horrible as the visages upon which we now looked." Gross ignorance, total nudity, and promiscuous intercourse, will give a notion of their moral condition; and to complete the picture of other savages would demand the introduction of features darker and deadlier still. To read one such description of savage life is to read all; in short, the savage is not a stately, free, noble creature, presenting the happy spectacle of unsophisticated innocence and primeval liberty, but too generally a wretch, depraved, hideous, and sanguinary; his body equally disgustful to the eye and to the nose, and his grotesque existence divided between "a mistrust of life, and a still greater mistrust of death, which he dreads like fire." They are, says Mr. Darwin, who, unlike the whole company of those who have romanced about them, has had the opportunity of personally inspecting them, "they are men whose very signs and expressions are less intelligible to us than those of the domesticated animals; men who do not possess the instinct of those animals, but yet appear to boast of human reason, or at least of acts consequent on that reason. *I do not believe it possible to describe or paint the difference between savage and civilised man.* It is the difference between a wild and tame animal."

If it be asked what is the history of these races, the answer is extremely simple. They have no history. They have not originated a single discovery; they have not promulgated a single thought; they have not established a single institution; they have not hit upon a single invention. Of the seven or eight civilisations which the world has seen, not one, if we except the Egyptian,—which has been grossly exaggerated, which was probably due, such as it was, to Semitic and Aryan influences, and which was deeply marked by the Negritian stains of cruelty and

Fetichism,—not one has been achieved by a black race. The features of these tribes are invariable and expressionless, and their minds characterised by a dead and blank uniformity. Among them generation hands on no torch to generation, but each century sees them in the same condition as the last, learning nothing, inventing nothing, improving nothing, living on in the same squalid misery and brutal ignorance; neither wiser nor better than their forefathers of immemorial epochs back, mechanically carrying on only a few rude mechanical operations as the bee continues to build her waxen hexagon, and the spider to spin his concentric web; but in all other respects as little progressive, and apparently as little perfectible, as the dogs which they domesticate, or the monkeys which chatter in their woods. They are without a past and without a future, doomed, as races infinitely nobler have been before them, to a rapid, an entire, and, perhaps for the highest destinies of mankind, an inevitable extinction. They have not added one iota to the knowledge, the arts, the sciences, the manufactures, the morals of the world, nor out of all their teeming myriads have they produced one single man whose name is of the slightest importance in the history of our race. Were they all to be merged to-morrow in some great deluge, they would leave behind them no other trace of their existence than their actual organic remains.

And I call them *irreclaimable* savages for two reasons: *the one* is, that I find this to be the practical verdict of all who have been thrown most closely into contact with them; *the other*, that, so far from being influenced by civilisation, they disappear from before the face of it as surely and as perceptibly as the snow retreats before the advancing line of sunbeams.

If no attempt had ever been made to reclaim them, no one could call them irreclaimable. There is indeed a very favourite method of disproving this. A few isolated instances are adduced of individual savages trained up to a certain point by civilised races. "I shall not wait," says De Gobineau, "for the partisans of the equality of races to come and show me such and such a passage from such and such a missionary or traveller, from which it appears that a Yolof showed himself a vigorous carpenter, that a Hottentot became a good servant, that a Kaffir dances and plays the violin, or that a Bambarra is acquainted with arithmetic." Even, however, if we take such individual cases, the single savages who have been, after complete isolation from their fellows, with all appliances and aids to boot, in any way reclaimed or instructed, offer very few and not very hopeful instances. Jemmy Button, Admiral Fitzroy's Fuegian, who was petted in England even by royalty, "as a passably finished man," was found twenty years after by Captain Parker Snow, "rude, shaggy, half-repulsive," in

every respect like his fellow-savages, to whom literally the *only* civilisation which he had communicated was a knowledge of some of our most degraded English words. Miago, the Australian, who was so kindly trained by the officers of the *Beagle*, soon after voluntarily returned as a savage to the bush, and was soon seen almost naked, painted all over, after having been concerned in several murders. Benilong, another Australian, after living for some time in London, resumed with full choice the savage life. A Hottentot boy, long and carefully instructed by Governor Van der Stel, after years of kindness and education, stripped off his European dress before the Governor, clothed himself in sheepskins, and emphatically renounced both civilisation and Christianity. Hundreds of such instances might be quoted, and every one will recollect how hopelessly this incapacity for improvement frustrated in Australia the generous and benevolent efforts of Mr. Threlkeld and of Governor Maquairie.

In fact the real, wild, pagan, savage not only has a *horror* for civilisation, but deliberately *despises* it. An old Indian chief spoke to Dr. Daniel Wilson, "with the unimpressible indifference of the true Indian, of the civilisation of the European intruders as a thing good enough for the white man, but in which neither he nor his people had any interest." Neither as individuals nor as races have they ever adopted it. Barely 300 years ago the Red race were the sole and undisputed lords of the rivers, the prairies, and the forests of America. Now, as a people, they barely exist, and in the late terrible civil war though they saw the encroaching strangers decimating each other by sea and land, and one half of them standing in terror of a third, or black race, introduced still more recently than themselves, they looked on with a strange and terrible apathy, which does not even borrow energy from despair. They deliberately refuse every opportunity of improvement, from which their conscience, their whole nature, their very blood revolts, and as though they were the indisputable "proletarians of humanity," they accept with a mysterious horror and depression of mind, their inevitable lot. Their very spirits are broken, and they watch with frigid indifference the approaching extinction of their type and race.

Or, again, let us take one specimen of the 100,000,000 of Africa, and that not the most degraded types, Hottentots, or Bosjesmen, or even Amakoso Kaffirs, but a much higher race, the pure-blooded negro. With keen senses, and singularly powerful physique, yet, mainly owing to his salient animality, and the crimes of cruelty laziness, and superstition which, if we may accept the accounts of hosts of successive travellers, mark his native condition, he is not untameable like the Indian, but so mentally apathetic as to bow his shoulder to the yoke of race after race of Asiatics and Euro-

peans. Ever since civilisation has existed, he has been conterminous to, and even in contact with it from an unknown period. Yet this natural imitativeness has given him no proficiency even in the mechanical arts. He did not learn architecture, writing, or organisation from the Egyptians; the brilliant Phœnician could not teach him so simple a lesson as the taming of his native elephant; neither Dutch, nor French, nor Spaniards, nor Americans, nor Anglo-Saxons have weaned him, on his native continent from his cannibalism, his rain-doctors, his medicine-men, his mumbo-jumbo, his gris-gris and ju-jus. St. Domingo, "the only episode" in the history of all the dark races put together, only proves their incapability as a race under the most favourable circumstances, of maintaining, without constant and rapid retrogression even a poor imitation of civilised life. The grand qualities which secure the continuous advance of mankind, the generalising power of pure reason, the love of perfectibility, the desire to know the unknown, and, last and greatest, the ability to observe new phenomena and new relations,—these mental faculties seem to be deficient in all the dark races. But, if so, how are they to be civilised? What hope is there for their progress? As they were probably the earliest to appear on the earth's surface, "covering the soil since an epoch which must be determined by Geology rather than by history," so will the vast majority of them in all probability be the first to disappear by a decay, from which not even the sweet influences of Christianity, at least as *we* have taught it, have hitherto been able to rescue more than a small and insignificant number.

For many of them *have* disappeared already. The Tasmanian has perished; the Australian is dying out; the Carib has disappeared from the West Indies; the Maori race is diminishing; the Esquimaux is decreasing in numbers; the North American Indian dwindling away by a process of extinction which has already obliterated innumerable tribes. Savage and civilised life *cannot* co-exist side by side, and even when savages adopt the externalities of civilisation, they seem to wither away with a kind of weary nostalgia, a pining sickness, a deeply-seated despair, and an inevitable decay. They learn with terrible and fatal facility the worst vices of civilisation, without acquiring one of its nobler lessons. To our disgrace it must be admitted, that the steps of the Caucasian man over the earth's surface have too often been dipped in tears and blood; and that his worst vices have spread like a leprosy among these rude and ignorant children of nature. But if he has imparted to them his diseases, his fire-water, and his implements of war, he has at least put down cannibalism, suttee, infanticide, and human sacrifices with the strong arm of power, nor has his conduct been solely an *exemplar vitiis imitabile.* The savage *might* have learnt many great and glorious lessons;

he *has* learnt only what is vicious and degrading. Hence it is that these races—the lowest types of humanity, and presenting its most hideous features of moral and intellectual degradation—are doomed to perish;—not, let us hope, by the criminality of superior races, *to whom the very weakness and inferiority of these races ought to constitute their most powerful claim to protection, justice, and pity,* but because darkness, sloth, and brutal ignorance cannot co-exist with the advance of knowledge, industry, and light. "It is written in the Book of Destiny," says a recent traveller, "that man must either advance or perish."

These low and perishing races then, the congeners, if not the representatives, of those early sporadic allophylians, whose deformed skulls and cannibal relics are turned up here and there, appear to me, on these, and on other grounds, some of which I have already laid before the Society, to have no genetic connection with the other races to which I shall now allude, but as they were the first to appear in the annals of humanity they seem likely to be the earliest to vanish, and in many regions at any rate to leave no traces of their ignoble type. A great philosopher has called this "a desolating belief." I do not see why it should be more desolating than the certain fact that even in the same family man is divided from man by immeasurable and ineffaceable distinctions; but whether desolating or not, is it not the conclusion to which we are led by a vast mass of unmistakeable evidence? If so, is it a sound reverence "to model Providence after our fashion"?

And, now, if we mount to a second stage or stratum of humanity, we *again* find that difference of aptitude, which appears to prove a radical, permanent, and an original difference of race. Let us take the most advanced and eminent family of the Mongolian race—the Chinese. They will furnish the best possible example of that *arrested development,* that "mummified intelligence," as Bunsen happily calls it, that stopping short at a certain stage, which seems to characterise the earliest civilisations, no less certainly than absolute *immobility* has ever characterised the Black and Red types of mankind.

China represents a spectacle all the more astounding from the fact that it survives as the sole representative of those primitive materialistic utilitarian civilisations which mark in human history the time when races, hitherto unknown and in all respects superior to the dark races, began to appear. Every product of these civilisations seems to be ingenious but imperfect, to betray, as I said before, an *arrested development.* They invented writing, but it stopped at ideography and hieroglyphics; their art had no perspective and no ideality; their science no progressiveness; their religion no enthusiasm; their literature no warmth; their

administration no vigour. Everything in them is marked with the plague-spot of utilitarian mediocrity; they reduce everything to the dead level of vulgar practical advantage, and hence the inventions, which they possessed centuries before the Europeans, stop short at the lowest point. Their compass is but a plaything; their ships painted tubs; their sculpture only grotesque; their architecture a repetition of children's toys; their painting found its consummation in a "grimacing activity;" their gunpowder mere pyrotechny; their printing only by wooden blocks; their very language a petrified fragment of primeval periods—flexionless, monosyllabic, and infinitely awkward. The unmarked features, the serene, blandly-smiling face, the tendency to physical obesity and mental apathy, the feeble, tranquil, childish, gluttonous sensuality, mark the race. And when a handful of barbarian French and English made these 300,000,000 repeal some of their immemorial laws, what spectacle did this fossil nation display? "They mistook," says Dr. Knox, "the big drum of the 18th Irish Foot for an unknown and dangerous machine, and kept firing at it during the greater part of the action, so that they killed nobody." They lighted a fire inside an iron tube to frighten us with the smoke, and put on huge and hideous masks that we might mistake them for monsters; and finally, with almost asinine ignorance, they put great lights beside their guns to see to fire by at night, thus gratuitously making an excellent mark for our gunners without benefiting themselves in the slightest degree. The age of Pericles alone, short as it was, with its eternal ideals of art and science, was worth a hundred centuries of that frightful torpor, that slumber of death, that immemorial congealment which characterises the so-called wisdom of the Chinese, and proves that—

"Better twenty years of Europe, than a cycle of Cathay."*

How vast the contrast presented by the two races whose history begins latest, and who belong to the highest stratum, the Tertiary deposits of humanity, the Semitic and Aryan stocks. To the Semite belong pre-eminently a pure religion, iconoclasm, monotheism, and probably writing. It is but a few days' journey among a Semitic population from Mecca to Sinai, and from Sinai to Jerusalem—the three mother-haunts of Christianity, Judaism and Islam, the three greatest and noblest religions of mankind. On the other hand to the Aryan belong science, philosophy, and art; to his race belong the Greeks, the Romans, the English, the French,

* "We see at Pekin, in every material object around us, traces of the decrepitude of the empire, and of the utter worthlessness of their boasted civilisation. Dilapidation, decay, impoverishment and ruin are impressed upon every object."—Bishop Smith (late Bp. of Victoria, Hong Kong).

the Germans, the Italians, the Spaniards; to his race Homer, Aristotle, Cicero, Charlemagne, Da Vinci, Columbus, Shakspeare, Newton, Göthe, Kant. To him and to the Semite belong every single discovery that has adorned, every single thought that has ennobled, every single influence that has elevated and purified our race. To them we owe writing, coinage, commerce, navigation. To them belong the steam-engine, the printing-press, the ship, the lighthouse, the electric telegraph. To them belong all that is ideal and exquisite in painting, poetry, and sculpture. To them are due discovery and colonisation. Vast islands and continents, like New Zealand and America, where before their arrival for untold ages, unalterable and degraded savages, black and red, had been miserably living on the pupæ of the wood-ant, or on each other, they have in a few years transformed into richly cultivated, prosperous, and densely inhabited countries, the seats of new civilisation and the homes of gigantic empire. Can one single step, can one single discovery be named in the mental and religious progress of mankind which was not due to them? Has there ever been one single tribe of their brotherhood which was marked by the stolid unprogressiveness of the Mongol, or which for thousands of years have ever been known to have existed in that abysmal degradation which seems to have been the normal condition of many races, Black and Red?

Here, then, we have *marked,* and so far as any evidence can show, *primordial* differences of aptitude in salient representatives of the great stages of mankind. We believe that the *lowest* of them are the *eldest* brothers of our race, and that they, or savages like them, have existed for 30,000 years on the surface of the earth. But they are vanishing fast, and signs are not wanting to show that even the Brown and Yellow races, so far above them, may in turn give way. To the Aryan, *i.e.,* to the youngest and latest race which has appeared in human history, apparently belong the destinies of the future. The races whose institutions and inventions are despotism, fetichism, and cannibalism,—the races who rest content in administrative formalism, placid sensuality, and unprogressive decrepitude, can hardly hope to contend permanently in the great struggle for existence with that noblest division of the human species whose intelligent energy and indomitable perseverance have won for it, from Peru to China, from Spitzbergen to the Falkland Isles, so wide an empire and so unapproachable a rank.

Perhaps it will be asked in conclusion, do you then disbelieve in the future of mankind? do you not believe in "a common humanity transcending all divisions of tribe and race?" Both questions admit of a brief answer. I *do* believe in the future of humanity; but all testimony leads me to the certainty that it will

not be achieved, or even in any way promoted, by Yamparicos or Fuegians. And I *do* believe in a common humanity, although I do not believe that all races are equally gifted, or all descended from a common pair. Here, as in other cases, the endowments of men are unequal; but *for that very reason we must rear a strong barrier of Religion and Right against the encroachments of the stronger upon their less privileged brethren* Driven by the evidence of centuries to doubt the perfectibility of the negro, I yet abhor slavery from my heart. Believing that all men are children of a common Father, and partakers of a common Redemption, I do not require the notion of a physical or genetic unity as a motive to philanthropy. Though but a single race should ultimately be proved to have descended from that great Protoplast of Eden, such a conviction will not shake the sense of universal charity in any mind which has only thereby been deepened in the belief that there is a *far higher unity* in the fact that for every child of humanity there is "one God and Father of us all."

XI. — *Observations on Mr. John Crawfurd's Paper on the European and Asiatic Races.* Read before the Ethnological Society on February 13th, 1866. By DADABHAI NAOROJI, Esq.

[*Read March 27th*, 1866.]

I FEEL very thankful to Mr. Crawfurd and the Council for allowing me to make a few observations upon Mr. Crawfurd's paper "on the European and Asiatic Races."

Mr. Crawfurd tells us, in illustration of the mental inferiority of the Asiatics, that in the seminaries at eighteen the native is left far behind by the European, and never after recovers his lost ground. What are the facts? Only a few mails ago, *The Friend of India* tells us, that at the Calcutta University there were then above 1200 candidates for entrance; 447 underwent the first examination, and that 120 had applied to compete for the B.A. degree. *The Friend* remarks, "These examinations are assuming a Chinese magnitude, and present a spectacle at once curious and gratifying." The result of my own experience as a teacher and professor for ten years in the Elphinstone Institution, and of my observations for ten years more, is entirely contrary to Mr. Crawfurd's statement. Gambier, Perry, Lewin, Sims, Warden, and others, have given similar opinions in their evidence before Parliament. The mistake made by Mr. Crawfurd is one of those which foreign travellers and writers are very apt to fall into from superficial observation and imperfect information.

When English seminaries were first opened in India, boys were principally sent there with the object of acquiring a sufficient knowledge of the English language to enable them to get situations in government offices, or to talk and write in English. The consequence was, that for some time these seminaries did not produce any scholars, the pupils generally leaving on attaining their main object. With the imperfect education with which they usually left school, and falling again in the society of their own equally or more ignorant countrymen, they were not able to continue their studies. Those Englishmen, however, who watched their progress, but did not understand the cause, wondered at such result, and concluded that the native youth was incapable of progress after eighteen. There is another circumstance which unfortunately aggravated the mischief; the custom of early betrothal and marriage among the natives. The pupils, therefore, were often fathers before they were eighteen or twenty, and the

necessity of supporting a family soon drove them from school to service.

For those who take a real interest in the natives of India, I cannot do better than refer them to that mass of interesting evidence given before Parliamentary Committees by interested and disinterested persons, and I have no doubt that any impartial and candid inquirer will find that the natives of India are not below the average of the head and heart of any other nation in the world.

This evidence was given in 1853 and 1858; but since that time the progress in education and several other matters has been so marked, though not very great, that even this evidence has become obsolete in some particulars. No careful observer will now make the statement that the Hindu is not capable of keeping up his studies after leaving college, much less that he falls back at eighteen and never regains his lost ground. The very fact that the Hindus were even capable of producing a vast and varied literature in all departments of human knowledge, shows beyond all doubt that the capacity to study all life is not wanting. The fertile soil is there, but neglected. Let it have its proper cultivation, and it will again shew the same fruit.

Lastly, as Sir C. Trevelyan very justly remarks, what is said about the natives takes place in some degree in all countries, even in England, and as a remedy, he says,—"The main thing required is to open to them a proper field of mental and moral activity in after life . . . and we should encourage a wholesome mental activity in the pursuits of literature, science, and the fine arts . . . . all the avenues of employment in the service of the state should be opened to them.* They have very considerable administrative qualities, great patience, great industry, and great acuteness and intelligence."†

I do not know whether the remarks made by Mr. Crawfurd on Asiatic literature and dearth of great names are based upon his own personal knowledge of all these literatures, or on the authority of others who possess such knowledge, or on the assumption that, because Mr. Crawfurd does not know them, therefore they do not exist. Mr. Crawfurd himself admits that there have been some conquerors, lawgivers, and founders of religious sects. I suppose such names as Christ, Mahomed, Zoroaster, Manu, Confucius, Cyrus, Akbar, Fardoosi, Hafiz, Sady, Calidas, Panini, Abool Fazil, and a host of others, are such as any nation may be proud of. The Royal Asiatic Society has a descriptive catalogue of 163 manuscripts in their library of 100 distinct Persian and Arabic works on the single subject of history. Sir W. Jones thinks

* Lords' Committee, 1853, ques. 6614. † Ib. 6605.

(vol. x, p. 349) Persia has produced more writers of every kind, and chiefly poets, than all Europe put together. He mentions a manuscript at Oxford of the lives of 135 of the finest Persian poets.

Mr. Crawfurd speaks disparagingly of the *Shahnameh;* I hope Mr. Crawfurd has read it, or has authority for what he says. In my humble opinion, from what little I know of it, it is a work of great poetic merit.* Sir W. Jones, after giving the palm of superiority to Homer, asserts a very great resemblance between the works of these extraordinary men; and admits that both drew their images from nature herself, and both possessed, in an eminent degree, that rich and creative invention, which is the very soul of poetry (vol. x, p. 355).

He considers the characters in it as various and striking; the figures bold and animated, and the diction everywhere sonorous, yet noble; polished, yet full of fire (vol. x, p. 354). Sir J. Malcolm thinks that the most fastidious European reader will meet with numerous passages of exquisite beauty in the noble epic poem of Firdoosi; that some of the finest scenes are described with simplicity and elegance of diction, and that to those whose taste is offended with hyperbole, the tender part of his work will have most beauty (vol. ii, p. 539). Sir W. Jones considers that the Persian language is rich, melodious, and elegant; that numbers of admirable works have been written in it, by historians, philosophers, and poets, who found it capable of expressing with equal advantage the most beautiful and the most elevated sentiments (vol. v, p. 165). With reference to the ridiculous bombast of the Persian style, he remarks, "that though there are bad writers, as in every country, the authors who are esteemed in Persia are neither slavish in their sentiments, nor ridiculous in their expressions."

Upon Mr. Crawfurd's remarks as to the absence of any literature or history among the Persians before the Arabian conquest, let us see what Sir John Malcolm says. He says the Arabs, in their irritation at the obstinate resistance of the Persians for their independent religion, destroyed their cities, temples, etc., etc. And the books in which were written whatever the learned of the nation knew, either of general science, or of their own history and religion, were, with their possessions, devoted to destruction." He refers, as a parallel, to the fate of Greek and Roman manuscripts, to show how few of the works of a conquered and despised nation like Persia would be saved amid the wreck to which that kingdom was doomed.

* Dr. Julius Mohl informs me that he has already published four volumes of the text and translation; the fifth is nearly ready for publication, and the sixth is printing.

He further says,—"We know from sacred history, that the deeds of the kings of Persia were written in a work styled the Chronicles of that Kingdom; and we are told by a Grecian author, who was at the court of Artaxerxes Mnemon, that he had access to volumes which were preserved in the royal archives."*

I need not take up your time with more extracts on the merits of other poets. Mr. Fraser, after naming Nizami, Omar Keyormi, Oorfi, and Rudki, says he might cite a hundred others as high examples of genius. Lastly, we must bear in mind, that a large amount of Asiatic and European literature may have been lost in that deplorable act of destruction of the Alexandrian Library by Omar.

In Arabic literature, to the *Arabian Nights* at least, I hope Mr. Crawfurd accords some merit; for according to his test of merit the work is translated in European languages, and extensively read, too. Chrickton's *History of Arabia* gives an account of a varied and vast Arabian literature. He thinks Europe indebted to the Arabs for some of her most valuable lessons in science and

* Mr. Ed. B. Eastwick, in reply to my inquiries as to his opinion upon the extracts I have given from Sir W. Jones and Sir John Malcolm on Persian literature, etc., says:—

"I thoroughly agree in the opinions expressed of Firdausi, and of the Persian poets, by Sir W. Jones and Sir J. Malcolm. The narratives of events in the *Shanamêh* are not so unnatural, hyperbolic, or absurd as those in the *Iliad*, and the 'curiosa felicitas verborum' of the Persian poet is little if at all inferior to that of Homer. Mr. C. cannot be aware that M. Mohl has translated the *Shanameh* into French, and that Atkinson has rendered some portions into English. If Arabic and Persian were taught in our schools, as Greek and Latin are, we should have as many and as careful translations of the *Shanamêh* as of the *Iliad*. It is not the slender merit of the poet, but our ignorance of Persian, that has made the dearth of translations. As yet we have only dipped into Persian poetry. No European can pretend to have explored that ocean of literature."

I am sorry that my very slight knowledge of French prevents me from studying, for the present, the annual reports of Dr. Julius Mohl; but I give below an extract from his letter to me, which I think gives the Eastern literature its proper place in the history of man.

"Oriental literature can only take its place in the universal literature of mankind, when intelligent historians show its value for history in its largest sense—history of the development of the human race, its ideas, its manners, etc.; and show, too, how large has been the past of the East, and how great in some respects its influence. This is gradually being done, in proportion as translations and researches on special subjects put the materials in the hands of thinking people. It is, above all, the history of religion, of legislation, of philosophy, and of poetry, which will show the importance of Oriental literature; but it is slow work, and cannot be otherwise, by the nature of the case. Greek and Latin literature will always prevail in Europe; our minds have been moulded upon them, and they are nearest to us: but this does not extinguish the claim of the East to take its place. I have said this over and over, in my annual reports to the Asiatic Society."

arts. He also gives the names of more than half-a-dozen female poetesses and philosophers.

Professor Max Müller thinks that the achievements of the Brahmins in grammatical analysis, which date from six centuries before Christ, are still unsurpassed by any nation (*Science of Language*, p. 80). Colebrook thinks that among the infinity of volumes on Nyaya, there are compositions of very celebrated schoolmen (*Religion and Philosophy of the Hindus*, p. 167), and that the Hindu writings abound in every branch of science. Sir W. Jones strongly recommends to Europeans the study of Indian medical works. He says there are many works on music, in prose and verse, with specimens of Hindu airs in a very elegant notation, that the Sanscrit prosody is easy and beautiful, that there are numerous astronomical works, and that wherever we direct our attention to Hindu literature, the notion of *infinity* presents itself, from which we may gather the fruits of science without loading ourselves with the leaves.

No doubt there may be much leaves and branches, or much trash, in this vast forest of literature, but we know also what amount of trash is daily poured upon us in the present day.

Sir W. Jones ventures to affirm that the whole of Newton's *Theology*, and part of his *Philosophy*, may be found in the *Vedas*, which also abound with allusions to a force of universal attraction (vol. iii, p. 246). With regard to the Sanscrit language, he says, "whatever be its antiquity, it is of wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either" (vol. iii, p. 34). With all the above opinions of Sir W. Jones Dr. T. Goldstucker concurs.

Horace Wilson thinks it probable that in fiction much of the invention displayed on the revival of letters in Europe was referable to an Indian origin (vol. iii, p. 156); that enough has been ascertained to determine the actual existence in Sanscrit or in vernacular translations from it of a very extensive literature of fiction, in which many of our European acquaintances are at once to be recognised (vol. v, p. 108), and that the Hindus occupy an early and prominent place in the history of fiction (vol. iii, p. 159); that in speculations upon the nature of the superior being and man, the Hindus traverse the very same ground that was familiarly trodden by the philosophers of Greece and Rome (vol. ii, p. 115). He also remarks:—"That in medicine, as well as in astronomy and metaphysics, the Hindus once kept pace with the most enlightened nations of the world; and that they attained as thorough a proficiency in medicine and surgery as any people whose acquisitions are recorded, and as indeed was practicable, before anatomy was made known to us by the discoveries of modern inquirers. That surgery (as well as other departments of

medical science) was once extensively cultivated and highly esteemed by the Hindus."

Lastly, I appeal to Professor Goldstucker, whether Sanscrit literature was not important enough to warrant the formation of the Sanscrit Text Society, headed by his Royal Highness the Prince of Wales.

Further development was checked by the frequent invasions of India by, and the subsequent continuous rule of, foreigners of entirely different character and genius, who, not having any sympathy with the indigenous literature—on the contrary, having much fanatical antipathy to the religion of the Hindus, prevented its further growth. Priesthood, first for power and afterwards from ignorance, completed the mischief, as has happened in all other countries.

Mr. Crawfurd tells us that the Asiatics are untruthful, very inferior in morals, and have no fidelity to engagements. Beginning with the ancient Persians, Zoroaster, hundreds of years before Christ, taught, "I understand truth-telling exalted; all the days of the holy man are with thoughts of truth, words of truth, and deeds of truth." Those that tell untruths and do wicked actions shall not receive the reward of life from Hormuzd. "To speak true words is true excellence; in the treasures of religion exalt truth above all." What is the high religion? —That which promotes my holiness and truth, with good thought, word, and deed. "In this house may .... prevail words of truth over words of lie."—"Punish the breakers of promise, and those that induce others to break their promise."* Coming down in the course of time to the third century of the Christian era, Ardai Viraf, a high priest, holds out the punishment of hell, among others, to the following:—

"The man who used false weights and measures, took full weight and returned false, who adulterated his goods by mixing water with milk, to men who were liars and tale-bearers. The crime of lying being the most displeasing in the sight of God; even the most trivial and innocent falsity being a heinous sin. The man who was a bearer of false witness; who was fraudulent and deceitful; who, though he kept his word and rigorously performed his agreement with those of his own sect and faith, yet held it no sin to break his faith with those of a different persuasion; this, in the eye of Omnipotence, being a heinous sin, and the keeping of a promise even with an enemy being a duty inculcated."

Mr. Pope, the translator of Ardai Vlraf, concludes with the following remark, "that the philosophers will rejoice to find

* My paper on the Parsee religion read before the Liverpool Literary and Philosophical Society.

them (the modern Parsees) neither deficient in virtue or morality." Mr. Rawlinson says, "that in their (Zoroasterian) system, truth, purity, piety, and industry were the virtues chiefly valued and inculcated."

Coming down to the latest times, the Parsee children are taught as a religious lesson to speak the truth, and not to tell untruths nor to commit treachery.

The above is the testimony of the religious literature of Persians. Let us see what foreigners have said of them. Greek testimony about Persians is to be taken with care and caution. When we see that in the nineteenth century, gentlemen of learning and authority, with every means of obtaining correct information available, commit such mistakes as the one I have pointed out before, about the educational capacity of the natives of India, and make statements contrary to well known facts, how much more necessary is it to sift carefully the testimony of a hostile people given at a time when intercommunication was rare and difficult, and the character and manners of the two people very different. Even good Greek testimony, however, is in the favour of the Persians. Herodotus says, "Their sons are carefully instructed .... to speak the truth." He also says, "They hold it unlawful to talk of anything which is unlawful to do; the most disgraceful thing in the world they think is to tell a lie, the next worse to owe a debt, because, among other reasons, the debtor is obliged to tell lies."*

Next, there is the testimony of the inscriptions in which lying is taken as the representative of all evil. Darius's successors are exhorted not to cherish but to cast into utter perdition the man who may be a liar or who may be an evil doer.† The modern Parsees are admitted by Mr. Crawfurd himself, as well as others, as a trustworthy and truthful race.

Of the modern Mahommedan Persians of Persia I do not know much. But I may say this much, that if they be truthful, Mr. Crawfurd's statement, then, is incorrect; if untruthful, Mr. Crawfurd's conclusion of his paper is so far upset. For, the present untruthful Persians, being the descendants of an old truth-speaking race, the difference in the character is no proof of difference of race, and that external circumstances have great influence in modifying a nation's character.

About the Hindus I can speak, both from personal knowledge and from other testimony, that Mr. Crawfurd's charge against them is unfounded. This mistake also arises from causes I have alluded to before—superficial observation and hasty conclusions. Fortunately there are many who have studied the native character more carefully. Not to take up much of your time, I

* Rawlinson's "Herodotus," vol. ii, p. 222. † Ib. note 7.

refer you to the evidence given before Parliament, 1853 and 1858, and I think that a careful and candid examination of that evidence will satisfy anybody, that the general character of the natives of India is as good as that of any other people.

I shall very briefly refer to some of this testimony here. Beginning with the early writers, Strabo testifies to the truthfulness and virtue of the Hindus (vol. iii, p. 106). Arrian also describes the Hindus as truthful (Sykes's *India*, p. 121). Coming down to later times, Abool Fazil, the celebrated Mahommedan minister of Akbar, describes the Hindus in the sixteenth century as lovers of justice, admirers of truth, grateful, and of unbounded fidelity (J. Crawfurd's *Researches*, vol. ii, p. 139). Coming down still later to the present time, Sir G. Clerk thinks the morality among the higher classes of Hindus of a high standard, and of the middle and lower classes remarkably so. He thinks there is less of immorality than in many countries of Europe. Sir E. Perry tells us, that offences against property and crimes generally are less frequent in the island of Bombay than in any similar community in Europe, and that it is the opinion of the Hindus that native morality suffers by coming into close contact with the English—the pristine simplicity and truthfulness of the native village disappears in drunkenness, intrigue, and a litigious spirit supervening, and that their commercial integrity has always been famous.

This commercial integrity is mentioned by Strabo also, who says that "they make their deposits, and confide in one another" (vol. iii, p. 105). It is a fact at the present day, that transactions of great value take place between natives, for which there is no further evidence than the entry in the books of the seller. I do not suppose there is any parallel to this in Europe.

Colonel D. Sims considers the natives not inferior to the people of other countries in point of honesty, and even veracity, and says that people are apt to judge of the natives of India by those whom they find about the precincts of the different courts of justice, where, temptations to mendacity being many, the atmosphere is unfavourable to truthfulness, as is probably the case in any other countries under the same circumstances. When Mr. Fowler, a planter, gained the confidence of his labourers by his fair dealings with them, everything went on smoothly, and he was never in any part of the world where he had less trouble with his labourers.*

* In Mr. Justice Phear's opinion, "the character of the average oral testimony in the Guildhall of London, and that of the same in the town-hall of Calcutta, were on a par." And the Hon. Mr. Campbell fully admits that it was the courts which were to blame for the character of native testimony. (*Native Opinion*, Bombay, 25th March, 1866.)

Horace Wilson tells us "not to imagine that the Hindus are ignorant of the foundations of all morality, or that they do not value truth, justice, integrity, benevolence, charity, to all that lives, and even the requital of evil with good; that these duties are all repeatedly enjoined, and Hindu authorities commend as earnestly as those of any other language" (vol. ii, p. 109).

The complaint often made about untruthfulness of natives, has, I think, this cause. There are several professional experts about the courts who sell their evidence. The judge is very often not sufficiently familiar with the vernacular; some of the subordinates in the court being most wretchedly paid, yield to the temptation of bribery, and these three causes combined together make the task of the judge sometimes difficult, and every instance of successful perjury naturally encourages it more. The obvious remedy, one would think, would be that if proper severe examples were made of the perjurers, instead of merely raising up the cry of untruthfulness against the whole nation, their number, if at all unusual, would soon be reduced.

The other cause of the Hindus being sometimes denounced as untruthful, is the following clauses in the *Institutes* of Menu.

Chap. iv, 138. "Let him say what is true, but let him say what is pleasing; let him speak no disagreeable truth, nor let him speak agreeable falsehood. This is a primeval rule."

139. "Let him say 'well and good', or let him say 'well' only; but let him not maintain fruitless enmity and altercation with any man."

Chap. viii, 103. "In some cases, a giver of false evidence from a pious motive, even though he know the truth, shall not lose his seat in heaven: such evidence wise men call the speech of the gods."

104. "Whenever the death of a man, *who had not been a grievous offender*, either of the servile, the commercial, the military, or the sacerdotal class, would be occasioned by true evidence, *from the known rigour of the king, even though the fault arose from inadvertence or error*, falsehood may be spoken: it is even preferable to truth." (The italics in all extracts from Menu are from the commentators on Menu.)

It must be remembered that these are laws for a state of society entirely different from your present one; the will or wisdom of the sovereign is the practical law of the land. I do not propose here to read a dissertation on truth, but I may simply, as parallel to the above extracts from the works of a Hindu legislator, refer to what is said by some of the European thinkers of modern times. Bentham allows, 1, falsehoods to avoid mischief, the case of misdirecting a murderer; 2, falsehoods of humanity, the case of physicians; 3, falsehoods of urbanity, an exaggerated compliment. In these cases, or at least in the first two, he says, "falsehood is a duty; in other cases it may be allowable, as in all those in which the person addressed has no right to know the truth. This would embrace most of the cases discussed by Grotius and Puffendorf." Instead of making any further quotations, I refer

you to an article in the *Saturday Review* of July 2nd, 1864, on "Lying," from which the above extract is given.

I give in a note below extracts from the *Institutes of Menu* to show how highly truth is valued among the Hindus. Dr. Goldstucker kindly writes to me to say, that in Rigveda and Jagurved "the necessity of speaking truth and avoiding untruth is emphasised in the most beautiful language, but unfortunately there are as yet no translations of these texts."*

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* Chap. iv, par. 175. Let a man continually take pleasure in truth, in justice, in laudable practices, and in purity; let him chastise those, whom he may chastise, in a legal mode; let him keep in subjection his speech, his arm, and his appetite.

Par. 237. By falsehood the sacrifice becomes vain.

Par. 256. All things have their sense ascertained by speech; in speech they have their bases; and from speech they proceed: consequently, a falsifier of speech falsifies everything.

This is somewhat similar to Bentham's description of truth, in his *Theory of Legislation* (p. 260): "Every instant of our lives we are obliged to form judgments and to regulate our conduct according to facts, and it is only a small number of these facts which we can ascertain from our own observation. Then results an absolute necessity of trusting to the reports of others. If there is in these reports a mixture of falsehood, so far our judgments are erroneous, our motives wrong, our expectations misplaced. We live in restless distrust, and we do not know upon what to put dependence. In one word, falsehood includes the principle of every evil, because in its progress it brings on at last the dissolution of human society."

Par. 255. For he, who describes himself to worthy men, in a manner contrary to truth, is the most sinful wretch in this world: he is the worst of thieves, a stealer of minds.

Chap. vi, par. 92. Content, returning good for evil, resistance to sensual appetites, abstinence from illicit gain, purification, coercion of the organs, knowledge of Scripture, knowledge of the Supreme Spirit, veracity, and freedom from wrath, form their tenfold system of duties.

Chap. vii, 26. Holy sages consider as a fit dispenser of criminal justice, that king, who invariably speaks truth, who duly considers all cases, who understands the sacred books, who knows the distinctions of virtue, pleasure, and riches.

Chap. viii, par. 79. The witnesses being assembled in the middle of the court-room, in the presence of the plaintiff and the defendant, let the judge examine them, after having addressed them altogether in the following manner:

Par. 80. What ye know to have been transacted in the matter before us, between the parties reciprocally, declare at large and with truth; for your evidence in this cause is required.

Par. 81. A witness, who gives evidence with truth, shall attain exalted seats of beatitude above, and the highest fame here below: such testimony is revered by Brahma himself.

Par. 82. The witness who speaks falsely, shall be fast bound *under water*, in the *snaky* cords of Varuna, and be wholly deprived of power to *escape torment* during a hundred transmigrations: let mankind, therefore, give no false testimony.

Par. 83. By truth is a witness cleared from sin; by truth is justice advanced: truth must, therefore, be spoken by witnesses of every class.

Mr. Crawfurd admits the commercial integrity among native merchants. Dealings in money, however, produce the greatest temptations to dishonesty, and when the commercial portion of a nation can stand this ordeal well, one would think it must tell much in favour of the general character of a people.

Par. 84. The soul itself is its own witness; the soul itself is its own refuge; offend not thy conscious soul, the supreme internal witness of men!

Par. 85. The sinful have said in their hearts: "None sees us." Yes; the gods distinctly see them; and so does the spirit within their breasts.

Par. 89. Whatever places of torture have been prepared for the slayer of a priest, for the murderer of a woman or of a child, for the injurer of a friend, and for an ungrateful man, those places are ordained for a witness who gives false evidence.

Par. 90. The fruit of every virtuous act, which thou hast done, O good man, since thy birth, shall depart from thee to dogs, if thou deviate in speech from the truth.

Par. 91. O friend of virtue, that supreme spirit, which thou believest one and the same with thyself, resides in thy bosom perpetually, and is an all-knowing inspector of thy goodness or of thy wickedness.

Par. 92. If thou beest not at variance, by speaking falsely, with Yama, or the subduer of all, with Vaivaswata, or the punisher, with that great divinity who dwells in thy breast, go not on a pilgrimage to the river Gangà, nor to the plains of Curu, for thou hast no need of expiation.

Par. 93. Naked and shorn, tormented with hunger and thirst, and deprived of sight, shall the man, who gives false evidence, go with a potsherd to beg food at the door of an enemy.

Par. 94. Headlong, in utter darkness, shall the impious wretch tumble into hell, who, being interrogated in a judicial inquiry, answers one question falsely.

Par. 95. He, who in a court of justice gives an imperfect account of any transaction, or asserts a fact of which he was no eye-witness, shall receive pain *instead of pleasure*, and resemble a man who eats fish *with eagerness*, and swallows the sharp bones.

Par. 96. The gods are acquainted with no better mortal in this world, than the man of whom the intelligent spirit, which pervades his body, has no distrust, when he prepares to give evidence.

Par. 97. Hear, honest man, from a just enumeration in order, how many kinsmen, in evidence of different sorts, a false witness kills, or incurs the guilt of killing.

Par. 193. That man who, by false pretences, gets into his hands the goods of another, shall, together with his accomplices, be punished by various degrees of whipping or mutilation, or even by death.

Par. 257. Veracious witnesses, who give evidence as the law requires, are absolved from their sins; but such as give it unjustly, shall each be fined two hundred panas.

Chap. x, par. 93. Avoiding all injury to animated beings, veracity, abstaining from theft, and from unjust seizure of property, cleanliness, and command over the bodily organs, form the compendious system of duty, which Menu has ordained for the four classes.

Chap. iv, par. 170. Even here below an unjust man attains no felicity; nor he whose wealth proceeds from giving false evidence; nor he who constantly takes delight in mischief.

Chap. v, par. 109. Bodies are cleansed by water; *the mind is purified by*

Mr. Crawfurd denies integrity even to the educated classes. I do not hesitate to give a direct contradiction to this statement. From my actual acquaintance and experience of the educated natives in the Bombay Presidency, I can with confidence assert, in Mr. Crawfurd's own words, that integrity is most prevalent among them as among the educated in Europe. This mistake about the integrity of the educated is also like that about the capacity for education. There are many youths who know how to speak and write English without being educated, and Englishmen often confound them with the educated.

Polygamy.—The Parsees are strictly monogamists. The old and young, the most bigoted and the most orthodox, all agree in their abhorrence of bigamy. They prevailed with government to make bigamy criminal among them. I am not able to refer to the books, but I have a strong impression that there is nothing in the religious literature of the Old Persians indicative of the prevalence or sanction of polygamy among them. It is the most universal belief among the modern Parsees that they have always been monogamists, and they consider concubinage, also, a sin. Greek testimony, however, is against the Persians in this matter. But at the same time the Greek best authority lays the blame upon the Greeks themselves, for Herodotus tells us, "as soon as they (Persians) hear of any luxury they instantly make it their own, and hence, among other novelties, they have learnt unnatural lust from the Greeks. Each of them has several wives and a still larger number of concubines." It appears, then, that we have to thank our good friends, the European Greeks, for this unnatural lust. The magi of the Medes are charged with worse institutions than polygamy by some Greek authorities, but Mr. Rawlinson says, "whether it had any real foundation in fact is very uncertain" (vol. iii, p. 131).

The *Desatir*, which in some parts is, according to some, of great antiquity, and according to others only a work about three

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truth; the vital spirit, by theology and devotion; the understanding, by clear knowledge.

Chap. ii, par. 97. To a man contaminated with sensuality, neither the Vedas, nor liberality, nor sacrifices, nor strict observances, nor pious austerities, ever procure felicity.

Chap. vii, par. 13. Let the king prepare a just compensation for the good, and a just punishment for the bad: the rule of strict justice let him never transgress.

Chap. viii, par. 111. Let no man of sense take an oath in vain, that is, not in a court of justice, on a trifling occasion; for the man, who takes an oath in vain, shall be punished in this life and in the next.

Par. 86. The guardian deities of the firmament, of the earth, of the waters, of the human heart, of the moon, of the sun, and of fire, of punishment after death, of the winds, of night, of both twilights, and of justice, perfectly know the state of all spirits clothed with bodies.

hundred years old, but, withal, the work of an Asiatic, says, "Marry only one woman, and do not look with a wicked eye on or cohabit with any other woman." This fact deserves much consideration. Had the Persians been originally polygamists it is strange that, during their residence in India for 1200 years in the midst of the Hindus and Mohammedans, who are more or less polygamists, they should have so strictly preserved their monogamic character.

I asked Professor Spiegel to point out any texts in the religious literature of the Parsees, for or against, polygamy. He replied, "As far as my knowledge goes, there is no instance of polygamy in the religious literature of the Parsees. It is said that Zerdusht had three wives, but he had them successively. I share with you the conviction that the majority of the Parsees were at all times monogamists, although, perhaps, indulgences have been granted to kings and other individuals of high station." In another reply to further inquiry from me, about these indulgences, he repeats that there is not a single text of the *Avesta*, or the later *Parsis*, which alluded to polygamy, and that the indulgences he referred to were upon Greek and Latin authority.

Moreover, Sir J. Malcolm thinks, "There is every reason to believe that the manners of the ancient inhabitants of Persia were softened, and in some degree refined, by a spirit of chivalry which pervaded throughout that country from the commencement till the end of the Kayanian dynasty.... The great respect in which the female sex was held was no doubt the principal cause of the progress they had made in civilisation; these were at once the cause of generous enterprise and its reward. It would appear that in former days the women of Persia had an assigned and an honourable place in society, and we must conclude that an equal rank with the male creation which is secured to them by the ordinance of Zoroaster, existed long before the time of that reformer." I can say, in confirmation of this, that, even among the old and most orthodox in the present Parsee society, the above remarks on the respect to the female sex are true, and to the best of my recollection I can confirm the remark of the equality of rank of the female and male creation by the ordinance of Zoroaster.

Mr. Rawlinson also thinks the Aryan races seem in old times to have treated women with a certain chivalry, which allowed the development of their physical powers, and rendered them specially attractive alike to their own husbands and to the men of other nations.

The existence of polygamy among the Hindus cannot be denied, but on reading the *Institutes* of Menu, I think that any

one will be satisfied that, short of a perfect equality with man, and strict monogamy, woman has high consideration shown her. Menu says, "When females are honoured then the deities are pleased, but when they are dishonoured then religious acts become fruitless" (chap. iii, 56). The duties enjoined to husbands and wives are as good as those of any other people. They are summed up in the following words:—"Let mutual fidelity continue to death" (chap. ix, 101); this, in few words, may be considered as the supreme law between husband and wife. I give below a few more extracts.*

Strabo says of the Hindus, "and the wives prostitute themselves, unless chastity is enforced by compulsion." This bears evident mark of a hasty conclusion from some partial observation. Domestic matters are always most difficult to be ascertained by a foreigner. Certainly the people who not only considered chastity a high virtue, as I have already shown, but even a power, and represented it so in the drama, cannot be charged with such degradation.

Damayante, on being insulted by a hunter in the forest, uttered loud her curse of wrath:—(*Story of Nala*, p. 35.)

> "As my pure and constant spirit swerves not from Nishadha's Lord,
> Instant so may this base hunter lifeless fall upon the earth!
> Scarce that single word was uttered, suddenly that hunter bold
> Down upon the earth fell lifeless, like a lightning-blasted tree."

On the subject of chivalry among the Hindus, Sir Bartle Frere, in a speech at the distribution of prizes to the girls' schools of the Students' Literary and Scientific Society of Bombay, says to the natives around him (Stud. Lit. and Scientific Society's Report for Session 1864–65), after alluding to the spirit of chivalry and its effects in Europe, "There is no doubt that our ancestors regarded the female portion of the community as the great, almost the chief instruments in bringing back civilisation to Europe. I wish all my native friends to recollect, that this spirit, although if manifested chiefly there, was not confined to

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* Par. 58. On whatever houses the women of a family, not being duly honoured, pronounce an imprecation, those houses, with all that belong to them, utterly perish, as if destroyed by a sacrifice for the death of an enemy.

Par. 60. In whatever family the husband is contented with his wife, and the wife with her husband, in that house will fortune be assuredly permanent.

Par. 28. From the wife alone proceed offspring, good household management, solicitous attention, most exquisite caresses, and that heavenly beatitude which she obtains for the names of ancestors, and for the husband himself.

Par. 165. While she, who slights not her lord, but keeps her mind, speech, and body devoted to him, attains his heavenly mansion, and by good men is called sádhirè, or virtuous.

Europe. If they read any history of Rajpootana they will see that this spirit was a desire to make them as far as possible equal to this. This spirit is essentially the spirit of the old Hindu races—a spirit which subdued India and drove out the barbarous tribes of those days, and formed such communities, that they are now, after the duration of many centuries, still vigorous and still able to oppose to us a vital power, which in spite of this government and its forces can command the respect of all who go among them."

Lastly, I beg to draw Mr. Crawfurd's attention to the phenomenon of the nineteenth century among European races of Mormonism.

It is a matter much to be regretted that gentlemen, like Mr. Crawfurd, make sweeping denunciations against the character of the Asiatics. They naturally provoke recriminations like the following, with all their mischievous consequences.

A Parsee gentleman, during his residence in this country for nearly eight years, disgusted with these sweeping charges, used to say, "Look at all the mass of untruths in the daily advertisements; in the daily language of shopkeepers; how much swindling is there in the concoction of companies for the benefit of the promoters only; see what the book on facts, failures, and frauds discloses; what extremely watchful care one is obliged to have in his dealings in the city, when every kind of scoundrelism is so rife; how many manufacturers always give you the best article only, at any price; how cleverly flaws are found in contracts; how artizans always require more time for wage-work than for job; how often you get goods different from patterns and samples;" and he asked what grounds are there for Europeans to boast of higher commercial morality than that of the natives of India? He asked, "Look at the number of immoral haunts in London, read the account of *Life in Liverpool*, see the social evil and street immorality, cases of unfaithfulness in domestic life, great immorality whenever numbers of the two sexes work together, the amount and character of crime disclosed by police and law reports, and election corruption, and all this among a highly civilised people. Is there not more reason for humiliation than boasting on the part of Europeans as to their morality? See the constant changes of views in the papers about Indian matters as it suits the purpose of the writer at the moment; the mode in which India has been acquired:—

> "War, disguised as Commerce, came;
> Won an empire, lost a name."

"When it suits their purpose the Hindus are described as most loyal, obedient, civilised, etc.; at other times they are cowardly

wretches, disloyal, ungrateful, barbarous. They first give a bad name, and then cry out to hang them. They draw millions every year from India, and in return abuse its people, caring not so much for it as for a rotten English borough. They yield with the greatest reluctance and difficulty any of their just rights and privileges demanded by the natives. Look at that iniquitous annexation policy in spite of treaties; see how the cost of the Affghan war is clapped on the shoulders of India; their whole aim being how to get most money from India." Reasoning in this way he concluded, "the only God the English worshipped was gold; they would do anything to get it," and he illustrated this by saying, "that if it were discovered that gold existed in human blood, they would manage, and with good reasons to boot, to extract it from thence."

He said "the English boast of fair play, etc., and yet see with what different measures they deal it out sometimes to the European and native; with what flagrant injustice was Dr. Colah treated; how bullying they are towards the weak, and very polite and reasonable with the strong. Coercion alone, it seems, makes them do what is right." He said that as long as an Englishman wanted anything he was the very embodiment of politeness, but the object gained, he was no more the same person, and pointing to the treatment of India generally, he thought gratitude was not a very prominent trait in the English character.

They pay native officials most wretchedly, and yet claim from them as efficient and honest service as they get from the highly-paid English officials, forgetting how rife corruption was among themselves in the days of small pay and much service. They complain of the untrustworthiness of native servants, but in their innocence they do not know how cleverly English landladies and servants manage to have their pickings and discounts.

Studying the English character in this manner, the gentleman formed his opinion that the English were the most hypocritical, the most selfish and unprincipled people, and had no right to boast of higher morality and integrity. Now, if such evidence as Mr. Crawfurd relies upon be conclusive as to the character of the natives of India, I do not see how this Parsee gentleman's conclusions cannot be also admitted as proved. Strange to say, the principal argument that was flung at our face against our attempt some sixteen years ago to establish female schools, was the state of English society, which the objectors, from superficial observation, urged was not highly moral, as female education afforded opportunities of secret intrigue and correspondence. I trust it is not such kind of evidence that will be considered sufficient by any thinking man to traduce whole nations.

When we left India in 1855 to come over here to open the

irst Parsee firm, the principal advice given by our European riends was to be exceedingly careful in our business in the city gainst the many rogues we should meet with there. "In India," aid some one, "we keep one eye open; in England, you must eep both eyes wide open."

In the cause of truth and science I do not in the least object o the proclamation of truth regardless of consequences; but I ppeal to Mr. Crawfurd himself, and to Englishmen, whether, when in the instance of the natives of India, the case at the worst is but doubtful, such wholesale abuse of the whole nation rom persons of position and authority in science is not much to be deplored; it creates ill feeling and distrust, excites recrimination, and engenders a war of races.

India, gentlemen, is in your power and at your mercy; you may either give it a helping hand and raise it to your political and enlightened condition, to your eternal glory, or keep it down with the foot of the tyrant upon its neck, to your eternal shame! The choice is in your power, and, as I am happy to believe that, true to English nature, the first course is chosen, though not yet very energetically pursued, is it not very necessary, for men of weight or influence, not to say or do anything to mar this great and good work.

Abuse from persons like Mr. Landon of Broach, or Mr. Jeffries of the East Indian Association, natives care not for. The natives know the men and their motives; but disinterested gentlemen of weight and authority ought to ponder well upon their responsibilities. I do not at all mean to say that you should not point out to the natives of India their real faults and shortcomings—in fact, you cannot do a better act of friendship; but pointing out real faults is different from traducing indiscriminately. I may demand, in the words of Horace Wilson, "Let whatever they urge be urged in charity."

In my remarks about the general moral character of the Parsees and Hindus, I do not mean to be understood that they are models of perfection, they have no doubt their fair share of black sheep also, and their faults arising from centuries of foreign rule and more or less oppression; but, judging from the experience of some past years, there is every hope of these faults being corrected by education.

The intercourse between the Europeans and natives is not, except in few instances, of that frankness and confidence which alone can enable them to judge of each other rightly. Coupled with this, they very often misunderstand each other; and the Englishman, generally being an educated man, judges of every native by the high standard of his own enlightenment and civilisation. The result is often anything but a right conclusion, and

hasty generalisation. Every wrong act of the native is at once condemned as innate in the native; similar acts of Europeans are of course only individual delinquencies, or capable of explanation!

There is nothing strange in the natives feeling shy and misunderstanding the rulers. The other day the Welsh farmers did not fill up government returns about cattle, after deliberation, on the ground that government wanted to tax cattle.

There is no doubt that owing to a colder and more bracing climate, the enjoyment of free institutions for centuries, the advantages of high educational establishments and high moral culture, free public opinion, and the advancement in material prosperity and mode of life by the discoveries of physical science and mineral resources, the modern Englishmen is, in his physical and mental development, in his pluck and public spirit, in literature, science and arts, superior to the modern Hindu, ground down and depressed as he is by centuries of foreign rule and oppression, and possessing less advantages of climate and food for personal vigour. But the very fact that the Hindu has under all such unfortunate circumstances preserved his character for morality and virtue, for high commercial integrity, for his bravery and military aptitude, and that he has at one time produced his vast ancient lore, shows that there is no want of capacity, and that, under the influence of British rule rightly administered, and re-invigorated by modern western civilisation, he may once more regain his former high position among mankind.

At present he has not yet fully recovered from the staggering blow of the most extraordinary revolution by which a small nation in the far west has become a ruler of his vast country. He does not yet quite understand his new rulers. He is only just beginning to see dimly that after all he has perhaps some reason to congratulate himself for the change. The higher classes, the rulers now displaced or still remaining, are in a bewildering state of mind. They lying prostrate, with all their energies fled, and smarting at their fallen condition, cannot be naturally expected to reconcile themselves suddenly to the loss of their power, and to find themselves, once rulers of millions, now of less importance than an ordinary English official, and sometimes treated with injustice or indifference. The revolution in all its aspects, military, political, social, or intellectual, is so extraordinary and unparalleled in the history of mankind, that it cannot but be a work of time before a people, numbering two hundred millions, though now a fallen, but once a highly civilised nation, can be reconciled and assimilated to the new order of things. Under these circumstances, coupled with some unfortunate social barriers between the rulers and the ruled, the ignorance of each other's language, and the little interest shown by Englishmen, the Englishman and

the native of India are still at wide distance from each other, and know therefore little of each other's true merits and faults. The time, however, I hope will come, when, as some who have taken a real interest in the people have already done, the English people will with better knowledge think well of the natives of India. It will be the fault of the rulers themselves if they do not find the Hindus a loyal and a grateful people, and capable of the highest degree of civilisation. Even Abool Fazul, the minister of the greatest Mohammedan ruler of India, has borne high testimony for them. Unfortunately, the mischief of distance between the Englishman and natives is aggravated by the conduct of a class of Englishmen in India, who, either from interested motives or from pride of superiority, always run down the natives, and keep up an ill feeling between the races. Sometimes some English gentlemen claim ten or twenty years experience who have hardly been on intimate terms, or have familiarly conversed, with as many natives, or have hardly learnt to speak as many sentences in the language of the natives as the number of years they claim experience for; and such gentlemen constitute themselves the infallible judges of the character of the people. Perhaps a parallel to this to some extent is to be found in the accounts about Englishmen themselves given by European foreigners. When Englishmen are incorrectly described by these foreigners, they of course open their whole artillery of ridicule upon such ignorance, and yet it does not always occur to them that in their judgment on natives of India, with less mutual acquaintance, they may be as much, if not more, egregiously mistaken.

There are several peculiar difficulties in India in the way of rapid progress. Education permeates the mass very slowly on account of many different languages; the efforts of the educated to improve their countrymen remain confined within small limits, while in this country an idea in the *Times* is known over the whole length and breadth of the land within twenty-four hours, and the whole nation can act as a man.

The natives are sometimes charged with want of moral courage. We have only to look at the difference of treatment by the Bombay Government between a native and an English judge —I mean Mr. Manockjee Cursetjee and Mr. Anstey—and one may ask what result can be expected from such circumstances.

However, though such unfortunate circumstances do now and then occur, the educated are beginning to learn that the rights of intellect and justice are the same for all, and that though often snubbed and discouraged, they may rely upon the ultimate triumph of truth and justice.

Lastly, I think Mr. Crawfurd's treatment of this important subject is one-sided and not judicial and scientific. The paper

professes to draw a conclusion from certain facts, but to me it seems the facts are selected for, and adapted to, a foregone conclusion. All explanatory causes of difference are made light of and thrown into the background, and all tending to prove the conclusion brought most forcibly into the foreground. The whole reasoning is that, because there is a diversity in the intellectual, moral, and physical character of various nations, they must therefore have separate origins; moreover, there are several assumptions which are not correct.

In one place (p. 61) a comparison is made between different countries, and it is assumed that the greater the natural resources the greater must be the development; while a most important feature in human nature, "necessity the mother of invention," greater difficulties compelling greater exertions, and calling forth the exercise of high powers, and the bracing effects of colder climates are ignored. In one place the Phœnicians, Jews, and Mamelukes are taken over to the European side, as they seem to disturb the argument.

Mr. Crawfurd alludes to the bad governments in Asia as their own creation, as if bad governments had never existed in Europe, and no European kingdoms or empires had to thank bad governments and degeneracy for their fall.*

One principal objection to Mr. Crawfurd's paper is an unfair comparison between the old Asiatic civilisation with the modern European civilisation, with all the impetus given to its material advancement by the discoveries of physical science, both in the arts of war and peace. The ancient civilisation of both continents may be a legitimate subject of comparison. The Asiatics, after their fall from the first civilisation, had not new blood and vigour brought to them. The Goths and other wild tribes, mainly derived from Asiatic races, permanently settled in and brought new vigour to Europe, and created a new civilisation in it with the advantages of a ground-work of the old civilisation. It would be interesting to make a fair comparison between the old civilisations of the two continents and between the modern condition of the people among whose ancestors the old civilisations prevailed. But to compare a hand armed with an Armstrong gun with an unarmed one, and thence to draw the conclusion of the superior strength and warlike spirit of the former may be complacent, but does not appear to me to be fair.

Differences in the conditions of nations and their various pecu-

* In the nineteenth century, and in the very heart of Europe, a king claims "divine right", and a minister sets all law and justice at defiance. Poland and the Duchies are a strange commentary upon the political justice of Europe. Has not Italy till very lately groaned under bad governments?

liarities, arising from differences of political, physical, and social circumstances, and these circumstances reacting upon each other, require careful study and due allowance before attributing any share to innate difference.

I do not mean to undertake here the solution of the most difficult problem of the unity or plurality of races, or of maintaining or denying what may legitimately follow from Mr. Crawfurd's conclusions, that there are as many distinct races with distinct origins as there are countries or even provinces with peculiarities of their own. I leave to ethnologists to say whether the present philological and physical researches which Mr. Crawfurd has altogether ignored, and other ethnological inquiries, lead to the conclusion of the unity or plurality of races, or whether more light is still necessary upon the subject.

I shall only make a few remarks suggested by the paper. The races of Europe present a large variety in their size, from the Highlanders to the Laps. The Asiatic races have their Afghans, of the large size, and other races of different sizes. Herodotus writes (vol. iv, p. 354): "For in boldness and warlike spirit the Persians were not a whit inferior to the Greeks;" in another place he says (vol. iii, p. 405): "and in the mid battle, when the Persians themselves and the Sacæ had place, the barbarians were victorious, and broke and pursued the Greeks in the inner country." In the comparison between the Greeks and Persians, Herodotus accounts for the inferiority of the latter in deficiency of discipline and arms only.

Rawlinson, in his *Five Monarchies*, judges from the sculptures that the ancient Aryan race is a noble variety of the human species—tall, graceful, and stately; physiognomy handsome and somewhat resembling the Greek; and that on the authority of Xenophon and Plutarch, the Median and Tromen Persians were remarkable for their stature and beauty. Palgrave calls the Arabs of inhabited lands and organised governments one of the noblest races of earth. (Vol. i, p. 24.) A large portion of the Sikhs and Afghans, and large numbers of Bramans in Central India, have fair complexions and fine features.

We must not also forget, in comparisons of nations, the part which accident, or commonly called luck, plays. We know what part storms played in the defeat of the navy of Xerxes and of the armada of the Spaniards.* The European lives in a colder and

* Now a single law sometimes fixes the character of a nation for a time for good or evil. What extraordinary changes have been wrought since the recognition of free-trade by this nation! I do not suppose Mr. Crawfurd means the English of the past generation were a different race, because they were protectionists, less tolerant, and in several other respects different from the present generation.

bracing climate. I do not suppose the innate physical character of any European race will enable it to preserve its vigour and strength intact on the plains of India for a long time. The European, says Mr. Crawfurd, enjoys walking, the Asiatic prefers sitting. The Asiatic, when here, enjoys walking as much as any European can do, for he must walk in this climate to preserve his health. The European in India, after the fatigue and heat of the day, often prefers sitting in a cool breeze. With the European dress, and in this climate, sitting with his legs tucked up under him, becomes irksome to the Asiatic also. The rigidity of the muscle of the European is much modified in India. I suppose it is a well known fact to ethnologists that animals are capable of acquiring a large variety of physical characters in different climates, though originally of the same stock. Mr. Crawfurd's statement, that the Jews of Asia are substantially Persian among Persians, Arab among Arabs, and difficult to distinguish from Hindus among Hindus, and that their social advancement in Europe is with the people of the community among which they dwell, tends rather against his theory, showing that external circumstances have modified the character of a people within historic times.

In estimating the character of a people, we must not forget that sometimes single events have given a peculiar direction to their character and history. Had it not been for taxed tea, we do not know whether there would have been a United States now. Had the confederates been victorious, what would have been the future history of the United States and of slavery? Had Britain been connected with the continent of Europe, it is probable that it might have had a different history, either a large European empire, or a province of some other. What change was wrought in the character of the Britons when they complained, "The Picts drive us to the sea, and the sea drives us to the Picts." Was that change in character, the result of the external influence of the Roman civilisation and government, or not?

The one-sided and partial treatment of the subject is best illustrated by the comparison made (page 35) between Greece and the Island of Java. The wide difference between the climate and products of the two countries is admitted, but the legitimate conclusion of its effects in stimulating or checking exertion are ignored; the rest of the comparison might as well not have been made.

The Guzerat-speaking Hindus are eminently commercial, and carry on the most extensive foreign commerce, while just on the other side of the Ghauts and in Concan the Maratha-speaking Hindus are quite uncommercial, except so far as some inland

trade is concerned. Whether these may be considered as two distinct races by Mr. Crawfurd or not I cannot say, but there is this marked difference in their character, arising, to a great extent, from local and historical circumstances, the Guzerat people having commercial connections with Arabia and the West from ancient times.

Again, in Western India there is even now a marked difference in the educational, and therefore intellectual condition of the Mohammedans and Hindus of Concan; though they have the same physiognomy, speak the same language, and, in fact, are originally the same people, there are not half a dozen of these Mohammedans attending the English seminaries, while the Hindus swarm in numbers. Should this state of things continue for some length of time, the difference in the characters of these two portions will be so great that according to Mr. Crawfurd's theory, I suppose they will have to be put down as two distinct races.

I wish I had more time to examine more fully the several points I have touched upon, and also to examine a few more statements of Mr. Crawfurd's paper, especially about Hindu astronomy, music, and architecture, and Chinese literature and character. The ethnologist should study man in all his bearings, and make due allowances for every cause of disturbance. Mr. Crawfurd's conclusion may be right or wrong, but, with every deference to him, all I wish to submit to the Society is that the evidence produced is not only not sufficient but defective in itself, inasmuch as it is superficial, and several statements are not quite correct.

I have not made these remarks for the pleasure of objecting, or simply for the sake of defending the Asiatics; truth cannot be gainsaid, and I hope I shall be the last person to deny it wherever it is proved to exist, no matter in howsoever unpleasant a form. The sole business of science, as I understand it, is to seek the truth and to hail it wherever it is found, and not to bend and adapt facts to a foregone conclusion.

XII.—*On an Ancient Hindu Sacrificial Bell, with Inscription found in the Northern Island of the New Zealand Group.*

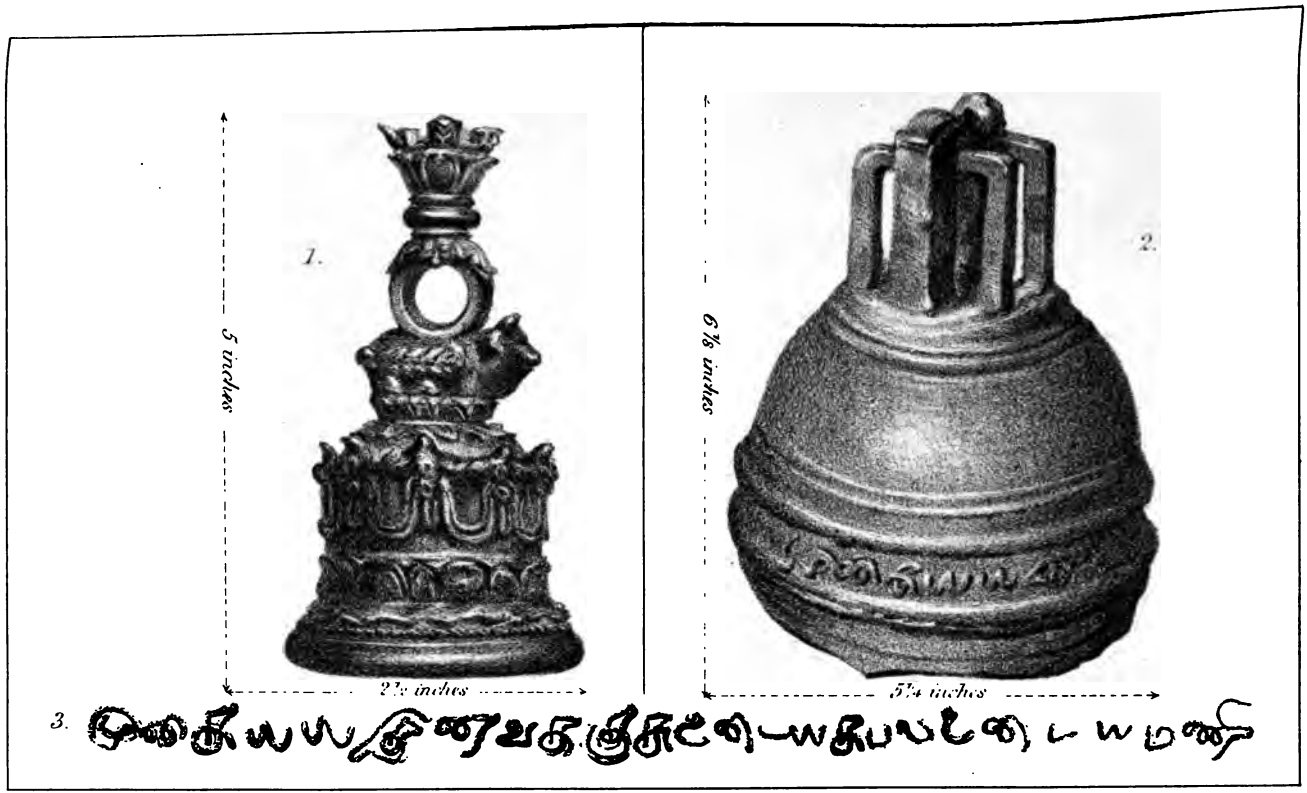
By JOHN CRAWFURD, Esq., F.R.S.

[*Read April 10th*, 1866.]

IN 1837, or near thirty years ago, there was found among the Maories of the North Island a bronze bell, bearing an inscription. This curious relic is now in the possession of the discoverer, Mr. W. Colenso, an old and respected settler, and a magistrate and member of the New Zealand Legislature. I possess myself only a photograph of the bell and a fac-simile of the inscription, sent to me for explanation by Mr. J. T. Thomson, now chief engineer of Otago, in the Southern or Middle Island, but who, from a long residence in Singapore, is well versed in the language and literature of the Malays.

I proceed at once to give such explanation as I am able of a discovery so unlooked for as a metallic implement with inscription among savages and cannibals equally ignorant of metals and letters. I am satisfied, then, I may at once assume, that the relic is a Hindu Sacrificial Bell such as the Brahmins are wont to use in the performance of the ritual of their religion,—that it was cast in Java, and found its way to distant New Zealand, along with portions of the Malayan languages in the course of that inter-tribal trade which the Malays and Javanese, the leading nations of the Malayan Archipelago carried on before the arrival of Europeans. It will not, I think, be difficult to produce satisfactory evidence of this assumption.

Java, in all known times the most fertile, the most populous, and the most civilised island of the Archipelago to which it belongs, is about one-half the size of Britain. Down until towards the end of the 15th century (A.D. 1478) the people had been Hindus, and abundant ruins of the temples dedicated to this religion still remain, most of which I have myself seen and examined. Among these ruins have been found from time to time various objects of bronze, as Hindu images of gods, sacrificial cups, and sacrificial bells, similar to the bell which is the subject of this paper. In that portion of Sir Stamford Raffles' *History of Java* which treats of the antiquities of the island, there are two engravings of sacrificial bells of the same form with that discovered in New Zealand, and the bell which I now exhibit was brought by myself from Java near fifty years ago; I received it



SACRIFICIAL BELLS.

1. JAVANESE. 2. FROM NEW ZEALAND. 3. FAC SIMILE OF INSCRIPTION ON THE NEW ZEALAND BELL.


LIBRARY

directly from the hands of the natives who excavated it. The only essential difference between the bells represented in the work of Sir Stamford Raffles, and my own sample as compared with the New Zealand bell, consists in the inscription on the last. Both my own specimen and the New Zealand bell are mutilated by the fracture of their ornamented apex, mine having been broken by an accident since it came into my possession, a similar mishap having no doubt befallen the New Zealand relic. The only other difference consists in the New Zealand bell being much larger than mine, while mine is a much superior work of art.

When the Portuguese, in the first years of the sixteenth century (1509-10-11) made their first appearance in the waters of the Malay Archipelago, they found the Javanese to be not only the most agricultural people of the Archipelago, supplying their less industrious and less civilised neighbours with corn, but also the principal manufacturers, supplying the same parties with tools, implements, and weapons of iron and of bronze. Along with the Malays they were also the carriers of the Archipelago, their trade extending to Timor, and even to New Guinea.

Among the articles which composed the outward cargoes of this intertribal commerce, Barbosa, the most authentic, as he was one of the earliest of the Portuguese narrators, expressly states that gongs and bells were included in such adventures.

The Western Emporia from which this trade was conducted were Bantam and Jacatra (now Batavia), in Java, and Malaca on the Malay Peninsula. The return cargo consisted chiefly of fine spices, and was the first stage in that long series of voyages and journeys which had for ages brought the cloves and nutmegs of the Moluccas first to India and eventually to Europe.

The Hindu sacrificial bell which was so strangely found among the Maories we can easily fancy to have been brought as far as Timor, or even New Guinea; but how came it to have been conveyed from thence to remote New Zealand? The answer is, by the same route and the same means by which words of the Malayan languages reached the language of all the non-negro people from the equator to New Zealand, including even the language of one group north of the equator, the Sandwich.

Upon the subject of the introduction of Malayan words into the Polynesian language,—for there is but one tongue, differences being merely dialectic, from the Sandwich Islands to New Zealand and from the Feejee group to Easter Island,—it is necessary that I should offer a short explanation. The Malayan and Polynesian people are not, as some have supposed, one and the same race of man, but two different and distinct ones. They somewhat resemble each other in colour, but even in this matter not more than an Esquimaux resembles either of them.

The Polynesian is by full four inches taller than the Malayan, and he has generally prominent features, while the Malayan never has.

The languages spoken by the two races exhibit broad distinctions. Their sounds, their structure, and the great majority of their words are wholly different. A few Malayan words have been introduced into the Polynesian language, just as a few words of Arabic have been introduced into Spanish, of Arabic into Persian and Turkish, of Persian into the languages of the Hindus, and Sanskrit into the languages of the people of Southern India, and of the Malayan nations.

They are proportionately fewer than in any one of these cases. As far as I have been able to ascertain by a strict examination, their total number does not exceed 120, or reckoning the entire Polynesian vocabulary at 6,000 words, in the proportion of 20 words in 1,000.

The Malayan words thus referred to include those of two different tongues, the Malay and the Javanese, mainly those of the two people who carried on the intertribal trade to which I have alluded. Mr. Thomson informs me that he has himself detected 70 Malay words in the Maori, but Mr. Thomson was not aware of the Javanese element, and the Maori dialect of the Polynesian wants Malayan words which exist in other dialects, such for example as that of the Friendly Group. To detect the Malayan words in the Polynesian language is a matter of some difficulty owing to the wide difference in pronunciation which exists between the Malayan tongues and the Polynesian language. Thus the consonant sounds of the Malayan languages amount to no fewer than nineteen, each of which has a written character to express it. The Polynesian has, according to dialect, from seven to ten, or on an average not one half the number. But, over and above this, Malayan words and syllables may end in either a vowel or a consonant, while every word and syllable in the Polynesian must end in a vowel. From this there necessarily follows much truncation and corruption.

The Malayan words engrafted on the Polynesian are not indispensable to the latter, but however few in number, they are useful to it, and point clearly to considerable social improvement introduced through Malayan intercourse. Thus the whole numeral system of the Polynesians is derived from the Malayan languages up to 100. Without this foreign help, the Polynesians, like other people in the same state of society, would not have been able to reckon beyond the fingers of one hand, or of both hands at the utmost. The only names in the Polynesian for the sugar-cane, cocoa-nut palm, the taro or *Caladium esculentum*, are Malayan, and whether these plants be natives of the South Sea Islands

or not, the natural inference from this fact is that the Malays at least taught the Polynesians the art of cultivating them.

A few other words may be quoted as indicative of progress from Malayan communication, as the name for an axe, and the point of a tool, for the mesh of a net, for the generic terms for fish and for fowl, for earth, or land, for a year, and for a god. In an intercourse with strangers attended by such results, we may easily imagine that a gong or a bell might by some chance have been introduced. But, in the natural order of things, the Malayan intercourse would take place with the nearest parts of the country inhabited by the Polynesian people, the Friendly Islands, and certainly not with the remote islands of New Zealand at least 30° of latitude out of the ordinary route of the Malayan traders, and it was in the last that the Hindu bell was found.

The explanation is that the race, and also the language, with less dialectic difference than exists between the Gaelic of Ireland and Scotland, or between the Welsh and Armorican, prevails, as already stated, over all the non-negro inhabitants of the islands of the South Pacific. Hence it is to be inferred that they had all a common origin, and that their present dispersion is the result of migrations, voluntary or compulsory. The Maoris consider themselves as the result of one or more migrations, not above a few generations back, from one of the tropical islands. In their migrations they took to their new home whatever would survive a long and perilous voyage, and whatever would live and thrive when transplanted from a hot to a temperate region. They took with them the Yam, the Taro, and the Batata, which the New Zealanders were found cultivating when they were first seen by civilised man. But they did not carry with them, or at all events they did not transfer to their new home, the cocoa-palm or the sugar-cane, for the first would not grow, and the second could be grown only with a difficulty which the savage emigrants could not surmount.

The Maoris took with them and naturalised in their new home the dog, but not the hog, or common fowl of their fatherland, for their transport would have been more difficult. On arriving in their new home, the emigrants found no domestic fowl, tame or wild, but they found a monster bird bearing some resemblance to a hen, the Diornis, to which they gave the name of the familiar bird of their native country, that is the Möa, which is the same by which it is still known by their countrymen who remained at home.

The sacrificial bell, in all probability, first came to one of the tropical islands, and would from thence be conveyed by the Maoris to their new home, very probably as a sacred heir-loom.

The Malay and Javanese traders, as we have seen, had pushed their voyages to New Guinea, and from thence to the nearest island peopled by the Polynesian race the distance is a voyage of 3,000 geographical miles, which might be performed without difficulty by mariners even now accustomed to make voyages of equal length in corresponding latitudes, that is, in a sea with many islets, along the Equator, and in a region of calms and variable winds unvexed by storms.

As to the inscription on the bell I have very little to say, but I have no hesitation in asserting that it is in a form of Javanese writing of no very remote antiquity. I am tolerably familiar with the modern writing of the Javanese, but know nothing of the ancient characters, which consist of several varieties widely differing from each other: in my time, indeed, there was but one man, a native prince of Madura, who claimed to have any acquaintance with the old forms of writing.

The total number of letters in the inscription is but twenty-three, and the total number of the letters of the Javanese alphabet, vowel signs included, is double that number, so that the materials for coming to a safe judgment are but scanty. From their near resemblance to the letters at present in use, I can identify the letters the sounds of which are represented by the Roman letters j, y, m, n, and w. The writing which most resembles that of the inscription, is contained on bronze coin, which instead of the usual cabalistic characters on Javanese coins, contains the legend in plain letters, *Pangeran ratu*, which may be almost literally rendered "sovereign prince." This coin is said to have been struck by a prince who reigned in Bantam, and the year of its coinage is given in the work of Sir Stamford Raffles as A.D. 1489. Bantam, it will be recollected, was one of the emporia from which the trade with the far Eastern Islands was carried on.

The conclusion I come to, then, is that the bell is a genuine Hindu relic; that it was fabricated in Java, and probably in the country of the Sundas, or inhabitants of the western part of Java, who are a distinct people from the proper Javanese, speaking a separate language; and that it reached the islands of the Pacific by the same course as did the words of the Malayan languages to which I have alluded.

XIII.—*On the Invention of Writing Materials in reference to Ethnology.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read April 10th*, 1866.]

I HAVE no intention in this paper of attempting to discuss the large subject of Materials for Writing, and shall confine myself to the question in its bearing on the early history of man, and in so far only as it tends to illustrate the character of the various races into which man is divided. Most probably, the first material on which writing would be attempted would be sand; but this evanescent matter, we can readily believe, would soon be abandoned for the bark of living trees, and this again for the more durable material of stone; and the adoption of this last substance necessarily argues the previous invention of the metals. The Hebrew laws were inscribed on tables of stone in the time of Moses; and most probably, at the time the writing on these tables was executed, the art of engraving on stone was already well known to the Jews. Even the time of Moses carries us back to an era some sixteen centuries before the birth of Christ; but Egyptian inscriptions on stone carry us back to an antiquity in the art of stone engraving by thousands of years beyond the age of Moses.

Wherever the art of writing has been invented, the practice of writing on stone, at least for enduring purposes, has obtained; and hence we find, not only in Egypt, but in Persia, India, the Hindu-Chinese countries, and the Malay Islands, stone inscriptions of great, but too often of unascertainable antiquity, and usually in obsolete characters.

Plates of ivory, copper, and bronze probably followed stone; but writing on such expensive materials could only have been for lasting purposes, and it yet remained to discover a material for current and familiar use. The inhabitants of the tropical and sub-tropical countries of Asia would have such a material at hand in the fronds or leaves of palms, and must early have had recourse to it, and it is still largely employed in Southern India, in extra-gangetic India, and in the Malayan Islands. The palms which furnish it are the Tal and the Palmeira, or respectively the *Corypha tallia* and *Borassus flabelliformis* of botanists. The first of these is the palm which chiefly supplies the writing material. The leaf, before attaining maturity, and as yet soft and pliant, is macerated, pressed, dried, and cut into slips of from twelve to eighteen inches long and about three broad, which are at once fit to write on. A volume consists of a

number of these strung loosely by a cord passed through the middle of the leaf, or by one at each end. A hole through the middle of the leaf seems to have been the more general practice of the Hindus, and such slaves of habit are they that after coming to write on paper with ink, the paper was cut into slips, of the form of the slips of palm leaf, and a blank space left for the spot where the cord used to pass in the old material.

The writing on the palm leaf is executed with a style in the same manner as was practised by the Greeks and Romans when they wrote on waxed tablets. To make it more conspicuous, the leaf is sprinkled over with powdered charcoal, which, remaining in the grooves, assists in bringing out the writing. Still the yellow colour of the material, and the smallness of the letters, which necessarily consist entirely of hair-strokes, make palm-leaf writing so obscure, that a manuscript is rather deciphered than read. The difficulty is greatly enhanced in practice by the habit of leaving no interval between words, or even sentences, so that a whole sentence, or even paragraph, seems to the eye but a single word. Notwithstanding its inconvenience, writing on palm leaves has in several parts survived the introduction of paper, as in Southern India, in the country of the Burmese, Siamese, and Cambodians, and in some parts of the Malay Archipelago.

The palm leaf, as might be looked for, is in India closely connected with the invention of writing. The Sanskrit name for the Corypha palm, extended, however, frequently to the Borassus, is *tala*, vernacularly *tal*, and *tali*. From this comes *talpatra*, and, vernacularly, *talpat*, literally, leaf of the tal palm, and applied to the dried leaves of this palm, whether used as parasols or as leaves to write on. This is the word which Europeans have corrupted into *talpot*. In Javanese, and from it into Malay, we have a strange orthographic perversion of this word. The name not only of the palm itself but of slips cut from the leaf for the purpose of writing, is *rontal*. The first syllable here is *ron*, the Javan word for leaf, and this is but a translation of the Sanskrit *patra*, both words, of course, equally meaning the leaf of the tal palm. But the perversion is not yet complete; for the Malays, by exchanging for each other the liquids at the beginning and end of the compound word, make the word *lontar*.

The Greeks and Romans had no more convenient a material than waxed wooden boards, written on with a style, until the Egyptians came to their assistance with their papyrus; but at what time they began first to avail themselves of this material, or at what time the Egyptians themselves first employed it, is, I believe, wholly unknown. The papyrus was the produce of a tall reed growing in the marshy land of Lower Egypt. The pellicle surrounding the stem of this plant, the *Papyrus antiquorum*,

was cut into ribbons, which, glued together, and subjected to pressure, formed the best writing material of the polished Greeks and Romans. The papyrus plant is at present rare in Egypt; but, as this country was the sole seat of the manufacture which supplied the whole Roman world with the article, it is to be inferred that it must at one time have been an extensive object of cultivation.

The process by which the ancient papyrus was made, it may be observed, much resembles that by which the cloth of the South Sea islanders, and the native paper of Java, called in the language of that island *diluwang*, is made from the liber or inner bark of a shrub of the natural order of *urticæ* or nettles, and named by botanists the *Broussonetia papyrifera;* with this difference, however, that the raw material of the rude islanders far excels in quality and in abundance that of Egypt, while the fabrics made from it, and with which are clothed the otherwise naked Polynesians, are in every respect of a better quality than that on which the productions of the genius of Greece and Rome were written.

The word Papyrus is not traceable beyond the Latin. In Greek the name given to it was *Kartis*, corrupted in Latin into *Charta;* and from these two words come the names for paper, in the modern languages of Europe, as the French *papier*, the English *paper*, the Spanish *papel*, and the Italian *carta*.

Some writers have ascribed the invention of true paper to the Arabs of Spain, but the conjecture seems to be sufficiently refuted by the fact that the name for paper in Arabic is the Greek one, with very little alteration, namely, *kartas*. Had it been a native invention, it would certainly have borne a native name; but the Arabs seem to have taken the name from the Greeks of Egypt, the Greek name being that by which the papyrus was known in that country when the Arabs conquered it. The Arabs, it is to be observed, although, in the course of their conquests, they were certainly the instruments of diffusing some foreign arts among the nations they subdued, do not appear themselves to have ever made any notable discoveries. We may, then, be tolerably sure that the wonderful and beautiful discovery of paper was not an invention of the Arabs of Spain or of any other country. Neither was it an invention of the Hindus, for in Sanskrit there is not even a name for paper, and the usual ones in the modern languages of India are taken from the Persian. The Persian name itself, *kaghas*, is only a corruption of the Greek word through the Arabic. That the Persians had not invented paper, or received the manufacture from abroad in the fifth century, may, I think, be inferred from the fact that down to that time a considerable intercourse had existed between them and the people of the Eastern Empire,

who would surely have acquired so useful an art, had it been known in Persia.

The Arabs who conquered Transoxiana or Turkistan, in the first century of the Mahomedan era, are said to have found the manufacture of paper carried on in the city of Samarcand as early as A.D. 706. But so rude a race as the Tartars were, and still are, were by no means a likely people to have fallen upon the difficult discovery of paper-making. From these Tartars, however, it seems not unlikely that the Arabs first learnt the art which they, in their turn, eventually conveyed to their western conquests, including Spain, where most probably the civilised nations of Europe first saw the process of manufacture.

Paper, at first made of cotton, began to take the place of papyrus in the tenth century, and in the eleventh and twelfth had wholly superseded it. The Greeks of the Lower Empire were the first to adopt it, and were themselves, most probably, the manufacturers.

The real discoverers of paper were the Chinese—the same ingenious people who discovered silk and porcelain. Even in China, civilisation had already made great progress before the Chinese had fallen on this curious, and by no means obvious, invention: for, according to their own reckoning, it was not made until the close of the first century of the Christian era (A.D. 95), that is, about three centuries after the building of the Great Wall. In the time of Confucius, the Chinese wrote with a style on the prepared bark of the bamboo cane. Afterwards, they advanced to writing on silk cloth with a pencil, and it is from this practice that the name for paper, *chy*, is taken, for the word is the same as that for silk. As Confucius lived 500 years before the birth of Christ, a period of about 600 years had, therefore, elapsed from the time of scratching on the bamboo bark to the invention of paper.

The principal raw material of paper in China is the bamboo cane, softened by long maceration in water, then ground to a pulp in mortars, and finally manufactured by a machinery similar to the European, but rude, yet economical. A coarse paper is made from rice straw, and the finest from cotton and the inner bark of the paper mulberry, or *Broussonetia papyrifera*, already mentioned.

From China there can be little doubt that the art of paper-making reached Japan, where paper is even of more universal use than in China itself. The Arabs, after their conquest of Turkistan or the ancient Transoxiana, found the manufacture of paper carried on in Samarcand. This was in the first century of the Mahomedan era, and the year of Christ 706; but of the time when it was first commenced there, there is, of course, no record. In all probability, the manufacture was introduced from China, and there

was ample time for its introduction in the lapse of better than six centuries since the invention had been made in China itself. How the discovery should have reached the rude Turcomans is sufficiently intelligible. A commercial intercourse of great antiquity has existed between the Turcomans and the Chinese. It still exists, and it is through it that the Turcomans are furnished with silk, with porcelain utensils, and with tea—an article of universal consumption among them. It was by the same channel that the silk of China, and, perhaps, even the celebrated Murrhæne vases, reached the distant markets of Rome, enormously enhanced in cost.

The Persians most probably received the art of paper-making from the Turcomans, and it was they who introduced it into India, as is shown by the only name which it bears in the vernacular languages, namely, the Persian *kaghas*. The Burmese and Siamese manufacture a coarse paper of their own, by a rude process resembling that of the Chinese, and, I doubt not, borrowed directly from them. The more advanced nations of the Malayan Archipelago wrote on palm leaves only, but now more generally they write on imported paper, never having themselves learnt the art of manufacture. Their paper is European or Chinese, and always known to them by its Greek name *kartas*, taken from the Arabs, whose first recorded appearance in the Archipelago does not go back beyond six centuries.

The invention of printing is stated to have been made in China a century before it had been made in Europe—that is, in the fourteenth instead of the fifteeenth century. It Europe, it had soon followed the introduction of paper; but in China we are surprised to find that it did not take place until twelve centuries after that event. Printing is still in China what it was when originally invented. This consists of stereotype printing by wooden blocks, one side of the paper only being printed, so that a Chinese book is double the size of a European for the same amount of letterpress. The use of metallic types is unknown to the Chinese, and a language without an alphabet forbids printing by movable types.

The art of printing, as practised by the Chinese, has been borrowed by the Japanese and Anamese, but by no other Asiatic people. With the few exceptions of Asiatic nations under the direct influence of Europeans, the books of all other oriental people continue to be in tedious, expensive and uncertain manuscript.

A few words will be sufficient to describe the implements at various times and by various nations used for writing with. The Greeks and Romans wrote on their waxed tablets with a sharp pointed iron instrument, the stylus—a word which, with trifling

changes, has been received into all the modern languages, but chiefly in the metaphorical senses of, firstly, manner of writing; and secondly, manner of doing anything. The same implement was used, and still continues to be so, by the Hindus, and all other nations who write on palm leaves. A similar instrument must have been employed by the Chinese before the discovery of paper, and while they were confined to the bark of the bamboo cane. From the mere fact of the use of the style, we may infer, what is otherwise probable, that the invention of iron preceded the discovery of the art of writing; for we have no account of any people who had a knowledge of letters, who were unacquainted with iron.

On the discovery of the papyrus, and the use of liquid ink, the universal implement for writing with was the reed, the *calamus* of the Greek and Latin. This is the *kalam* of the Arabs, and through the Arabs of the Persians, Hindus, and even Malays. The Arabic name is most probably but a corruption of the Greek, and received from the Greeks at the same time as that in which they borrowed the name for paper. The reed still continues to be the universal writing implement from the Dardanelles to the western limits of China, and, if we are to judge by the beauty of the manuscripts, especially the Arabic and Persian, is better suited than the pen for the writing of the oriental characters.

The goose quill is said not to have superseded the reed in Europe until the eighth century, or several centuries before the introduction of paper, so that many *papyri* must have been written with the quill. The names for the quill in all the modern languages of Europe show the source from which they originated —the Latin word for a feather, *penna* and *pluma*, being the source of all of them. Thus we have the *pluma* of the Spanish, and the *plume* of the French, the *penna* of the Italian, the *pen* of the English, and the *pîann* of the Gaelic. The invention of the metallic pen has by no means superseded the quill, for, independent of our domestic supply, we import yearly, chiefly from Russia, close to the number of seventeen millions of goose quills.

Etymology throws some light, not only on the invention of writing, but even on the history of the dissemination of the art. The literal meaning of the Greek verb *grapho*, is to scratch, to scrape, to grave; and 'to write' is but a metaphorical one derived from it. Scholars have shown that the word does not exist in the Homeric poems in the sense of writing, and but once in the sense of delineating by making a mark; that is, by making a score. In the sense of delineating by written letters, it occurs for the first time in Herodotus, three centuries after the computed time of the Homeric poems.

The Latin verb *scribo*, like the Greek *grapho*, meant at first to mark or scratch with a sharp point, and came eventually also to signify to delineate letters by scratching, or to write. No doubt, both the Greek and Latin word had reference to forming letters on a hard surface, that is, writing or engraving on stone. The nations of Western Europe, who were themselves wholly ignorant of letters, and indebted for them to the Romans, afford in their languages sufficient evidence of this in their universal adoption of the Latin word, always more or less corrupted, and in some cases to the extent of utter disfigurement. Thus the Latin *scribo* or *scribere* becomes in Italian *scrivere*, in Spanish *escriber*, in French *écrir*, in German *schreiben*, in Welsh *ysgrivenu*, and in Gaelic *sgriobh*. The derivation of our own word is the greatest puzzle. Skinner, as quoted by Richardson, inclines to think that the verb to write may come from the Dutch word *wroeten*, to plough—that is, to plough into the paper; but as neither the Anglo-Saxons or their contemporaries the Dutch had any knowledge of paper, this etymology is not tenable. It would seem more probable that the Anglo-Saxons, following the example of the other nations, would take the word from the Latin, and that 'to write' may be a gross corruption of the Latin *scribo*, probably of its perfect participle.

It is remarkable that the languages of Asia, notwithstanding the remoter era of the invention of written language with them, afford in some instances illustrations of its origin similar to those of the Greek and Latin. In Sanskrit, the verb to write is *likh*, and its literal meaning, to scratch, to scarify, and its metaphorical, to write, or delineate by letters, and also to paint or delineate pictorially. I owe this derivation to a learned Dane, Mr. Westergaard, to whose work, the *Radices Sanscrittæ*, my attention has been directed by a distinguished orientalist, Mr. Fitzedward Hall, the Curator of the Library of the Indian Home Government. It is a corroboration of this etymology, that the name for the Hindu stylus, *likni*, is derived from the verb, and literally means "a scraper," while the same word in the vernacular language of Upper India, is the usual name for a pen of whatever material.

The verb to write, in the Malay and Javanese languages, is *tulis*, but the word equally means to delineate or form lines, and to paint. If other oriental languages were closely examined, they would probably furnish similar evidence.

XIV.—*British Superstitions as to Hares, Geese, and Poultry.*

By J. THRUPP, Esq.

[*Read April 24th*, 1866.]

CÆSAR tells us that there were three animals which the Ancient Britons bred from inclination and for amusement, but which they thought it a crime to eat, viz., the goose, the hare, and the fowl.*

This feeling existed extensively in Europe; but was probably abandoned at an earlier date by the southern than by the northern nations, and by the south Saxons sooner than by the Britons.

It was the child of superstition. The religion of savages is often nothing but a vague belief in the supernatural. Every extraordinary quality, whether in a chalybeate spring, a medicinal herb, or in the instinct of an animal, is deemed miraculous and venerated with fear.

This may account for what Cæsar tells us of the goose. It was supposed to possess marvellous longevity, and to live eighty years;† and it was justly famous for the acuteness of its hearing and smell. A mouse could not stir without its hearing it, and it could scent a man at a greater distance than any other animal.‡ It discovered St. Martin when he had concealed himself to give practical effect to his "nolo episcopari," and, as a reward, was, and is, sytematically eaten at Martinmas over the greater part of Europe; though, when in England the autumnal rent-day was transferred to Michaelmas, the goose was transferred also.§ It was supposed to study the stars, and astrology, and to be weather-wise.‖

The Egyptians regarded it as sacred to Isis; but they had for gods so many beasts, and birds, that had they not sometimes eaten them they must have starved.

To the Romans, the goose was the symbol of vigilance. It was employed in every petty village, if not in every humble house, in

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* Cæsar de Bell. Gall., lib. v, c. 12.

† Migne, Nouvelle Encyclopédie.

‡ A. Neckam, De Naturis Rerum, p. 117.

§ Molesworth's Denmark, p. 10; Brande's Pop. Ant., vol. i, p. 368;

"Altera Martinus dein Bacchanalia præbet,
Quem colit anseribus populus multoque Lycæo."

Thomas Neogeorgius, De Regno Pontif.; Clavis Calend., p. 266.

‖ Brande's Pop. Antiq., p. 217.

lieu of a house-dog;* and, in discharge of its duty, is fabled to have saved the capitol. It was reared with religious care in the Temple of Janus, and was not until the time of Cæsar generally eaten. Under the emperors, geese became a most fashionable article of luxury, and fetched an enormous price.†

The Northmen had a superstitious dislike of eating geese. In the eighth century some brethren visited St. Cuthbert in his storm-girt isle, and were there detained by weather. St. Cuthbert offered them food, saying, "When you have cooked and eaten the goose which is hanging on the wall, get into your vessel, and, with God's blessing, return home." They would not touch the goose, put to sea, and were driven back. On their return, the saint exclaimed, "You have left the goose hanging in his place: why wonder at the storm? Put the goose in the cauldron, boil and eat it, and the sea shall then be calmed." They did as they were bid; and the moment the kettle boiled, the winds and the waves were stilled. The voyagers departed possibly more surprised that the saint should eat a goose than still a tempest.‡ The goose was, at first, but semi-domesticated; and, being a great plunderer of corn-fields, was severely dealt with.§

By the law of Wales, animals which trespassed might be redeemed; but the goose was to be slain; and its owner, though responsible for his other animals, was not so for it. If cattle, for instance, broke a fishing-net in river or sea, the owner was responsible; but if his geese did it, he was not; for, says the law, "the geese and the nets are equally senseless;" and, as it is impossible to say which is to blame, neither pays damages.‖

In Wales geese could not be tendered in payment of rent or fines, for centuries after they might have been so in England; nor were they payable for the support of foster-children, though among the south Saxons they formed a considerable portion of the compulsory allowance for that purpose.¶

But the superstition which prevented the domestication of the goose yielded to the love of gain, and geese became regular articles of commerce. The luxury of Imperial Rome demanded the "pinguibus et ficis pastum jecur anseris;" and to the delicious pâté de foie-gras, which was in Rome served up in wine and milk, we owe a step forward in economic civilisation.

The Celts, Gauls and Franks, tempted by profit, abandoned

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* Unicus anser erat minimæ custodia villæ.—*Ovid.*
† Migne, Nouvelle Encyclopédie.
‡ Bedæ Vita Sanct. Cuthberti, c. xxxvi.
§ Michelet, Origines du Droit Français, p. 198.
‖ Ancient Laws and Institutes of Wales, vol. ii, pp. 813, 873, and 906.
¶ Ll. Inæ, Anc. Laws and Inst., vol. i, p. 147.

their hatred of geese, and reared them in enormous numbers for the Sardanapalian feasts of Italy.* Anseria (or goose folds) were established in Northern Europe, whence geese (the tired ones foremost) were driven across the Alps. Under Ludovicus Pius these "anseria" were taxed in aid of royal or seignorial revenue.† When it became profitable to breed and export geese, their unpopularity ceased; and in *that*, as in a hundred other instances, commerce slew a superstition.

The hare, the second animal mentioned by Cæsar, was in many lands the object of superstitious fancies, all of which were the children of ignorance. The Jews pronounced it unclean for chewing the cud, of which it was physically incapable ;‡ and Mahomet followed in their wake. The probable ground of condemnation was, that hares, in Syria and Arabia, were very scarce and very unwholesome.

The northern nations, among whom hares were more plentiful, were not less unjust. It was regarded as the familiar of wizards and witches, who adopted its form, and in compensation bestowed on it magical powers. It was accused of supernatural restlessness, possibly because it wanders great distances in search of its mate; and was supposed never to sleep, probably, because it sleeps with its eyes open, and wakes at the slightest sound.§

The Welsh, at a comparatively late period, held the hare valueless, because, as their law asserts, "it was alternate months male and female ;‖ and the English, even after the Norman conquest, believed it to be of both sexes at once.¶ This, again, may have arisen from male and female hares being rarely seen together, and from their change of colour in winter and summer in northern climates.

The hare was considered an animal of evil omen.** If it crossed a labourer's path when the latter was going out to work, he would return home and start anew.†† Nor was he singular in this; for it was customary from the time when Cyrus marched against Armenia to that of Sir Thomas Browne. The former would have abandoned his intended invasion if an eagle had not

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* Pliny, Hist. Nat., lib. x, c. 27.

† Du Cange, Nov. Gloss, p. 222; Ll. Ludovici Pii, "Francorum à quolibet habente anseriam, unum anserem haberet," etc.

‡ Levit., c. xi, v. 6; Deut., c. xiv, v. 7.

§ Migne, Nouvelle Encyclopédie, p. 939.

‖ Guentian Code, c. xxiii, s. 7.

¶ Alex. Neckam, De Naturis Rerum, p. 215.

** Brande's Popular Antiq., vol. iii, p. 201.

†† "Lepus quoque occurrens in via infortunatum iter præsagit et ominosum."—*Alex. ab Alexdro.* lib. v, c. 13.

carried off the ill-omened hare; and the latter believed that no man of grave years could see it cross his path without fear.*

In Wales it was not hunted at the time of Howell the Good, for there were no harriers in his days.† The fox and the hare were counted as wild beasts, and with the roebuck denounced as vermin;‡ but as in the portion of Britain, which was occupied by the Romans, the bones of hares have been found, it is not improbable that Roman luxury bought off a national prejudice. The first we hear of the hare being chased in Anglo-Saxon times is in a scolding given to his pupils by Alcuin for running after them, when they ought to have been learning their lessons or sayings their prayers.§ It was probably in the tenth century that they were first hunted for profit in southern England. The professional huntsman, in Archbishop Alfric's colloquy, enumerates the animals he hunted for gain, and finishes with (*aliquando lepores*) *sometimes* hares.‖ It is curious that, in contravention of the Mosaic law, the clergy should have urged the eating of them, nominally because they cured dysentery and diarrhœa; but more probably because they had discovered the art of converting their fur into an artificial beaver or ermine, which was then extensively used in ecclesiastical costume.¶ Shortly before the Norman conquest they were hawked for with falcons, but probably rather for sport than food.**

The domestication of the hare was wisely despaired of. He was formally doomed to destruction at the same time as the fierce wolf, the astute fox, and the gallant otter; but while these have barely escaped annihilation, the defenceless hare prospers. The superstition against it has ceased, and if it was once unlucky for a farm labourer that a hare should cross his path, the ill luck would probably now be on the side of the hare.

The cock is the third animal reared by the ancient Britons, which they thought it wicked to eat. This also may have arisen from superstition. The cock was a native of Central Asia, whence it passed into Persia, over which country (according to Aristophanes) it reigned supreme prior to Darius and Megabazus.

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* Vulgar Errors, b. v, c. 23.

† Ancient Laws and Institutes of Wales, vol. i, p. 500.

‡ Demetian Code, c. xiii, s. 19.

§ William of Malmesbury, b. i, c. 3.

‖ Arch. Alfric's Colloq., p. 4.

¶ Theodore, Arch. Cant. Lib. Pœnit., c. xxx, s. 13; Ecberti Arch., Ebor., c. 38. It came to be used by the clergy so extensively as to damage the trade in all other furs. Its use was therefore forbidden by the Arrêt du Conseil du 10 Août 1700. The Russian hares were quite white, and highly valued.—*Encyclopédie Méthodique*, tom. iii, p. 31.

** Alex. Neckam, De Naturis Rerum, p. 25.

From Persia it probably found its way into Greece, and thence through Rome to France and Britain.*

In all these countries it was regarded superstitiously. In Persia it was used for the purpose of divination, as it was afterwards by the Greeks and Romans. It was a cock that assured Themistocles of his victory over Xerxes, influenced the decision of Romulus in choosing the site of Rome, and inspired Numa Pompilius.

It is probable that with the bird arrived in England the superstitions which enshrouded it, and to these others were freely added. The most fanciful and important was that it fed on human blood and flesh; and one, hardly less important, that the cock in its old age laid eggs, which, hatched by toads, produced the cockatrice.†

Our ancestors had the greatest horror of eating blood or any animal that fed on it; and their half-naked wanderings in their pathless forests gave them a still more intense hatred of adders.‡ This may, in part, account for the feeling with which the cock was received.

The first objection to it (that of feeding on blood) seems to have slowly yielded to the persuasion of the Christian clergy, who required capons and innumerable eggs for their frequent fasts. Theodore of Canterbury taught that even had the bird been guilty of tasting blood, it might be eaten after being sprinkled with holy water; but his great disciple in the See of York, followed him with trembling steps, and said that such fowls might only be eaten after three months' probation, and seems subsequently to have repented this his too liberal opinion, and ordered them to be killed and given to the dogs. No Christian man was to taste the blood of fowl or cattle, nor of any animal which fed on blood.§

It is possible that the pugnacity of the cock might have rendered it a favourite with warlike barbarians, and that it was kept for fun, or, to borrow Cæsar's words, "animi voluptatisque causa"; and that, even before the time that the Romans made cockfighting a popular amusement in England.

To what exact date we may refer the cessation of the prejudice against eating poultry is unknown; but they were favourite food in the seventh century, and constantly increased in favour, both with rich and poor. A cock or hen was thought an acceptable present from a serf to his lord, particularly on rent day (when pos-

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* Rees's Encyclop., v. Phasiniadæ.

† Alex. Neckam, De Naturis Rerum, p. 392.

‡ Riht is that ænig Xisten mon blod ne thycge.—*Soames*, p. 252.

§ Ancient Laws and Institutes of England, vol. ii, 165, 167.

sibly punctuality in payment had not been too severely observed), and it was as systematically offered at Christmas or Lady Day as the goose at Martinmas.

The parties giving them piqued themselves on the beauty of the birds.* As every present made at fixed dates became in feudal times compulsory, we find poultry claimed as a species of rent, and afterwards their payment constantly reserved in grants in evidence of feudal superiority. But, as a rule, the burghers would not yield them, and when a serf became a burgher, his so doing was sometimes expressed by the phrase, "his chickens no longer fly over the wall."† In the middle ages they were most extensively bred in every country place. In the course of a few centuries the merits of the cock lived down the ill fame it brought to England with it, and it rose to the popularity it has ever since maintained.

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* "Rouge comme un coq de redévance."

† Michelet, Origines du Droit Français, t. xi, p. 74.

XV.—*On the Intercourse of the Romans with Ireland.* By THOMAS WRIGHT, M.A., F.S.A., etc.

Read April 24th, 1866.

I OFFER a few brief notes on a subject which can perhaps hardly be considered to be directly ethnological, although it relates to ethnology as far as it concerns the great question of the movements of peoples and races. But my reason for bringing them forward here is that they have arisen out of a paper on the bronze weapons, etc., of antiquity, which was read before this Society last year, in which I said, speaking of Ireland, "Where, by the way, it has been somewhat too hastily asserted that the Roman arms never penetrated, seeing that we know little of the history of our islands under the Romans; that Juvenal, speaking as of a fact generally known, asserts—

"Arma quidem ultra
Litora Juvernæ promovimus";

and that Roman antiquities are now found in Ireland." A writer in the last number of the *Anthropological Review* has "felt compelled to contradict me most flatly and pointedly" (I use his own words) in the remark I had here made; and he proceeds to allege a few arguments which go at most only to shew that we have no direct proof that the Romans did *conquer* Ireland. The tone of these arguments seems to be founded on the assumption that I have said that the Romans had *subjugated Ireland and established themselves as conquerors in it*, which was certainly very far from my thoughts. The facts on which we have to work, in this question, are very few, and, it must be confessed, not altogether satisfactory; but perhaps it may be worth while to put them together, and see what is the presumption which will arise from them.

And, first, as to the historical evidence which remains,—and it is to be regretted that nearly all the historical records which could have affected this question have been lost in the wreck of ages,—the writer of the remarks alluded to refuses to accept the statement of Juvenal as a historical fact, but considers it to have been a mere flourish of the pen. "It sounds," he says, "very like a poetical license." I confess that I can perceive no such sound in it; on the contrary, it reads to me like a very distinct statement of an event, probably recent, which was then publicly known at Rome. But let us consider for a moment the little information we possess relating to British affairs at this period. We are informed by the historian Tacitus, that Agricola, in the fifth year

of his government of Britain, had formed the design of invading Ireland. He was encouraged in this project by the presence in his camp of a fugitive Irish chieftain, or king, who had been driven from his throne (if you like to call it a throne) by a domestic revolution, and of course sought the assistance of the Roman power to restore him. It is evident that Agricola had the project greatly at heart; for he had gathered so much information as to its feasibility, and the means of carrying it out, that he was able to assure Tacitus, his son-in-law, that "the island might be subdued and guarded with one legion and a few auxiliaries." Other important affairs so far occupied Agricola, that he had not carried his design into execution when he was recalled from his government; but we know that the design was not given up, for in the second year after this, Agricola's fleet "sailed round the north of Scotland, took possession of the Orkneys, and came into the Irish Channel, surveying the coasts and collecting information by the way. His motive in sending the fleet round was connected with his intended invasion of Ireland." I tell this in the words of the writer in the *Anthropological Review.*

Agricola was recalled in the year 85, and we know literally nothing of the governors of Britain who followed him; but the Romans were not in the habit of giving up a design they had once formed, and a successor of Agricola is very likely to have sought to emulate his glory by such an expedition as the invasion of Ireland, having only to carry into effect the preparations already made by his predecessor. Accordingly Juvenal, whose second *Satire* appears to have been written some two or three years after this time, tells us,

> "Arma quidem ultra
> Litora Juvernæ promovimus, et modo captas
> Orcadas, ac minima contentos nocte Britannos:
> Sed, quæ nunc populi fiunt victoris in urbe,
> Non faciunt illi quos vicimus."—*Sat.*, ii, 159.

We have here a statement of three recent conquests, which were evidently thought much of in Rome. By the "*minima contenti nocte Britanni,*" Juvenal no doubt meant the people of the north of Britain, who had been subdued by Agricola; and no one will doubt that Agricola's victories over the Caledonii were a fact. We have just seen that the capture of the Orcades, or Orkneys, was also a fact. What, I should like to ask, is there in the third of the satirist's statements, that the Roman arms had been carried beyond the shores, that is, into the interior, of Ireland, which especially "sounds like a poetical license," so as to distinguish it from the two other statements,—particularly when we consider that the satirist has placed it first in order, probably as the most

recent of these causes of Roman triumph? I think we are quite justified in concluding that, subsequent to Agricola's removal, his plan for the invasion of Ireland had been carried into execution, and successfully. Perhaps the Romans had not judged it advisable to establish their power in Ireland. They left the northern parts of Britain only partly subdued. Perhaps they received the nominal submission of the native chieftains, and perhaps a tribute; but I think it can hardly be doubted that the Romans did invade, and, in their view of the case, subdue Ireland. That there must have been a close intercourse between Roman Britain and Ireland during the Roman period, seems to me evident from another circumstance.

There was a great Roman road—perhaps we may call it the greatest in this island—which our Saxon forefathers named "the Watling Street." It ran from the celebrated port by which the Romans usually entered Britain, Rutupiæ (Richborough), right through the heart of the island, across North Wales, and over part of the Snowdon mountains, to a Roman town called Segontium (near Caernarvon), the walls of which still partially remain. Segontium was evidently a very important place, and stood on the shores of the Menai Straits, being the point from which the Romans passed over to the Isle of Man. There was another of the great Roman military roads, which, starting from Deva (Chester) the station of the twentieth legion, proceeded along the coast of North Wales, and ended also at Segontium. A third great Roman military road, running from Isca (Caerleon), the station of the second legion, passed through the southern and western districts of Wales, and again carried us to Segontium. Why should three of the great roads in Roman Britain all go to this town? Let us cross into the Isle of Man (the Mona of the Romans), where we know that they had copper mines. At Holyhead there was a Roman station of importance. Roman antiquities have been found there abundantly. There is, on the summit of the Holyhead mountain, a space enclosed with ramparts, called in Welsh "Caer-Gybi," which appears to have been a Roman post. We all know that at the present day the passage over to Ireland is from Holyhead. Surely no one, especially one who knows anything of the Romans, will believe that they made all these great roads to carry you to Segontium, and onward to Holyhead, that they made a station there, and that with all this they stood still at the top of the rock for a great part of four hundred years, staring across the Channel towards Ireland, and never ventured over!

I do not believe, and I am not aware that I ever said, that the Romans established themselves as conquerors in Ireland; and I need not, therefore, reply to the objection of the writer whose objections I am reviewing, that if the Roman general had landed,

"he would have built forts and roads, etc. . . . . But not one trace of a Roman exists on the soil of Ireland, not one fort, one road, one earthwork, one engraved stone, not one of the well-known Roman relics so plentifully found in England and Scotland, have ever been seen in Ireland." The circumstances of the case are totally different. But I would remind this writer that Julius Cæsar invaded Britain twice; that on the second of these occasions he fought battles, gained victories, marched over a considerable extent of ground, crossed the Thames, forced the *oppidum* of one of the most powerful tribes, situated in the heart of Hertfordshire, received the submission of numerous chieftains, and conquered the south-eastern parts of the island. These are facts which I suppose nobody will doubt; but we know them only because they had so much to do with the great revolutions of Rome, that the Roman historians, as well as Cæsar himself, have recorded them. Yet there is not a single monument left, "not one trace of a Roman, not one fort, one road, one earthwork, one engraved stone, not one of the well-known Roman relics," etc., to mark the presence of Cæsar and his Roman legions. If the Roman writers who speak of Cæsar's invasion had been all lost, and if no Roman had ever been here after his time, we should probably have no evidence whatever that a Roman had ever set his foot on our shores.

But my opponent on this point has replied to himself in another way, and I think, too, rather contradicted himself, when a little further on he says: "A quantity of silver coins, all Roman, with some engraved specimens of silver, were lately found in Ireland; these were unmistakably the property of some travelling silversmith. A Roman medicine-stamp has also been found in Ireland, denoting that most probably some travelling physician had found his way thither. Some sixty of those stamps have been found in France, Germany, Africa, England, and Scotland; but, as I believe, like the bronze swords, not one has been discovered in Italy."

Supposing that no other Roman antiquities had been discovered in Ireland, those mentioned here are of classes which bespeak permanent residence rather than transitory visits. We have no reason to believe in wandering silversmiths among the Romans, nor is it likely that a Roman wandering silversmith would carry a hoard of coins with him in Ireland. He could not receive Roman coins in payment from the wild Irish; and it would be useless to carry them among people among whom there was no minted circulation, and who, therefore, would not receive them in payment. Moreover, where hoards of coins are found under such circumstances, they mark usually the spot where some kind of permanent residence had existed; for they arose from a well-known practice in former times, of preserving pro-

perty in money by burying it in the ground, either beneath the floor of the house, or within the enclosed yard or garden. The Romans did not usually bury their treasures in unprotected or accidental places.

The same may be said of the medicine-stamps, which in Britain, as far as we know, have always been found on the sites of Roman towns. They were, as this writer says, analogous with the modern patent medicine-stamps; and I need hardly remind him that wandering or local venders of patent medicines were not in the habit of carrying with them the instrument for printing the stamps, but the medicines which bore the stamp upon them as the warrant of their authenticity. There appears to be little room for doubting that these Roman stamps belonged to resident manufacturers of the medicines indicated on them, and that these manufacturers supplied these medicines, made in packets in some form or other, to the dealers. The fact of their not being found in Italy destroys at once one of the arguments against the Roman character of the bronze swords. Although found in tolerable abundance in the western and northern provinces of the empire, not one is at present known to have been found in Italy, yet they are undoubtedly Roman.

I will only add that our writer appears to be very imperfectly informed as to the number of Roman antiquities which have been found in Ireland; and I have no doubt, now that more attention has been called to the subject, the number will be greatly increased by future researches. The following is a list of a few such discoveries, consisting chiefly of coins, as objects the character of which admits of the least dispute, and gathered in a glance over the volumes of the *Journal* and *Transactions* of the Archæological Society of Kilkenny, and of the *Ulster Journal of Archæology*,—

In 1820 a hoard of about three hundred Roman silver coins were found near the Giant's Gauseway, in the county of Antrim; all of the earlier periods of the empire. (*Proceedings of Kilkenny Archæological Society*, vol. iii, p. 61, 1854-5.)

In 1850 eight Roman coins were found in the county of Down. (*Ib.*, p. 62.)

In 1850 a brass coin of Augustus was found in the county of Tyrone. (*Ib.*)

In 1851 two Roman coins, one of the Emperor Gordian III, the other of Antoninus Pius, were found near Templemore in the county of Tipperary. (*Ib.*, p. 63.)

In 1854 "an extraordinary discovery of an urn containing 1,937 coins, together with 341 ounces of silver in pieces of various sizes, was made near Coleraine. The coins are Roman, in a perfect state of preservation; and, what is very singular, no

two coins appear to bear the same superscription. The silver is composed of a large number of weighty ingots and ornamental pieces, supposed to have been used on armour for horses. There are also several battle-axes marked with Roman characters. The whole are now in the possession of Mr. J. Gilmour, Coleraine, county of Londonderry." (*Ib.*) A more detailed and accurate account of this discovery is given in the *Ulster Journal of Archæology*, (vol. ii, p. 182), with a complete list of the coins, the true number of which was 1,506. They were all of silver, and of the lower empire, the list beginning with Constantius II and ending with Constantine III, who was proclaimed emperor by the legions in Britain in 407.

Other discoveries of Roman coins appear to have been made in the neighbourhood of Coleraine and the Giant's Causeway, but the account of them is not very clear. (See the *Ulster Journal of Archæology*, ii, 187.)

A Roman interment, with a Roman coin, was found in the townland of Loughey, near Donaghadee, county Down. (*Journal of Kilkenny Archæological Society*, vol. i, p. 164, 1856-7.)

Roman coins were found in a Roman cemetery near Bray, in the county of Wicklow. (*Proceedings of the Royal Irish Academy*, vol. iii, p. 186.) It is hardly necessary to remark that the existence of a Roman cemetery amounts to positive evidence of a Roman settlement.

In 1830 five hundred Roman silver coins were found in the townland of Tonduff, about one mile from the Giant's Causeway. (*Ulster Journal of Archæology*, ii, 187.)

In 1854 a hundred and ninety-five Roman coins were found near Coleraine, not far from the place of the discovery of the great hoard of coins found in the same year, as described above. These were of the emperors Gratian, Honorius, and Valens. (*Ib.*)

We have thus authenticated accounts of discoveries of Roman coins in no less than five Irish counties, Antrim, Londonderry, Down, Tyrone, and Tipperary, which already shew us the Romans scattered tolerably widely over the island. With one exception, these discoveries all occur in the province of Ulster, which would seem to shew that the Romans had settled chiefly in the north-east of Ireland. There are many reasons for supposing that this would be the case; the south-west was, no doubt, at that time very wild and difficult of access. Moreover, the coins themselves shew that this settlement of the Romans in the north-east of Ireland, of whatever character it may have been, lasted during the whole period of the Roman power in Britain; for while some were evidently deposited at a rather early date of the Roman rule, others belong to emperors who belong to so low a date as the beginning of the fifth century.

XVI.—*On the Himyaritic Inscriptions lately brought to England from Southern Arabia.* By Col. PLAYFAIR, H.M. Consul and Political Agent at Zanzibar.

[*Read April 24th*, 1866.]

THE Himyaritic is the language which preceded the modern Arabic in that portion of the Arabian peninsula now known as Yemen, or Arabia Felix. Himyar, so called on account of his predilection for red garments, was the first of the Kahtanite kings of Yemen who wore a crown of gold. He was the head of the great Himyaritic family which reigned in Yemen from his time till the Abyssinian conquest in A.D. 525, a period which has been estimated at twelve centuries.

During the first part of this lengthened period, the government of Arabia Felix was shared by other princes of the same family, and the nation was then known to foreigners as the Sabeans, from the fact of their descent from the great father of their race, Saba, or Sheba, the son of Joktan. Subsequently, when the house of Himyar flourished in unrivalled splendour, the name of Himyarites, or Homeritæ, according to the Greeks, began to replace that of Sabeans.

The immediate cause of the downfall of the Himyaritic dynasty was the religious intolerance of the last tobbas, or kings, who had embraced Judaism, and who persecuted with the most unrelenting fury such of their countrymen as had received the doctrines of Christ. Upon the pretext of the murder of the Jews by the people of Nejran, Dthoo Nowas, the sovereign of Yemen, took up arms against them, obtained possession of their city, and gave its inhabitants their choice between Judaism and death. They preferred the latter. Accordingly large pits were dug, filled with burning fuel, and all who refused to abjure their faith, amounting it is said to 20,000, were either cast into the flames or put to the sword. A few of the Christians who had escaped to Constantinople laid a detail of their sufferings before the Emperor Justin, who, in his turn, moved the Christian Emperor of Abyssinia to take up arms for the protection of his co-religionists in Arabia.

Even before this time the Himyaritic power had been on the decline, and now the tobba found that he had not sufficient influence to compel the subordinate princes to unite their contingents for the defence of their common country, which thus fell an easy prey to the Abyssinian invaders. I need not detail

the history of their government in Yemen, or how, in a very short time, they were in turn expelled by the Persians, or how a remnant of them remain to the present day in Arabia, in a position similar to that of the Pariah of India, an impure race filling the most degraded offices, and with whom no Arab will eat or associate.

Till a few years ago, little or nothing was known of the language of this people. Niebuhr met with no inscriptions during his journey in Arabia, though he heard of their existence; subsequently Seelzen, Wellsted, Cruttenden, and Arnaud found a considerable number in various parts of the country, which they copied with a greater or less degree of accuracy. A few inscribed stones, of a very fragmentary nature, found their way to India. but as far as I am aware not a single specimen reached this country until 1862. Shortly before that time, General Sir William Coghlan obtained at Aden a considerable number of bronze tablets and a marble altar; I also became possessed of a few, and a colporteur of the Bible Society obtained some very fine slabs from Mareb; these are now all in the British Museum. This collection consists of three distinct series: first, there are twenty-eight bronze tablets found at Amran, near Sana, the capital of Yemen; many of them quite perfect; they are mostly votive tablets, dedicated to the deity El Mukah. Secondly, there are a few inscribed stones and a marble altar, discovered in the vicinity of Aden; and, thirdly, there are the slabs from Mareb.

These last probably formed part of the great dam of Mareb, so celebrated in Arabian story. Some historians attribute its construction to Saba, or Sheba; others to Lokhman, king of that remnant of the Adites who renounced idolatry at the preaching of the prophet Húd. He is said to have settled at Saba, or Mareb, about 1750 B.C., and finding the country frequently ravaged by impetuous mountain torrents, while, at other times, it was parched for want of a sufficient supply of water, he conceived the idea of building a dam across the gorge of a valley contained between two mountains, which he thus converted into an immense reservoir for the reception of the rain water descending from the hills. The dam was built of cut stone secured with metal clamps, forming a prodigious mass of masonry three hundred cubits thick, one hundred and twenty feet high, and nearly two miles in length. It was provided with sluices, through which the water was conveyed into canals for the irrigation of the fields and gardens of Mareb, the richness and prosperity of which, owing to this reservoir, are a favourite theme with Arabian historians.

In about A.D. 120 this dam, which had stood for 1700 years, having fallen into decay, yielded to the pressure of water from within, and gave way, deluging the country far and wide, carry-

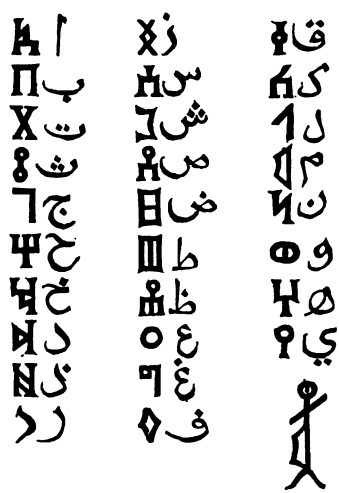
ing away the whole city with the neighbouring towns and villages, and reducing this fertile province to a state of utter desolation and ruin. The site of this great work has been visited by at least two Christian travellers, M. Arnaud and a Chaldean in the employ of the Bible Society, who both bear testimony to the numberless inscriptions scattered everywhere about; unfortunately, the ignorance and fanaticism of the inhabitants, and their jealousy of anything approaching to an exploration of their country, renders it an exceedingly difficult task to procure specimens.

The Himyaritic character, called by the Arabs *musnud*, or *upright*, is closely allied to the Æthiopic, and it was by the assistance of the modern Amharic that the clue was discovered by the late M. Fresnel, the French consul at Jedda. I have drawn out the alphabet of the language, with the corresponding characters of modern Arabic, not that these express the value of the ancient letters so well as the Æthiopic or Hebrew, but for the very sufficient reason that I am familiar with the one and I am not with the others; several forms of each letter occur in various inscriptions, but I have shown only one and the most common form.

The character is generally written from right to left, and there is one peculiarity which greatly facilitates the deciphering of the inscriptions, which is that a perpendicular stroke is inserted between every two words. In one solitary instance, that of the marble altar, the inscription is in the style called boustrophedon, from the turnings of an ox when ploughing; the first line is read from right to left, and the next from left to right, the letters being reversed.

All the inscriptions have been published in a handsome volume by the trustees of the British Museum, and in a smaller form in the *Journal* of the Oriental Society of Germany for last year, and in the twenty-second part of the *Journal* of the Bombay Branch of the Asiatic Society. My renderings of the inscriptions in the Arabic character are printed. It is to be hoped that these facilities for the study of this interesting character may tempt Orientalists to do more than has yet been done towards an elucidation of these inscriptions.

The volume of the German Oriental Society which I have just mentioned, contains an elaborate and learned article on the subject by the late Dr. Oseander. Unfortunately I cannot give you a summary of it as it is written in one language, German, and illustrated by two others, Hebrew and Ethiopic, with none of which I am familiar. I will not weary you with any detailed account of these inscriptions, but I may be allowed to make a few remarks in illustration of them.



THE HIMYARITIC ALPHABET.

Take, for instance, the first of my transcriptions and of the German collection, which corresponds to the 4*c* of the British Museum volume. The commencement is clearly "Raibuis and his brothers, the sons of Marthad and their tribe." Then follows the letter *z* and the word Amran; this probably is the same as *dthoo* amran, lord of Amran, where it must be remembered the tablet was actually found. Then follows an expression which is to be found in nearly all the bronzes of this series, with slight modification, "*kakniir shimharu almakah zaharan mazandan*", the meaning of which is that a dedication is made to a deity named El Mukah, the words *zaharan mazandan* being probably a specification of this deity, as one would say, Venus Aphrodite. Then follows a long passage of which I cannot even guess the meaning, save that it contains an allusion to "value" and "gold," and terminates with another proper name, "Am-Karib, son of Samh-Karib, son of Hutferm lord of Tethurim."

Another of these bronzes contains the names of a certain king of Hadaramaut; several of the marble slabs make allusion to the kings or kingdom of Saba (Sheba of Scripture), and perhaps the most interesting of all is the altar, on which it is recorded that it is dedicated by "Himathat, son of Wudthbin, the slave of K. Athitor;" *th* is frequently pronounced as *s* in Arabic. We thus obtain the name Asitar, which is unmistakeably the Astarte of the Phœnicians, or the Ashtaroth of our Scriptures. At the end of this inscription the names of Astarte and El Mukah are conjoined, thus, "By or with Astarte, and by or with El Mukah."

XVII.—*On the Migration of Cultivated Plants in reference to Ethnology; Articles of Food.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read May 8th*, 1866.]

THE migration of cultivated plants is wholly the work of man, and its history, therefore, a legitimate branch of ethnology. In so far as vegetable sustenance is concerned, the earliest food of man, on his first appearance on earth, must of necessity have consisted of wild fruits and roots, wild corns and wild pulses, and these would certainly be more abundant than we now find them. The plants resorted to for this purpose would necessarily vary with climate. In temperate regions, the seeds of spontaneous grasses and pulses, and of a few marine plants, with acorns and honey, would be had recourse to. In tropical and subtropical regions, the available vegetable food of the early savage would consist of the date, the cocoa-nut, wild cereals, the yam, and other spontaneous roots.

Some races of man are still found in the primitive condition thus described. The natives of Australia, to this day, cultivate no plant, and have no other vegetable food than a few wild roots. The natives of the Andaman Islands have for their vegetable food only a coarse wild bean, and the still coarser fruit of the mangrove. In a similar condition are the inhabitants of Tierra del Fuego and the Esquimaux.

Even of the nomadic tribes of Northern Arabia, the chief vegetable food, down to the present day, consists of two wild unculvated plants called in the Arabic language sambh and mesáa, but the technical denominations of which my accomplished friends, George Bentham and William Hooker, to whom I referred, have not succeeded in determining. Speaking of the first of these, the gifted traveller Palgrave says, "the ripening season is in July, when old and young, men and women, are all out to collect the unsown and untoiled-for harvest."

In America, from Canada to Florida, there grows in marshy land, on the banks of lakes and rivers, a species of grass, the seeds of which yield a nutritious corn, similar, but inferior, to the millets of the old world. This, in one of the prevalent American languages, is called the Tuscarora, and is the Zizania aquatica of botanists. Although capable of cultivation, it has never been cultivated, the superior maize having most probably dispensed with the necessity for it. It is, however, used as food by the wandering American tribes, as the two plants named in the last paragraph are by the Bedouins. In Southern Africa, the fruit of a species

of wild gourd, called the nara, about the size of a cocoa-nut, is used as food by the natives, who, when it is ripe, repair periodically to the plains where it grows, to feast upon it. It is of the family of gourds, but its exact scientific place has not been determined.

That bold, skilful, and instructed traveller Mr. S. Baker, in those long and perilous journeys which happily ended in the discovery of the main source of the Nile, and of the true cause which has made Egypt immemorially fertile and famous, found the barbarous Africans in his route often living on the products of sporiferous plants. Among these were the fruit of the Doma palm, the Hyphæne thebaica of botanists, and the seeds of a species of nymphæa, which last were dried, stored to be ground and converted into a kind of porridge. This is an approach to the mere savage condition.

It would not be until, through increase of population, and wild plants becoming scarce, that the ingenuity of man would be stimulated to multiply them by cultivation. We have an example of the early steps in this progress in the condition of society among the South-Sea islanders, both fair and negro, who, when first seen by civilised man, were found cultivating the yam, the taro, or esculent caladium, the batata, the coco-palm, the banana, and the bread-fruit, but no cereal and no pulse.

In the present paper I propose to confine myself to the ethnological bearings of bread-plants, and begin with the most important of them, the cereals. These consist of wheat, barley, rye, oats, rice, maize, and several millets. Rye and oats are plants confined for the most part to Europe, but wheat and barley embrace a far wider range, for they extend to all the temperate, and even to the subtropical, regions of the Old World, from Spain to Japan, while within the last 350 years they have been transferred, through the enterprise of European nations, to the corresponding climates of the continents of America and Australia, in neither of which did any one of the principal cerealia of Europe previously exist whether in a wild or cultivated state. Rice is the principal cereal of all the tropical and subtropical countries of Asia, from Persia to Japan, and its culture has been extended to Europe, as will afterwards be noticed, only within the historical period. Maize is an exclusive product of America, and was as unknown to the Old World, before the first voyage of Columbus, as tobacco or the pine-apple. With a wider geographical range than any other of the cereals, it has invaded every country of the Old World, from the equator to the 50th degree of latitude, and is now the bread of many millions of people whose forefathers lived in ignorance of its existence. It is extensively cultivated in the southern provinces of China, in Japan, and in the islands

of the Malay and Philippine archipelagos. Speke and Grant found it the principal corn in parts of the interior of Africa which the feet of white man had never trodden before their own, and in Italy and Spain it was a frequent crop within fifty years of the discovery of the New World. This wide and rapid extension maize owed to its adaptation to diversities of soil and climate, its hardihood, with consequent facility of propagation, and its eminent fecundity.

With the exception of rice, which is found growing wild in some parts of India, but which yet may have sprung from the seeds of the cultivated plant, not one of the cereals now enumerated can be traced with undoubted certainty to their wild originals, nor can we state their parent countries. This must be received as evidence of vast antiquity of cultivation. Ears of wheat and of barley have been found in the oldest Egyptian tombs of the same peculiar species or varieties as those cultivated in the same country at the present day; and in the Book of Genesis, in the poems of Homer, and in the oldest of the Hindu Vedas, these cereals are as familiarly referred to as they are now. Wheat and barley must have been well known to the Egyptians before the earliest of the pyramids was built, for a people feeding on roots and fruits could not have possessed the power or the skill indispensable to the construction of these stupendous monuments. The first culture of these corns, therefore, carries us very far back in the history of man himself. There is no good reason to think that wheat and barley may not have been just as early cultivated in Persia, India, China, and Japan, as in Egypt itself, although we have not the same satisfactory evidence of their having been so; and the same may be asserted of rice for tropical Asia, and even for maize in the case of the constructors of the temples of Mexico, and of the builders of Palenqué.

Millet, derived from the Latin *milium*, and coming to us indirectly in its present form through the French, is a common term for all the smaller cultivated cereals. These, of many species, are largely cultivated in all the warm countries of Europe and Asia, from the 40th degree of latitude to the equator. The most frequent of them belong to the genera Panicum and Sorghum, but they are not confined to these two. The late Dr. Hugh Falconer, the ablest and most accomplished naturalist whom I have known, told me, when I had the good fortune to have him for a guide, that the number of kinds of millet cultivated in the plains or mountains of India is not fewer than five-and-twenty. In Asiatic countries they form a large portion of the bread of the humbler classes. As to the history of their culture, it goes far beyond all record, and is probably of equal antiquity with that of wheat, barley, or rice. It is impossible to fix the parent country of any of these millets, and the probability is that they are indi-

genous in many, for we find them growing with the facility and vigour of native plants in such remote and unconnected regions as Italy, India, China, and Japan. Some of them are certainly found in a wild state, and even crops of some of these are occasionally gathered. In some parts of Asia, such as its islands, they seem to have been in a good measure superseded by the far superior corn, the American maize.

A great number of pulses, or leguminous plants, have been cultivated immemorially for food, at least in every part of the Old World. They belong to such genera as Vicia, Faba, Pisum, Ervum, Lathyrus, Orobus, Cicer, Phaseolus, Dolichos, etc., etc. In our narrow vocabulary they are all comprehended under the vernacular terms of peas, beans, vetches, lentils, etc. In those parts of Asia of which the principal cereal is rice, which contains but a small amount of gluten or nitrogenous matter, and where little animal matter is consumed, legumes are largely used as food to make up for the deficiency. Several of the cultivated legumes can be traced to their wild originals in Europe, while other sorts are traced to Africa, to Asia, and to America. The only parts of the world that produced no native legumes fit for cultivation were Australia and New Zealand, where they were equally absent as the cereals. This arose from no inaptitude of the soil and climate, for they now flourish in these Austral regions of every useful species.

The principal plants cultivated and yielding a farina, as substitutes for the bread of the cerealia, are the common potato or tuber-yielding solanum, the yam or dioscorea, the sweet potato, or tuber-yielding convolvulus, the sago-palm, the bread-fruit, and the banana. There are other plants, such as those yielding arrow-root and tapioca, but of far less importance.

The common potato (Solanum tuberosum) is an undoubted native of America, and there of a temperate climate. It is still found wild on the western slopes of the Andes, the tubers being no bigger than filberts. Even the rude red man was found to have cultivated the potato before the arrival of Europeans. It was brought from America direct to Ireland, and there first cultivated in 1586, or in about eighty years after the discovery of the New World. It is stated to have been still earlier introduced into Spain and Portugal. From Ireland it found its way to the Low Countries and to Germany, and from Spain it reached Italy and France. It is an object of cultivation in Asiatic countries only where Europeans have colonised or settled, and here chiefly for their consumption, and only since the beginning of the present century. It is successfully cultivated in Australia and New Zealand, which produced no esculent farinaceous food at all, not even the yam, the taro, or the manioc.

The yam, the Dioscorea of botanists, is a native only of tropical

and subtropical climates. The genus to which it belongs is considered to consist of several distinct species, natives both of Asia and America, and in many places it is still to be found in the wild state. The plant is a slender creeper, yielding a huge tuber, often weighing from ten up to thirty pounds, consisting of a great mass of farinaceous matter, a wholesome but dry and insipid food, greatly inferior in flavour to the common, or even to the sweet, potato.

The sweet potato, or batata, the Convolvulus batatas, the Ipomæa batatas, and the Batatas edulis of botanists, is, like the yam, the plant of a warm climate. It is a native of the tropical parts of both Asia and America, but is stated not to have been an object of cultivation by the native Americans, the first mention of it being by Pigafetta, the companion of Magellan, in the first quarter of the fifteenth century. On this subject, however, I shall have occasion, before the conclusion of this paper, to make a few further observations. In the neighbourhood of the equator, the batata grows to a large size, often weighing several pounds: in Java, I have myself seen them of ten pounds weight, and occasionally they are said to reach even to fifty. In that island they enter largely into the food of the people; never, however, forming their principal vegetable diet, which is always rice.

One or more species of the botanic genera Ocimum, Arum, Caladium, Maranta, Tana, and Jatropha yield esculent roots, which in a rude state of society, in their respective native countries, were the only bread of the people before the culture of the cerealia began. Their starch in a refined state comes to us under the names of arrowroot, tapioca, cassada, salep, etc. The plants yielding these productions are, with few exceptions, natives of tropical or at least of very warm countries. Some of them in their crude and unprepared state are either poisonous or very acrid, but the savage cultivators had everywhere discovered that heat or edulcoration dissipated the poison, and rendered them wholesome food.

The taro, or Caladium esculentum, formed the principal bread of all the South-Sea islanders, who had no kind of corn; and the manioc, or Jatropha manioc, that of the rude inhabitants of native America, who had but one of the cerealia, and even that one not universally known and cultivated.

The bread-fruit, or Artocarpus incisa of botanists, in so far as concerns its use as bread, is confined to the tropical islands of the Pacific, to the inhabitants of which it formed a considerable article of diet, and, no doubt, contributed materially to the social advancement at which they had arrived when first seen by Europeans. At the recommendation of some theoretical botanists, the tree was conveyed in 1792, at great trouble and expense, to our West India islands, but with little advantage. In

the wild state, the plant exists in the islands of the Malay archipelago, where, however, the immemorial possession of the cerealia seems to have superseded the necessity of cultivating it.

Some species of the musa or banana which yield a large portion of farinaceous matter are, either in their fresh or dry state, extensively used in the wild parts of America as bread, but, as far as I know, never so in any Asiatic country; and Baron Humboldt generalises rashly when he asserts that in all tropical countries the banana takes the place of the cereals of temperate and subtropical regions.

Sago, or more correctly sagu, is the name of the pith of several palms, natives of the Malayan and Philippine archipelagos. The most productive of these palms is the Sagus Rumphii, or Metroxylon Sagus of botanists. This and other species of the same genus have the peculiarity among palms of propagating themselves by lateral shoots as well as by seeds. They thrive only in bogs within the air of the sea, but excluding tidal action. A plantation once made perpetuates itself interminably. A sago-palm acquires maturity in about fifteen years. The stem is a mere case containing an immense mass of medulla or pith, which, when freed from fibrous matter, is a starch which, dried and granulated, or subjected to heat in earthen moulds, forms the bread of all the people of the Malay archipelago east of Celebes, as far as New Guinea inclusive. It is consumed also in Sumatra, Borneo, and even Mindano, the most westerly of the Philippines; but in these places, where the cerealia have long existed, sago is the bread only of the poor, or of barbarous tribes.

Language often throws light on the birth-place and migration of cultivated plants; and I, therefore, proceed to offer such remarks as have occurred to me, regarding those which I have now been referring to. To begin with the cereals, it will be found that they bear different nomes in every separate and independent language, or sisterhood of languages. In so far as philology can be considered evidence, this fact would seem to show, not that the culture of the cereals had originated at a single point, from which they were in course of time widely disseminated, but at many separate and independent points, foreign names only distinguishing them in the few instances in which they are exotics.

Thus, the English name for wheat is essentially the same in all the Teutonic languages. In Irish and Welsh, which I have elsewhere endeavoured to show are two distinct independent languages, we find two different names for this corn, it being *cruineachd* for the first, and *gwenith* for the last. The *trigo* of the Spanish and Portuguese is but a corruption of the *triticum* of the Latin; while the French *froment* and the Italian *frumento* are taken from a synonyme of the same language. But in the Basque, which, according to competent judges, differs not only

from all other European languages but from all other tongues whatsoever, ancient or modern, we have two names for wheat wholly different from those of any other tongue, namely, *garia* and *ocaya*.

Having alluded to this singular language, the Basque, I think the names of cultivated plants in it may be safely referred to as evidence of the comparative antiquity of their culture by the people speaking it. Thus the names for wheat, barley and oats are purely Basque, while those for rye (*cecalea*), for rice (*avvoza*), for maize (*maiza*), and for the bean (*baba*), are taken from the Spanish. The inference is that the first-named plants were immemorially cultivated by the Basques, and the last only introduced into their country after the Roman conquest of Spain; indeed, after the Spanish language had assumed its present form.

If we look into the Oriental languages, we shall find in them evidence of the same tendency. In Sanskrit the name for wheat is *godhum*, and in Persian *gandum*, essentially the same word; but, as the people who spoke the Sanskrit language are believed to have emanated from a country forming part of Persia, it is not difficult to account for the agreement in this case. In Hindi the name is *gehun*, which seems to be an original word. In the Tamil we have the Sanskrit word in the corrupt form of *gudumai;* but the people speaking this language occupy the extreme southern part of India, within from eight to twelve degrees of the equator, and where wheat will only bear fruit in a few elevated tracts; and hence, as an exotic, it bears a foreign name.

In Turkish the name for wheat, *baghdoi*, is a native word. In Arabic we have two original and unborrowed ones for it, *hantah* and *bar*. From this, so far as etymology can be trusted, we infer that this corn is of indigenous culture both in the parent land of the Turks and in Arabia. In Java, within seven degrees of the equator, wheat will only yield grain at an elevation of 5,000 feet above the sea-level, and here it is sometimes called by its Portuguese name of *trigo*, and sometimes by its Persian name of *gandum*, pointing clearly enough to the parties who introduced it, and even to the comparatively recent time in which it was introduced.

An examination of the names for barley point to similar results as in the case of wheat. This word itself, as it exists in our language, has not, that I am aware, been traced to its parent source; but the name of the hardy four-rowed barley, *beer*, belongs to the Teutonic family of languages, and it was probably the earliest, as the easiest, variety cultivated in Britain. The French *orge* and the Italian *orzo* are but gross corruptions of the Latin *hordeum*. The names for barley in Gaelic and in Welsh are different, the first being *eorna*, and the last *haidd*. The name for oats is essentially the same in these two tongues,

namely, *corc* for the Gaelic, and *ceirc* for the Welsh; but for rye the name in both languages, *seagl*, is evidently taken from the Latin *secale*, and we shall not err if we conclude that this corn was directly or indirectly introduced into our islands by the Romans. The Basque, again, furnishes an original name for this grain, namely, *garagarra*.

The Oriental languages furnish us with similar evidence in the case of barley, at it does in that of wheat. In Sanskrit the name for it is *yava*, of which the Hindi *jau*, and the Persian *jo* are certainly corruptions. In the language of the distant Tamils it is a widely different word, *shali*, which is probably but a common name for "corn." In Arabic the name is *shaer*, and in Turkish *arpa*, terms which have no connection with each other, or with those of any languages of Asia or of Europe, and so we come to the conclusion that this corn is indigenous; or, at least, that its culture was not borrowed from strangers in the countries in which these languages are spoken.

We cannot determine the native country or primitive locality of the first culture of rice to any particular Oriental region by philological evidence. This corn was unknown to the Greeks and Romans, at least as an object of cultivation, and has no original name in their languages. We may presume that it was equally unknown to the ancient Persians; for, had it been an object as well known to them as it now is to their descendants, it would hardly have failed to have attracted the notice, and to have been described by the Greeks, who had so much early intercourse with Persia. In Sanskrit the general name for rice is *dhanya*, and in Hindi it is *dhan*, a mere abbreviation of the same word; in the Tamil the name is *shali*. In each of the monosyllabic languages which extend from Bengal eastward to China inclusive, rice bears a different name. Thus we have it in the Peguan as *ha*, in the Siamese as *kao*, in the Cambodian as *ang-ka*, and in the Anam as *lua*. The many languages of the Malay and Philippine archipelagos are a signal exception to this diversity, for with them the general name is the same throughout, although the languages themselves often differ widely in words, in structure, and in sound. That name is *padi*, varied into *pari*, *pali*, *pasi*, and *vari*, according to national pronunciations, and it prevails not only from one extremity to the other of the two great archipelagos, but extends even to the language of remote Madagascar. There is but one exception to this uniformity, and it is found in the recondite and dead language of Java, called the Kawi, which abounds in Sanskrit, and in which the term is *dana*, an obvious corruption of the Sanskrit name already given.

The Persian name for rice is *shali*, which, as already stated, is that for it in the Tamil. This leads to the belief that the grain was most probably introduced into Persia from Southern India

in the course of that maritime trade, which is known to have been carried on for ages between the ports on the western coast of India, where the Tamil is the vernacular tongue, and those on the Persian Gulf. Had this cereal reached Persia from Northern India, its name, as in the case of wheat, would have been traceable to the Sanskrit, or one of its derivatives.

The name for rice in Arabic is *arus*, and this is obviously the source of the *arros* of the Spanish, the *rizo* of the Italian, the *riz* of the French, and the *rice* of the English—the word increasing in corruption from Spain to Britain. It points to Spain as the country where the culture of this corn was first introduced into Europe by the Arabs. Rice, however, was probably known to the Greeks of the lower empire before the Arabian conquest of Spain; but they too must have learnt it from the Arabs, for the name they gave to it, *aruza*, seems to be equally of Arabic origin as the names which it bears in the modern languages of Europe. The Arabic name itself may be supposed an original native word, and rice itself the indigenous plant of a country, the greater part of which is tropical, and therefore congenial to its growth.

The vast importance attached to rice by those of whom it is the chief bread-corn, and perhaps, also, the tendency of the Oriental languages to run into verbal redundance, is strikingly exemplified in the case of this corn. Rice sports into far more varieties than any of the corns familiar to Europeans, for some varieties grow in the water, and some in dry land; some come to maturity in three months, while others take some four and some six months to do so. The Hindus, however, are not content with terms for such broad distinctions as might be derived from these obvious sources, but have names for varieties the distinctions between which are unappreciable by Europeans. In the north-western provinces of India, no fewer than sixty-six of these names have been enumerated, and in Bengal, of which rice is nearly the sole bread-corn, the number is said to be still greater. I state this on the authority of two men whose oriental knowledge was great and accurate, not only in language, but in every branch of useful or curious learning, the late Sir Henry Elliot, and my lamented friend Horace Hayman Wilson. But, besides terms for this corn founded on variety, on season, and on mode of culture, the grain itself bears one name in the straw, another when threshed, one name when in the husk, and another when freed from it, and a fifth when cooked. A similar redundance of terms is found in the languages of the Malay and Philippine Islands. Such minute nomenclatures seem to point to a great antiquity in the culture of this cereal with the people among whom they obtain.

Maize is beyond all question a native of America, and before

the discovery of the New World was wholly unknown to the Old. The name as known to European nations is taken directly from the Spanish, and it is to be presumed that the conquerors of the New World borrowed it from one of the many languages of that continent. In some of the Oriental languages we have specific names for it, which seem entirely native—such as *bhutta* in Hindi, *jagung* in most of the languages of the Indian Archipelago, *katsalva* in the Madagascar. This would lead to the belief that the plant was indigenous where such names are given to it, but the probability is that they were taken from some native plant bearing a resemblance to maize. Thus, in the two principal languages of Southern India, maize is named after the chief millet cultivated in the peninsula, the *cholu* or *ragi*, the Cynosurus corocanus of botanists, to which an epithet implying its foreign origin is added. The Turks give it the name of *boghdai misr*, or the wheat of Egypt, which is not more amiss than the names given by the French and English when they call it Indian and Turkey corn.

Philological evidence applied to plants yielding starch, or esculent farina, affords somewhat more satisfactory evidence than in the case of the cerealia. One of the most important of the plants yielding this farina is the genus called by botanists Dioscorea, in our language the yam, and of which a dozen species, independent of varieties, have been enumerated by botanists. They are natives of Asia, Africa, and America, but of their tropical and subtropical parts only. The Spanish and Portuguese name of the dioscorea is *inhamé*, from which comes the French *igname*, and from that, with Anglo-Saxon brevity, "yam." I presume the Spanish name to be taken from some American language. In Hindi the general name given to all esculent bulbs and roots is *alu*. This, Professor Wilson tells us, was the name given by those who spoke the Sanskrit language to a species of cultivated arum, and not to the yam, with which, as an extra-tropical people, they must have been unacquainted. The generic name *alu*, with the prefixes *phul*, a flower, or *rath*, a chariot, are the names by which the Hindus of the north distinguish the yam. Not so, however, with the Hindus of the south, in whose country the yam is indigenous. As an example, it has in the Tamil the specific native name *kalangku*.

Like the word *alu* of the northern Hindus, the word *ubi*, especially applied to the yam, is used generically for all esculent roots and bulbs by the Malayan nations. It is one of very wide dissemination, for it prevails in not only all the many languages of the Malayan archipelago, but has been also extended to the Philippine tongues of a very different genius from the Malayan. It has done far more than this, for to the east it is found in the languages both of the lank-haired and woolly-

haired races of the island of the Pacific, while to the west it has reached as far as Madagascar. The original word is of such simple structure that it has undergone no other change than the substitution of one labial for another, or the elision of its single consonant. Among the insular languages there are but few exceptions to this general prevalence, but there are a few. In the principal language of the Philippines, and in the dialect of the Sandwich islands, the only one of the great Polynesian language beyond the northern tropic, we have native names for the yam. One species or other of the dioscorea is, no doubt, indigenous in many of the islands of the Malay and Philippine archipelagos, and in those of the Pacific. I saw myself wild yams dug up in the woods of an island off the Cape of Cambodia which, probably from the frequency of the wild yam in it, takes its Malay name from it, for Pulo-ubi, the island in question, literally rendered, signifies "isle of yams." No doubt, it would be long used as food in its wild state by savage man, and it was probably first cultivated by a people who had made the first steps in progress, who would naturally give it its now wide-spread name. Who that people was, it is impossible to be sure of, but the Malays, or Javanese, as the most advanced and most enterprising, are the most probable.

The sweet potato, or tuber-yielding convolvulus, appears to be a native of many parts of the tropical old and new world. Some have alleged that it was first made an object of cultivation by the native Americans, but when the South-Sea Islands, whose inhabitants had assuredly no communication with any American people, were discovered, the sweet potato was found to be in cultivation, and known by a native name throughout, the word being essentially the same, and a native one, varying only in pronunciation, as *kumava*, *humäa*, and *gumala* abbreviated *mala*.

There is every appearance of the culture of the batata having been introduced into the islands of the Malay archipelago, and this by the Spaniards or Portuguese. In the Molucca Islands it accordingly goes under the name of *ubi kastela*, which signifies literally "the Castilian yam," for the Moluccas had been temporarily under the rule of Spain, already in possession of the neighbouring Philippines. The Javanese, dropping the generic word, and eliding the sibilant in the word Castilia, call the plant simply *catela*. The Javanese give it also the same name as the Spaniards, namely, batata, or patata. The probability, then, is, that the Spaniards introduced the plant from the neighbouring Philippines, where it seems, if we are to trust the evidence of language, to have been cultivated by the natives when the Spaniards conquered them. I find the plant accordingly desig-

nated by native names in the two leading languages of these islands, the Tagala and Bisaya, in the first of which it is called *gabi*, and in the last *kamoti*, a word, I may observe, adopted in Spanish dictionaries, and defined as the name of "a kind of sweet potato or batata."

In Upper India the plant is clearly an exotic, and shown to be out of its genial climate by the production of poor and small tubers. The name given to it is *shakarkand*, a word half Persian and half Hindi, and both of which signify sugar. The Tamil name is the American batata, slightly corrupted into *vatata*.

The common potato takes its European name from the sweet one, for the latter seems to have been known, and even cultivated, in the south of Spain before the first. Even at present, the name "potato" is given by the Anglo-Saxon Americans to the Convolvulus batatas, while to the common potato is given the epithet "Irish." At present, the Spaniards call the sweet potato batata, or batata di Malaga, and the common potato, patata, a mere change of one labial for another. The last is nearly our own name, and its source is therefore obvious. The original word is probably a native American one, but of what language I have not heard. The common potato had probably many native names, corresponding with the many tongues of America, for it was found by the discoverers cultivated both in North and South America. Whatever the origin of the name, the term is, at all events, better than the "earth-apple" of the French and Germans, or the "white truffle" of the Italians. In Hindustan, where the potato is now successfully cultivated, chiefly for European consumption, the name given to it is *balaiti alu*, or the "European esculent tuber." The Malays give it the name of *ubi yuropa*, that is, the "European yam," and the Javanese that of *kântang holanda*, or "tubers of Holland," the *kântang* being the name of the *Ocymum tuberosum*, or tuber-yielding basil, a plant cultivated in Java for its tubers, which in flavour bear a considerable resemblance to those of the common potato.

Sago, correctly *sâgu*, is simply the name of the prepared pith of the palms which yield it, and has no reference to any particular palm, of which there are not fewer than five distinct species of the genus. The word, probably of the Malay language, is of universal use throughout the Malay and Philippine archipelagos, and has long been adopted in the languages of Europe.

The bread-fruit, or *Artocarpus incisa* of botanists, is known in the Malay archipelago (according to the language of the country) under the various names of *sukun*, *kluwi*, *kulor*, and

tambul, but none of these are the names which it bears in the tropical islands of the Pacific; and hence we may conclude that the South-Sea islanders are not indebted for it to the Malayan nations, as they are for some other cultivated products, such as the yam, the cocoa-nut palm, and the sugar-cane. This is, indeed, what might be inferred, without the help of etymology, from the character of the plant, which is of the size of a forest-tree, with perishable fruit, and consequently impossible of distant transport by a rude people. The plant is, no doubt, indigenous to the Pacific Islands, where alone it sports into several varieties, which have been reckoned as many as five, a proof of long cultivation. Even the name given to the bread-fruit is not uniform in all the dialects of the Polynesian language, for we have it in the Tonga as *me* and *marnai*, in the Tahiti as *vavo*, and in the Owihee as *ulu*.

I shall conclude this paper with a few general observations on the relative value of the plants enumerated in it, in so far as regards their influence on social progress. Of these, incomparably the most valuable to man are the cerealia. They are the most agreeable and the most wholesome, while they contain the greatest amount of nutriment in the smallest bulk. Their culture, moreover, demands a greater amount of skill and labour than the lower kinds of bread; and this is a quality belonging to them which, as it stimulates industry and ingenuity, is in a social view, of high value. It is useful that several of these cerealia should be cultivated together, so that in the event of the failure of one or two there should remain others to fall back upon. It must be admitted, however, that although the culture of several different cereals together may mitigate, it cannot prevent either dearths or famines, since the same drought or blight may, more or less, affect all of them. India, for example, in which a greater variety of cereals is cultivated than in Europe, has, nevertheless, been visited within the last hundred years with many dearths and several great famines, owing to the absence of the means of supplying the deficiency of one part of it by the superabundance of another. An easy and cheap intercourse between the different provinces of a country, and its free commercial intercourse with foreign countries possessing climates different from its own, are the only certain guarantees against scarcities and famines. These conditions, however, can exist only in the most advanced states of society, and are wholly absent in the early and rude stages of it, to which the present discussion refers.

It may be safely asserted that no people ever attained a tolerable degree of civilisation who did not cultivate one or other of the higher cerealia. The architectural monuments and the

letters of Egypt, of ancient Greece and of Italy, of Assyria, of Northern India and of Northern China, were all produced by consumers of wheat. The monuments and letters of Southern India, of the Hindu-Chinese countries, of Southern China, of Java, and of Sumatra, were the products of a rice-cultivating and rice-consuming people. The architectural monuments of Mexico and Peru, and, we have no doubt, also of Palenqué, were produced by the cultivators and consumers of maize.

No cultivators and consumers of roots or fruits, it may be safely asserted, ever invented letters, or constructed a durable architecture. Among the Malays, whose bread is rice, the term "root-eater" is one of reproach, equivalent to savage. When the inhabitants of the celebrated Spice Islands were first seen by Europeans, their only bread was sago, or the pith of palms; and, notwithstanding the possession,—even the natural monopoly, of the then much-coveted clove and nutmeg, they were not only ignorant of letters but had not even the rudest kalendar. They had not even invented iron, which, together with their clothing, they received from strangers; and but for the accident of their spices, they must have been downright savages, hardly on a level with the South-Sea islanders. Had the bread of Britons some 2,000 years ago, been confined to the potato, Julius Cæsar would unquestionably have found our ancestors far greater barbarians than he describes them to have been, and they would surely not have encountered him with horses drawing armed chariots,

Perhaps the most advanced social position ever attained by men living on mere roots and fruits was that of the South-Sea islanders. They cultivated no cereal, not even the humblest millet, but they were well supplied with farina-yielding plants—such as the yam, the sweet potato, the taro, and the bread-fruit: still their advance was of the humblest, for they had not even invented pottery or textile fabrics, having nothing better than paper for raiment.

It is possible for a people to attain a very respectable civilisation when living on one of the chief cereals, although it be not the very highest. The mass of the Russians, and even of the Belgians, live on rye, and the mass of the people of Scotland on oats, although their condition would undoubtedly have been better had their bread been of wheat. The respectable amount of civilisation which the Irish had attained after their conversion to Christianity, and which resulted in the adoption of foreign letters, and the construction of the round towers, was accomplished by growers and consumers of barley and oats. Had they been strangers to these, and their main food consisted, as it afterwards did, of a single root, their ancient civilisation never could have existed: on the contrary, they would have been on a

lower level than the South-sea islanders, who possessed a far greater variety of sustenance with a more benignant climate.

But the potato is by no means the lowest quality of bread on which a people can live and multiply. The lowest is that which is most easily produced, that is, which is produced with the smallest amount of skill and labour, and in this respect the banana is below the potato, and the sago perhaps even below the banana. The banana yields a crop in ten months from the time of planting, perpetuates itself by rattoons, and requires little care in its growth. Baron Alexander Humboldt reckons that the produce of the same extent of land in bananas and wheat is in the proportion of 135 of the banana to 1 of wheat, and that of the potato as 44 to 1. The sago-palm takes about ten years to yield its produce, but grows in a bog where nothing else will thrive, requires no care in culture, and like the banana propagates itself by shoots. Mr. Logan, the distinguished statist and philologist, estimates the produce of the sago-palm, compared with wheat, as 163 to 1, and as compared to the potato as 53 to 1. The quantity of nutriment contained in the banana and sago are by no means in the proportions thus given, for we have to deduct the large proportion of water which they contain, and the absence in them of gluten, the most nutritious portion of the cerealia. Baron Humboldt informs us that the Spanish settlers in America were so satisfied of the evil consequences of living on the banana that they frequently entertained the violent remedy of extirpating the plant, as the only cure for overcoming the apathy and idleness of those who made it their only bread—the Indians and half-breeds. The sago-feeders, however, are by no means so prepossessed in favour of sago, and never fail to prefer rice, or even the yam and sweet potato, their consumption of it being a matter of necessity, and not of choice.

Two plain objections to root and similar crops, as compared to cereals, remain to be noticed. The first is that they are, with few exceptions, incapable of being stored for a length of time, so that the superfluity of one harvest may make up for the deficiency of a future one. The potato lasts but for a year at best, and the tropical roots not much longer, while wheat, oats, and barley will keep for ten years, rice, in the husk, for fifty, while with the cereals there is far less difficulty in storing and transport.

XVIII.—*The Fishermen of Southern India.* By JOHN SHORTT, M.D., Zillah Surgeon, Madras.

[*Read May* 8, 1866.]

AGREEABLY to Hindoo legends, there are said to be some eighteen tribes who make fishing their calling, or trade, for a livelihood; but at the present day only two or three tribes adopt fishing with the view of earning a livelihood; whilst the others only occasionally take to it, as a matter of necessity.

Of the eighteen tribes said to exist, I can only trace thirteen; these are named as follows:—

1	Pareya Putteenaven	8	Pesthavur
2	Chirma Putteenaven	9	Sharayacaren
3	Paramen	10	Vunnien
4	Shembadaven	11	Thaver
5	Currean	12	Shervacarer
6	Meenpullee	13	Shepaliar
7	Boyee		

Of the thirteen tribes here given, No. 4, or Shembadaven, is the chief. They continue to follow the calling of fishing, and their operations are chiefly confined to fresh-water rivers, tanks, and salt lagoons. They claim for themselves a royal descent, which they trace to a king termed Paravatharoyen (king of a mountain), who is said to have reigned, at a time out of memory, at Trinomallai, a village situated in the western part of South Arcot, in lat. 12° 15′ N., and long. 79° 9′ E., celebrated in Hindoo mythology for its beautiful pagoda, located at the foot of this hill, supported by a grant of money now given in lieu of the lands with which it was originally endowed for that purpose. The Shembadaven further claim relationship with Siva, one of the Hindoo triad, and say that the correct appellation of the tribe is Shiven-padavur (literally, Siva's warriors), now corrupted into Shembadavur; and in support of this allegation of relationship they relate the following fable, for which they claim the authority of the *Ramayanam*, *Bhairtham*, and *Bagavatham*. The fable runs as follows:—The king, Paravatharoyen, who reigned at Trinomallai, had an only daughter, called Paravattee, who is reputed to have been exceedingly handsome and beautiful; and Siva, whilst on a ceremonial visit to the king, happened to see Paravattee, and was so enamoured by her charms, and seriously wounded by her beauty, that, forgetful of his divinity, he began to treat with the king for her person; who, yielding to the entreaties of his god, accepted the divine

proposal, and bestowed the hand of his daughter upon his deity in marriage, thereby securing to himself the relationship of father-in-law to his god, and that of brother-in-law to his descendants; owing to which circumstance the tribe take the name of Shembadavur.

Of the Shembadur tribes, the three called Thaver, Shepaliar, and Shervacarar, constitute themselves into a formal court of justice, and decide all disputes and differences that arise among the tribe, as a whole. It is not my purpose, for the present, to describe the various groups which form the group, but to confine my description to the chief tribes which make fishing their calling, dividing these into two divisions—First, those who confine their fishing operations to fresh-water rivers, tanks, and inland streams; secondly, those who follow the same vocation in the sea, and reside on the coast.

1. The Shambadavurs, or fishermen, who fish in fresh water, comprise a large body who are scattered over the country in small parties. Most villages in Southern India have a few of these men residing in them. During the rains, and at other times when fish is procurable, they confine themselves entirely to fishing. Occasionally, some of them take to agriculture, or other operations, with the view of gaining a livelihood.

They make use of nets of various kinds, but that in general use is of a circular form, and about 10 feet in diameter, and from 8 to 12 feet in length, terminating above in a pointed cone; the lower, or open, end is loaded with iron or leaden rings, to enable the net to sink under water rapidly. The fisherman either enters the water to some depth (sometimes the water is above his waist), or he stands on the brink of the river or tank, and throws in his net. He gathers his net by opening it over his left forearm, and flings it in such a manner that it opens out, and falls into the water like a bell, whilst he has a cord fastened to the cone end, with which he gives it a few jerks, as it descends in the water; and the same thing is done when it is being drawn up. When he approaches the shore, to examine the contents of his net, and secure such fish as he may have caught, by placing them in a palmyra-leaf bag, which he has tied around his waist, and then re-enters the water again; or he may, as he stands in the water, resume his occupation by emptying his net in the same way. Other kinds of nets and fish-traps of various kinds, chiefly constructed of bamboo laths like a bird-cage,* but differently shaped, are set in streams or places where water flows. Rarely do they take to fishing with hook and line.

* Termed *purree*, an instrument or basket for catching fish.

The Shambadavurs are generally followers of Siva, and have Brahmins for their Gooroos, or priests; and to this day, it is said, during the great annual festival that takes place a few days after the new moon, in the month of November, that it cannot be celebrated unless a certain number of the Shembadavurs are present. The magnitude of the festival may be estimated from the fact of nearly 100,000 persons assembling here annually, to celebrate it; and during its progress, a large light, the wick of which is made of new cloths, and the lamp fed with ghee, is kept burning night and day continually for three successive days, in a temple on the summit of the rock, to which the attention of the devotees is directed, as it is believed that the witnessing of the burning light is sufficient to purify the individual, and that thereby a remission of sins up to the time of witnessing the occurrence be obtained. Their caste has nothing peculiar about it, and their ceremonies, etc., are similar to those of other Hindoos or Sudras, with this exception, that widow marriage is permitted among them. Among the various subdivisions, a small number are sometimes Lingatharees*, others Shival,† and others Mamestharee;‡ and, as a rule, the Lingatharees and Shival do not follow the profession of fishing. In the appendix I give the weight and measurements of twenty-five men, and regret that I was unable to obtain that of the women.

The Shembadavurs, as far as their physical conformation extends, have nothing peculiar; they have the usual Hindoo features, but are frequently an extremely ugly set, squint and other visual deformity not uncommon among them. Their general conformation is spare, and they are of active habits, the tribe generally being expert swimmers; and, owing to their occupation leading them to keep to the water for the most part of the day, they are addicted to drink, which, they say, they are obliged to resort to, in order to keep them from taking cold and getting sick. As a tribe, they are not very intelligent, although sometimes one or more remarkably shrewd men may be found among them. It is very rare to meet with educated men, nor do they care about learning to read or write any language. Their occupations are chiefly confined to fresh water, inland; they never, at any time, attempt to fish in the sea; on the contrary, it is against their caste to do so.

The following comprise the sub-tribes who follow the occupation of fishing in the sea:—

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* One who wears a lingam, or metal box containing a figure of an indecent nature.

† One who abstains from flesh-meat.

‡ Flesh-meat eaters.

1 Putteenaven (who style themselves Chetties)	4 Meenpuller
2 Senna Putteenaven	5 Paramen
3 Currean (who style themselves Moodelys)	6 Vunnien

These people live on the coast, and the village they occupy is called a Coopum, and may comprise from ten to two hundred huts, rarely more,* built chiefly of palmyra leaves, with a small and only opening for a door or entrance. The eaves of the hut frequently resting on the sand, or very little above it; sometimes these have no walls to sustain them; but rest entirely on the sandy soil. These tribes claim a proprietary right to the soil extending from the sea-beach to 120 yards inland, which, they say, was bestowed on them by ancient Hindoo rajahs of Southern India. The villages on the coast are from one to three miles apart, and they have certain land-marks, which point out the portion belonging to each village; and in the sea, pieces of wood are floated out, and anchored to baskets of stone, which mark the ground of each village, lengthwise; but as to extent, they may go out as far as they may think it safe to do so in their frail boats seawards to fish, but are not permitted to encroach upon each other coastwise; any attempt of the kind is sure to lead to a row, terminating in a fight; if on land, skulls are broken; if afloat, attempts are made to drown each other.

Every coopum has its head-man, who settles any dispute that may arise among themselves, and he acts as master of the ceremonies on festive and other occasions.

There is no great difference as regards caste among these several sub-tribes; they intermingle, and, sometimes only, intermarry; some will, and others do not, partake of food at the different villages; but when invited, they all attend on ceremonial occasions, and exchange betel and nut with each other. The Currean will partake of food with the Putteenaven and Paramen, but these will not partake of the Currean's food. Some of these tribes have embraced Christianity, and among them Roman-Catholics and Protestants are met with. These various tribes inhabit the whole Coromandel coast; and although they have different names and castes among themselves, they are termed generally Curreans by other natives, who class them all into one caste, and do not recognise their minute distinctions. They partake of animal food, except the cow and pig; the latter is occasionally taken by some.

As a body, they are a dissipated set, and, whenever they can afford it, partake freely of toddy or arrack. They are also particularly partial to tobacco, which they chew and smoke.

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* Larger fishing villages are called *Puttenum*, from which two of the tribes derive the name of Putteenaven.

Each village or coopum is presided over by a female deity of its own, recognised by different names. In some coopums either a brick or temporary temple is raised; these contain a small, rude-made image of wood or stone, representing the presiding deity, termed Ummen.* Mostly all of these people are followers of Shiva; a small minority are said to worship Vishnu. Annual feasts are held in honour of the deity, which last several days, followed by a procession, which encircles the village, when cocoa-nuts are broken, and fruits and flowers offered, sometimes goats and fowls. Their marriage and other domestic ceremonies are conducted much after the manner of the surrounding Hindoos. The bridegroom has to pay a dowry of 24 rupees 8 annas to the parents of the bride. The bride receives such gifts as her parents can give her in the way of jewellery, etc.

In labour, their own women assist; but should any difficulty arise, a barber-woman is called in, for which she receives a fee of 8 annas. The men may have one or more concubines, in addition to their wives. In cases of sickness they apply to the Moors in the vicinity for assistance; and the old women have recourse frequently to various herbs and roots, which are made into a decoction, and administered. The men, when they can afford it, have a cold meal ere starting on a fishing excursion, and partake of a hot meal at night; very few, indeed, can afford three meals. The meals usually consist of rice, seasoned with fish or greens cooked into curries. They proceed out to sea some forty or fifty miles from shore, either in boats or in catamarans or floats.

These boats comprise what are termed masulah boats, the pieces being sewn together with cocoa-nut coir yarns, and, from their yielding nature, resist the force of the waves better. Their catamarans, or floats, consist of from two to five logs of wood, with curved extremities. The wood selected for the purpose is that of the Peruvian lilac, or *Melia Azadarach*, the Tamil name is Mullay bamboo; sometimes the wood of the *Erythrina Indica*, or Moochee wood, is brought into use. The price of a catamaran comprising five pieces ranges from 35 to 40 rupees. The dimensions of the logs are 20 feet long and 2 feet wide, tied together with coir yarn, and are intended to carry five to ten men, with their nets, etc. Single logs are sometimes used by men who fish with a hook and line. One man will put out to sea mounted on one of these, and he is fully capable of managing it, even in boisterous weather, although he may sometimes get washed off his float; but being expert swimmers, they readily manage to remount their floats again. The catamarans carry

* Female god or goddess.

small sails, which are fastened to the log by an upright poll, and brought into play when the wind is favourable; otherwise, each man uses a short oar or paddle. The anchor consists of a forked stick, which is weighted with stones, with which they can anchor their floats in desirable localities.

The nets in use by these men are generally what are termed drag, and other kinds of oblong nets, extending to a couple or three hundred feet in length, and from three to four feet in breadth, and are made from the fibres of the *Crotalaria Juncea*, Janapha, cocoa-nut fibre, and cotton wool; these are prepared for the purpose by steeping in a decoction made from the bark of the *Acacia Speciosa*, or *Cantoovaya Palla*, or *Wrightia Tinctoria*, and that of the *Elœodendron Roxburghi*, or *Shalum-pay*. These are selected on account of their great astringent properties, and they impart to the fibre a rust-brown colour, which, in a measure, protects them from the destructive effects of salt water.

When the nets are made, they are steeped in a decoction made from the bark of either of the trees named above, from twenty-four to thirty hours, when they are taken out, and dried in the sun.

The tribe called Currean, as a rule, purchase their nets, as they do not understand the manufacture so well; but all the other tribes make their own nets. The large nets are valued from 2 to 300 Rs. each, and the smaller ones at 1 to 150 Rs. each. When not in use, the nets are rolled up, and placed on pieces of wood on the beach, and covered over with palmyra leaves, to protect them from sun and rain.

If not carefully attended to, they are subject to destruction by rats. The nets, boats, and catamarans generally belong to one or two of the chief men. These are lent out to labourers or fishers, who, on their return from a fishing excursion, divide the fish taken into seven portions, two are given to the owner of the catamarans and nets, and the remaining five shares are taken by the five men, one share to each. If it happens to be a boat, it takes out a larger net, and the produce is divided into two parts; one is given to the owner of the boat and nets, and the other part is divided into ten portions, and one given to each of the ten men who took out the boat.

They are generally in most villages under contract to a Moor to deliver up all the fish they happen to take, at a previously stipulated rate, to whom they are deeply indebted, and from whom they borrow money at a usurious rate, either to purchase fishing-tackle, or for marriage and other ceremonious occasions; and for every 35 Rs. they receive they pay $3\frac{1}{2}$ Rs. interest. This system of advance tends greatly to keep them in poverty,

so that they may be said to live from hand to mouth. At each coopum one, two, or more Moors, known otherwise as Lubbays, reside, who buy up the fish, and salt and dry it for export to other localities inland. These men are ever ready to make advances, so as to be able to get these poor people in their power. The Moor is their banker, physician, and advocate. Separate charges are made for the two last professions.

The whole tribe are subject to the usual diseases of the country, such as cholera, small-pox, dysentery, syphilis, rheumatism, and fever. Their women suffer in labour, and deaths on such occasions are by no means unusual. The only difference between these fisherwomen and the other Hindoos is said to consist in the fisherwomen using an old piece of net as a binder in confinement, whilst the other Hindoos use cloth.

They rear dogs, cats, and fowls, but keep no cattle or goats, as they have no use for them; nor does the vicinity of the sandy flats they occupy furnish food for them. They seldom or ever enter into agricultural operations. Their dress consists of the usual dhoty in men, and saree in women; they are fond of ornaments, and have them when they can afford to do so. The working or fishing dress of the men consists simply of a lungootee, and sometimes of a skull-cap of a conical shape, which is made of the date, palmyra, or screw-pine leaves.

It is said that these tribes worship the sea turtle along the coast, which they term Cootee Andaven, or the young god, and will neither seize nor otherwise injure it; but there are numbers of them who have overcome such scruples, when they have had the opportunity of turning them into money by selling them to Europeans. They believe in the transmigration of souls, and term their Creator Esperen, who is said to be everywhere.

There are about 1,000 Putteenavers in and around the old village of Pulicat and Coromandel. Among them there are 50 Protestant and 57 Roman-Catholic Christians, while the rest are heathens. The number of Curreans in this locality is small, and comprise only about 50, out of whom there are 8 Protestants and 10 Romanists, and the rest are heathens. There are a very large number of Roman-Catholic Christians among Curreans in Madras, comprising what are termed the Madras boatmen, among whom now may be found men of wealth and influence, and many well-educated individuals. The Madras boatmen have a world-wide reputation in aquatic feats, for courage and daring in times of danger and difficulty. They are like amphibious animals, for they can live on land or sea, and are from morn to night naked and exposed to cold and wet in plying their boats to and from the roads. They appear to glory in the sea, and are altogether a very hard-working set; at the

same time they are great rogues, and would rob one to his face, if allowed to do so. They are great experts in robbing the cargo in their boats, when to and from the shipping in the roads, as well as tapping casks of beer or spirits. As a class, they are greatly addicted to drink.

Two other tribes of late years have taken to fishing; these are Pariahs and Moors, or Lubbays. These people use all kinds of nets, without any distinction, and are very successful in fish-catching; and whenever fishing fails, the Pariahs and Lubbays, and the other six tribes just described, become boatmen to gain a livelihood; but the Shembadavurs will never do so. They may engage in constructing rafts to ford rivers, or floats for a shooting party of gentlemen in tanks, but they will on no account become boatmen.

Table of Measurements and Weights of Twenty-Five Men of the Shembadavur Tribe.

Number.	Age.	Height, ins.	Circumference around the					Weight, lbs.	Remarks.
			Head.	Neck.	Chest.	Arms.	Thighs.		
1	20	63¾	20½	12½	30½	6½	17	105	Pug nose, prominent muscles of lips and nose.
2	40	66½	22	13	31½	6¾	16	135	Large eyes, pitted small-pox, plain featured.
3	20	67¼	20	12	30	6⅛	16⅛	110	Pitted small-pox, robust.
4	30	67	20½	12⅛	32	9⅝	17	130	Able-bodied, stout, pitted s-p.
5	30	67	21½	13	33	9½	18½	128	Grey eyes, light colour, stout, European features.
6	17	65¼	21	11½	28	8½	16	100	Pitted small-pox, growing.
7	30	60	20	11	30	8	15	111	Short, sharp featured, prominent os frontis.
8	40	65½	21½	11¾	29	7½	14½	125	Old, emaciated, eyes small.
9	16	60½	20¼	10⅜	28½	7½	16½	95	Growing, short, acquiline feat.
10	45	65¾	21	12½	30¼	8½	16½	140	Old, squints, light colored.
11	50	64¾	21	12	30½	9	15	139	Old.
12	15	58	19¾	10	24	6½	13½	90	Boy, light coloured, squints.
13	40	65½	21½	11½	31	8	15¾	132	Pitted small-pox, old looking.
14	20	66¾	21¾	12	30	9	16½	110	Do.
15	25	68	21¾	13	32	9	17	130	Do.
16	35	69	21½	12	32	8½	17	127	Do., beardless.
17	22	65	20¼	13	33	10	17	131	Robust, squints.
18	23	68	21	12½	32½	9	16½	129	Do., deformed orbits.
19	30	67½	21¼	13	31	9	17	126	Do. do.
20	50	65½	21	12½	31¼	9	16	136	Do. do.
21	20	63½	21½	13	30½	9	17	115	Old do.
22	35	65	21	12¼	31	8¾	16½	110	Stout do.
23	35	66	22	12½	32	8½	16½	116	Plain featured.
24	22	66½	21	12½	31¾	8½	17½	117	Do. do.
25	30	64	21	12	31	8¾	16¾	115	Do. do.

Table of Measurements and Weights of Sixteen Men of the Coast Fishermen.

Number.	Age.	Height, ins	Circumference around the					Weight, lbs.	Remarks.
			Head.	Neck.	Chest.	Arms.	Thighs.		
1	20	63	21	11½	32	10	17½	118	Vunnien.
2	19	62¾	20¾	12¼	33	9½	16¼	120	Do.
3	30	62	21	12½	33½	9	17½	138	Do.
4	35	60½	20½	11¾	31½	8½	15	135	Do.
5	40	63	21½	12	33	9½	16	140	Do.
6	20	58½	20⅜	12	31	9	16	125	Putteenaven.
7	18	52¼	20⅛	11	28	7½	14¾	119	Do.
8	25	65	21	12	30	9½	15½	126	Meen Pullee.
9	22	62	20½	12⅓	31	9	16¼	124	Putteenaven.
10	28	65½	22	13	35	10	19	130	Do.
11	22	62¾	21	12	31½	9½	17¼	126	Do.
12	21	66¾	21	12	32	9	16	125	Meen Pullee.
13	40	62¾	21¼	12	32½	9½	17	139	Paramen.
14	18	59½	20¼	10½	30	8¼	15	117	Do.
15	30	64½	21½	12½	33	9	15½	135	Do.
16	35	61¼	19¾	12	31½	9¼	16½	137	Putteenaven.

As a body on the coast, these men are more strong, robust, and heavier, although not quite so tall as the inland fishermen. The difference in their mode of living may account for this, as the coast fishermen have so much harder work in plying their boats and rafts. The general cast of features is the same. Owing to some mischievous vagabond having given out that I was taking their measurements with the view of ascertaining which of them had the largest *liver*, as I wanted one for some particular purpose, I was mobbed, and had to desist, and beat a hasty retreat from the locality, after taking the measurements of sixteen men only, which I regret; and I have had no opportunity of completing my list of twenty-five since.

These poor people, like others ignorant as themselves, are readily led to believe any idle report, more especially if one's actions give cause to support such a probability, forgetting that under British rule nothing of the kind can happen to them, or to the poorest and most helpless among them. Even in large towns, I find great difficulty sometimes in obtaining measurements; for the natives look on all such acts with a superstitious dread, and refuse to permit it frequently.

XIX.—*On Cæsar's Account of Britain and its Inhabitants in reference to Ethnology.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read June 12th*, 1866.]

THE celebrated *Commentaries* of Cæsar throw the first ray of light on the forefathers of the people who, after many turns of fortune and much intermixture with other nations, eventually founded the British Empire and planted colonies in the New World and the antipodes, now far exceeding themselves in number. The knowledge which Cæsar gives us of our ancestors and our country near two thousand years ago is neither large nor very accurate, but it is still valuable as the only genuine information we possess, and I therefore propose to make his account the subject of this paper.

The first point to determine is Cæsar's means and opportunities of obtaining information. He invaded Britain the first time fifty-five years before the birth of Christ, and the second time in the following year, remaining in the country on both occasions but for a short time, and seeing but a small corner of it, whether in person or through subordinates. The object of his first visit, he tells us, was to take a general view of the island, so as to acquire some knowledge of its inhabitants, its coast, harbours, and landing-places; to all which things the Gauls, he adds, were perfect strangers, for it was rare that any other than merchants resorted to Britain, and even they were unacquainted with any other part of the island than the coast opposite to Gaul.

It must be noticed, however, that this alleged ignorance on the part of the Gauls is hardly consistent with other parts of Cæsar's narrative. Thus, he tells us that his invasion of Britain was undertaken as a punishment for the aid which the Britons had given his enemies in his Gallic wars, which clearly implies some political connection between the two people. Then he informs us that he sent as an emissary to Britain a prince of the name of Comius, whom he had himself made Chief of the Atrebatians, and he describes him as a man in whose courage, wisdom, and fidelity he greatly confided, and who possessed considerable authority in the island.

The means which Cæsar, in common with all other Roman commanders, under similar circumstances, had of communicating with strangers must necessarily have been very imperfect in respect to all countries in which the Latin and Greek languages were not spoken. In all such cases it was through interpreters, usually

natives of the country, and Cæsar makes mention of several of them in his account of the Gallic wars. They were no doubt Gauls through whom he communicated with the Britons, for at least in some cases the languages of Gauls and Britons must have been nearly the same, or at least intelligible to each other. Cæsar himself had been already in Gaul for four years when he undertook his first British expedition, and therefore was in some measure acquainted with the manners, institutions, and character of a people whom he describes as much resembling the Gauls. He was not, therefore, without some preparation for the task of describing Britain and its inhabitants.

It may not be out of place here to offer some observations on the striking contrast which we find in the policy of the ancient and modern nations in respect to their conduct as to the languages of the nations which they respectively conquered and governed. The Greeks and Romans seem to have considered all languages but their own as mere barbarous dialects unworthy of their regard, and they hence came to the conclusion that all other nations were bound to acquire their own cultivated languages. This partiality, with their great superiority of civilisation, probably contributed, in the case of the Romans, to the wide diffusion of the Latin language over an area which included the greater—all indeed except the mountainous parts—of Italy, France, and Spain. The Romans seem to have communicated with the subject nations wherever Greek was not understood through interpreters only, and it is probable that no Roman consul, pro-consul, or other chief in authority ever acquired a knowledge of any barbarous language. It is owing to their ignorance of strange languages that Greek and Roman writings furnish us with no correct information respecting the languages, manners, or religion of the many nations whom the Greeks and Romans conquered or held intimate relations with. Thus they do not tell us what or how many languages were spoken in Persia, a country with which both Greeks and Romans were in frequent communication for many centuries. The Greeks might, for instance, easily have left us translations of the Persepolitan inscriptions, for in their time they were in the character of a living tongue. As to the language spoken by the Arabians, for aught that Greek or Roman has told us, we should not have known that they spoke their own language pretty much as they do now, although there can be no doubt that they did. The ancients have left no authentic sample of the languages spoken in Syria, Assyria, Egypt, France, Spain, Gaul, Germany, Britain, or even Italy, except Latin. Even the names of foreign persons and places are so travestied in their writings that we can only now and then guess at their native originals.

A very opposite course is pursued by the modern nations of

Europe, and an acquaintance with the languages of the conquered nations is considered a duty and a necessity. In our own Indian conquests, civil and military functionaries, theologians, and merchants have to make a competent acquaintance with native languages; and of these over our wide-spread empire, there are not fewer than fourteen main tongues, independent of those of rude unlettered tribes. The same course is followed by the Dutch in the Malayan Archipelago, and by the Spaniards in the Philippines, and in America.

Ecclesiastics have contributed largely, perhaps more so than any other class, to that diffused knowledge of barbarous languages which distinguishes the modern from the ancient Europeans, and this has arisen from the wide difference of the spirit of religion between them. The ancients were indifferent on this subject, and seem to have thought that the same gods under different names prevailed everywhere. Thus Cæsar could see the gods of Greece and Rome among the rude deities of the Gauls, and he enumerates among others Jupiter, Pluto, Mars, Apollo, Minerva, and Mercury. There were but two conquered people who declined this community of belief, the Egyptians and the Jews; and the first the Romans despised for the abjectness of their worship, and the last they hated, charging them with a common hatred of mankind on account of the unsocial character of their belief. The religious spirit has been the reverse of all this with the European nations since their conversion; they have no community of sentiment with those who differ from them, but hold their opinions as fatal error, and their subversion a sacred duty. As an indispensable means to this end they have diligently studied many obscure languages.

But to return to the main topic of this paper: the land which Cæsar sought was in sight from the shores of Gaul, and he effected with his fastest sailing ships a passage in ten hours which can now be easily performed in one-fifth part of that time. I proceed to give some account of Cæsar's narrative, which seems to have been written after his second expedition, and therefore, in the maturity of such knowledge as he possessed. His geographical account is, of course, vague or inaccurate, but the wonder is that it should be even such an approximation to the truth as it is. The form of Britain he describes as triangular, having its eastern face fronting Gaul, and 500 Roman miles in length. He states the western side of the island as being 700 miles in length, and this he makes to face Spain, Ireland lying between—an island about half the size of Britain, and divided from it by a channel no wider than that which separates the latter from Gaul. He gives Britain, which terminates in an apex, a face fronting the north of 800 miles in length, and he makes the whole coast line of the island to be no more than 2,000 miles.

I may take this opportunity of observing, that considering the rude and illiterate condition, not only of the ancient Britons, but of their nearest neighbours the Gauls, it is a remarkable fact that the Greeks and Romans should be aware even of the insular character of Britain and of Ireland while they were in possession of names for both of them. It is certain from these facts that the two islands must have been circumnavigated; while, if the names given to them be of native origin, even this fact implies on the part of the civilised nations of antiquity, some acquaintance made with their inhabitants before the time of Cæsar. Such is certainly not the case in other parts of the world, the inhabitants of which, when first seen by civilised man, were found in as high a state of social advancement as the Gauls or Britons of Julius Cæsar. The Malay, the Philippine, and the Columbian Archipelago afford examples. In these islets, of which the insularity is almost obvious to the naked eye, or which can be determined by a few hours' sail in a canoe, are alone called islands. The great islands have no native names, and are known only by names given to them by strangers. They are, in fact, considered by their inhabitants as so many continents, inhabited by many different independent tribes. Thus, in the Malayan Archipelago, we have the following samples. Borneo has no genuine native name, and that by which it is designated by European navigators and geographers is taken from the name of one state in it, and was given to it by the Arabs, followed by the Portuguese. Sumatra is a name unknown to its inhabitants, and of unascertained origin, and was bestowed upon it by the Arabs. That singularly-shaped island Celebes was imagined by its own inhabitants to be an aggregate of islands, and the name was bestowed upon it by the Portuguese, and indeed is hardly yet known to the most intelligent of its inhabitants. Java takes its name from the principal of the two nations who inhabit it, but it is not usually called an "island," but a "land," or "region." We have similar evidence in the Philippine group. Thus the great island of Luçon takes its name from that of a rice-mortar in Malay, and this, through a mistake in interpretation, was given to it by its Spanish discoverers, for its native inhabitants have no name for it. The names of the two considerable islands of Negros and Çebo, signifying "Isle of Negros," and "Isle of Food," were given to them by the Spaniards, for they had no native ones. As to the Columbian Archipelago, I can from imperfect knowledge speak less confidently, but I do not believe that Cuba, Hispaniola, and Porto Rica, names all of which are taken from the Spanish language, ever had native ones. Jamaica, the smallest of the great islands, may possibly be an exception. Columbus, knowing no native name for it, gave it the name of the tutelary saint of Spain, St. Iago, but it came after-

wards to be known by its present name—sometimes written in Spanish Xamyca, said to be taken from a Caribbean word; being, according to some, the name of a plant, and according to others meaning "isle of springs." If, then, the ancient Britons, or the ancient Irish, or both, were the parties who ascertained that the lands they inhabited were islands, and who gave them names, we must conclude that they were a people, if not more civilised, certainly more enterprising and intelligent than Malays, Philippine Islanders and Caribs, which is not probable.

As to the etymology of the names which the Romans gave to our two islands, namely, Britannia and Hibernia, I may offer a few remarks. In the Gaelic or Irish, the word from which the Latin Britannia is supposed to be taken, is written *Brituin* or *Breathan*, and in Welsh *Prydain*, but the word, whatever its orthography, is obviously the same. In Owen's Dictionary the word Prydain is called an adjective, meaning "fair to look on," or beautiful, and the word for island, *ynys*, being added, we have the name "Fair Island" as the appropriate one for Britain; but this is far too fanciful a name to have been composed by uncontemplative barbarians, little prone to admire the picturesque, and deserves to be rejected. The name for Ireland, Erin, is more certainly a native word, and from it no doubt have come the Latin *Hibernia*, and even the English, *Ireland*, however remote their sounds and their orthography. The name was most probably taken from that of some dominant Irish tribe.

Cæsar's account of the climate of Britain consists of a couple of lines: he says that it is more temperate than that of Gaul, the cold being less intense; a fact which is confirmed by the experience of 2,000 years. He adds, that of certain islands lying in the channel between Britain and Ireland, some writers have asserted that during the winter solstice there was a night of thirty days, but he observes on this with judicious scepticism, "we ourselves could make out nothing on this point by enquiry." The assertion, however, seems to show that in some way or other the long nights and long days of the far north had been made known to the Greeks and Romans.

The account given of the useful productions of Britain is very brief, and, of course, not very accurate. The interior, Cæsar says, produces tin, although it is a maritime district only that does so. According to him, it is the districts on the coast only that produce iron, and this but in small quantity, although the future history of Roman conquests proves that this metal was far more generally diffused and used. In Cæsar's time the Latin name for tin was *plumbum album*, that is, "white lead," a term which points at its foreign origin. In the same manner, lead, which is a foreign metal to the Malays, has in their language no

other name than "black tin." Even with the Irish, tin was as much a foreign metal as it was to the Romans, or as lead to the Malays, and the usual name for it in Gaelic is "white iron." In the time of Cæsar, Welsh was the language not only of Wales, but of Cornwall, the tin region, and in Welsh the name for tin is *ystaen*. Is that the word which became *stannum* in Latin as applied to tin, but which did not come into use until the fourth century, or some 400 years after the time of Cæsar? The copper used by the Britons, Cæsar tells us, was imported, and this seems to be confirmed by the fact that it has no native name in the two ancient British languages still extant, being called in both by slight corruptions of its Latin name. The word used by Cæsar is *æs*, which applies equally to copper and to bronze, the alloy of copper with tin. Some of our translators have rendered the Latin word by "brass," which, however, was unknown to the Romans, who were even ignorant of zinc, one of its ingredients.

Of the vegetable productions of Britain, Cæsar gives us no other information than telling us that all the timber trees of Gaul were found also in Britain, except the beech and the fir; but it so happens that the exception is a mistake, for modern botanists have decided that both trees are natives of Britain. The only doubt was about the fir. This is the *Abies* of the Latin, and our own silver fir, which has been found in our ancient forests, and beams of it even under Roman roads. It is very possible that neither Cæsar nor those about him may have seen either the beech or the silver fir, and he is only too hasty in pronouncing that they did not exist because he and his informants happened not to see them. Some commentators have fancied that the fir tree which Cæsar missed to find in Britain, may have been the stone pine, a native of Southern Europe and the Levant, but it is equally a stranger in France as it is in Britain, and although since cultivated as an exotic, it must in Cæsar's time have been equally unknown in both countries. The cultivation of corn is only incidentally referred to by Cæsar, and of the kinds cultivated no hint is given. But when his foragers go out, he describes them, for his first visit at least was in harvest time, as cutting down fields of corn; and it was probably wheat that was the grain alluded to, for no other would be considered as corn by the Romans.

As to the domestic animals, Cæsar tells us that the country abounded in cattle (*pecorum magnus numerus*). This would include the horse, the ox, the sheep, and the goat; and we may safely add to these the dog and the hog, universal in the old world. The goose and common fowl are expressly named as being domesticated, but they seem only to have been kept as pets; but this is a subject to which I shall presently have to refer more particularly.

By far the most interesting part of Cæsar's narrative is his account of the inhabitants. He describes the people of the interior of the island, in contradistinction to those of its coast, as men reputed to be its primitive inhabitants, children of the soil, or aborigines, and in this he was, no doubt, quite right; for it cannot for a moment be believed that one of the largest islands in the world was left by nature destitute of inhabitants of its own, and abandoned to the accident of being peopled from some foreign land. Cæsar's account of the people of the interior is, that for the most part they did not sow their lands, but lived on milk and flesh, and were clothed in skins. This description, taken literally, would make the majority of the Britons of Cæsar's time arrant savages, far below the level of Tartar shepherds, and very little above that of Maoris or Australians. That a few such "naked barbarians, who chased the deer of the forest over cold and lonely heaths," and who, like the New Zealanders after the extirpation of that monster bird the Moa or Dinornis, may, when other flesh was scarce, have occasionally betaken themselves to feed on one another, did exist in very unfavourable localities, such as the mountains of Wales, and more especially of Scotland, is probable. But that the great mass of the Britons were in no such abject condition, is sufficiently attested by the fact that in the future conquests of Britain, extending from the shores of the Channel to those of the Forth and Clyde, the Roman armies were supplied with corn and cattle, the products of British industry, and not only they, but also the necessarily more numerous native armies which opposed them. The people who could do this could not have been the savages which Cæsar's description makes the majority of them to have been.

According to Cæsar, the coast of Britain was inhabited by men of strange origin, in a state of civilisation very different from that of the aborigines of the interior. "The sea coast," says he, "is peopled by the Belgians, drawn thither by the love of war and plunder. These people, coming from different parts of their parent country and settling in Britain, still retain the names of the states from which they emigrated." He describes the island as "populous, with many buildings resembling those of Gaul, and abounding in cattle;" and he observes that "the inhabitants of Kent, which lies wholly on the sea coast, are the most civilised of all the Britons, and differ but little in their manners from the Gauls."

The settlement of a Belgic people on the sea coast of Britain, I may further add, is corroborated by the fact of Cæsar's sending Comius, the chief of the Atrebates, to Britain before himself in the quality of an emissary, on account of the influence he possessed in the island. Now, the Atrebates were a Belgian people,

inhabiting the present department of the Pas de Calais, and Comius could not be supposed to possess much influence unless the party he influenced were of the same blood and even language with himself. The probability, therefore, is that there were Atrebates in Britain as well as in Gaul.

On these statements I offer the following remarks. Cæsar with his army marched from the coast from about the place where the distance from Gaul is the shortest, and the whole of his line of march would not have exceeded 100 miles, the greater part of it being through the county of Kent, which he himself tells us was by far the most civilised part of Britain. The remainder of his march, probably about a fourth of the whole, was almost as much a maritime region as Kent itself, for it was close on the Thames, still influenced by the tide. If this was the case, all that Cæsar saw of Britain was a country peopled by foreign immigrants from Belgium. Now, according to his own account, the Belgians were a people differing "in language, manners, and law," from their neighbours the Celts. If the Belgian settlers in Britain, who are considered by the best authorities to have been a Teutonic people, followed the practice of their successors, the Angles, Jutes, and Saxons, and this is very probable, they continued to speak the language and to follow the laws and customs of their parent country. Such, indeed, would be the case, whether the immigrants were of Teutonic races or not. The colonists would not indeed be pure Belgians, but the adventurers, consisting mostly of the male sex, would intermarry with the Britons, and the Belgians of Britain whom Cæsar describes, would be mostly a mixed people, bearing foreign names, and speaking a foreign tongue. If this view be correct, it would follow that Cæsar never saw a pure British people, and never, unless by accident, heard the sound of the Welsh or the Gaelic language.

The hints given by Cæsar respecting the manners and customs of the inhabitants of Britain whom he encountered or heard of are very brief. "All the Britons," he tells us, "stain their skins with woad to make them more terrible in battle." Upon this I may observe, that the practice referred to seems to have been peculiar to the Britons, for it is nowhere mentioned as being observed either by the Gauls or Romans. The culture of woad, the *Isatis tinctoria* of botanists, for the production of a dye, it is to be observed, demands a rich soil and a skilful cultivation, and its existence among the Britons is therefore evidence, not of barbarism, but of a considerable civilisation. The probability is that it was used by the Belgic Britons to dye their woollen dresses with, as well as to stain their bodies. The last of these practices was, no doubt, for mere ornament, and seems analo-

gous to the tattooing of the South-Sea islanders, and of other rude nations. When at the Burmese capital I saw several individuals of a rude tribe, whose faces were tattooed all over with indigo, and as blue as the skin of any British warrior could have been made by woad. The reason assigned by Cæsar for staining the skin does not appear a sufficient one. He asserts himself that the practice was general, and it could, therefore, be no more formidable to one party than to another, any more than it would be formidable to any party if all the Britons were alike clothed in sheep or goat skins. It would be fearful in battle only to strangers whom the Britons seldom saw, and even to them it would probably soon appear more grotesque than fearful.

One superstition of the Britons is singular. According to Cæsar, not however, I believe, repeated by any other authority, "they thought it unlawful (*fas non putant*) to eat the hare, the hen, and the goose." With respect to the hen and goose, the probability is, that in Cæsar's time they were scarce in Britain, as they generally are among all barbarians, and hence too costly to be used for food, although kept for ornament and amusement, or, in more homely phrase, kept as pets. We ourselves keep and breed exotic water-fowl in ponds for ornament, and breed doves and canaries for amusement, and although their flesh be palatable, these birds are too dear to be used as food; and, indeed, if it were otherwise, for want of custom, we should have some repugnance to eat their flesh. As to the hare, I cannot help fancying that its name may have slipped into the text by mistake in copying, and that instead of reading *leporem* in the accusative, we should read *anitem*, the duck, in the same case. This would include all the poultry which we can suppose to have been known to the ancient Britons. At all events, there must be a mistake in the text when it is said that the hare, in common with the hen and goose, was bred or reared; for this non-gregarious and timid animal is incapable of being reared and domesticated, as the birds associated with it certainly are. I may add, that the duck and goose, in their wild state, are natives of Britain, while even the common fowl had been naturalised in Europe in Cæsar's time for at least five centuries, although it would necessarily be late in reaching remote and rude Britain. To the Romans, who had no Egyptian or Jewish prejudices on the subject of animal food, the rejection of the flesh of poultry may easily have been ascribed to a religious ground, and hence they may have concluded that it was forbidden food, as Cæsar represents it.

There is one institution ascribed by Cæsar to our ancestors which is not very creditable to them. To polygamy, which was

not unfrequent among the ancient nations of Europe, and was and is universal among those of Asia, was substituted, according to him, polyandry. "Ten or twelve of them have their wives in common, especially brothers with brothers and parents with children, but if there be offspring, the child is deemed to be his who first espoused the virgin." I know no example of a plurality of husbands in any part of the world, except in the case of the people of Bhootan and of some Hindu tribes of Southern India, as in the example of some castes of the Mahratta state of Coorg. As, however, Cæsar makes no mention of the existence of this practice among the neighbouring Gauls whom the Britons so much resembled, and as no future writer, so far as I am aware, has repeated the allegation, I think its existence must be considered as very doubtful, more especially when I find that one of its results implies a violation of the laws of nature itself.

The few words in which Cæsar refers to the trade of the Britons represents it certainly in a very humble condition. The money of the Britons consisted of bronze and of iron rings of a given weight. To possess money at all, even in the humble form of the cheapest metals, implies some social advancement; for savages have no money at all, and even nations who have made some progress represent it by such crude products as cakes of beeswax and cacoa-beans. According to Cæsar, the commerce of Britain with strangers was confined to the Gauls, and carried on from the ports of Kent. In this intercourse, the chief export must have consisted of the tin of Cornwall, brought probably by water to the ports of Kent, while the chief imports would consist of copper and bronze; and thus, in so far as the last article is concerned, their own tin would come back to the Britons in a manufactured state, implying superior industry on the part of those who furnished it,—the people of Gaul.

In the century which elapsed between the inroads of Cæsar and the commencement of the actual conquest under Claudius, the Britons, free from foreign aggression, and most probably profiting by the peace which the Roman conquest of Gaul had given rise to, seem to have made a considerable advance in civilisation. This is to be inferred from the fact of several of their princes, in imitation of the conquerors of Gaul, having coined gold and silver money, of which abundant authentic specimens still remain to us. But on this subject I must refer to the learned work of my friend Mr. Evans.

Cæsar, in his account of Britain, says nothing of the religion of its people, but in a part of his Commentaries, written subsequently to his invasion, he treats of the religion of the Gauls, calls its priests Druids, and asserts that it was supposed to have its origin in Britain, the Gauls, who desired to perfect them-

selves in its mysteries, being wont to repair to that country for instruction. We may conclude, then, that the Druidical religion was equally that of the Britons. In describing it Cæsar makes no distinction between Celts, Belgians, and Aquitanians, so that we are led to believe that it was universal over Gaul, although we are expressly told that it did not extend to Germany. Its priests, he tells us, preside over all matters of religion, have the care of sacrifices, and interpret the will of the gods. They were presided over by a High Priest, who had supreme authority over them; they were exempt from the performance of military or other public services, and paid no taxes: and these privileges necessarily induced many to join their order. It was obligatory on the Druids to commit many verses to memory, and in their efforts to make this acquisition, they often spent as many as twenty years. "It is one of the principal maxims of their religion that the soul after death passes from one body to another."

So far there is much resemblance between the Druidical and Buddhist religion, such as I myself saw it in Burmah and Siam, and such as it exists in Ceylon, but not as it exists in China, Anam, Japan, Tartary, and Thibet, in all of which it is modified or altered, according to the state of manners and institutions. But the divergence between Buddhism and Druidism is at least as great as the resemblance. The Druids were invested with the entire judicial power, civil and criminal, while the Talapoins or Buddhist priests are expressly interdicted from every temporal employment The Talapoins are enjoined a rigorous celibacy, the penalty of a breach of which is death, while it is not stated that any such abstinence was enjoined to the Druids. The Talapoins live by open and avowed mendicity, but it is not stated that the Druids did so, nor is it at all likely that a body vested with the whole judicial power of the State should be content to live by begging.

In some respects, the religion of the Druids far more resembled the bloody Feticism of African negroes than the bloodless worship of Buddha. "The whole nation of the Gauls," says Cæsar, "is extremely addicted to superstition, from whence it is that in threatening maladies and imminent danger of war they make no scruple of sacrificing men, or making a vow to sacrifice themselves, in which they make use of the ministry of the Druids. It is an opinion among them that nothing but the life of a man can atone for the life of a man, and in fulfilment of it they have established public sacrifices. They prefer for victims such as have been convicted of theft, robbery, or other crimes, believing them to be most acceptable to the gods; but when real criminals are wanting the innocent are made to suffer. This proceeding on the part of the forefathers of the French and English nations,

it must be owned, is very much after the manner of the institutions of Dahomey and Ashantee; the African practice having, in point of mercy, some advantage, insomuch as it seems more humane to have the neck broken by a fall from a height after a libation of rum than to be burnt to death in a wicker basket.

The funerals of the Gauls, and with the same religion we must suppose also of the Britons, in so far as chieftains at least were concerned, much resembled those of the most barbarous of the tribes of the South Sea Islands. "Everything that was dearest to the deceased, even live animals, was thrown into the pile, and formerly such of their slaves and clients as they loved most sacrificed themselves at the funeral of their lord."

There is one point of difference between the Buddhist and Druidical religion worth naming, since it is a striking example of the slow development of the mind among the European races and its precociousness among the Asiatic. Cæsar says that the illiterate Druids were driven to the necessity of getting the mysteries of their religion by heart, whereas the Buddhists of all ages—and Buddhism is five-and-twenty centuries old—have had them recorded in writing. Cæsar says that the Druids committed the mysteries of their religion to memory in order to hide them from the vulgar, and to exercise the memory of their pupils; and he considers these reasons the more satisfactory since in all other matters they use the Greek characters—a hint from which we learn the first introduction of letters in Gaul. The religious writings of the Buddhists are, no doubt, in writing; but then the character is obsolete and the language a dead tongue, so that the mysteries are much veiled from the vulgar, as if, like the Druidical religion, they were confined to the breasts of the priesthood. The Gauls, no doubt, employed the Greek letters, but it was for writing their own tongue, and had they buried their mysteries in the Greek language they would have been as safe from vulgar knowledge as are the mysteries of Buddhism in the Pali alphabet and language. The doctrines of our own religion are sufficiently veiled from the public gaze when they are written in a dead language, although that language be not, as in the case of the Pali, that in which they were originally written.

It is hardly necessary to add that the resemblances between the Buddhist and Druidical religions are purely accidental, and neither by historical nor linguistic evidence can any filiation be proved to exist between them. The Buddhist religion had its origin in the centre of the valley of the Ganges, about 400 years before Cæsar's arrival in Gaul or Britain, and we know of no possible means by which it could, in that time, have reached Gaul or Britain, and Cæsar expressly tells us that Druidism had

no existence in Germany, or, in other words, that it was limited to those two countries.

From Cæsar's account we gather that the Britons had made less progress in the art of war than the Gauls. They never encountered him with such large organised armies as did the Helvetians, a Celtic, and the Nervii, a Belgian people. "They never," says he, "fight in a body, but in small parties, at considerable intervals from each other." Their most remarkable arm consisted of chariots, the feeble flying artillery of antiquity; and his account of the skill which they exhibited in their management in action tempts us to the belief that there must be some amount of exaggeration in it. "Thus, in action," says he, "they perform the part both of nimble horsemen and stable infantry, and by continual exercise and use have arrived at such expertness, that in the most steep and difficult places they can stop their horses at a full speed, turn them which way they please, run along the pole, rest on the harness, and throw themselves back into their chariots with incredible dexterity."

Such feats as are here described might indeed be possible on the smooth and gently rounded downs of Kent, where the Britons first met the Roman invaders, but in an ordinary rough country they would be altogether impracticable. The Roman soldiers, Cæsar tells us, were "astonished and confounded at this new mode of fighting," but they seem soon to have recovered from their fears, and to have treated the chariots of the Britons with the same contempt that their forefathers had treated the elephants of Pyrrhus. A small body of Gallic horse, which by good fortune Cæsar had brought over, quickly dispersed the British chariots which had made themselves troublesome to the heavy-armed legionaries. In the battle which Agricola, 140 years after Cæsar's invasion, fought with the Caledonians at the foot of the Grampians, chariots were still used, and the wild disorder produced in the ranks of Galgalus was a main cause of the loss of the battle of a brave chieftain, to whom the Roman historian ascribes a speech which no Caledonian of our time, not even Lord Macaulay, could speak or even write.

As to the chariots armed with scythes, this was, no doubt, the invention of some less authentic writer than Cæsar, who makes no mention of them, nor indeed are they at all likely to have existed among a people with whom iron was so scarce that it was used in the shape of rings as money. War chariots, like war elephants, must always prove more dangerous to those who employ them than to their enemy. In the early history of most nations they seem to have been had recourse to, as in the example of the Egyptians, Jews, and Persians, but in time they have been abandoned, on an experience of their danger or in-

utility. The Gauls who had once used them must have left them off in Cæsar's time, or his soldiers would not have been alarmed by them when they saw them in Britain.

The conclusion to which we must, I think, come from the perusal of Cæsar's account of such of the Britons as he saw is, that although they were certainly barbarians, they were very far from being savages. They were in possession of nearly all the domestic animals known to the Greeks, Romans, and Egyptians. They possessed the art of making malleable iron, and they mixed, smelted, and exported tin. They had a fixed money, although a very rude one. In war they had an infantry, a cavalry, and chariots. There can be no doubt but that they possessed the art of manufacturing pottery, and I think it most probable that they had the art of weaving their wool into a coarse fabric, and perhaps of dyeing this fabric with woad. We may, then, safely pronounce our forefathers to have been a more advanced people than were the Mexicans and Peruvians, when first seen by Europeans, 1,600 years after the time of Cæsar. They encoutered the first invader of their country with far more courage and even military prowess than did the Mexicans, the Spaniards, or than did even the Hindus, the Greeks and Macedonians of Alexander, but these last results were more an affair of race than of civilisation. Such were the Britons whom Cæsar saw, and assuredly he saw no savages, although such may have existed in some remote and mountainous parts of the island.

XX.

Note on Italian Celts. By HODDER M. WESTROPP, Esq.

[*Read June 26th*, 1866.]

BRONZE celts, bearing a great analogy in form to those found in Denmark and in Ireland, have been found in the south of Italy, in Etruria, and near Rome. They cannot, however, be considered to be of very remote antiquity, as they have been discovered in the ruins of Pompeii. Among the objects disinterred in the excavations at Pompeii, and presented by the King of Naples to the Museum of Turin, is a flat bronze celt. If this was in use at the period of the destruction of that city, it cannot argue a very high antiquity for the celt. The bronze celts in the Museum at Naples have been, for the most part, found at Pæstum. A peculiarity is observable in the celts of the south of Italy, not found in other celts. There is a small hole at one end, nearly large enough to admit of a small cord passing through. In the opinion of Signor Ceci, the curator of the Museum at Naples, these celts were used by gladiators, who flung them at their adversaries, and then drew them back by the cord passed through the small hole. As a proof of this view, he mentioned a painting discovered in a tomb at Pæstum, which represented a gladiator with a number of these celts in a belt round his waist. In the work containing the figured illustrations of these celts, published in the *Piccoli Bronzi* of the Museum at Naples, they are described as, "Haches qu'on lançait dans les combats, et que l'on retirait avec une corde."

Five of the bronze celts exhibited are from the south of Italy; the sixth, with circlets, was found in a tomb near Perugia, and is, consequently, Etruscan. A few of the bronze celts, called palstaves, have been found near Rome; but they are exceedingly rare. Some may be seen in the Museum of the Collegio Romano, at Rome.

XXI.—*On some Remarkable Archæological Discoveries in Ireland.* By EUGENE ALFRED CONWELL, Esq.

[*Read June 26th*, 1866.]

ON the 26th of February last, Eugene Alfred Conwell, Esq., of Trim, Co. Meath, Inspector of National Schools under the Commissioners of National Education in Ireland, a Member of the Royal Irish Academy, British Association, and several other learned societies, read a paper before the Royal Irish Academy, in Dublin, on his recent examination of the sepulchral cairns on the Loughcrew hills, County of Meath, Ireland, which embraced a minute account of thirty-one partially destroyed cairns, extending along a range of hills, two miles in extent, overlooking the beautiful demesne of Loughcrew, and about two miles distant from the town of Oldcastle.

These ancient sepulchral remains, which had hitherto escaped all previous observation and description, are said to surpass in point of magnificence, number, and quaint ornamentation, anything of the kind yet discovered in Western Europe. Mr. Conwell acknowledged the debt of gratitude which British archæologists owe to J. L. W. Naper, Esq., D. L., Loughcrew, the lord of the soil, and to his agent, Charles W. Hamilton, Esq., J.P., for the indispensable aid which they supplied in labour during his researches, and for the interest and zeal which they evinced in the careful exploration of the place. The internal arrangement of the chambers is, for the most part, cruciform, the shaft representing the entrance passage, and the termination of the arms, the small cists, from four to five feet square, arranged round the central chamber, roofed by large overlapping flags, and the whole being surmounted by a pyramid of dry loose stones. The three largest cairns were surrounded, at a few yards distance, by others of smaller dimensions; and in the larger ones the slabs, measuring from six to twelve feet long, which formed the periphery of the base of each cairn, were found to converge inwards towards a point indicating the mouth or entrance of the passage, which generally pointed in the direction of east, or a few degrees north or south of east.

The most common style of sculpturing on the inscribed chamber-stones was punched work, executed by a metallic tool; but there are also examples of chiselled work and scraped work. Though the carved stones exceed one hundred in number, there are not two the decorations on which are similar. On the

stones which have been long exposed to the destructive effects of the atmosphere, the punched or other work is often much obliterated; but on those lately exposed the work of the tool is almost as fresh and as distinct as at the period of its execution.

At what remote, or even recent, period these ancient tombs have been subjected to demolition, it would be difficult to determine. Mr. Conwell, however, has heard from old men who were engaged at the work of exploration, that they recollected, before quarries were generally opened in the country, that persons were in the habit of coming from twenty to thirty miles round about, to procure from these archaic structures slabs suitable for domestic or other purposes. Of what now remains, deprived of most of the roofing-flags, the inscriptions on the sculptured chamber-stones in thirteen cairns in the entire range may be thus summarised: —406 single cup like hollows, some arranged in parallel lines, some in circles, and many of them scattered in groups; 86 cups, each surrounded by a single circle; 30, by two circles; 17, by three circles; 4, by four circles; 3, by five circles; 4 cup-hollows, each surrounded by a spiral; 35 star-shaped figures, varying from four to thirteen rays in each; 22 circles, with rays emanating from each; 14 cups, each surrounded by a circle, with rays emanating from it; 16 single ovals; 1 figure of two concentric ovals; 1 of six; 114 single circles; 32 figures of two concentric circles; 10 of three; 6 of four; 4 of five; 1 of six; 68 semi-elliptical, or arched figures; 12 spirals; 14 quadrilateral figures; 6 triangular figures, formed by cross-hatched lines; 54 reticulated figures, consisting, in all, of 138 diamonds; nearly 300 single straight lines, some of which may probably be oghamic; upwards of 80 zig-zag, or chevron lines; 10 single curves; 11 figures of two concentric curves; 10 of three; 8 of four; 4 of five: 4 of six; 20 of seven; 1 of eight; 1 of nine; and 2 of thirteen concentric curves. In all, so far as the explorations have gone, Mr. Conwell has laid bare 1393 separate devices, which will be found to be many times more than had been previously supposed to exist in Ireland; and these chiefly in the sepulchral chambers at Dowth, Knowth, and New Grange.

Some remarkable stone basins, or urns, have been found. One oval one is deserving of especial notice, being probably the largest yet discovered in a cairn, and almost double the size of the much celebrated ones at New Grange. It has been tooled or picked with exquisite care, and a raised rim, varying from two to four inches in width, runs all round the otherwise perfectly level surface of the stone. The broader end points to the east, the narrower to the west. Its greatest length is 5 feet 9 inches. At a distance of 18 inches from the narrower extremity it is 3 feet 1 inch broad, and at 18 inches from the other extremity

it is 7 inches broader, having on its southern side a curve of about 4 inches in breadth, scooped out of the side of the stone.

The following is a summary of the principal articles found:—A bead and pendant of stone; portions of a necklace; several perfectly round stone balls, of various colours, measuring from half an inch to three inches in diameter, some still preserving their original polish; a finely-polished oval ornament of jet, an inch and a quarter in length, and three quarters of an inch thick; a white flint arrow-head, and a dozen of flint flakes; upwards of 100 white sea-pebbles, and 60 others of different shades of colour. Of sea-shells, 155 were in a tolerably perfect state of preservation, and 110 others in a partially broken state.

Seven specimens of iron were found—viz., an open ring, half an inch in diameter; one-half of another, somewhat larger; two pieces, each about an inch long, and a quarter of an inch thick, of uncertain use; one thin piece, three quarters of an inch long, and half an inch broad, probably a portion of a knife or of a saw; one piece, an inch and a half long, presenting all the appearance of being the leg of a compass; and, lastly, an iron punch, or pick, five inches long, with chisel-shaped point. A compass must have been, and indeed was, used for the very fine and high style of art exhibited in the ornamentation of the bone-flakes, while a metallic pick was evidently the tool used in the execution of the comparatively rude and barbaric sculpturings on the carved chamber-stones.

Of bronze were found an ornamented pin, two and a half inches long, still preserving a beautiful green polish; six open rings, varying from a quarter to three quarters of an inch in diameter; a portion of another, which is hollow, and formed by the overlapping of a thin plate of bronze; and portions of eight other small rings in a less perfect state.

Of glass were obtained three small beads, of different shapes, and various shades of colour; two fragments of coloured glass; a curious molten drop, an inch long, trumpet-shaped at one end, and tapering towards the other extremity.

Seven small beads of amber were collected, the largest scarcely a quarter of an inch in diameter; and another small oblong bead of uncertain material.

Of rude pottery were found upwards of 170 portions of broken urns, the fragments varying in size from one to thirty square inches, very imperfectly fired, but much blackened, particularly on the inside surface and round the lip. Some slightly-raised ridges are the only attempts at ornamentation on any of them; and two pieces contain holes for suspension—probably the first specimens of urns of this class yet discovered in ancient interments in Ireland.

A most singular and unique collection of worked bone implements has been here, for the first time, brought to light. Mr. Conwell has collected and deposited in the Museum of the Royal Irish Academy 4071 fragments of plain worked bone implements; 108 others, nearly perfect, and closely resembling in shape the first knives of Scandinavia; 60 fragments, in which the bony substance is little decomposed, and still retains the original polish; 27 fragments, which appear to have been stained; 11 others, plain, and perforated for suspension, by a single hole near the end; 503 fragments, ornamented with rows of fine transverse and parallel lines; 91 bone implements, engraved, principally with a compass, and in a very high order of art, with circles, curves, and punctured ornamentations, twelve of which are decorated on both sides, and on one, in cross-hatch lines, is the representation of a stag, being the only attempt in the collection to depict any living thing; 13 combs, seven of which are engraved on both sides, the heads only remaining, and a small portion of the teeth. In all, Mr. Conwell has collected of these worked bone flakes the large number of 4884!

The collection also includes several bone pins, one ornamented, and still retaining a metallic rivet for holding on a head; and a bone dagger, seven inches long, and nearly an inch broad, but of very rude workmanship.

Of human remains there were found several dozen of human teeth, in a good state of preservation; 6 portions of human jaws, with the teeth still remaining; 48 portions of human skulls, but not one entire; several limb-bones and shoulder-blades; upwards of 2000 fragments of human bones, nearly all charred, and found intermixed with pieces of charcoal.

Mr. Conwell has not yet completed his researches on the Loughcrew hills; but, so far as he has gone, archæologists may well consider it "a virgin find;" and it is certainly one of the most startling and comprehensive made by any antiquary of modern times.

Not having had sufficient time at his disposal to devote to the *rubbing* of so many inscribed stones as he has here, for the first time, brought to light, Mr. Conwell urged upon his friend, G. V. Du Noyer, Esq., M.R.I.A., an eminent antiquarian Irish artist, to make *drawings* of the various hieroglyphics they contained; and these admirably-executed sketches were exhibited by Mr. Du Noyer on the occasion.

XXII.—*On the Flint Implements recently discovered at Pressigny-le-Grand.* By Professor STEENSTRUP and Sir JOHN LUBBOCK, Bart.

[*Read June 26th*, 1866.]

PRESSIGNY-LE-GRAND, a small French town, hitherto but little known out of its immediate neighbourhood, has suddenly been rendered famous by a discovery of flint implements in unparalleled abundance, and presenting some remarkable peculiarities. Dr. Leveillé, whose kindness and hospitality we must not omit to acknowledge, felt, like many others, deep interest in the progress which had been recently made in the study of pre-historic archæology. Affording one more illustration that men seldom see what they do not look for, he had not until then observed any flint implements in his own neighbourhood; but he now began to search for them, and found, to his astonishment, that his own fields contained them in an abundance of which we have hitherto known no example. We do not propose here to give a detailed account of their exact distribution. It will be sufficient to say that, although they extend over a wide area, they are extremely local. The country round Pressigny is tolerably flat, but it is intersected by numerous small valleys, which either are or have been occupied, and no doubt excavated, by running water. On the sunny slopes of these valleys, near the water, or at least the water-courses, the flint implements are generally found. They occur in abundance only where the blocks of flint are, or were, numerous; and the areas occupied by them have often very well-defined boundaries. In one case we found them in abundance on one side of a little valley, while on the other side of the water-course, which was dry, and not more than a few yards in width, not one was to be seen.

Thus, then, when the facts shall have been thoroughly observed, we shall be able to map out with considerable exactitude the boundaries of the villages or manufactories of the men by whom these flint implements were made.

Another remarkable fact is that, although the same types of flint implements occur throughout, still the different localities vary a good deal in the character of the assemblage which they present.

Thus, as has been already remarked by M. Brouillet, the "livres de beurre" and large nuclei, which are so common at La Claisière

and Goujons, are almost entirely wanting at Vendeuvre; while the manufactories of Nassé and La Pinaudière are principally characterised by lance-heads and hatchets.

One cause, at least, of the extreme abundance of worked flint in the neighbourhood of Pressigny may probably be found in the nature of the flint, which is peculiar, being of a dark yellow colour, and of an uniform, though coarse, texture. It occurs, moreover, in great tabular masses, many of which may still be seen strewn on the surface of the ground.

We found at Pressigny no arrow-heads, nor are there any fragments of bones or of pottery.

The flint implements found at Pressigny may be classified as follows:—

Firstly. Polished stone hatchets, which are not rare in the neighbourhood of Pressigny; but it must not, we think, be concluded too positively that they belong to the same period as the other flint implements. In the first place, because they do not appear to be more abundant at Pressigny than they are in other parts of France, where they have been sought for with equal perseverance; and, secondly, because in many cases they have been brought from a distance, and not manufactured on the spot. This is evident because they are not made of the peculiar yellow flint so characteristic of the Pressigny implements. Further observations, however, will be required before we shall be disposed to express any decided opinion as to the relative antiquity of the polished flint hatchets and the other implements, to which the interest of the spot is principally due.

Rude flint implements of the Palæolithic types have also been found in the neighbourhood of Pressigny. Five or six were discovered by M. Le Breton, several are in the collection of Dr. Leveillé, and we ourselves found four during our late visit. Those in the collection of Dr. Leveillé, as well as those found by us, were picked up on the surface; but those belonging to M. Le Breton appear to have been found *in situ*, and an account of their discovery has been read before the Geological Society of France, by M. Louis Lartet. These rude hatchets are made of the Pressigny flint. The oval type is that which predominates.

Thirdly, flint flakes; fourthly, scrapers; fifthly, awls; sixthly, hammers. These are of the usual forms, and require no special description.

But the most curious and characteristic implements of Pressigny are the "livres de beurre."

These "livres de beurre" are large blocks of flint from eight to thirteen inches in length, shaped more or less like a boat, with a broad butt at one end, tapering gradually to the other. The form has been obtained by a succession of lateral chips, at right

angles to the longer axis, while generally one or more longitudinal flakes have also been removed.

At first sight they certainly suggest the idea that they are early stages in the manufacture of large axes or some similar instruments, and from their form it has even been suggested that they may have been intended to serve as plough shares. On comparison of a large number, however, and we have had the opportunity of many hundreds, it will be observed that we never meet with any specimens in a more advanced state of manufacture, as would certainly have been the case if this hypothesis was correct. Again, some of them have an original depression in the flint, very greatly reducing the thickness. This would weaken them so greatly as to render such specimens useless for implements; flints of such a form would certainly therefore not have been selected, if strength had been any object. On the other hand, such irregularities would be no disadvantage if the "livres de beurre" were, as has been suggested, nuclei prepared with some degree of care in order to give long and regular flakes. We incline then to this theory. Any one who has attempted to make a flint flake will know that it is no easy matter to do so. Long flint flakes were much in demand during the stone age for the manufacture of spear heads, etc., and these "livres de beurre" appear to have been the blocks or nuclei from which they were obtained.

In order to ascertain the greatest depth at which these "livres de beurre" and the worked flints associated with them occur, we caused to be dug in one of the fields belonging to the farm known as La Claisière, a hole about four feet square. The surface of the ground in this field is literally strewn, as has been already mentioned, with flint implements and chippings. They extend to a depth of about eighteen inches, below which they cease suddenly and altogether. Below this depth we found no flints of the characteristic yellow colour, either worked or unworked. The soil also was of a different hue, and the flints contained in it bore no resemblance to those occurring nearer the surface. In the lower part of the layer containing the worked flints we found also numerous fragments of charcoal. During the night before this visit to La Claisière, and also on the day itself, it fortunately rained very heavily, and one of the ditches at the side of the field was, in consequence, excavated to a greater depth than usual. Here, therefore, we could see, along a line of about a hundred yards, that the flint chips, etc., did not extend to a depth of more than eighteen inches below the surface. It may be said, therefore, that they do not reach to a greater depth than that which is turned up for agricultural processes; for although it is true that the plough does not reach so deep, still it is usual,

when the land is first brought into cultivation, to turn it over to a somewhat greater depth than that which is afterwards considered necessary. We ascertained, by inquiry, that this had actually been the case at La Claisière.

M. Decaisne, the President of the French Academy, has expressed his opinion that the Pressigny worked flints are merely the remains of a manufactory of gun-flints. This hypothesis has as yet but one other supporter, M. Robert, and deserves the attention which it has received only on account of the high position occupied by M. Decaisne. The arguments against it, brought forward by M. Leveillé, M. l'Abbé Bourgeois, M. Penguilly l'Haridon, and M. de Mortillet, appear to be quite satisfactory. According to M. Penguilly l'Haridon, flints were first adapted to the muskets used by the French army in the year 1700, and the regular gun-flints were not introduced until some years afterwards (1719). Although gun-flints are apparently so simple, still there are comparatively few places where flint is found of a texture so homogeneous as to enable the manufacture of them to be carried on economically. There is no reason to suppose that the Pressigny flint, or any resembling it, was ever used in France for gun-flints.

For these reasons, and as the whole history of the manufacture extends back for only a century and a half, we know perfectly well the different localities from which the supplies of gun-flints have been derived. There are only four, and Pressigny is not one of them. There is no tradition in the neighbourhood that gun-flints were ever made there; and Dr. Leveillé has kindly favoured us with the following communication: "M. Malardici, Notaire au Grand Pressigny, ancien président de la chambre des notaires de l'arrondissement de Loches, a lu tous les régistres de l'état civil du canton du Grand Pressigny, et une partie des minutes anciennes de ses confrères dans l'arrondissement. Il n'a jamais trouvé sur les régistres de l'état civil aucunes personnes prenant le titre de tailleurs de pierres à fusil, ni dans les actes passés à son étude par ses prédecesseurs, ni dans les minutes de ses confrères. J'ai les titres de partages qui ont eu lieu entre les anciens propriétaires de Moizay, et de la Doucetterie, depuis dix huit cent vingt. Ces villages faisaient bien anciennement vingt familles. Je n'ai vu sur les titres personne ne prendre la profession de tailleur de pierre à fusil."

M. de Mortillet also states that worked flints occur in buildings which are at least from three to four hundred years old. We fully accept this statement, though we did not actually verify it ourselves. We certainly observed in one case a nucleus built into the wall of a cottage; but although the proprietor assured us that it was of considerable age, we were not able to obtain

any conclusive information on this point. We regretted this the less, as we made another observation, even more conclusive. In one of the fields near la Claisière stands a fine oak (chêne noir), which, at about three feet from the ground, measured 3 metres 12 cents. in diameter.

In a forest near Blois we met with many felled oaks, and had a good opportunity of ascertaining the average diameter of the annual rings. A diameter of 44 cents. gave 130 rings, 45 cents. gave 140 rings, 48 cents. gave 150 rings; and a stem of 1 metre 12 cents. would indicate an age of AT LEAST four to five hundred years.*

It appeared to us, therefore, that an excavation at the foot of this tree would conclusively settle the question whether the flint-flakes, etc., were really the *debris* from a manufactory of gun-flints. They were so numerous all round that, if really older than the tree, and unless the tree had been planted with unusual care, we were sure to find flint-flakes underneath it; which, on the other hand, would clearly be impossible if they were so recent as was supposed by M. Decaisne. We, therefore, dug close to the base of the tree, and found several worked flints, in some cases directly under the bole of the tree, and firmly attached to the wood itself.

This observation appears to set the question entirely at rest; but there are other facts almost equally conclusive. Even M. Decaisne will hardly pretend that the scrapers, awls, and well-worked flint-flakes can have any connection with the manufacture of gun-flints; nor do the "livres de beurre" themselves, and the larger flint-flakes, resemble in any way the true *débris* of a gun-flint manufactory. This has been already pointed out, both by M. de Mortillet, by M. l'Abbé Bourgeois, and Mr. John Evans; but, in order to satisfy ourselves more completely, we visited the village of Meunes, where, and where only, I believe, in France, the manufacture of gun-flints still continues on a scale of some magnitude. The nuclei resulting from this manufacture are small and irregular in form, as may be seen from the specimens which we have the honour of exhibiting to the section. No doubt, a certain number of the smaller and simpler flakes will present a great similarity; but there is nothing whatever to be found among the refuse at Meunes in the least resembling the "livres de beurre," the large flakes, and other well-worked objects which occur so abundantly at Pressigny. Under these circumstances, I think we may conclude, without hesitation, that the worked flints have not any connection with the

* Dr. Hooker informs me that though there is much variation, still this calculation is on the safe side.

manufacture of gun-flints. The hypothesis, indeed, would not have deserved to be treated seriously, but for the high authority of M. Decaisne, although it is the more surprising that he should have adopted so singular a theory without having any sufficient reasons for doing so.

But if it be easy to satisfy oneself that the "livres de beurre," and the other implements associated with them, do not belong to the gun period, it is more difficult to say to what age they really appertain. There are not, as yet, any sufficient grounds for attributing them to the age of the extinct mammalia: the "livres de beurre" have not yet been found in the drift-beds, either at Pressigny itself or elsewhere.

Nor do we feel disposed to refer them to that period at the close of the Stone Age, when the use of polished stone implements appears to have attained its greatest development. It is true, that a certain number of polished implements, and even of polishing-blocks have been found in the neighbourhood. Of the latter, indeed, the collection of Dr. Leveillé contains one very magnificent specimen. It has been, however, already mentioned that polished flint implements do not appear to be more numerous at Pressigny than in many other parts of France, and that, in very many cases, those found there have been brought from a distance. From these considerations, and from the entire absence of pottery, we are disposed to think—although we would on this point speak with much hesitation—that the characteristic flint implements of Pressigny will not be found to belong to the latest part of the Stone Age. The same reasons, as well as the entire absence of metal, render it, in our opinion, improbable that they belong either to the Bronze or to the Iron Age. The nearest analogues of the "livres de beurre" yet known to us appear to be some of the larger flint blocks found in the peat-bogs and coast-finds of Denmark. And if we are to attribute much weight to the entire absence of pottery, it would seem, in the present state of our knowledge, perhaps more probable that the flint-finds of Pressigny belong to the period illustrated by some of the Danish peat mosses, and of the Dordogne caves, so admirably studied by M. Lartet, and our much-lamented friend, Mr. Christy. If, however, the Pressigny flint-finds belong, indeed, to any part of the Stone Age, then we think that they suggest certain considerations which are devoid neither of interest nor importance.

One of us has endeavoured in a recent work, to show, by the analogy of existing times, that the men of the Stone Age may very probably have attained to a certain degree of civilisation. It is evident that Pressigny was the seat of a very large manufactory of flint implements, which were intended for exportation, which were, we know, actually exported, and which have been

found at very considerable distances. It remains to be ascertained whether they were made by some resident tribe, or whether, like the pipestone quarries of North America, Pressigny was visited from time to time by distant tribes, when they were in want of new flint implements. The former hypothesis seems to us the most probable—firstly, on account of the similarity of type which characterises the "livres de beurre;" and, secondly, because, as far as we are aware, the implements made of Pressigny flint, and found at a distance, are all of good workmanship.

The large number of flint implements found in the Valley of the Somme has excited much surprise. It is quite possible that here also we may have another place of manufacture, resembling, though on a much smaller scale, those of Pressigny. A discovery recently made by M. l'Abbé Bourgeois, if it shall be confirmed by subsequent observations, also tends to raise our ideas as to the degree of civilisation attained by our ancestors in Palæolithic times. In the drift-gravel at Vendôme, near Blois, he has discovered, not only scrapers, flakes, saws, (?) lance-heads, (?) arrow-heads, (?) etc., of the ordinary magnitude, but also a very large number "de très petits instruments qui semblent n'être qu'une imitation, pour ainsi dire, microscopique, des instruments d'une volume ordinaire."

Similar objects are common among the Esquimaux, by whom they are, or rather were, placed in considerable numbers in the tombs. Here, again, we find illustrations and analogies of our oldest known predecessors in Europe rather in the far North than in the sunnier regions of the East. And what strikes us as being of great interest is the fact that, if these observations shall be confirmed by others, and if the deductions drawn from them are correct, we thus find, in the workshops of Pressigny, in the works of art of the Dordogne, and in the emblematical miniatures of Vendôme, evidence that the inhabitants of Western Europe, even in the Stone Age, possessed some, at least, of the rudiments of civilisation—namely, manufactures showing considerable skill, and by no means on a small scale, and a certain appreciation of art.

XXIII.—*The Races of the Nile Basin.* By Sir Samuel White Baker.

Read July 10th, 1866.

That great historian, general, and legislator, Moses, first cradled on the river Nile, gave us the book that describes the world's creation and the origin of man: that first man, Adam, created 4004 B.C., 5870 years before the present day. We are thus bound to accept as *historical* fact, that all the varying and conflicting types of the human race spread over a surface of the world at that time utterly unknown (and even now not completely known), originated in one man, Adam; and in the comparatively short space of 5870 years the human race that commenced with a unit has entirely lost its individuality, and has divided into numerous and distinct types or familes, differing in language, colour, and in physical conformation.

As the account of the Creation was written by Moses, and he "was learned in all the wisdom of the Egyptians," that account is peculiarly interesting, as emanating from one brought up in the land of Egypt, which was at that period the centre of civilisation and learning..... It is not my province on the present occasion to inquire into the difference between the Mosaical period allotted as the origin of the human race, and the far greater antiquity claimed by the Egyptian priests; we have merely to examine the inhabitants of the Nile Basin, and to show how much was actually known to the wisdom of the Egyptians, and how many tribes were positively and utterly unknown at the time when the history of the Creation was recorded.

The Egyptians at the mouth of the Nile Basin depended entirely upon the Nile, but they vainly sought its source; that source was buried in obscurity; in regions so distant that every speculation upon the mysterious origin of the river was a fable. Thus, combined with the complete ignorance of those secluded lands that shrouded the Nile sources, was also the ignorance of all that related to those lands; of the plants that throve in those fertile regions far beyond the barren deserts of Egypt; of the animals that wandered over those grassy plains; and of those races of *man* that, hidden and unknown, occupied Equatorial Africa at the sources of the Nile.

The Basin of the Nile extends from the 3° south lat. to 32° north. The drainage to the Nile is included between long. E. 22° and 39°, and lat. 3° south to 18° north. This enormous area of

about 1,285,000 square geographical miles, is inhabited by many races; some who have migrated from the east coast of the Red Sea (the Arabs), others who have settled by conquest, and those towards the southern limit of the Basin who form the original inhabitants of the country. The Egyptians and the tribes of the Lower Nile I omit from my description, and I shall merely notice those races occupying the Nile Basin south of the 18° north latitude.

The Arab tribes of Nubia include the Bishareen, Haddendowa, Hallonga, Ialeen, Shookarēya, Dabaina, Kunāna, Hamrān, and some others. All of these tribes are nomadic, wandering with their flocks to various localities at particular seasons according to their necessities for pasturage. Arabic is the language common to all except the Haddendowa and Hallonga; these tribes speak a language perfectly distinct from Arabic, it is therefore probable that they are the original tribes of the Nubian desert prior to the settlement of Arabs who crossed the Red Sea.

There is no distinguishing feature among these Arab tribes that would suggest a separate type; each tribe has a peculiar fashion for dressing the hair, beyond which there is no difference either in appearance or dress. All are Mahommedans, which religion extends to about the 15° north latitude. They are ruled by sheiks, all of whom are responsible to the Egyptian government for the tribute due by their tribe. Their wealth consists exclusively of camels, cattle, and goats, which are pastured in the small valleys where rank grass and low mimosas appear at long intervals unexpectedly in the desert. Although their country is the burning wilderness of sand and glowing mountains of bare rock, there is a peculiar interest in residing with these people, as they have never changed. Their manners, customs and appearance remain unaltered, and the present is the picture of the ancient past; the children tend the flocks, and the women go to the well morning and evening with pitchers that have never changed the fashion of several thousand years. By the well-side the traveller may sit at sunset and watch the young girls and women of the tribe arriving at the spring, as the servant of Abraham thus waited for the coming of Rebekah.

Time will not permit me to touch upon the manners and customs of these people; the races of the Nile Basin would require more than a single volume to describe them even partially—the Arabs extending beyond the Blue Nile, the Abyssinians embracing that magnificent country of lofty mountains from which the great Eastern Nile affluents spring, and the black races of Senaar on the south bank of the Blue Nile—those Ethiopians who filled the slave markets of Egypt and Constantinople.

All these races were known to the ancients, including the

tribes and kingdoms on the west bank of the Nile, extending to Kordofan and the territory of Darfur, which, after the conquest of Egypt by the Arabs, became Mahommedan. But there was a limit to the progress of the ancient explorers. Upon the Blue Nile there are Egyptian antiquities, believed to be coeval or anterior to the pyramids of Lower Egypt; but upon the White Nile not a stone marks the site of former settlements; not a ruin remains to attest that once a nation existed, that has passed away; —all is wilderness; not the dreary desert of burning sand that was a barrier to advancing armies, upon which the bones of the Persian troops had bleached, but a still more formidable obstacle of nature had cut off the south from the invader, and from civilisation. Over the deserts parched with the withering simoom the thirsty camel continued on his way, the ship of the desert on a sea of sand; but who or what could penetrate the mysterious White Nile?—that region of marsh and pestilence, that sickly flat, cursed as an infernal Styx!—where in the countless windings of the stream through regions of interminable swamps it was vain to seek a resting-place. As the vast Nubian desert appeared to bear a curse in its parched desolation, the river flowing through a dreary world of sand, so the south bore its watery curse; not a dry spot, morasses, reeds, mosquitos, fevers, an adverse current, to the horizon a stagnant marsh. Not only for a day's journey, neither for a month's, but the marsh appeared to last for ever, and the baffled centurions of Nero returned with the description of the "paludes immensas" that gave birth to the mighty Nile, but through which no man could cleave his way. Not the dreaded deserts of Africa, but the *marsh* was the barrier to an advance from the north; thus that portion of the world ever unknown has been unreckoned in the earth's history.

Strange does it appear that, however unfitted certain localities may be for human existence, there are few portions of the earth that are not tenanted, and although animals and fishes are generally adapted by nature to the localities they inhabit, so man is found without those adaptations, wandering as a savage naked and wild through the miserable solitudes of the White Nile; a human being born to exist in misery where the crocodile, hippopotamus and mosquito are in their paradise, and where man is represented by so abject and low a type that the mind repels the idea that he is of our Adamite race.

In this short paper I must confine myself to a description of those tribes which appear to have been completely shut out from the world's history, barred out, from the earliest ages, from the rest of the world by that mysterious entangled river and interminable marsh, which resisted not only the explorer and invader, but seems to be a barrier to the belief in God; beyond which

miserable swamp there is no belief in a Supreme Being, no creed, and man is a mere brute.

The most northern tribes of the White Nile are the Dinkas, Shillooks, Nuehr, Kytch, Bohr, Aliab, and Shir. A general description will suffice for the whole, excepting the Kytch. Without any exception, they are without a belief in a Supreme Being, neither have they any form of worship or idolatry; nor is the darkness of their minds enlightened by even a ray of superstition. The mind is as stagnant as the morass which forms its puny world.

The men are perfectly naked, apparently not knowing that they are so; the girls, up to the age of about fifteen, are also entirely naked, after which period they wear a slight fringe of a few inches in length. They are physically strong, exceedingly tall, and muscular. They build small circular huts, congregate in villages, and generally cultivate a small amount of grain (*dhurra*) on the drier portions of their land. There is no actual negro type, excepting the woolly hair. The forehead is rather low, the head broad, the back of the skull heavy; but neither is the jaw prominent, nor are the lips extraordinarily full, nor is the nose flattened.

They possess large herds of cattle, which they never kill, contenting themselves with bleeding them periodically, sometimes drinking the blood raw, sometimes boiling it. Milk is their chief diet, invariably mixed with cow's urine. They catch game in pitfalls; spear fish with harpoons, by casting at random; and they are continually at war with neighbouring tribes, owing to razzias upon their herds. They have no laws of marriage, the number of a man's wives depending upon his wealth in cattle, a wife being invariably purchased for her value in cows.

This may be accepted as a general outline of the tribes bordering the White Nile. They are armed with lances, some with bows and arrows, clubs of iron wood; and they are governed by chiefs, none of whom appear to have much control over their subjects. Glass beads, and both copper and iron rings, iron hoes, and lance-heads are the common articles of barter. They work in iron, forming lances, arrow-heads carefully barbed; and they prepare charcoal for smith's work. Their ornaments consist of beads, iron rings, with which the women load their ankles, and strings of rounded pieces of river-shells, wound round their waists and necks.

In some countries, such as the Shir, where no iron ore exists, the arrow-heads are formed of ironwood. The absence of articles and weapons of metal in no way proves their excess of savagedom. Having no metal to work, there are no blacksmiths. The hard wood supplies the want of iron, as the hard stone is used by the New Zealanders, and as flint stones formerly served for arrow-heads.

The Kytch tribe is the exception to all others in abject misery and in the lowest stage of savagedom. They never cultivate, probably owing to the miserable marsh, which would render it impossible. Thus they are dependent upon fishing and trapping for their existence, neither of which appears to be productive, as the natives are a race of skeletons. They wander like storks over the country, searching for lizards, mice, snakes, locusts, and white ants. Hours are spent in digging field-mice from their burrows. The men are of course naked, and their hair is stained red by a thick plaister of cow-dung and wood ashes, the change of colour being the effect of the potash. The women are equally naked as the men, not having even the slight attempt at clothing common among other tribes. Should a man become old, his eldest son occupies the place of his father in the domestic establishment, and succeeds to his parent's wives. Nothing can be lower in the human race than this wretched tribe; there is hardly a remove in advance of the chimpanzee, except in the power of speech.

On the 5° N. latitude the Bari tribe commences. An improvement in the locality is accompanied by a corresponding advance in the tribe. Instead of the desolate marsh inhabited by the miserable Kytch, the country is dry, the morasses have ceased, and park-like grounds, diversified by mountains, entirely change the character of the scene. The Bari tribe is extremely numerous and powerful. The men and women are tall and muscular. The mountains are rich in iron ore, and the natives are celebrated blacksmiths. They smelt the ore, and work most beautiful lance-heads, although they have no other tools than a hard stone for a hammer and an anvil, a cleft stick of green wood serving in lieu of tongs; the fibrous bark of a tree, with hard sand and water, completes the finish, instead of a file.

The Bari are so renowned for the manufacture of spades or hoes (all of which have the exact form of our "ace of spades" upon playing cards), that a considerable traffic is carried on between them and the tribes of the interior, the Bari spade being exchanged for ivory, which is sold to the Arab traders from Egypt for cattle, the latter being plundered from their neighbours.

The soil in the neighbourhood of Gondokoro is poor, and the Baris use manure for their crops. This fact proves a remarkable degree of intelligence among savages, and is a rare exception. The men are like all others, naked, but the women are slightly protected by leather aprons nearly a foot in length; the wives of the chiefs wear aprons of iron mail delicately worked in minute rings. All these people are rich in vast herds of cattle. Their villages are seldom large, but exceedingly numerous and beauti-

fully clean. A circular courtyard of about 100 feet diameter is cemented with clay and cow-dung, and carefully swept several times during the day—this yard is surrounded by a live fence of impenetrable euphorbia; small circular granaries supported upon piles contain their corn and beans, thus protected from the white ants. Their huts are like those of all African tribes, circular, having a low doorway of about two feet high like the entrance to a dog kennel. It is a singular fact that as the circle appears to afford the readiest form for the bird's nest, so all the wild tribes of Africa have adopted this shape for their dwellings; not one tribe that I have met with has sufficiently advanced in architecture to construct a window. I attach considerable importance to this fact, as it proves a tenacious conservatism to old established usages that suggests an extreme antiquity of race. As various birds construct peculiar nests, the shape of each class never varying, and the form of the nest proclaiming the species of the builder, so the dwellings of the various tribes although all circular have their distinguishing peculiarities which never alter. As birds and insects adhere to peculiar forms for their dwellings which must have been the original forms from the time of the creation, so these wild tribes in Central Africa preserve the specific patterns of their savage architecture as unchanged from the beginning as the cell of the wasp and bee.

Leaving the warlike Bari tribe, we find, eighty miles to the east, the powerful tribe of Latooka, totally distinct in feature, language, and customs. Instead of the bows, and barbed and poisoned arrows of the Bari, they are simply armed with the lance and shield. Equally devoid of a belief in a Supreme Being they firmly believe in sorcery and the power of rain-making, which is supposed to belong to the chief. This tribe is far superior to those near the White Nile in intellectual capacity. They cultivate largely, are good hunters, exceedingly brave and warlike, and live in considerable towns containing several thousand houses. Although their huts are circular and the entrances like dog holes, the roofs are totally different to any I have ever met with; these are extremely high, about twenty feet, and at an angle of about 70°, like candle extinguishers. They have an extraordinary custom of exhuming the bodies of those who have died a natural death, and exposing the bones upon the surface at some spot outside the town; while those who have been slain in fight are allowed to remain where they fell. I was quite unable to trace the origin of this custom; at first I imagined that it had some faint connection with a belief in a resurrection, but from a conversation that I had with the chief Commoro, who was a rare exception among savages in acuteness of intellect, I was forced to abandon the idea.

The Latookas had a peculiar head-dress, their own hair being felted and woven during a period of eight or ten years until it assumed the form of a helmet, growing upon the head; this so far completed, was covered with a plating of coloured beads, and ornamented with a crest and peak of polished copper. As the various Arab tribes in Upper Egypt are distinguished by a peculiar fashion in dressing the hair, so are the equatorial tribes of Central Africa; the hair-dressing being an object of superlative vanity. Without any exception in the countries I have visited in Central Africa, the tribes that are entirely distinct from each other are distinguished by a particular head-dress, in all cases accompanied by a totally distinct language; thus, those tribes that simply vary in dialects, wear a similar head-dress, as the Madi and Obbo; but the Bari, Latooka, Madi, Lira, and Unyoro being distinct in language, are equally distinct in head-dress and in the pattern of their huts. This is a curious fact accompanying their conservative principles in architecture; each tribe is entirely different from the other, although occupying a comparatively insignificant area. South-west of Latooka, on a plateau elevated 3,600 feet above the sea, the Obbo and Madi tribes present a sudden variety from the Latookas. Instead of the vast herds of cattle and powerful stockaded towns, they possess smaller herds and less important villages; the huts differing in form although still circular, and the hair of the natives woven into a flat mass like a beaver's tail, stiffened with thongs of raw hide, and turned up behind with a tuft made of ostrich feathers at the extremity.

The features of the Madi are peculiar in the finely-shaped noses, many having a delicately arched bridge; the women are generally good-looking, rather less clad than those of the Latooka and the Bari.

The Madi extend to lat. N. 2° 50′, from that point to lat. 2° 15′ there is a tract of prairie uninhabited, owing to the wars between them and various tribes to the east of the prairie route (the Langgo and the Umiro). Those tribes speak the language of Lira and wear their hair accordingly in a distinct pattern, matted into a felt wig reaching below the shoulder-blades, very similar to that of a Lord Chancellor's, but smeared with a cement of blue clay carefully chased in patterns by the aid of a long thorn.

Upon reaching the western bend of the Nile in N. lat. 2° 15′, a sudden and extraordinary change takes place in the tribe of Unyoro. The river is the boundary of naked savagedom; crossing the ferry to the south bank, we arrive among people differing totally in their appearance and habits from all those we have left to the north; we are startled by our arrival in a kind of semi-civilisation that is the more striking by its sudden contrast with

the wildest savagedom. This country, Unyoro, governed by a king, an unflinching despot, exhibits a degree of order and arrangement unknown to the northern tribes. The entire country is divided into districts separately governed by chiefs appointed by the king, all of whom are responsible for the taxes imposed upon their provinces. Death or torture are the punishments inflicted by the king for the most trivial offences, and the country is ruled by terror to such an extent that the name of Kamrasi is generally connected with a pantomimic action of drawing the finger across the throat.

Nakedness is considered a disgrace, and both men and women are carefully clothed with bark cloth or with beautifully prepared skins as soft as chamois leather, cut into squares, and neatly sewn into mantles. The natives make their own needles, and form their thread of the plantain fibre; they are excellent smiths, using iron hammers instead of the rude implements of stone of the more savage tribes; they draw wire, and construct excellent knives and lances; they work fine braid of plantain fibre; produce very superior pottery, and their agricultural implements are a great improvement upon those of other tribes. They cultivate the ground with extreme care, producing sweet potatoes, plantains, varieties of beans, Indian corn, sesame, dhurra, tullaboon (a variety of grain), and prepare an excellent flour from the fruit of the plantain that I have never met with elsewhere. Tobacco is grown by every tribe and is in general use, each tribe having a pipe of a distinct shape. The natives of Unyoro are exceedingly particular in their arrangements for smoking, using long pipe-sticks, and frequently indulging in double pipes, two bowls being united to a single stem; thus, two qualities of tobacco can be smoked at one time.

The superiority of the Unyoro over all northern tribes is especially exhibited in the form of their huts; these are circular, but very large and lofty, having an entrance of six or seven feet high, with a small portico in front instead of the dog-holes of the Latookas and Madi, etc.

The labour of cultivation is performed by the women. The men are generally tall and good-looking—not so dense a black as the northern tribes—with peculiar exceptions of both men and women, who are merely a dark brown. Kamrasi, the king, is of the latter colour. This fact suggests the idea that a mixture of races may have taken place at this point, especially as the sudden change from nakedness to clothing can hardly be attributed to accident, but would appear to have been a custom introduced from the south, in which direction towards Zanzibar the tribes are more or less clothed. At the same time it should be borne in mind, that the extreme elevation of the country, about 4,000

feet, and corresponding decrease of temperature, may have prompted clothing.

On the borders of the Albert N'yanza, on the west of Unyoro, the inhabitants are perfectly black, as are likewise those on the western shores of the lake in the country of Mallegga. The difference of colour is exceedingly perplexing. Were the colour uniform it might be attributed to some local influence, but the want of uniformity warrants the conclusion of a mixture of races. Where the art of writing is unknown, traditions must be extremely vague; but I gathered sufficient to prove that for many years war had been carried on upon a scale far more extensive than the petty razzias of the northern tribes, and large tracts of country had changed hands, which fact may account for the mixture of races.

Although the country of Unyoro was far in advance of all others of the White Nile in government and civilisation, there was the same moral darkness and ignorance of a Supreme Being. A belief in sorcery—in prognostications of coming events by certain signs detected in the entrails of fowls sacrificed for that purpose, was all that the natives depended upon. Professional witches and wizards were in attendance upon the king, to be referred to on every occasion of importance.

Beyond the country of Unyoro, south of the equator to 3° lat., are the countries of Uganda and Karagwe, visited by Speke and Grant. Those countries have been in communication with Zanzibar by means of the Arab traders from a remote period, from whom the ancients may have obtained a knowledge of the existence of two great lakes, as recorded by Ptolemy, from which sprang the mighty Nile. Beyond this fact all was unknown. All attempts to penetrate Nilotic Africa from the north had failed, while those from the south or east had been limited to the vicinity of the equator. Vague and strange reports had been brought of these strange lands occupied by the "man-eating Ethiopians," coupled with the existence of the two vast lakes which fed the Nile, and wild and exaggerated as those fables sounded, we have proved that they were not altogether fabulous. The lakes so long hidden now have the footprints of Englishmen upon their shores, and no longer mythical and nameless, they represent the reign of Victoria upon the hitherto blank map of Central Africa. The "man-eating Ethiopians" also exist no longer as a fable, but are represented by the Makkarika tribe west of the Albert Lake. These people, again, perplex the ethnologist by their peculiar and independent type. Totally different from all other tribes in language, features, and general appearance, they inhabit the country west of the Nile beyond the Niambara between the 2° and 5° N. lat. They are not positively black, the

men not absolutely naked; their features are pleasing, and their general conduct friendly; nevertheless they are cannibals. Not only do they differ from the adjoining tribes by man-eating, but they have a peculiar propensity for dog-eating. I saw a number of these men last year on my return to Gondokoro, they had arrived as ivory porters with the traders from the interior. I was immensely struck with them as being so entirely different from any tribes either north, south, or east of the Nile. It would be perfectly impossible in the limited notice this evening to give more than a general description of the numerous tribes that inhabit the Basin of the Nile.

In a comprehensive view of the Nile Basin we find that the Abyssinian affluents which have formed the delta of Lower Egypt, (the Atbara and Blue Nile) spring from a land inhabited by a superior race, the only independent Christian country in the whole of that vast continent of Africa; a race far removed from savagedom, where reading and writing are not uncommon among the people, and where the features and form of the inhabitants are closely allied to the European; where the women are not only lovely, but have hearts and warmth of affection equal to those of our own homes; a land that may at some future time become thoroughly civilised. This exalted state of feeling in a country hitherto excluded from general association with the civilised world, is a grateful proof of the humanising influence of Christianity in a position and circumstances where little could be expected. On the other hand, as we view the Great White Nile from its sources and throughout its entire course, it flows through a land of barbarians without a belief in God; where man is a mere animal, and where woman is merely the female of the male brute; woman in sex, without one of those natural virtues that we almost expect as instincts; no feeling of love, no affection for either husband or child. Exceptions exist, but they are few to this distressing rule.

That land of wildest savages cut off from the whole world by a geographical position so distant and so secluded as to be unattainable, appears to stand aloof from the earth's history. Those numerous tribes, all differing in type and language, inhabit a portion of the earth so primitive in geological formation, that no change appears to have taken place since it was originally tenanted by animals and man. Thousands of feet above the ocean, this plateau of equatorial Africa, formed of granitic rocks, has never been submerged; no change, either by water or by volcanic action, seems to have disturbed the original form that this portion of the globe assumed; thus man, if he existed in those regions at that remote beginning, must be the savage man that exists at the present time. As animals and insects preserve the

habits of their species unchanged from the Creation, so these various tribes have preserved the individuality of their savagedom, each with the fashioned hut as shaped by its ancestors, never to be altered until the bee shall change the fashion of its cell.

Every phase in the history of the Adamite creation is linked with a belief in God, but where is the creed of Central Africa? These hitherto unknown races of the Nile Basin have been as obscure as the Nile sources; but as that vast river has poured down its cataracts from the beginning, so the roar of those falls has sounded in the ears of savage tribes upon its borders, and these tribes have never known the name of God; they have never been linked in that chain of evidence that binds us to the belief in an Adamite creation. Are these races the result of that historical creation when God said "let us make man in our own image?" or are they descendants of a family as ancient or of greater antiquity than those whose arrow-heads of flint excavated from the drift are the testimony of the existence of pre-historic man?

I do not presume to lay down a theory, but at the same time it is impossible to witness the barbarous White Nile races which have been entirely excluded from the history of the human race, without reflecting, that, as the Nile sources have been but recently laid down upon the hitherto blank chart of Central Africa, even so the savage races of the Central Nile Basin have now for the first time appeared upon the page of history; thus, both the sources of the river and the races of men being pre-historic, upon what evidence can we claim the co-relationship with the wild savage of the Nile Basin? can we venture to date from one common origin, and claim him as a "man and a brother?"

XXIV.—*On certain Aborigines of the Andaman Islands.* By Colonel ALBERT FYTCHE, Commissioner of the Tenasserim and Martaban Provinces.

[*Read July 10th*, 1866.]

A CHANCE has occurred to me lately of observing three Aborigines of the Andamans, who were captured in the vicinity of Port Blair, some four months ago, in an attempt, together with others of their countrymen, to acquire possession of the working implements of a party of convicts. They were however surrounded by the convicts, who happened to be in considerable numbers at the time, and as many as seven of them were taken prisoners. These were deprived of their arms, and detained for some weeks at Port Blair, when one of them managed to effect his escape, and three others were released from durance. The remaining three who were less advanced in years than the rest of the party, it was deemed advisable to send off by a steamer leaving the settlement for Rangoon, with a view to ascertain whether some knowledge of their language could be acquired, and at the same time to impart to them some idea of the power and resources of their captors.

While in Rangoon, they were lodged for security's sake within the precincts of the jail, under charge of an English sailor, who took them out daily for a walk about the town and suburbs. Though regarded with great curiosity by the Burmese, they did not appear to be at all disconcerted by the notice they occasioned. No progress was however made in acquiring means of communication with them, and it was thought desirable to forward them to Moulmein, from which place they might the more readily be shipped to their own country, should circumstances require it. On their landing at Moulmein from the steamer, they happened to meet, and recognise in the street, an intelligent Burman, who was formerly in the service of Captain Haughton, the present Superintendent of Port Blair, a man who had moreover a passable knowledge of the English language, and who willingly undertook the charge of them upon the terms offered to him.

On the voyage from Rangoon to Moulmein, a friend of mine had a constant opportunity of observing them, and contrived to ingratiate himself into their good favour. Short as had been their introduction into civilised life, they had already acquired a fondness for tobacco, and he states there was no better passport to their good graces than an offer of a cheroot, and it was amusing

to observe how quickly they learned the pocket in which any one kept his cheroots, for they would point to the pocket, and give a gesture by way of hint that they would like to enjoy one. Being thus indulged, they would quite politely offer to take a light from the cigar of any one who happened to be smoking in their vicinity, and in return would offer a light from their cigar when it was needed. They were in high spirits when on board the steamer, evidently supposing that the vessel was destined for their own country. They had picked up the name Port Blair, and could always most readily indicate the exact direction of their own islands, pointing to the position of the sun as their guide; this they intimated by signs that it would be difficult to misunderstand. They were accordingly disappointed when brought ashore at Moulmein, and were at first downhearted when the steamer left without taking them, but apparently recovered their self-possession in the course of a few days. One, however, was ailing from a pulmonary disorder, from which he is still suffering.

Since the arrival of these men at Moulmein I have made an especial study of them, and their reputed similarity to the true African Negro appears to have been greatly exaggerated. The forehead is well formed, and not retreating, neither are the lips coarse and projecting, and the nostrils are by no means broad; the ear is small and well formed, the hair unlike the so-called woolly hair of a Negro, and growing conspicuously in separate detached tufts. They have absolutely no trace of whiskers, beard, or moustache, and have been long enough in captivity for the growth of such were it existent. The hair of the head also shews little disposition to elongate, it continues very short and crisped. The complexion is not a deep black, but rather of a sooty hue; hands and feet small, the latter not exhibiting the projecting heel of the true Negro.

The Andamanese appear to be one of many remnants, still extant, of a race that was formerly very extensively diffused over South-Eastern Asia and its Archipelago, which, for the most part, has been extirpated by races more advanced towards civilisation, being now driven to remote islands, or mountain fastnesses, such as the Andamans, the interior of the great Nicobar (where they are reported to be constantly at warfare with the people of the coast); and within the present century for certain (vide Crawfurd), and probably even now, there are, or were, tribes of them in the mountains of the interior of the Malayan Peninsula, Sumatra, Borneo, and especially the Philippine Islands, where the island of Negros, derives this, its Spanish appellation, from its being inhabited by a blackish race, variously known as the Negrillo, Negrito, or true Papuan. The race has its head-quarters

in the great islands of Papua or New Guinea, where some tribes are found attaining to six feet in stature, whilst others are as diminutive as the Andamanese.

Upon the island-continent of Australia the true Papuan type has never been detected; but it formerly constituted the people of Tasmania, so numerous at the time of Captain Cook's visit, but which race is there now all but extinct, three or four individuals only surviving. The history of the capture of the last remnant of the race inhabiting Tasmania is well known, and their removal to an island in Bass's Straits, where the government provided them with blankets and a certain amount of food; but it is remarkable that they died off fast, and chiefly from pulmonary consumption. The same remark has been made also of the New Zealander, belonging to a very different race of humankind, since the introduction of blankets, and other European clothing amongst them, they having also been subject to pulmonary diseases, which seem to have been previously unknown.

Now it is remarkable of the three Andamanese at present in Moulmein, one is already suffering from a pulmonary affection, and it is desirable that he, at least, should be returned to Port Blair by the first opportunity. The others also appear pining from this cause, and from home sickness; they are not likely to learn much more than they have already learnt should their stay be further protracted. Besides it may not be advisable to overstrain their faculties. They are quite able to appreciate the kindness with which they have been treated, and it is well that they should communicate this to their fellow subjects. It may be finally added, that they have been uniformly tractable and good humoured, and have manifested a marked partiality for children. It is to be regretted that scarcely a word has been gathered of their language, the sounds of which are by no means confused or inarticulate. The reason is, that they persist in imitating every sound that is addressed to them, and it is only when they try to make themselves understood, or in speaking one to another, that an idea of their vocal enunciation can be obtained. Although in the prime of life, they are in fact too old to be taught much; but should any accident happen to throw children of the race under the care of Captain Haughton, there might then be a better opportunity of acquiring means of linguistic communication.

Since the foregoing remarks were committed to paper our Andamanese friends conceived the idea of an escapade, and very nearly carried it into effect. One very boisterous and rainy night, it was discovered at 2 A.M., that they had absconded, and at dawn their foot-prints were traced to a sawpit on the banks of the Moulmein river, near their late place of abode, where it appears

they had collected a few loose planks, with which they had formed a raft, and boldly launched themselves off. A single large yam was the only provision they had taken with them as far as could be learned. Three police boats were sent immediately in pursuit of the fugitives, and at nightfall intelligence was obtained of their having been seen by a Taloing on an islet about twelve miles below Moulmein; on the same night they must have again pushed forward on their raft, which was soon broken up on their arrival in rough water, whereupon they swam ashore, landing at the south-east corner of the Island of Belookwyn, near the entrance of the river. They were there seen by some villagers, who, suspecting them to be runaways, took them to their kyee-dan-gyee, or village elder, by whom they were taken proper care of and forwarded into Moulmein.

On the evening prior to their departure they went to see Major Tickell, to whose charge they were entrusted, and appeared to be in particularly high spirits, patting him and others on the back with the utmost good humour, and talking to each other in (to us) an unintelligible language. When brought before Major Tickell on their return they appeared just as good humoured as ever, quite unabashed and unconscious of having done wrong. They were very hungry when first taken, as might be supposed, and submitted unrepiningly to their destiny, very probably conscious that they had escaped a worse evil.

XXV.—*The West Coast Indians in Vancouver Island.* By GILBERT MALCOLM SPROAT, Esq.

[*Read July 10th*, 1866.]

THE Aborigines of Vancouver Island may be divided into three nations; one including the tribes which speak the Quoquoulth or Fort Rupert language, another including the tribes which speak the Kowitchan or Thongeith, and the third those which speak the Aht language.

The Quoquoulth language prevails in the north and north-east of the island, the Kowitchan in the east and south, and the Aht language in the west coast, between Pacheenah and Nespod (Woody Point). The Kowitchan and Aht languages, or dialects of them, are also spoken on the southern, or American, side of the Strait of Juan de Fuca, and I believe that the Aht language can be traced through all the tribes on the ocean coast as far south as the mouth of the Columbia river. These three supposed aboriginal nations in Vancouver Island are made up of many independent neighbouring tribes, and are almost as distinct as the different nations in Europe. They do not understand one another's language, and their national customs and institutions are in many respects very different. I select for description one set of tribes which inhabit the greater part of the outside coast of the island between Pacheenah and Nespod, and which are called by me the Aht Indians, from the circumstance of all the tribal names ending in that affix. Those people have not been separately described by any former writer, nor does it appear to be known that the different tribes are nationally connected; and, of all published accounts of a great portion of them, those of Cook's and Jewitt's appear to me the best. A general name for this set of tribes was not easily found; the only native term (Mahtmahs) for the entire population, signifying "the peoples," did not specially designate the tribes in question.

Having been placed in a favourable position during the last five years as a magistrate, and a proprietor of the settlement at Alberni in Nitinaht Sound, for observing these almost unknown savages, who, until lately, had no general intercourse with civilised foreigners, I desire to record some portion of the information which I possess respecting them, before the Aht tribes become further changed, or are removed altogether by contact with a superior race.

I would also further state, that I had peculiar opportunities

for observing the effects of civilisation, however carefully carried out, upon the savage; and also, that at last I sufficiently gained the confidence of the Indians to obtain from them a knowledge of their religious opinions and practices—a point on which, I believe, some writers on savage life have been led into error. Their moral and intellectual characteristics have not been, as far as I can judge, to any important degree, moulded by surrounding conditions external to them as a nation—at least in modern days. If I am right in considering these social and moral feelings, religious notions, etc., as ancient national characteristics, the fact affords evidence that men can have remarkable usages, opinions, and beliefs—remarkable, whether or not peculiar or new, in savage life—such as the Aht natives on this coast exhibit, and yet be in a physical condition not much above that of brutes, without even idols, without metals, without domestic animals, and with no knowledge of agriculture; a condition, in fact, similar to the earliest and rudest state of mankind that can be conceived. Having made these general remarks, I will proceed with my more immediately personal narrative.

In August, 1860, I entered Nitinaht, or Barclay, Sound, on the outside coast of Vancouver Island, with two armed schooners, *Woodpecker* and *Meg Merrilies*, manned by about fifty men, who accompanied me for the purpose of taking possession of the district now called Alberni, from the Spanish navigator who first discovered the inlet at the head of the Sound. Having reached the entrance of this inlet, we sailed for twenty miles further up it, as up a natural canal, three quarters of a mile wide and very deep, bordered by rocky mountains which rose high on both sides, almost perpendicular from the water. The view as we advanced up this inlet from the sea was shut in behind and before us, making the prospect like that from a mountain lake.

Near a pretty point at one side of the bay, where there was a beach shaded by young trees, the summer encampment of a large tribe of natives was to be seen. Our arrival caused a stir, and we saw their flambeaux of gumsticks flickering among the trees during the night. The clattering of the cables of the ships was a noise hitherto unheard in that place, and one that might well be remembered by the people, for their land really passed into the unrelaxing English grip as our anchors sank to the bottom.

Sending for their chief in the morning, I explained to him, through an interpreter, that the tribe must move their encampment, as I had bought all the district from the Queen of England. He replied that he was willing to sell the land, so for the sake of peace we paid him what he asked, on condition that the whole village should be removed. He did not keep his engagement, and the Ahts seemed determined to attack us, but dread of our

cannon prevailed, and they did not molest us. They removed to a short distance, and two or three days after I visited the principal house with a native interpreter. "Chief," said I, on entering, "are you well? are your women in health? are your children hearty? and do your people get plenty of fish and fruits?" "Yes," answered an old man, "our families are well, our people have plenty of food, but how long this will last we know not; we see your ships, and hear things that make our hearts grow faint. They say that more King-George men will soon be here, and will take our land, our firewood, our fishing-grounds; that we shall be placed on a little spot, and shall have to do everything according to the fancies of the King-George men."

This was my first introduction to the savages. For some time their movements continued to be very threatening, and we were obliged to keep guard night and day, armed with revolvers, etc. Many rumours reached us of their purpose to attack us, but eventually Governor Douglas was good enough to send H.M. gunboat *Grappler* to our aid, and the arrival of this vessel convinced the natives that the King-George men were in earnest.

Not to detain the reader from the special subject of this paper, I will proceed to describe, as far as limited space permits, some leading features connected with these people, which, for the sake of clearness and brevity, I will arrange under different heads.

To mention first the condition of these people. These Aht tribes are undoubtedly a degraded and wretched portion of the human race, but their manners are peculiar; they have an unusual respect for their women, certain curious ideas of rank and property, and a variety of tribal and intertribal usages not commonly associated in our minds with so primitive a condition as these tribes live in. This condition, in fact, seems to be just that of the people who may be supposed to have existed immediately before the age of the stone and fir-trees; the state of life suggested, if not quite revealed to modern inquirers, by the remains discovered in the Danish shell-mounds. Space does not allow me here to enter upon the subjects of the different archæological epochs and the condition of life they are supposed to indicate; but it appears to me that the wood at command must have been very influential in determining the state of the people; a bone-using age with soft wood, probably, would be in a better condition than a stone or iron-using age with hard woods; and perhaps those savages who have been supposed to have lived in the most wretched form of human existence, were in reality in a condition quite as good as that of the Ahts.

The localities chiefly inhabited by the Aht tribes are the three large Sounds on the west coast of Vancouver Island, called Nitinaht, Klah-oh-quaht, and Nootkah; the two former of which are

native names borne by tribes at those places. In Nitinaht, or Barclay Sound as it is sometimes called, is now the large settlement and port of Alberni; Klah-oh-quaht was the scene of the destruction of the ship *Tonquin*, and massacre of her crew, as related in Irving's *Astoria*, an occurrence which to this day is spoken of among the tribes.

Of the country along the coast a short description will suffice. The whole surface, as far inland as I have penetrated, is rocky and mountainous, and is covered with thick pine forests, without any of the oak-openings that enliven the scenery near Victoria in the southern part of the island. From some of the eminences near Alberni a considerable expanse of country can be seen on a clear day, but the river, looking inland, is not varied, consisting for the most part of narrow valleys and steep hills clad in dark green weather-beaten peaks, with bare stony tops, here and there glimpses of shining lakes or rain-pools, and in the distance snow-covered mountains.

It is not easy to ascertain the exact native population of this district at the present time; but, as far as I know, there are between Pacheenah and Nespod twenty distinct tribes of the Aht nation, numbering together about 1,700 men capable of bearing arms. The largest tribe numbers 400 men; seven other tribes have between 100 and 200 each; the remaining fifteen tribes vary in number from sixty down to as few as five.

No superior position in the political scale of the tribes is assigned to any one tribe, but the Toquahts in Nitinaht or Barclay Sound are generally considered by their neighbours to have been the tribe from which the others sprung. Subdivisions of the tribes occasionally take place by the secession of restless influential individuals.

The external features of all the natives along this coast are much alike, but one acquainted with them can generally distinguish the tribes to which individuals belong. I noticed that the slaves had a meaner appearance than the freemen, and that those few small tribes inland, along lakes and rivers, who live on a mixed diet of fish and flesh, have a finer stature and bearing than the fish-eaters on the coast. Of all the tribes in Vancouver Island, the Klah-oh-quahts, who live on Klah-oh-quaht Sound, probably are as a tribe physically the finest. Individuals may be found in all the tribes who reach a height of five feet eleven inches, and a weight of a hundred and eighty pounds, without much flesh on their bodies. The extreme average height of the men of the Aht nation, ascertained by comparison of a large number, is about five feet six inches, and of the women about five feet and a quarter of an inch. Many of the men have well-shaped forms and limbs; none are corpulent, and very few are

deformed from their birth. The men as a rule are better looking than the women. The latter are by no means enticing even when young, though one meets with some good-looking women, but these in a few years lose their comeliness; they are short-limbed, and have an awkward habit of turning their toes in too much when walking. The men generally have well set, strong frames, and, if they had pluck and skill, could probably hold their own in a grapple with an Englishman. They want heart, however, for a close struggle, and seldom come up after the first knock down. The best place to strike them with the fist is on the throat or on the breast, so as to take away their wind; a blow on the head does them very little harm. Their powers of endurance generally are great. I may here mention their strange custom of altering the natural form of the head by flattening. The Ahts imagine that it improves the appearance, and also gives better health and greater strength to the infant; but they do not regard it as any sign of freedom or high birth.

I could not satisfactorily discover whether the brain is injured by the change in the form of the skull. The natives say that no harm is done; but I have observed, from whatever cause the superiority arises, that several of the tribes of the Aht nation —the Klah-oh-quahts for instance—who do not greatly flatten their heads, are superior to other tribes known to me which flatten their heads excessively. This superiority, however, may, for what I know, be in the race itself. The process is as follows: the infant is laid soon after birth in a small wooden cradle, higher at the head than the foot; a padding is placed on the forehead, and is pressed down with cords, which pass through holes on each side of the trough. These being tightened gradually, the required pressure is obtained, and after a time the front of the skull is flattened. The covering is filled with sand, and sometimes a maple mould is made to fit the forehead. It is said that the process is not painful; but some of the chiidren whom I saw undergoing the compression seemed to breathe slowly, and their faces were pale. It is difficult to discover the origin of this singular custom.

The man's dress now is a blanket; the woman's a strip of cloth, or shift and blanket. Their complexion is unmistakeably a sort of dull brown. They frequently move their encampments for the sake of following the salmon and other fish, but they can hardly be called migratory, as they return to the same encampment again. In removing, they leave the frame-work of the houses standing, and only take down the boarding. The houses of the natives at their winter camping-grounds are large and strongly constructed. I have seen a row of houses along the bank of a stream for a third of a mile, with a varying breadth

inside the buildings of from twenty-five to forty feet, and a height of ten to twelve feet. Cedar is the wood used in making the houses. They are far from making a mean appearance. The following is their method of building. A row of round posts, a foot thick, and ten to twelve feet high, placed twenty feet apart, and slightly hollowed at the top, is driven firmly into the ground to form the frame-work of the house. The posts are connected by strong cross-pieces, over which lengthwise the roof-tree is placed; a stick, sometimes of twenty inches diameter, and eighty or ninety feet long, hewn neatly by the missel adze, and often to be seen blackened by the smoke of several generations. Some of the inside mainposts often have great faces carved on them; these are not idols, but probably rude artistic efforts undertaken without any view to symbolise the notion which the natives have of a higher being, known as Quawteaht. I could not find that the Ahts possessed for religious purposes any idols that could properly so be called.

Heavy timbers cap the sideposts of the house, and across from these to the roof-tree smaller cross-pieces are laid which support the roof. This roof is formed of broad cedar-boards, sometimes seen of five feet in width and two inches thick, overlaid so as to turn off the water. The roof is not quite flat, but has a slight pitch from the back part. The sides of the house are made of the same material as the roof, the boards overlapping and being tied together with twigs between slender upright posts fixed into the ground. The building is now complete, except that the inmates have no place for the reception of goods. To get this, a sort of duplicate building is made by driving into the ground, close to the exterior upright posts, smaller posts shorter by about two feet, from which small trees are laid across to the opposite side of the house, and then lengthwise from one to the other, at right angles to these small trees, slender posts are laid, on which the natives stow all sorts of things; onions, fern roots, mats, packages of roe, dried fish, guns, and hunting and fishing instruments. There is no ceiling, and with the exception of these poles, the interior is open to the roof. For about a foot deep inside the building the earth is hollowed out, and on the outside a strong stockade of split cedar is sometimes erected, about six feet from the walls. The houses of the Ahts are without windows, and the entrances are small, and usually at a corner of some division of the building. The chimney consists of a shifting board in the roof. There is access from division to division of the house. The inside is divided for family occupation into large squares, partitioned for four feet in height; in the middle of each square is a fire on a ring of stones, and round the sides are wooden couches raised nine inches from the ground, and covered with

six or eight soft mats for bedding. A more comfortable bed to rest upon I do not know, and the wooden pillow, nicely fitting the head of the sleeper, and covered with mats, is a good contrivance. The floor is uncovered.

The principal food of the natives is fish; whale, halibut, herring, salmon, anchovy, and shell-fish of various kinds. Their commonest article of food at all times is dried salmon, blubber, preparations of roe, and heads of small fish. Twenty years ago when few trading vessels visited the coast, the Ahts probably were restricted to a diet of fish, wild berries, and roots; but they now use also for food flour, potatoes, rice, and molasses. This change of food, from what I saw of its effect on the tribes with whom I lived, has proved to be very injurious to their health. Geese, ducks, and deer are also used as food, but are not so well liked as fish, and are seldom kept in stock. I give one of their methods of cooking fish—it is to cover the fire with stones, on which water is sprinkled and the fish placed; mats saturated with fresh water being thrown over all. In this way as many as fifty salmon are cooked at once, and no better mode could be desired. Water is the only drink of the natives.

As regards visitors, the Aht Indians have an etiquette by which the manner of receiving guests and visitors is laid down, and all their ceremonies on public occasions are regulated. Extreme formality prevails, and any failure in good manners is noticed. The natives of rank rival one another in politeness. Compared with the manners of English rustics or mechanics the manners of the Aht natives are somewhat dignified.

There are no traces or records of a past people on the west-coast. The only rock-carving which I ever heard of here is on a high rock on the shore of Sproat's lake near Alberni, and of this I possess a drawing; it is rudely done, and apparently not of an old date. There are half-a-dozen figures intended to represent fishes or birds—no one can say which. The natives affirm that Quawteaht made them. The figures resemble the rude paintings which are seen on wooden boards in the native houses, or on the seal-skin buoys that are attached to the whale and halibut harpoons and lances. The Indians do not know, or they will not tell the meaning of the figures, and I daresay if the truth was known, they are nothing but feeble attempts on the part of individual artists, to imitate some visible objects which they had strongly in their mind.

I proceed now to notice the progress of the natives in art and workmanship. Many of their canoes are of the most accurate workmanship and perfect design; so much so that I have heard persons fond of such speculations say that the Indians must have acquired the art of making these beautiful vessels in some earlier

and more civilised state of existence. The native artists in their localities have in the cedar a wood very suitable for their purpose, as it is of large growth, durable, and easily worked. Savages progress so slowly in the arts, that the absence of such a wood as cedar, and the necessity of fashioning canoes with imperfect instruments from hard woods, might make a difference of many centuries in reaching a given point of skill; probably the presence of soft woods enabled very early savage tribes to live in a condition far less desolate than is frequently supposed to have been their lot.

The axe used formerly in felling the largest tree, which they did without the use of fire, was made of elk horn, and was shaped liked a chisel. The natives held it as we use the chisel, and struck the handle with a stone not unlike a dumb-bell, and weighing about two pounds.

The other instruments used in canoe making were the gimlet and hand-adze, both of which, indeed, are now generally used. The hand-adze was a large mussel-shell strapped firmly to a wooden handle. In working with the hand-adze the back of the workman's hand was turned downward, and the blow struck lightly inwards towards the workman's body, whose thumb was pressed into a hollow in the handle made to receive it. The gimlet, made of bird's bone, and having a wooden handle, was not used like ours; the shaft was placed between the workman's open hands brought close together, and moved briskly backwards and forwards, as on hearing good news. The Indians on the Aht coast, if asked as to the implements they used before they learnt the use of iron, always produce old bone instruments and weapons for every purpose. Their own canoes and other work is a sufficient proof of what these bone-workers can do with soft suitable wood to work upon.

During winter many feasts take place. For a great feast a large part of the whole building is cleared, all the dividing planks that separate the families are removed, and a clear space left sometimes fifty feet wide by two hundred in length. Clean mats, or long twists of cedar fibre are laid round the inside of the lodge house. On the entrance of a guest, he is announced by name, and placed in the proper seat, where he finds a bunch of bark strips for wiping his feet. When a popular chief enters he is loudly cheered after the native fashion: that is by striking the walls with the back of the hand, or a piece of stick, in which way the natives also accompany their monotonous songs. The meat is never served till all the invited guests have arrived; meanwhile the cooking goes on in a corner of the house in a manner unknown to Soyer. Hot stones are put by means of wooden tongs into large wooden boxes, containing a small quan-

tity of water. When the water boils, the blubber of the whale, cut into pieces about an inch thick, is thrown into these boxes, and hot stones are added till the food is cooked; the chief's wives at such an entertainment preparing the food, and afterwards wait upon the guests. On everything being ready, the host directs the feast to be served up. Silence while eating is considered a mark of politeness. No knives are used. At these feasts much singing, dancing, and speech-making take place; and one custom especially prevails—distributing to the guests a variety of things, such as blankets, ornaments, etc.; all this, however, is done under the expectation that an ample return will on a future occasion be made. Of their many dances a description of one must suffice.

All the performers are naked. A man appears with his arms tied behind his back with long cords, the ends of which, like reins, are held by the natives who drive him about. The spectators sing and beat time on dishes and drums. Suddenly the chief appears armed with a knife, which he plunges into the runner's back, who springs forward, moving wildly as if in search of shelter. Another blow is given; blood flows down his back, and great excitement prevails, amidst which the civilised spectator shudders and remonstrates. The stroke is repeated and the victim staggers weakly, and falls prostrate and lifeless. Friends gather round and remove the body, which, outside the lodge, washes itself, and puts on its blanket. I never saw acting more to the life.

Many curious particulars are connected with the inter-tribal feasts, burial ceremonies, and other customs of the Ahts, but space does not allow me to enter upon them. I will only add some remarks upon their language, religious ideas, and gradual disappearance before the white man.

The Aht language, if it has any grammatical construction at all, of which there certainly seem to be some traces, is in a most imperfect and partially developed state. Case, gender, and tense are not found, and the inflection of the verbs, which is very irregularly carried out, makes no difference between singular and plural. One remarkable feature is the frequent change of termination in what is radically the same word. Mr. Anderson (see Cook's *Voyages*) mentions this as a defect of the language, as if the changes were governed by no reasonable law; but there is no doubt that these varied terminations have their proper significance, though this may often be difficult to discover. The property of the language, however, which decides its peculiar character, is the fact that it is made up of evident root sounds expressive of natural sounds and generic ideas. As it shares the two above peculiarities, viz., extensive use of root words and great variety

of termination with that most perfect language, the Greek, I must consider these usages, *per se*, as beautiful and advantageous.

An adequate acquaintance with the Indian languages in this quarter would throw a trustworthy and most interesting light on so much of their early history as consisted of their migrations. Passing from one Aht tribe to another Aht tribe on the outside coast of the island, even a cursory notice is sufficient to prove to the traveller the close similarity of the language, and therefore relationship of the people; but suddenly he comes to a sharp boundary, across which the speech of the people (phonetically at least) is almost or quite entirely changed, so much so, that even numerals and other radical forms contain no sign of similarity. This marked contrast appears about Cape Scott at the northern end of Vancouver Island, where the Aht language meets the language of the Quoquoulth; and again towards the south end of the island at a point between Pacheenah and Victoria, where the Aht language comes in abrupt contact with the Kowitchan. There is a decided resemblance between the Aht language and many words of the Chiniok jargon, which is a portion of the language of the Chiniok tribe at the mouth of the River Columbia, supplemented by French, English, and perhaps Spanish words. I know about a hundred words of the Chiniok jargon, and probably five hundred of the Aht language, and among these I can recall many words in both extremely similar. The correct meaning and pronunciation of these five hundred words I have had confirmed by several of the chiefs in different parts of the coast.

No knowledge connected with this people could possess a more general interest than that of their religious ideas and practices; but the subject is one as to which a traveller might easily form erroneous opinions, owing to the practical difficulty even to one skilled in the language, of ascertaining the true nature of their superstitions. Generally speaking, it is necessary, I think, to view with suspicion any very regular account given by travellers of the religion of savages; their real religious notions cannot be separated from the vague and unformed, as well as the grotesque and bestial mythology with which they are intermixed. My observations are the result of more than four years inquiry made unremittingly under favourable circumstances, and I can say thus much of the religion of the Aht Indians; it clearly exercises an influence over them, and, within the limits of its operation, almost governs their practical affairs. They are extremely unwilling to speak of what is mysterious, or akin to the spiritual, in their ideas; not, it appears, from a sense of the sacredness of the ideas, but from a notion that evil will result from any free communication on such subjects with foreigners. Even after long acquaintance, it is only now and then, when "i' the vein," that the

sullen, suspicious natures of these people will relax, and permit them to open a corner of their minds to a foreigner who possesses their confidence. They generally begin by saying that no white man is able to understand the mysteries of which they will speak. "You know nothing about such things—only old Indians can appreciate them," is a common remark; and in nine cases out of ten so many lies and misstatements are mixed up with the account, for the purpose of mystifying the inquirer, or owing to the mental weakness of the savage on religious subjects, that little reliance can be placed upon it. The opinions expressed by some of the natives are found on examination to differ in so many points from those of others, that it is hardly possible to ascertain the prevailing opinions of any tribe; but, taking all the tribes together as a nation, I have satisfied myself as to one or two facts in connection with their religion. They undoubtedly worship the sun and moon, particularly the full moon (*hoop-path*), and the sun (*nas*) while ascending to the zenith. Like the Teutons, they regard the moon as the husband, and the sun as the wife; hence their prayers are more generally addressed to the moon as the superior deity. The moon is the highest object of their worship, and they describe the moon (I quote the words of my Indian informant) as "looking down upon the earth in answer to prayer, and as seeing everybody."

They also worship the great Quawteaht, who made all things, and who first taught the people to address the sun and moon in time of need, but he is in their estimation an inferior deity to both these luminaries. They have especial forms of worship for their different events, which I will not here enter upon.

I will conclude this paper by stating my observations on a point which, until actually placed before my eyes, I had not an adequate conception of, but which perhaps forms an important, though not sufficiently appreciated, agency in the disappearance of the savage—it is the presence of civilisation. What was the effect on the aborigines of the presence of this settlement of Alberni on the west-coast of Vancouver Island, which I named at the beginning of this paper? At first no particular effect was observable; the natives seemed, if anything, to have benefited by the change in their circumstances. They worked occasionally as labourers, and bought new blankets with their wages; and many of the Indians supplied themselves with the white men's cast-off clothes, which they took a pride in wearing. Having at the same time acquired a taste for flour, rice, potatoes, and other articles of food that were sold to them at low prices, the natives spent the first winter after the arrival of the colonists more comfortably than usual. It was only after a considerable time that symptoms of a change amongst the Indians living nearest to the

white settlement could be noticed. Not having observed the gradual process—my mind being occupied with other matters—I seemed all at once to perceive that a few, young, sharp-witted natives had become what I could only call, offensively European, and that the mass of the Indians no longer visited the settlement in their former free independent way, but lived listlessly in the villages, brooding seemingly over heavy thoughts. Their gradual shrinking from association with us, when first observed, caused a little alarm, but I found on inquiry that it did not arise from ill will. The fact was that the curiosity of the savage had been satisfied; his mind was confused, and his faculties surprised and stunned by the sight of machinery, steam-vessels, and the active labour of civilised man; he distrusted himself, his old habits and traditions, and shrank away despondent and discouraged. Always suspicious, it now became the business of his life to scrutinise the actions of the whites, and to speculate apprehensively as to their probable intentions. He began soon to disregard his old pursuits and tribal practices and ceremonies. By and bye it was noticed that more than the usual amount of sickness existed among the Indians, and particularly among the Indians who lived nearest to the white settlement, and we could not attribute the increased ill-health to any cause, unless it were to the change in diet consequent on our arrival. It certainly was not produced by whiskey, syphilis, or any of the other destructive agencies which are loosely and erroneously described as being peculiar to civilisation.

I may repeat that the increased death-rate of the Indians, even after our arrival, did not result from ill-usage nor from the excessive use of ardent spirits—as I was able almost totally to exclude intoxicating drinks — nor from debauchery, but from other causes, among the chief of which, according to my observation, I would name—the effect of a change of food, and the despondency and discouragement produced in the minds of the Indians by the presence of a superior race. What are we to make of all this? It seems that savages must disappear. Are they, in thus shrinking away, obeying a natural and general law by which the purposes of the Almighty are being carried out in their removal?

XXVI.—*On the History and Migration of Cultivated Plants in reference to Ethnology.—Fruits.* By J. CRAWFURD, Esq., F.S.A.

[*Read November 6th*, 1866.]

THE first culture of fruits, like that of articles of food, and of the first domestication of animals, is buried in the obscurity of time, and beyond the reach of history or tradition. Their migration, however, from their native country is often traceable, and forming an instructive branch of the natural history of man, I propose in this paper to give an outline of it.

I may premise that the culture of fruits, as well as of other plants immediately useful to man, is restricted to far narrower geographical limits than the domestication of animals. The successful cultivation of wheat and barley, of flax and hemp, is confined to the temperate regions of the earth. The successful culture of the vine embraces no more than the twelve degrees of latitude which extend from the 36° to the 48°, and that of the pine-apple does not extend beyond the tropics. It is very different with the dog, the hog, the ox, the horse, the domestic fowl, the duck, and the goose, all of which are successfully reared from the equator to the 60° of latitude.

Nature, without man's aid, affords few fruits of any value as food; and, due allowance made for climate, the quality of fruits rises with the skill exercised in their culture. There are, it may be premised, some regions of the earth where the first step has never yet been even commenced. Of this the great continent of Australia, before its colonisation, was a signal example. Here there existed no wild fruit amenable to cultivation, for even in its tropical parts, the cocoa-palm, the yam, and the banana had no existence; and there was no intercourse with strangers through whom exotic fruits could have been introduced, while, even if there had, the native race of man was perhaps by nature too stolid to have availed themselves of it.

Perhaps the most convenient form of treating the subject of cultivated fruits will consist in furnishing actual examples, beginning with the earliest and rudest forms of which we have any real knowledge. On this plan I commence with the tropical islands of the Pacific. The fairer inhabitants of these islands, although ignorant of the metals and yet in the stone age, and although they had generally no pottery, and were clothed in paper in lieu of textile fabrics, had yet made some progress in horticulture. They cultivated the banana, the bread-fruit, the orange,

and, I may add, the sugar-cane, since it was used in the manner of fruit only. The banana, the bread-fruit, and the orange are known by native names, and in so far as a name is evidence, may be considered as indigenous. By the same evidence the name of cocoa-palm and sugar-cane, being derived from the Malay language, we may infer that they are strangers. The Malay words are, no doubt, greatly corrupted, but still clearly traceable. Thus the Malay name for the cocoa-palm is *ñur*, which by the mere elision of the final consonant and addition of a vowel, becomes *ñüi* of the Tonga and Tawai dialects, because no word in these or any other of the great Polynesian language can terminate in a consonant. When or how these two plants, with the yam, which also bears a Malayan name, were introduced, must ever be a matter of conjecture. I have given my own view of the manner in which these and other words, unquestionably Malayan, found their way into the languages of the South Sea Islands, in a dissertation prefixed to a grammar and dictionary of the Malay language.

Of the bread-fruit five varieties, and of the banana no fewer than twenty-eight, are cultivated by the inhabitants of Tahiti alone, a fact which shows satisfactorily that these two indigenous plants were of very ancient cultivation when Europeans first saw the group to which it belongs. It is here to be observed that the same race of man, speaking essentially the same tongue, extends from the Sandwich Islands in the twenty-second degree of north latitude to New Zealand, the most northerly part of which is in the thirty-fifth degree of south latitude. To all appearance, the emigration which produced so wide a dissemination of one race, speaking one and the same language, proceeded from the equatorial islands, but the colonists, or perhaps more correctly wanderers, would not carry along with them tropical plants much beyond the tropics. Hence, although we find the yam, the batata, and the taro, or esculent caladium, in the more northern part of the New Zealand group, the banana, the bread-fruit, and the sugar-cane are unknown.

In so far as I am aware neither temperate nor tropical Africa has yielded any valuable cultivated indigenous fruit, and seems always to have been a borrower, first from Asia, and lastly from America. The banana, the cocoa-palm, and the tamarind may possibly be equally indigenous to Africa as they are to Asia and America, but the subject has never been investigated as far as I know by etymological inquiry or otherwise.

America has furnished some valuable indigenous cultivated fruits, but by no means in such numbers as might be expected from its vast extent, and the variety of its soils and climates. The only fruits of note which America and its island have produced, and which are indigenous to them are the ananas, or pine-

apple, the custard apple (*anona*), and the papaw-fig (*Carica papaya*). It is even doubtful whether the banana, now so universal, throughout tropical America, be a native plant. It is not found in the copious list of the plants of Mexico given by Hernandez, who saw and examined the botany of that country shortly after the conquest, and we may, therefore, conclude that it was unknown to the Mexicans. Banana leaves, however, it is stated, have been found in ancient Peruvian tombs, and if this evidence be sufficient, the banana may have been cultivated in Peru, although it had not before the conquest extended to Mexico, since between these two countries not only did no intercourse exist, but even their very existence was unknown to each other. Had so remarkable a fruit existed in the American islands, it must, from its easy propagation and its usefulness, have been abundant in them, and therefore have attracted the particular notice of the conquerors, but they make no mention of it. The banana was abundantly cultivated in the Philippines when the Spaniards first saw them, thirty years after the discovery of America and its islands; and that it there attracted their special notice, as something new to the companions of Magellan, is to be inferred from the account given of it by Pigafetta. Humboldt's conclusion, then, that the banana is a native of Asia, and not of America, where it is an exotic, is probably correct. Mr. Bates, in his excellent account of the valley of the Amazon, tells us that he found the pine-apple in the wild state of its usual flavour, but no bigger than a goose egg. The Spaniards on their arrival found it extensively cultivated, and its size, and the sterility of its seeds show that it must have been so for many generations.

Temperate America, whether north or south of the equator, has furnished no indigenous fruit of mark worth the adoption of other parts of the world. It is the equinoxial region alone which has yielded cultivated fruits, but they are few in number, and indifferent in quality. Even the pine-apple owes its chief value with strangers to its rarity in regions where it can be produced only by a forced and expensive cultivation, for in localities corresponding with its native ones, that is, within a few degrees of the equator, it is as easily grown as turnips in Europe, and in public estimation ranks far below the mango, the mangosteen, the durian, the shaddock, the orange, and even the finest varieties of the banana.

All the cultivated fruits of the New have been transferred to the Old World, but, of course, to the tropical parts of it only. Most, but not all, the fruits of the Old World have been carried to the New; and the balance of advantage is greatly in favour of the latter. A few fruits appear to be common to the two worlds, as the cocoa-palm and the tamarind. It is with the New

World as to fruits what it is as to the domesticated animals; as to cereals and to pulses, it furnishes few in number, and these of inferior quality.

It is almost unnecessary to add, that the migration of plants between the Old and New World is the sole work of modern man, its very beginning not going much farther back than three centuries and a half. There does not exist an iota of evidence, ethnological or lingual, to show that any intercourse had ever existed between them. Their inhabitants were as ignorant of each other as they were of the inhabitants of any one of the planets.

The next region which I shall consider is the Malayan Archipelago, or the insular country which extends from the Peninsula to Java north and south, and from Sumatra to the Moluccas from west to east. For the production of valuable cultivated fruits, it not only surpasses native America and its islands, but every other part of the world, modern Europe excepted, and this, too, in so far as indigenous fruits are concerned. The valuable fruits peculiar to this region are the banana (*musa*); the mangosteen, or *gareinia mangostana* of botanists; the durian, or *durio zibithenus*; the champadak, or *artocarpus polyphema*; the pumplenoos shaddock, or *citrus decumanus*; the langseh with its variety; the duku, or *lansium domesticum*; and the rambutan, or *nephalium lapaceum*; the cocoa-nut, the bread-fruit, and the tamarind.

The banana is every where found in the wild state, and has a special name in each of the many languages of the Archipelago, so that no doubt can exist of its being an indigenous production. Wherever it has such distinct name, it was most probably soon cultivated, and likely to have been among the earliest food of the first inhabitants, partially superseded only when cereals and farinaceous roots came to be cultivated. At present it is not, as in tropical America, used as bread, or in any other way than as a fresh fruit. Everywhere it consists of many varieties, greatly differing in size, colour, and flavour. In Java twenty-eight varieties are counted. This plainly points to a very ancient cultivation.

The mangosteen is the finest fruit of the Archipelago, and, although not the richest in flavour, is certainly the most delicate fruit in the world. It is of the size and much of the shape of an orange. A rather spongy brown coat contains the seeds, divided by partitions. The esculent part of the fruit is the snow-white pulp that covers these seeds.

The mangosteen is the peculiar product of the Malay Archipelago, and mostly, probably, of its western portion only; for before the arrival of Europeans, it was unknown even in the Moluccas. For a long time, it was supposed impossible to propagate the mangosteen beyond its own native country, and all attempts to produce

it in our own Indian territories west of the Bay of Bengal have failed. The skilful botanist Roxburgh states that all his efforts in different parts of India in the course of thirty-five years were unattended with success. The tree, in a congenial climate, is a handsome one, which rises to the height of thirty feet, while in the experiments referred to it never exceeded two feet, and never yielded fruit. In Siam, however, the culture has been attended with perfect success, and I found the mangosteens of the capital of that country, Bangkok, as fine and as abundant as those of Java or Malacca. Although the culture has failed on the western side of the Bay of Bengal, our own settlers have lately pushed it successfully on the eastern up to the fifteenth degree. In its native country, the culture of the mangosteen requires little care or skill. When perfect, the fruit is very uniformly the same, not only of different trees, but of different seasons, and it does not sport into varieties like other long cultivated plants. The name of the mangosteen is in Javanese *mangis*, and in Malay *mangústa*, which is that which is adopted by Europeans with some corruption. It is the same, also, which has been adopted even in the monosyllabic language of the Siamese, which indicates the source whence the fruit was introduced into Siam. This seems to have been but a recent event, for the mangosteen is not mentioned by the French writers who visited Siam at the end of the seventeenth and beginning of the last century.

The durian is the produce of a tall tree bearing a fruit of the size of a small human head, and covered with prickles. It is divided into long partitions containing seeds of the size, shape, and colour of chestnuts, enveloped in an abundant pale yellow pulp of a rich, creamy taste, having with the entire fruit a strong odour, partaking of that of over-ripe apples with a scent of garlic. All the people of whose country the durian is a native place it far above all other fruits, and will perform voyages of a hundred miles to feast on the produce of a clump of it in the forest. Wherever the mangosteen abounds the durian will flourish, and it has been extended, like it, to Siam up to the fifteenth degree of latitude. In all the languages of the Archipelago the name is one and the same, which would seem to point at its culture having originated with a single tribe or nation, and from it directly or indirectly extended as far as climate would allow. The word is durian or duren, and its etymology shows that it is a native word, for it comes from *duri*, a thorn or prickle, its meaning being "the prickly object." It grows without any care, and indeed seems to be little better than a wild plant.

The bread fruit, or *artocarpus incisa* of botanists, is a native tree of the Archipelago, but among the civilised nations who are confined to its western parts, or those inhabiting the Peninsula,

and the islands of Sumatra and Java, it does not seem ever to have been cultivated for food; the existence of cereals, pulses, and farinaceous roots most probably precluding the necessity of having recourse to it. In the eastern part of the Archipelago, where the only bread was the pith of the sago-palm, the bread-fruit seems to have been once cultivated for food. The wild plant is known by a separate name in each language, as in Malay by that of *kâlawi*, in Javanese by that of *tâmbul*, in the Macassar by that of *gomasi*, and in Amboynese by that of *amakir*. Such is generally the case with all wild uncultivated plants, which, when they come to be generally cultivated, assume a common name. The cultivated variety is known by the name of *sukun*, which is taken from the language of Banda. This alone is seedless, which is evidence of a long cultivation, but in quality the fruit is greatly inferior to the bread-fruit of the South Sea Islands.

Another fruit of the same family with the bread-fruit and the jack is called in the Malay language, and I have never heard any other name for it, the *champadak*. It is the *astocarpus polyphema* of botanists, and is as much a peculiar production of the Archipelago as the mangosteen or the durian. It much resembles the jack, but is smaller, more delicate in flavour, and far more highly esteemed by the native inhabitants.

The pumplenoos pummelo, or shaddock, is unquestionably a native plant of the Archipelago, and until comparatively recent times was confined to it. It is a gigantic orange, and the *citrus decumanus* of botanists. In Javanese the generic name for the orange family is *järuk*, an epithet being applied to designate the species, which in this case is *machan*, or *tiger*. In Malay it has a special name, which is *kadangsa*. Its perfection requires a skilful cultivation, and when it receives this in its own climate, or one corresponding to it, it is a most excellent fruit, and, to the taste of Europeans, ranking next to the mangosteen. From the Malay Islands, this fruit has been carried to Continental India, where its name, *Batawi-nimbu*, or the Batavian lime, indicates the place of its origin, and also the comparative recentness of its introduction, since the city of Batavia was founded only in 1619. From the Archipelago, also, it has been carried to our West India Islands, where it is known by the name of the shaddock, which it takes from that of the commander of a trading ship, one of the class of persons known at the end of the seventeenth and beginning of the eighteenth century as "interlopers." He traded in the waters of the Archipelago about the time of the revolution, and is named by Dampier, who visited the Archipelago at the same time, and belonged to the same class of persons.

The langsah, rambeh, and dukuh are varieties of the same

fruit, the last being the best. Under a dirty white skin are the seeds, covered by a semitransparent pulp of an agreeable subacid taste. This is one of the best fruits of the Archipelago, and peculiar to it.

The rombutan is another peculiar indigenous fruit. It is about the size of a pigeon's egg, with a coat of a red colour covered with weak spines thought to resemble hair, and hence the name, which may be translated "the shaggy." A single seed is enveloped in a subacid sweet pulp, the edible part of the fruit. The very name, and it has no other, points out the native country of this fruit in the same way as its name does that of the durian.

The cocoa-palm is one of the few cultivated plants which are equally natives of the Old and New World. It is strictly a tropical plant, and a sub-littoral one, for it does not attain perfection beyond the reach of the sea air. It is certainly a native of the Malayan countries, for it is to be found growing spontaneously in some of the small uninhabited islands, round the shores of which it forms a fringe. In the Malayan languages I know but of two names for the cocoa-nut, *kalapa* in the Sunda, and *ñu* or *ñur* in Malay and Javanese. The last of these names is not indeed confined to the languages of the Malayan Islands, but extends also to those of the Philippines and, as already stated, the remoter islands of the Pacific, while it has even reached the language of Madagascar. This wide diffusion of a single name would seem to imply, not that the wild plant was confined to a single locality, and perhaps no more than that its culture and dissemination originated with a single people.

The cocoa-palm does not sport into many varieties like most long cultivated plants, nor does it undergo any great changes by culture, for the cultivated nut differs from the wild one only by its greater size. We may safely conclude, then, that wherever the cocoa-palm was indigenous, it must have been among the first sources of the aliment of the first inhabitants—of the savage man of the tropics before he had learnt to sow and reap.

The tamarind, like the cocoa-palm, is probably a native of the Archipelago, as it generally is of all the tropical parts of the Old and New World. It is a beautiful indigenous tree, and in Java, where it grows in the greatest perfection, it takes, as an ornament in clumps and avenues, the place that oaks, elms, and chestnuts do in western Europe. Like most indigenous plants, the tamarind bears different names in different languages, all of which are native words. Thus, we have it in the Javanese as *kamal*, in Sunda as *champaka*, and in Banda as *tanalaki*. The name *asam* is common to the Malay and Javanese, but it is also one of the words which expresses the quality of sourness or acidity. As an article of trade, the fruit is generally known under the

name of *asam-java*, which may be translated either as the tamarind of Java or the acid of Java, but this distinction is accidental, arising from the fact that in Java the fruit ripens, not in the wet season, when it would rot, but in the dry. For ordinary or medicinal purposes the fruit or leaves of the tamarind is the universal vinegar of the Malay Islands.

Several of the citron or orange family of plants are natives of the Archipelago besides the shaddock already mentioned. As before stated, the two most cultivated languages of the Archipelago have a generic name for the whole family—*jâruk*, the species or varieties being distinguished by epithets. Thus, the common orange has the epithet "sweet," and the lime that of "small," or "slender," while the citron is called the "buffalo orange." These three species appear to be indigenous. The orange here alluded to is a large fruit with a green rind adhering closely to the cloves or divisions, which themselves adhere closely to each other. It is much inferior to the same fruit of southern Europe and northern India. The species here described all grow freely at or near the equator, and at the sea levels, which is good evidence of their being indigenous, since foreign species will not do so.

The exotic fruits cultivated in the Malay Archipelago are the mango, the jack, some species or varieties of the citron family, one species of eugenia or jambu, the pine-apple, two species of anona or custard-apple, the guava, and the papaw-fig.

The mango, the *mangifera indica* of botanists, has been long cultivated in the more advanced parts of the Archipelago, but not to the same extent as on the continent of India, and this, probably, on account of the great numbers which exist of valuable native fruits, while in India it is the sole good indigenous fruit. There is good ground for believing that the mango is a foreign fruit, and brought to the islands from the continent of India, most probably by the Hindu people called the Tâlugu or Talingas, well known in the Archipelago by the name of *kaling*, an abbreviation of the national and Sanskrit name of their country, Kalinga. The original name I take to be Sanskrit, and in that language would be *maha-pahla*, literally "the great fruit." In the Talugu pronunciation, however, it would become *maham-palham*. The nearest people of the Archipelago to the country of the Talugus are the Malays of Sumatra, and in their tongue the word becomes *mâmpâlam*, which the Javanese abbreviate *pâlâm*. In the language of the Lampungs, a people of Sumatra, it becomes *kapâlam*, and in the language of remote Banda, an unwritten and now an extinct tongue, the word is corrupted into *maenpâlam*. The word, therefore, is essentially the same in all the languages of the Archipelago, as seems to

be the case with all cultivated plants derived from a single source.

The culture of the mango when Europeans first became acquainted with the Archipelago appears to have been confined to its western parts, or those lying nearest to India, and it was not introduced into the islands of the clove and nutmeg until they came under the dominion of the Dutch, and we have even the date of this transaction, the year 1665, on the authority of the great botanist Rumphius. The European name for the mango does not belong to any language of the Malay Archipelago, but is taken from that of the Tamils of Southern India, in which we find it as mangai.

Unlike the mangosteen, the durian and other indigenous fruits of the Malay islands, which require little care in cultivation, the mango attains perfection only when carefully and skilfully grown. With careless culture it is indeed a very poor, if not even a very bad fruit. Like the apple and pear, it sports into many varieties of very different qualities. In the gardens of some of the native princes of Java I have seen it very superior to any I had myself eaten in continental India, and probably not inferior to the famous mangos of Massagong near Bombay.

The jack, the *artocarpus integrifolia* of botanists, is a native of continental India, but grows in great luxuriance in the Malay Islands. In Java I have seen it of such size as to be a good back-load for a woman to carry to market. Coarse, and of strong odour, it is not to the taste of Europeans, but is largely consumed by the natives. The name by which it is known in all the languages of the Archipelago is *nangka*, no doubt a corruption of the Tâlugu or Kalinga word *jaka*, also the source of the European name.

Under the generic name of *jambu*, a word derived from the Sanskrit, several fruits of very different genera are cultivated in the Archipelago, none of which are valuable, except that which is called the *jambu-kling*, which is the *myrtus cumini* of botanists. This is the produce of a tall tree, is of the shape and size of a jargonel pear, of a rose colour, with a white spongy subacid pulp. To judge by its name, it was probably brought from India.

A species or variety of orange, much superior to the native one, is cultivated in Java, sometimes known as the Chinese and sometimes as the Japanese. Being the native of a temperate climate, its successful culture requires in Java an elevation of four or five thousand feet. To this, and indeed to all the species of the orange family, the generic term *limo*, taken from the Portuguese language, is often applied, and there can be no doubt that the Chinese orange was introduced by the Portuguese. This fact shows how feeble and ineffective must have been the intercourse between

the inhabitants of the Archipelago and the Chinese before the advent of Europeans.

The remaining exotic fruits to be named are all from tropical America. By far the most important of them is the pine-apple, known with few exceptions by its Peruvian name slightly altered into *nanas*. I know but of one material exception to this in the language of the people of Celebes, who, following our own example, gave it the name of a plant familiar to them, the *pandanus* of botanists, a genus of the Screw-pine tribe. As the Portuguese were in possession of Malacca in 1511, of the Moluccas in the following year, and as they had already discovered Brazil, they must have early introduced the pine-apple into the Archipelago. Indeed, it is well known that it was they who conveyed it to continental India. In the Malay Islands the pine-apple grows with the freedom of a weed, propagating itself like a wild plant; and near the equator it is, in this comparatively neglected state, equal to the finest produce of European hot-houses. It is, I presume, this hardihood of the plant in its own climate that enables our gardeners to produce it in such perfection, while they fail with other tropical fruits, such as the mango and mangosteen.

Two species of anona, or custard-apples, the sweet and sour sops of the West Indies, have been introduced by the Portuguese. One of them goes under the name of *buah-nona*, which signifies "nun's fruit." The last part of this compound is Portuguese, and has been borrowed by the Malays to express an unmarried European lady, or virgin. The botanists, under the belief that it is a native word, have converted it into *annona*, and made it the name of the genus to which the custard-apples belong.

The *guava*, or *psidium pomiferum*, and *psidium pyriferum*, grow as freely in the Malay Islands as in their native country, tropical America. The Malays include them under the generic term of *jambu*, adding the epithets seedy, yellow, or the Portuguese. The people of Ternate, the chief of the clove islands, alone give the guava its American name. The papaw-fig, the *Carica papaya* of botanists, grows with the freedom of a weed in the Archipelago, but this very coarse fruit is justly held in no esteem.

The great group of the Philippines, which, besides many considerable islands, contains two of the largest in the world, one of them nearly twice the size, and the other one-third larger than Ireland, yields no peculiar indigenous fruit of value. When discovered by the Spaniards in 1621, or but two years after the discovery and conquest of Mexico, it was found inhabited by a Malayan people, divided into many different nations, speaking distinct languages. The more advanced were acquainted

with iron, and had even made the first advance in letters, for they had invented a rude and imperfect alphabet, so that in some respects they were in advance of the Mexicans and Peruvians. They had domesticated the dog, the hog, and the goat, but not one of the larger quadrupeds, for the ox, the buffalo, and the horse are all of Spanish introduction. The truthful Pigafetta describes the fruits which were cultivated by the Philippine islanders, and they seem to amount to no more than three, the banana, some species of the orange family, and the cocoa-nut. The two first are known by native names, and these, as usual in so far as the banana is concerned, differ in the different languages. There can be no doubt, then, that the banana and orange are indigenous products, but as the cocoa-palm bears its Malay name and no other, we may infer that it is an exotic introduced by the Malays, as have been, on the same kind of evidence, rice and the yam.

The most important fruit to the people of the Philippines was, no doubt, the banana, which must have been of very ancient cultivation, for the varieties of it count no fewer than fifty-seven for food, while one species yields a valuable material for cordage and textile fabrics. The mango is successfully cultivated at present, but is evidently an exotic, and introduced by Europeans, for it bears its Tamil name *Mangui*, the word which has been variously modified by the European nations. All the cultivated fruits of tropical America have been naturalised in the Philippines; not so, however, the finer and more fastidious fruits of the neighbouring Malayan Archipelago, for the growth of which a climate characterised by rude equinoxial storms is probably too rough.

The valuable indigenous fruits of the native country of the Hindus are neither so numerous nor so remarkable as those of the Malayan Archipelago. They consist of the banana, the cocoa-nut, the mango, the jack, and some members of the orange family. No doubt there are several other cultivated indigenous fruits, but as they are not better, perhaps not so good as the wild fruits of Europe, it is not necessary to dwell upon them.

The region which yields the valuable fruits now enumerated embraces a great variety of climate, for it includes fifteen degrees of latitude within the tropics, reaching to within eight degrees of the Equator, while near ten degrees are extra-tropical, reaching in some parts to the thirty-fourth degree of latitude. Besides this cause for variety of climate, India possesses extensive mountain valleys and plateaus, rising from 3,000 to 15,000 ft. above the sea level.

I take my sketch of the fruits of India for ethnological purposes chiefly from the work of an eminent botanist, my friend the late Professor Royle; from personal communication with two of the first living botanists, my friends George Bentham and

William Hooker, and in a much smaller degree from my own notes or recollections. The banana or musa of botanists is, without doubt, a native of tropical India, as it is of every part of tropical Asia, with a climate suited to its growth. In all the languages of India, as in the Malayan tongues, it bears different names. Thus in Sanskrit it is called *mocha*, in Hindu *kila*, and in Tamil *varga* and *vulu*. It is to be inferred from this variety of names that the plant was cultivated at many independent points, and not diffused from a single locality or by a single people. The length of time in which the banana has been an object of culture is here, as everywhere else, to be inferred from the many varieties of it, differing in size, shape, colours and flavour, which exist.

The banana is properly a tropical plant, and has been found in its wild state in the forests of Bengal, in the twenty-second degree of latitude, and in India its culture does not extend beyond the twenty-fifth degree. In peculiarly favourable situations, however, its geographical limits extend far beyond this, for it is cultivated in the Canary Islands, on the African coast of the Mediterranean, and even in Southern Spain; in all these situations, however, it is exotic, and language even affords evidence of the manner in which its migration took place. Thus, the Sanskrit name, as already stated, is *mucha*, which the Arabs, substituting a soft sibilant for the palatal sound, which we represent by *ch*, and which does not exist in their language, have converted into *muz*, and this is the word which our botanists, Latinising it, have adopted in the form of *musa*, to express the genus to which the banana belongs. The probability seems to be that the Persians at an early period received the banana from the Hindus, so that from them it reached the Arabs. The conveyance of the plant to the shores of the Mediterranean, and eventually to Spain, must have been the work of the Arabian conquests of the seventh century.

"Throughout the African country of Unyoro," says Sir Samuel Baker, "plantains in various forms were the staple article of food upon which the inhabitants placed more dependance than upon all other crops. The green plantains were not only used as potatoes, but when peeled they were cut into thin slices and dried in the sun until they were crisp; in this state they were stored, and when required for use they were boiled into a pulp and made into a most palateable soup or stew. Flour of plantains was remarkably good; this was made by grinding the fruit when dried as described. It was then, as usual with all other articles in that country, most beautifully packed in long narrow parcels; others formed of plantain bark, or of the white interior of rushes worked into mats. The bark served as brown paper, but had the advantage of being waterproof; the fibre of the plaintain stem formed both thread and cord. Thus, the principal requirements of the natives

were supplied by this most useful tree."* The green plantains only were used as food, the ripe being reserved for making plantain cyder, a beverage unknown to Asia and America.

Unlike tropical America the banana is not at present, and probably never was, unless when the Hindus were savages, used as bread, for the abundance of cereals and pulses would early dispense with the necessity of having recourse to it. It is simply used as any other fruit in its raw state.

The cocoa-palm is a native of the tropical coasts of Continental India, wherever a dry sandy soil and the absence of marshes will allow of its growth; but its favourite localities are the islands near the continent, as Ceylon, and the Laccadive and Maldive Islands, from which it is largely exported. Being a sub-marine plant, it is of course wholly absent from the interior of the continent. In Sanskrit the cocoa-nut is called *narjil*, of which the Hindi *naryal* is an obvious corruption, but as might be expected in an indigenous plant, not restricted to a single locality, it has different names in different languages; thus, we have it in the Tamil, as *taingkai*.

It may here be asked how the cocoa-palm and the banana come to have special names in the Sanskrit language, seeing that neither in the country from which those who spoke Sanskrit as a living tongue came, nor in that in which they first settled, Northern India, are these two plants natives, or will even grow as exotics. The explanation given by Horace Wilson, the greatest Oriental scholar of his day, was that the Pundits never scrupled to invent names for exotic plants; and tobacco and the custard apple are given by him as examples.

The mango is by far the best fruit of continental India, which is its parent country, and from which it has been conveyed to other tropical and sub-tropical parts of the world. Its geographical range is considerable, for the tree yields fruit as far as the thirtieth degree of latitude; but the fruit declines in quality as we proceed northwards—a fact from which it may be implied that its native country is tropical. The finest fruit is produced at Bombay, in the eighteenth degree of latitude; and I have seen very fine fruit in Java, seven degrees south of the equator. At Delhi and Agra, in the twenty-seventh degree of latitude, the fruit is stringy, with the odour of turpentine, and requires to be artificially ripened in straw after being plucked. To produce the mango in perfection, demands as much skill as to produce fine pears and apples.

The mango bears different names in the different languages of India, implying that its first culture was originated at several different points. The name in Sanskrit is *amra;* in Hindi, *am*

* Baker's "Exploration of the Nile Sources."

and *amb;* and in Tamil, *mangai.* From India the mango spread to Persia, to Arabia, to the islands of the Malay Archipelago, and the Hind-Chinese countries, to America and its islands, and in the last of these always traceable by its Tamil name. In Persian and Arabic it is *ambh,* or the Hindi name with a final aspirate. In the Malayan languages it is, as I have already stated, known by corruptions of the Sanskrit compound signifying "the great fruit." No doubt the Tamil name was first employed by the Portuguese, who were the first European people who acquired a practical knowledge of a Tamil country, Calicut being the first they visited.

The jack, the *Astocarpus integrifolia* of botanists, is a special native of India. It is the *kachol* of the Sanskrit, the *phuns* of the Hindi, the *pula* of the Tamil, and the *jaka* of the Telinga, or what we used to call, in the olden time of our Indian knowledge, the *Gentoo.* From this last comes obviously our own name, and most probably the *nangka* of the Malayan languages, before mentioned.

The Emperor Baber, in enumerating the fruits of India, gives a description of the jack, which, although his comparison be homely, is so correct that I shall quote it. His invasion of India, which he had never seen before this event, took place in the year 1525, or only twenty-seven years after the arrival of Vasco Digama. "Another fruit," says he, "is the kadhil or jack. This has a bad look and flavour. It looks like a sheep's stomach stuffed and made into a haggis. The fruit grows, not only from the trunk and branches of the tree, but even from the root. You would suppose that the tree was all hung round with haggises."

Continental India is one of the native countries of the citron or orange family of plants; and it was probably from it and from China that its culture was introduced into many other countries. Botanists have found some species of it wild in the Indian forests. India and China, however, are not the only countries in which one species or another of the family appears to be a native; for species of it have been traced in cultivation in the Malay and Philippine Archipelagos, in the tropical islands of the Pacific, and even in far Madagascar; and always in these places distinguished by native names, indicating an indigenous origin.

Dr. Royle gives it as his opinion that the different kinds of the family, as the orange, the lemon, the lime, and the shaddock, are distinct species, and not varieties; and, indeed, they all differ so widely from one another, that it is difficult to come to any other conclusion. "One thing," he says, "is remarkable in the orange tribe, that, though a tropical genus, it ripens its fruit in the winter months, and has probably been enabled to travel from India to the southern shores of Europe, and find a congenial

climate in the agreeable and temperate Azores." These islands, I may add, are our own special orchard, which through their climate and propinquity, and the spirit of a free commerce, supply us with a better, a more abundant, and more continuous supply than any country possesses of which the orange is the indigenous fruit.

Western Asia and Europe would seem to have received the members of the citron family which have reached it direct from India, in early times at least, and not from China, with which no such intercourse existed as would have admitted of their transmission. This view is confirmed by the testimony of language. Thus, the name for the orange in Sanskrit is *nagrunga.* This in Hindi becomes *narangi;* and from this again comes the Persian and Arabic name *naranj.* From the Arabic comes the Spanish *naranja;* and from this again the French and English orange. It is the corrupt form of the name—the Hindi, and not the Sanskrit one, which the Persians have adopted, a fact that would seem to imply that they received this fruit in comparatively recent, and not in very remote times, or that in which Sanskrit was in India a living tongue. In the seventh century, the Arabs conquered and occupied Persia, where they must have found the orange, which we may readily suppose they would in time carry with them to the congenial climates of Assyria, of Egypt, and eventually of Spain.

The names for the lime or the lemon lead to the same conclusion. In Sanskrit the name is *nimbuka.* This is corrupted in Hindi into *nimbu,* into *nimo,* and into *limau;* and in Bengali into *nibu.* The Persians and Arabs make it *limao* and *limun.* From the Arabic come the Spanish *lima* and *limun,* and the Portuguese *limao.* From the Spanish come the French *lima* and *limon,* and the English lime and lemon. It may be remarked, that the original Sanskrit word, after undergoing various mutations in travelling from East to West, returns to the East, and in its Portuguese form is adopted in the Malayan family of languages as a generic term.

But the orange family is equally a native of Southern as of Northern India, and members of it have been found in the wild state in the Nilgherry hills, as well as in Chittagong in Bengal; and so we have names for the orange and lime in the southern languages of India, different from those above mentioned. Thus, the orange is called in the Tamil *kichili,* with the synonyme *korunji,* probably a corruption of the Sanskrit word; while the lime or lemon goes under the name of *yelumichum.*

Foreign fruits have been introduced into the country of the Hindus with various degrees of success. From Persia and the country of the Affghans, it has received the grape, the musk and

water melon, and the pomegranate; all of inferior quality to those of the countries from which they are derived, owing to incongeniality of climate. To these may be added the pomegranate for its fruit, excellent in Persia but utterly worthless in Hindustan. These fruits are known in the Hindu languages by their Persian names. They were, of course, introduced by the northern conquerors, whose invasions of India commenced little more than half a century before the Norman invasion of England. Their introduction, however, in the long period of five centuries, had made but small progress; for the Emperor Baber, who invaded India in 1525, only twenty-seven years after the arrival of the Portuguese, expressly mentions in his *Memoirs*, among the many drawbacks of India, that it had neither grapes nor melons,—fruits of the best quality in his own country, which was part of Turkistan. A present of melons having been once sent to him by despatch from the North, the sentimental Turk (for such he really was) shed patriotic tears at the very sight of the fruit.

The fruits of America introduced into Hindustan, are the pine-apple, the several species of anona, or custard-apple, the guava, and the papaw figs. The pineapple, known by its American name, and, as far as my experience extends, always of a very inferior quality, was introduced in the year 1594, in the reign of the Emperor Acbar. It was, then, close on a century after the discovery of the New World, that its most remarkable fruit reached Malacca, which had, at the time of its introduction, been eighty-three years in the possession of the Portuguese, and it was from Malacca that the pineapple was introduced into Continental India.

The tropical countries lying between India and China possess no valuable fruits peculiar to themselves, but they have all those common to India and the Malay Archipelago. The banana and cocoa-palm abound in them, and are, most probably, indigenous. The mango and orange are everywhere cultivated, but whether indigenous or exotic I have no means of knowing. As before stated, the Siamese valley of the Menam, singularly favoured in soil and climate, produces a greater variety of fine fruits than perhaps any other part of the Indies; for, in addition to the ordinary fruits of Hindustan, it produces the mangosteen, the durean, and the shaddock of the Malay countries, and the leachee of China. Of the Anamitic portion of the Hindu-Chinese countries, the chief fruits, independent of the cocoa-nut and banana, are the orange and the leichee of China. Into all the Hindu-Chinese countries, the fruits of America have been introduced, as they have indeed been into all the tropical parts of Asia, continental or insular. In the language of Siam, the guava goes under the name of the "fruit of Malacca", pointing to the spot from whence

it was received, and the Papaw fig is called "the banana of the Franks", which indicates the little estimation in which it is held. It may be observed here, that the genius of the monosyllabic and polysyllabic tongues differ so widely, that comparative etymology generally affords little assistance in tracing the migration of plants.

The fruits of China vary greatly, as might be expected in a region which embraces twenty-two degrees of latitude, extending from the eighteenth up to the fortieth degree. The apple, the pear, the peach, and the grape, are produced down to the thirtieth degree, but the Chinese apple is mealy, and the pears flavourless, most probably from some mistake in culture. The orange is cultivated successfully all over China, and one of three distinct varieties is that which is popularly known among ourselves as the Chinese, and is probably that which is now so extensively cultivated in the south of Europe and the Western Islands, we ourselves consuming of this exotic fruit, unknown to Greeks and Romans, about a million and a half of bushels yearly.

The tropical and sub-tropical parts of the empire produce three small fruits, which appear to be peculiar products of China. These are the leichee and longan, belonging to the botanical genus *Dimocarpus*, and the loquat of the genus *Mapilus*, or that which yields the medlar. We have ourselves naturalised those fruits in Bengal, and the Chinese have naturalised the leichee in Siam and Cochin-China. The tropical parts of China have received all the fruits of America which have been naturalised in the other tropical parts of the Old World. The chief of them, the pineapple, is stated to have been introduced from the Philippines in 1594, about thirty-four years after the Spanish dominion had been established in these islands.

The Japan Archipelago, the civilised portion of which extends from the 31st to the 45th degree of north latitude, has, in so far as latitude is concerned, the climate of Egypt at one extremity, and that of the south of France on the other, with that of the Spanish peninsula intermediate. It is fit, therefore, for the production of all the principal fruits of Southern Europe, and has them, without having any valuable fruits peculiar to itself. The southern parts of Japan produce the banana, but whether natural or imported, I am not aware. It produces a wild strawberry, and the apple, the pear, the peach, the orange, lemon, citron, the pomegranate, the grape, and the water-melon, all of which, with the exception of the two last, are to the European taste bad and flavourless,—a fact which I state on the personal authority of my friend Sir Rutherford Alcock.

As much of the civilisation of the Japanese has been received from China, it would be satisfactory to learn to what extent the

first are indebted to the last for their fruits and other cultivated plants, by a comparison of their languages, but as that of the Chinese is monosyllabic and that of the Japanese polysyllabic, the inquiry will be attended with serious difficulty.

I know of no fruit peculiar to Arabia, except the date, the *Pœnix dactilifera* of botanists. The date palm flourishes from the tropic to about ten degrees beyond it. It may be called a sub-tropical, but not a tropical plant, for it will hardly yield fruit within the tropics, nor in a temperate climate. The only countries in which it bears freely are Arabia, the southern part of Persia, Upper Egypt, and the African coast of the Mediterranean. It attains the highest perfection in Arabia, which indeed may, perhaps, be its parent country, and from which it has been disseminated to the other countries just named. "Here," says Palgrave, "as in most parts of Arabia, the staple article of cultivation is the date palm. . . . Date trees are, in consequence, the main source of landed Arab wealth, and a small cluster of palms is often the entire maintenance of a poor townsman or villager. The fruit partly serves him and his household for aliment, in which it holds about the same proportion that bread does in France or Germany."

In Arabia, then, the date is, not like the fruits of other countries, a luxury, but a necessary of life. It is more even than is the banana in certain parts of tropical America. East of Arabia, and within the same latitudes in which the date flourishes, this palm is unknown either in the wild or domestic state, although there exist species of the same genus to which it belongs.

The date has a native name in the Persian language, as might be expected in a native plant of Persia. This is Khurma, the same by which the fruit is known as an article of commerce among the nations east of Persia and Arabia. The most prevalent Arabic name is Tamar, and it is by this that it is known in all the languages west of Arabia in which the palm is an object of culture. This includes the Hebrew: the date, indeed, appears to have been cultivated in Palestine from the earliest recorded time, and yet seemingly, not as a primary object of culture as in Arabia. This is to be inferred from its being named in Scripture as a distinctive feature of certain localities, as in the instance of Jericho, which is mentioned as "the city of palms." If the cultivation had been general, such a designation would, of course, have no appropriate significance. The date, therefore, was probably never a prevalent crop in Palestine, and has at present nearly disappeared, being much rarer than the fig or vine in England. In times of war, the date is, of course, a dangerous crop as the chief subsistence of a people, since the cutting down of the groves of a town is equivalent to starving it by a blockade.

As to Egypt, the date palm is cultivated only in its upper region, and probably never was so in the irrigated part of the valley quite unsuited to it, and fit for the growth of more valuable productions. According to Palgrave, the fruit of the date of Egypt is greatly inferior in quality to that of Arabia, from which it may, perhaps, be inferred that the latter is its native soil and climate, while in the former it is an exotic most probably derived from Arabia.

The Greek colonists of Asia Minor do not appear to have been acquainted with the date palm as an object of culture, and with the fruit only commercially. They seem to have become acquainted with this last through the Phœnicians, and hence its Greek name Phœnix, supposed to come from the word Phenicia. Although the Greeks and Romans knew it as an object of cultivation, the tree, although refusing to bear fruit, was well known to them, its leaves being in request as an emblem of victory. The names given to it—*Palma* and *Dactylus*—signifying the palm of the hand and the fingers, which are Greek and Latin words, the obvious derivation indicating that these names were given to a plant of foreign origin. Of the thousand palms now known to botanists, the date was the only one known to the Greeks and Romans, a fact which represents the limited geographical knowledge of the ancients compared with the comprehensive one of the moderns.

Persia, Armenia, and the valleys of the Taurus, form the region which is the native country of some of the most prized fruits which have been disseminated through Europe, and which from Europe have extended to temperate America, as well as to Australia and New Zealand, which themselves had no fruit at all. It is also from the same quarter that these fruits have reached Northern India. The apple, *seb;* the pear, *gulabi;* the peach, *ghulu;* the nectarine, *shalil;* the fig, *anjir;* the vine, *angur;* the cherry, *gilas;* the mulberry, *tut;* the pomegranate, *anar;* the apricot, *shaftulu;* the musk melon, *karbuz;* and the water melon, *tarbuz,* are all, with the exception of the apple, which is flavourless, of excellent quality in Persia, although little skill is bestowed on their cultivation, a fact which shows that they are in their genial and native climate. The pears and peaches of Persia attain the highest perfection in Azerbijan, between the 36 and 38 degs. N. latitude, but the nectarine, in the vicinity of Ispahan, five degrees further south, a fact, from which it may be argued, that they belong to two distinct species, although usually considered by botanists as mere varieties. The small fruits of Europe, the gooseberry, the currant, the raspberry and the strawberry are unknown to the Persians as objects of cultivation.

Of foreign fruits Persia has received from India the orange and

lime, and, as before indicated, most probably also the banana, while from America it has received the pine apple. I am indebted for this sketch of the fruits of Persia to my esteemed friends Sir Justin Shiel and his accomplished lady, who had long resided in Persia, Sir Justin having been her Majesty's representative at the Persian court.

Some of the fruits here enumerated, however, it is to be observed, have a very wide geographical range, extending in latitude to Bokhara in about the fortieth degree of latitude down to Cashmere and the valleys of the Himalayas in the thirtieth degree, and in longitude, from Europe to Japan, in corresponding climates. The almond, peach, nectarine, apricot, plum and cherry, with the apple, pear and quince, are all found either in a wild or cultivated state, on the ramifications of Taurus, Caucasus, and the Himalayas, or in the valleys included in them.

The cultivated fruits, which are natives of Europe, show but a poor list. They consist of the apple and pear, the gooseberry, currants, the strawberry and the raspberry, with the wild plum. It may here be noticed, that in so far as the fruits of our own islands are concerned, the wild uncultivated ones usually bear native names, while the cultivated are distinguished by names which point at a foreign origin. Thus, the black or bramble berry, the blue or heath berry, the whortle berry and the sloe, have native names in Anglo-Saxon, in Gaelic, and in Welsh. It is the reverse with cultivated fruits. Thus the English word gooseberry, the Scots groser or groset, and the Gaelic grosoud, are probably nothing else than flagrant corruptions of the French *groseille*. The English word cherry, the Gaelic sirist, and the Welsh ceircasen and sarain, are no more than corruptions of the French *cerise*, itself from the Latin *cerasum*. The English name for currants is known to be taken from the French *corinthes*, or at full length, *raisin de Corinthe*, or grapes of Corinth; in Gaelic they are called deare fhrangaeh, that is "French berries." The English name pear, the Gaelic peor, and the Welsh peran, are obviously taken from the French *poir*, itself coming from the Latin *pyrum*.

Are we to infer from all this that the ancient Britons, and even the Anglo-Saxons, had no cultivated fruits, contenting themselves with crab-apples, blackberries, sloes, and the like; and that the culture of fruits was for the first time introduced by the Normans? The Romans no doubt introduced the culture of fruits into Britain, but, probably, it never extended much beyond the narrow bounds of their own colonies, and perished in the anarchy which followed their departure.

For the outline of the migration of cultivated fruits, by which exotic ones reached Ancient Greece and Rome, I chiefly rely on the

published lectures of my learned and scientific friend, Professor Daubeny of Oxford. The direct intercourse which the ancients had with the civilised countries of the East, was confined to Egypt, Persia, Armenia, Asia Minor, Palestine and Assyria, and hence their means of receiving and naturalising foreign fruits were very limited.

The native fruits of Ancient Greece were the apple, the pear, the vine, the fig, the wild plum, and the olive. Those of Italy were confined to the apple, the pear, the mulberry, and the wild plum. The Romans received the fig, the olive, and most probably the vine, from Greece. The exotic fruits naturalised by the Greeks and Romans are not traceable to the countries from which they were derived, by their names in the languages of these countries, as is frequently the case with Oriental nations and with modern Europeans. Their names simply indicated the country from which they received them by naming it as an epithet. They received the peach from Persia, and called it the Persian apple, or simply *persica*, still preserved in Italian, but corrupted in French to *pêche*, and still more into the English *peach*.

The Romans received the apricot from Armenia, and hence its Latin name *Prunum Armenicum*, or the Armenian plum. The damson they appear to have received direct from Damascus, and they hence named it the Damascus plum, from which come the French *prune de Damas*, and our own damson. The Greeks must have been early acquainted with the cherry, for the Romans received it from the Greek colonies of Pontus. Its name in Greek is *kirason*, from which is derived the Latin *cerasum*, the Italian *cirigia*, the French *cerise*, the English *cherry*, and even the Gaelic *sirist*. The Romans appear to have received the pomegranate from Carthage, to judge by its Latin name *punica*, or *Malus Punica*, the Carthaginian apple, but it seems also to have been called *Malus granata*, or the grained apple, and also *pomum granatum*, the source of the name of this fruit in all the modern languages of Europe. I venture to conjecture that the pomegranate is not an African plant, but introduced by the Phœnicians from Syria or Asia into their African colony. There is no evidence of its existence in the wild state in Northern Africa, whereas in that condition, as well as its cultivated state, it is abundant in Persia and the countries adjacent to it, and I may add that it is in Persia and in the corresponding climate of Affghanistan only, that it attains perfection in the cultivated state, being, as already stated, a very indifferent fruit in Northern India, and a very worthless one in all tropical countries.

Italy is stated to have received the fig from Syria, but it was probably introduced through the Greeks, who had an earlier intercourse with that country than the Romans. Its introduc-

tion into either of these countries must have been early and inevitable, for it was a staple product of Palestine, as we are informed by the Scriptures, from the earliest recorded time. The olive is recorded to have been introduced into Italy from Greece in the reign of Tarquinius Priscus. The quince took its Latin name from the town of Ceydon in Crete. The walnut was called by the Romans *persicum*, and hence was concluded, like the peach, to come from Persia. The almond took the name of *Nux Greca*, pointing to the quarter from which the Romans derived it. The filbert had the name of *Nux Pontica*, and therefore was received, like the cherry, from Pontus on the Euxine.

The only fruit of the orange family known to the Romans was the citron, which went under the name of the Median or Assyrian apple, indicating, although not very precisely, its origin. The orange was not introduced into Italy until the ninth century, and no doubt from Spain, for the Arabs had at this time been settled in that country for at least a century, and must have brought along with them some of the fruits of previously conquered Persia.

It appears from the account now given that Europe is indebted for some of its most valuable fruits to Western Asia; the fruits of America being all tropical, Europe can hardly be said to have received any from it, with one exception, the pineapple, which, by a skilful although expensive culture, is made to grow of a quality fully equal to the finest of its native land's. All our best fruits, whether indigenous or exotic, are of ancient cultivation, but through modern skill have been vastly improved both in size and quality. Thus, the native pear is made greatly to surpass the mango, and the wild and humble strawberry to be a match for the mangosteen; while a quasi-British orchard, which we have in the Azores, as already noticed, furnishes oranges superior to those of their parent countries, India and China, while, moreover, the inhabitants of these countries have them only in their season, when we can enjoy them nearly throughout the year.

XXVII.—*The Kaffir Race of Natal.* By Robert James Mann, M.D., F.R.A.S., F.E.S.L., and Superintendent of Education in Natal.

[*Read Nov. 18th*, 1866.]

The colony of Natal is situated on the south-eastern coast of the continent of Africa, about eight hundred miles beyond the Cape of Good Hope. It lies between the twenty-seventh and thirty-second parallels of south latitude, and occupies the broken slope by which the great continent here subsides from the high central table land to the sea. It has a sea-coast, looking to the Indian ocean, one hundred and fifty miles long, and a breadth from the sea to the landward frontier, the Drakenberg mountains, varying between a hundred and twenty and a hundred and sixty miles. Its north-eastern frontier is the large river the Tugela, and its upward continuation, the Buffalo river. Its south-western frontier is in part the river Umtamfume, and in part the river Umzimkulu. The land comprised within these frontiers has an extent about equal to one-third the area of England. Beyond the Tugela river, the neighbouring territory belongs to the independent Zulu Kaffirs. Beyond the Drakenberg frontier lie the Orange River Free States, and the land of the Basuto chief Moshesh; and beyond the Umzimkulu and Umtamfume rivers live the Griqua people of Adam Kok, and the Amapondo Kaffirs of the chief Faku. Such is the colony of Natal and its surroundings.

Natal now has lofty pastures covered by horses and flocks, and herds that are counted by thousands; and it now exports sugar, coffee, and wool, and aspires to export tobacco, flax, and cotton; and bids fair very soon to realise its aspiration. It nevertheless is in reality a very young land. It has only been an independent colony of Great Britain for ten years; it has only been a British dependency for twenty-one years; it has only been the seat of an English settlement for forty-three years.

Forty-three years ago, nothing was definitely known of the land which now takes rank as the sunny and promising colony of Natal. There were floating traditions that its shores had been occasionally visited by white people, and that the land was occupied by a gentle black race. It is, of course, familiar history that Vasco de Gama saw the land in December 1497, and named it the land of the Nativity. In the year 1683, eighty shipwrecked English sailors made their way through the coast region of what is now the territory of Natal, from Delagoa Bay

to the Cape of Good Hope. Three years subsequently, the crew of a stranded Dutch ship spent twelve months on the coast; and after this, certainly one abortive attempt was made to establish a Dutch settlement. There is at the present time a woman among Umnini's people, on the Natal river Umgababa, the wife of a native man named Funwayo, who is reputed among the Kaffirs to have the blood of one of these early European visitants in her veins. So little, however, is known of the incidents connected with these early visits, that, for all practical purposes, the year 1823 must be taken as the date of the actual introduction of the "Terra Natalis" of Vasco de Gama to good society.

In the year 1823, an officer of marines, Lieut. Farewell, who was at the time engaged upon a surveying expedition, landed on the coast, at the spot which is now the seat of the harbour of Durban. He found the coast almost void of inhabitants, from the river Itongati southwards. But to the north of the river Itongati there was a powerful native tribe, under the rule of a warlike chief, who claimed virtual supremacy over the wide district stretching from King George's river, Delagoa Bay, on the north (south lat. 26°) to the river of St. John's on the south (south lat. 32°). A brief explanation of the occurrences which had brought about this state of affairs must be here premised, because, without the light of such explanation, much that will have to be dwelt upon would be comparatively unintelligible. The explanation is also necessary, because it may be held in a small degree to modify the view of our worthy President, already before the Society, that "no Negro people has ever had the capacity to build up an empire or a monarchy of any extent and durability", unless the "any" be taken in a very limited sense indeed, and also provided the President's other statement, that "the eastern side of Africa is inhabited by the Negro race from the equator to the thirty-third degree of south latitude" is accepted. On this latter point, however, it is possible that there may be more to say.

It will not be without reason and interest, that I should here remark that the principal facts I am about to place before the Society have been ascertained by my friend Mr. Theophilus Shepstone, the secretary for native affairs in the colony, by direct investigation among the natives, and acting under the instructions of the late Lieutenant-Governor, Mr. Scott. Many of the incidents spoken of are of such recent date, that there are Kaffirs still living in the colony, who would be able to say in regard to them, "Magna pars fui"—if they could only speak Latin.

About the year 1785, the large tract of land which Lieut. Farewell found desolate and waste, was very differently circumstanced. At that time, the entire stretch of territory which is

now the colony of Natal, from the river Tugela to the river Umzimkulu, and from the Drakenberg frontier to the sea, was densely peopled by Kaffirs. There were at that time about ninety distinct tribes of natives inhabiting this territory. A small tract immediately under the Drakenberg, and lying between the sources of the Umzimkulu and Bushman rivers, was alone unoccupied. The names of these aboriginal tribes are placed on record in Appendix No. 1. The situations are given in the map.

The people who constituted these ninety aboriginal tribes of the district now ranking as the colony of Natal, were essentially gentle and peaceful. They had cattle, sheep, and goats, lived in fixed habitations, and cultivated the ground. They were too densely packed together to be nomadic in their habits. They dwelt in clans, speaking the same language, but ranged each under its own chief, who exercised patriarchal sway over his people, and who had supreme power over their lives and properties, but exercised that power in a mild way, and with considerable deference to public opinion. They were, indeed, very much what the wild natives in the retired districts of the colony now are. Their disputes, at that time, were quarrels rather than wars. The wars that arose out of tribal quarrels rarely lasted more than a few days. The old natives, speaking of this period, say that "the army then never slept away from its home". A single battle always terminated the dispute. The lives of women and children were invariabiy respected. Prisoners were simply detained until they had paid a ransom; and it was a common occurrence for warriors to send their war-shields home by their companions after a fight, and to remain to prosecute some love suit among the young girls of the tribe they had just been contending with. There was no trace of military organisation anywhere; and whenever it did chance that a hostile encounter occurred, its object seemed to be the mere settlement of a dispute, and not plunder and devastation.

So much for the "golden age" of Natal. We have now to relate how it came to pass that in a very brief period this "golden age" passed away, and an "iron age" took its place. When the ninety peaceful tribes were living where the colonial territory now lies, a similar state of things attained also to the north and to the south. Analogous tribes of black people were dwelling there after same fashion. On the Black and White Umfolozi rivers, situated a few miles beyond the great river Tugela, towards the north-east, there was among these one tribe rather remarkable for its size, and destined to become still more remarkable for its influence. This tribe was called the Umtetwa, and was ruled over by a chief whose name was Jobe. The Umtetwa claimed allegiance from some small native clans residing upon the same rivers. Among

these small tributary clans, one was the Zulu tribe, under the immediate rule of the petty chief Seuzugakona.

Now it happened that the Umtetwa chief Jobe had two sons, Tana and Godongwana; and as the old chief waxed in years, he made arrangements for the ultimate succession of the elder of the two to his place. It was, however, discovered that the young men were impatient for power, and were plotting against the old chieftain's life. He thereupon ordered the young men to be punished for their perfidy with death. The party charged with the execution of this order came upon the young men's hut in the dead of the night. Tana was slain, but Godongwana leaped the fence of the kraal, with an assegai wound in his back, and concealed himself in the darkness; and ultimately escaped from Umtetwa-land, and wandered from tribe to tribe, far to the south. This event occurred about the year 1790.

In the fulness of time the old chief Jobe died; and not long afterwards Godongwana reappeared upon the scene, with two horses, animals hitherto altogether unknown among these people, and riding in state upon one of them. After a brief conflict with the chief who had taken his father's place, he was received as the rightful patriarch of the Umtetwas, and acknowledged by the entire tribe. This was probably about fifteen years after his first exile. His identification was made complete by the scar of the assegai wound upon his back. In accordance with a common custom among the Kaffir tribes, the "birth-name" of the chief was now changed for a "praise-name". Henceforth he became known as "Dingiswayo", which means "the wanderer".

It now appeared that "the wanderer" had performed his wanderings to some purpose. He had come into contact with white people in the far south, and had studied their doings with an observant eye. He brought back with him to the banks of the Umfolozi, in addition to his horses, a considerable knowledge of military organisation and tactics.

But soon afterwards there came to Dingiswayo, from the small tributary tribe of the Zulus, a young adventurer named Chaka. Chaka was a son of the Zulu chief Senzugakona, already named, and had become troublesome at home from his insubordinate spirit, and had now consequently found it prudent to place himself under the protection of Dingiswayo. Chaka enlisted himself in the ranks of one of "the wanderer's" newly organised regiments. This occurred about the time that the battle of Austerlitz was fought in Europe, by one who was then, among the civilised nations of the north, very much what this dusky refugee was about to become in his smaller sphere.

Although Dingiswayo had brought back with him a knowledge of military organisation, and had with it introduced the first

spark of aggressive warfare among these rude people, he still adhered to many of the old softer and gentler traditions. He did not allow women and children to be put to death in a conquered territory. He did not habitually sweep away cattle. He merely occupied the vanquished land, and consumed its beeves and grain so long as it suited him to do so, and exacted obedience. The young soldier Chaka, however, gradually changed all this. He fought in Dingiswayo's army in all its expeditions, and rapidly acquired considerable personal renown and influence. In the year 1810 his father died, and he succeeded to the chieftainship of the Zulus. About the year 1818, the Umtetwas were vanquished by Zwide, of the Amandwandwa tribe, and the Umtetwas sheltered themselves under the rising chief of the Zulus, and amalgamated themselves with Chaka's people.

Chaka now found himself strong enough to start in history upon his own account. From the first he had maintained that Dingiswayo's half merciful policy was a policy of weakness, and that the only safe course, and wise course, for a warrior who was bent upon conquest and aggrandisement, was to utterly disorganise and destroy; if he struck at all, so to strike that nothing should remain which could rise up thereafter in retribution. In carrying out this principle, he adopted several very remarkable expedients. He banded his young men into regiments distinguished by the colour and pattern of their shields. He taught them to wield the single short assegai in close personal conflict, instead of launching the long assegai from afar. He did not allow his soldiers to take wives until they had acquired the privilege as veterans. He marched his troops in close phalanx distributed into body and wings. If a warrior returned from the battle without shield and assegai in his hand, or with a wound on his back, he punished him with immediate death; and if a regiment, or army, returned from an expedition foiled or repulsed, he decimated their ranks, or, in extreme cases, destroyed the entire body. Such was virtually the remarkable processes by which the harmless, gentle Kaffir tribes of the end of the eighteenth century became transformed into one warlike aggressive people, the formidable Zulu Kaffirs of the beginning of the present century.

Wherever there were cattle to be swept away, women and children to be destroyed, and independent tribes to be swallowed up sooner or later, the short javelins and marshalled regiments of Chaka appeared, until at length his name was a sound of terror and power, and his sway was undisputed from Delagoa Bay in the north to St. John's River in the south, a stretch of not less than five hundred miles. Wherever he went, true to his great principle he struck to annihilate. He broke up every tribe he came into contact with, absorbing such of the young men as he could enlist

into his own following, and carrying them away with his regiments. The storm first fell upon Zwide, the conqueror of Dingiswayo. It next broke upon a large tribe, the Amahlube, dwelling upon the Buffalo river, one of the frontiers of the present territory of Natal. The Amahlube at first were hemmed in by the resistance of the compact tribes beyond, and suffered severely; but they ultimately burst through, like a great wave, and dispersed. Other tribes then came in for their turn. Some few of the smaller ones, as, for instance, the Amakabela, lower down the river, who lived where there was dense jungle, manifested singular tenacity and resource. They dodged the conqueror about in the bush, and maintained a wretched and precarious existence in the wilderness, living upon roots and wild animals, and occasionally suffering actual starvation. It is a noteworthy illustration of the absolute and extreme wretchedness that was in places brought about at this period, that cannibalism for the first time appeared among the Kaffirs. The idea was first conceived by a man named Umdava, and under his example four fragments of tribes became cannibal. An old Kaffir named Funwayo, now living in Natal, narrates that when serving in the Zulu army he once came suddenly upon a party of the Amakunyao tribe, on the Umhlatuzan river, that passes near Pinetown, and found them cooking over a fire; and that on making a rush with his fellows to possess themselves of the flesh pots, the party found them filled with human feet. A living chief, named Nomsomekwana, relates that when a boy he was captured by one of these cannibal parties, and driven along up the river that runs past the site where the capital city, Maritzburg, now stands, and where then buffalos, elands, and sea-cows were abundant. The boy was made to carry a broad pot, which, he was told, was the cover of one in which he was to be himself cooked. He suddenly threw himself into the river amongst the sea-cows, at a spot close to where the residence of the Bishop of Natal now stands. He was followed by a shower of assegais; but he was a good swimmer, and by diving escaped the pursuit. His sisters were taken away, and actually eaten. After some adventurous wanderings, he had the good luck to fall in with a party of his own people, and went with them to the refuge of a concealed cave which had become their lurking place.

Another man, Unonibiba, tells how, after a period of concealment, he once returned to the home of his people, and found the gardens uninjured, and the crops ripe; but the skulls of those who should have gathered the crops, the relics of a cannibal raid, were bleaching on the hut tops! The Amadunge are known to have become cannibals as well as the Amakunyao. The dogs, at this time, were commonly eaten by their masters. "Wolves,"

(that is to say hyenas) became so daring and fierce from feeding on human flesh, that they boldly attacked both men and women, and continually carried away children

The larger tribes who were primarily attacked by Chaka, in the first instance forced their way further to the south, and took up fresh quarters. But they were there subsequently attacked again as the Zulu power expanded its operations, and the larger body of their people ultimately presented themselves to Chaka, and made formal submission, and were distributed among the head men and officers of the chief. The young men were all incorporated into the Zulu regiments. Two Natal tribes, alone, are spoken of as having escaped destruction by this process. These were the Abatembu, and the Amabaca, who lived respectively on the Buffalo River, low down, and near the site of the city of Maritzburg. The supremacy of Chaka was only checked towards the south by the barrier offered in the close neighbourhood of the Cape Colony, and towards the north by the fever districts lying along the low swamps of King George's River.

Towards the latter part of his reign, Chaka moved one of his royal kraals, named Dakuza, across the Tugela, into the territory that now forms a portion of Natal, near the Umvoti River. This spot is well known as "Chaka's Kraal." Chaka was, therefore, the powerful chief spoken of in a preceding passage as found in this position in the time of Lieutenant Farewell's first visit in the year 1823, and Chaka's supremacy was the reason of the desolation of the country at that time, from the Itongati River to the Umzimkulu.

It curiously enough happened that this remarkable man manifested from the first a readiness and anxiety to cultivate friendly relations with Europeans. Lieutenant Farewell's visit led to a party of about twenty English traders returning to the Bay of Natal, the following year, to effect a settlement there. Mr. Fynn, a gentleman who was personally known to me in Natal, but who is now dead, was sent forward to negociate a settlement with Chaka, and in the year 1824 this settlement was formed under the sanction of his permission. Mr. Fynn states that at that time he could find neither kraals, cattle, nor corn, anywhere south of the Itongati. He occasionally encountered a few half starved stragglers, deriving a very precarious subsistence from roots and shell-fish. It was a very rare thing to see more than two natives at a time together. Some of these miserable wretches soon gathered round the English settlement at the Bay for protection. Such was the first stage in English colonisation at Natal. Three years afterwards fugitives from Zululand proper, beyond the Itongati, began to be added to the settlement, and it became necessary to report the fact to Chaka. In that year a formal

consent was procured from the king for the retention of these fugitives at the settlement.

The rest of Chaka's history, and the events which immediately followed upon his death, lie within what may be properly called the historical period of Natal; they need, therefore, only to be alluded to here in the briefest possible way, and just so far as may serve to connect this curious early phase of Natal native life, with what has to be told of the Natal native subjects of her Majesty Queen Victoria. Chaka's reign ended on the 23rd day of September, in the year 1828. On that day he was assassinated at his royal kraal on the Umvoti, while receiving a deputation from the Amaponda chief Faku, to tender his submission. Chaka's army had just returned from a successful expedition against Faku, and been ordered off without rest towards the north. Immediately after its departure, Dingaan, a brother of Chaka's, seized a favourable opportunity to bring the great chief's career to a sudden and violent end. Chaka was about forty-one years of age at the time of his death. Dingaan succeeded to the chieftainship of the Zulus, after the destruction of his brother, but many of the tribes revolted from him. Disputes occasionally arose between Dingaan and the English settlers at the Bay, chiefly about refugees, which ultimately led to an expedition being sent against the English settlers in the year 1833. The English retired for a time into Faku's territory, but subsequently returned under the guarantee of a treaty with Dingaan. This treaty was dated the 6th of May, 1835, and set forth that:—"Dingaan, from this period, consents to waive all claim to the persons and property of every individual now residing at Port Natal, in consequence of their having deserted from him, and accords them his full pardon. He still, however, regards them as subjects liable to be sent for whenever he may think proper. The British residents at Port Natal, on their part, engage for the future never to receive or harbour any deserter from the Zulu country, or any of its dependencies, and to use every endeavour to secure and return to the king every such individual endeavouring to find an asylum among them." Immediately after the conclusion of this treaty the number of the natives gathered round the English settlement was increased to 1,000 adult men, and the settlement was named the township of D'Urban, after Sir Benjamin D'Urban, the Governor of the Cape. In the following year the Dutch immigrants began to flock down into Natal from the mountains. The struggle between the Dutch Boers and Dingaan, and the destruction of Dingaan, and the elevation of his brother Umpanda in the interest of Boer alliance and friendship followed. The victorious Dutchmen founded the city of Maritzburg in the year 1839; took a tribute of 36,000 head of cattle from Umpanda,

and set back the frontier of Zululand some distance beyond the Tugela to the north. Then ensued the dispute, and conflict, of the Boer immigrants with the British authorities, who claimed allegiance from them in virtue of their being off-sets from the Cape Colony. In the year 1845 this dispute was finally arranged by the submission of the Boers, and the formal annexation of Natal as a British colony was made, its frontiers being fixed on the Tugela River, the Drakenberg Mountains, and the Umzimkulu River. The arrangement gave Umpanda Zululand beyond the Tugela, and the Dutch the Orange River Free States beyond the Mountains.

During these several phases of Natal history, one most important change has been continually and steadily in progress. The Kaffir population, which was scattered at the time of Zulu encroachment, has been gradually, and year by year, returning to its old haunts, until at the present time there are in the colony of Natal close upon 180,000 black people living under the ægis of British protection and British rule. These numbers are made up in part of tribes which have returned from exile and concealment, and in part of refugees who escape from Zululand, and cross the river frontier in the darkness of night, either to avoid some penalty which they fear, or because they have learned to estimate rightly the advantage and blessing of a civilised government.

There are at the present time fifty-nine native tribes resident within the territory of Natal. The names of these tribes are expressed in the Appendix No. 2. The first forty-three tribes on the list are identical with old aboriginal tribes of the district that inhabited the land before the episode of Zulu invasion. The next nine tribes of the list are composite, being made up of a fusion of fragments of other aboriginal tribes. The last seven tribes of the list are intrusive tribes that have entered the territory subsequent to the Zulu dispersion, but that were found there when the land became a British dependency.

Now these people are living, for the most part, in huts and kraals, or native villages, either gathered into locations set apart especially for their accommodation, or scattered abroad over the lands of the Crown, and of private proprietors; and in these huts and villages they dwell much after the fashions of the days that preceded the advent of Chaka's legions. They have cattle, and sheep, and goats and gardens filled with grain crops, and an occasional family scuffle is all they ever know of war. Each tribe is again headed by its own patriarch, or chief, in numerous instances the direct lineal descendant of the old ruler. But there is this most important difference between the present and the past. No Chaka can ever again bring desolation to the simple community, and give its women and children to the flood and the spear, and

to the tooth of the cannibal and the hyena. The several patriarchs have at any rate taken security against the recurrence of that wretchedness. They are now each and all the children of Queen Victoria. They are still chiefs in the sense that they are looked up to by their people as the traditional heads of the clans, and as having power to settle petty disputes, and punish petty offences, in accordance with the traditions of their old customs. But they are now lieutenant chiefs in the place of being supreme chiefs. Each is said to govern his tribe, but he is also held responsible to the Lieutenant-Governor of the Colony for his management. The supreme power has been transferred to the proper head of the State. All grave matters are referred to the courts of the magistrates and judges of the land. Even in the petty cases that are adjudicated by the chiefs an appeal lies to the magistrates of the districts, to the secretary for native affairs, and even, in case of need, to the Governor himself in council. The tribes are subdivided into territorial districts, villages or kraals, and families, and each of these sub-divisions has its own appropriate and responsible head, who looks to the Induna, or head-man, of the division next above him. This organisation is so admirably complete that at the present time any order emanating from the Governor can be instantaneously disseminated to every native hut in the land, although it has necessarily to be communicated entirely without the intervention of written documents.

The traveller who goes, at the present day, into the native districts of the colony of Natal, among these people, can entirely realise what the state of the land was at the end of the last century before the Zulu invasion. The natives there have now resumed their old modes of life in almost every particular. The most notable differences that are found are that the old karosses have been very generally replaced by blankets of English manufacture, and that curious iron hoes of Birmingham make are now plentiful in the gardens. It should perhaps be added that the golden age has returned, in the sense that money bags are beginning to make their appearance among the lares and penates of the hut.

The wild Kaffir of Natal still lives in his low thatched hut upon the hill-side, and passes his days in sunny indolence, making his women perform such slight labour as is absolutely essential for the bare preservation of a mere animal existence. Much that the President of the Ethnological Society has said and written of the unprogressiveness of the Negro race is unquestionably true of this section of these Kaffir people. They have long had, as a possession, the ox, the sheep, the goat, and the dog; and they have long cultivated millet and Indian-corn. They have long possessed the art of rudely fabricating malleable iron. Still

their agriculture and their manufactures have remained in the most primitive state. They have no architecture; they have never attempted to hew a stone, or to fashion a brick; they have no literature; and certainly they have no more conceived the idea of taming the elephant than of taming the alligator. It is very remarkable how these people, after their dispersion by the aggressions of Chaka, have gathered together into the fold of a civilised protection, and into the light of a civilised example, with the exact reproduction of their ultra-barbarous and primitive state of existence.

The Kaffirs of the South-Eastern African coast, and of the Natal district, are undoubtedly of Negro blood. The distinctive characteristics of the Negro organisation,—the black woolly hair, dark eyes, flat face, depressed nose, jutting jaws, thick lips, large mouth, and peculiar odour of skin,—are all found among them in frequent and full development. But the Negro organisation is as unquestiohably mingled in the Kaffir with some higher and nobler type. The woolly hair and peculiar odour of the skin are never absent. But the observer continually encounters men with sharp features, thin lips, prominent nose, and upright prominent, and often square foreheads of unmistakeable capacity. Another peculiarity which is very remarkable among these people, and which I think is wanting among the pure Negro races, is the lightness and slimness of the limbs. This is so strikingly obvious in the children that it at once attracts the notice of the most casual observers. Mr. Crawfurd justly remarks that the typical features of Negro organisation are found in a "greatly mitigated" form in the Kaffirs of the Eastern African coast. Now this modification of organisation must, I conceive, be attributed to one of two causes. It must be due either to external circumstances, brought into operation in the eastern districts, which do not attain in the western; or it must be a result of the commingling of different bloods. In my own limited sphere of observation I have never been able to detect the existence of the first class of influences. Certainly there is nothing in the practice of these people of the proceeding which has been conceived to call forth in some instances finer types of organisation, namely, the selection of exceptionally handsome women for their mates by privileged and distinguished men. The more I have moved about among these Kaffirs, and studied the interesting diversities of their features and organisation, the stronger the conviction has, almost unconsciously, and certainly involuntarily, grown in my own mind, that they are not of pure Negro blood, but that there are at least two distinct elements in their organisation, which are continually cropping out, now one, and now the other, into predominance in even the same families. In considering this ques-

tion I think we should never lose sight of the fact, which has been so well put by our President, namely, that the Negro type is *in a state of abeyance*, or at any rate of mitigation, at the eastern border of the great continent. This surely in some way points towards the concealed cause of the peculiarity. We must look for that cause, not in the selection of handsome mates by tasteful and privileged men, which would surely be as likely, to say the least for it, to attain on one side of the continent as on the other; but *to the East;* in other words, to a geographical position, which at once seems to suggest that there may have been a special neighbourhood of peoples in one case that does not occur in the other case. I by no means pretend to be able to offer a solution of this interesting problem, or indeed to be able to express any very certain conclusion in my own mind beyond the general conviction I have alluded to, notwithstanding the fact that the consideration has been present to my thoughts for a very long time. But upon a recent occasion, in a conversation which I had with Mr. Palgrave at Nottingham, during the meeting of the British Association for the Advancement of Science, I was very much impressed by the description he gave me of his friends of the South-Eastern district of Arabia; the Kahtanic variety which he inclines, it will be remembered, to derive from the Highlands of Abyssinia, in contradistinction to the North-Western Ismaelitic Arab of true Asiatic extraction. Much that he told me of his Arab friends strongly brought back to my mind things that I had seen among my own acquaintances of what I take to be the higher type of Kaffir organisation. It is not unworthy of remark, in connection with this subject, that at page 454 of the first volume of his interesting book, Mr. Palgrave says, "The Kahtanic Arabs are, so to speak, nearer related to the Negro than are the Ismaelitic tribes, and hence more readily admit Africans to fellowship, intermarriage, and civil rights—nay, even to government—a fact which has not escaped the discerning eye of Niebuhr." My present object is simply to place in connection with this observation the fact that the original seat ascribed by Mr. Palgrave to this remarkable people, so ready to admit negroes to fellowship, and inter-marriage, is just *to the east;* that is where we have to search for the cause of mitigation of negro characteristics which makes Kaffir organisation.

The slimness of limb, which I have alluded to, is, I think, one of the Arab characteristics. It comes out in the adult Kaffir in moulding him more into the form of Mercury, than of Hercules. The Kaffirs, as a rule, are active rather than strong. They are great walkers, and as messengers are without rival. One would almost be justified in believing that a letter put into the slip of a cleft stick, and delivered to a Kaffir in Natal, with an intimation

that the great chief required it to be delivered to her Majesty Queen Victoria, at Windsor, would turn up at its destination in due time.

Mr. Crawfurd remarks of the Negroes, that their religion is witchcraft, and that they have neither doctrine, ritual, nor temples. I have no doubt that this is literally true of the Kaffir tribes. They have medicine men who bring rain for a consideration, and cure diseases by charms and incantations, and who undertake to discover lost property, and to find concealed water. These men are generally half fanatics, and half rogues, and often make out for themselves a prosperous career. There is among the Kaffirs some shadowy notion of an influence exerted over them by the spirits of their fathers, and of their great chiefs. It is, however, very difficult to get exactly at the character of this idea. My own impression is, that it is a very vague and imperfectly defined superstition among themselves. A feeling, more than a thought or a doctrine. One very amusing instance of the great difficulty that lies in the way of coming to a safe conclusion in this matter occurred within the sphere of my own knowledge. One high and excellent authority, who has come to the conclusion that the Kaffirs have a clear perception and recognition of the existence of a supreme power, strengthened this opinion by reference to the testimony of three Kaffir women at a certain missionary station. These three women were shortly afterwards examined by another authority, also well versed in their language and modes of expression and thought, and the second authority gave this version of the women's testimony—that it sometimes happens the women come into their hut with numerous children when a meal is prepared, and the children are very hungry and clamorous, and to get rid of this clamour the women say suddenly, "Listen! Unkulu-unkulu is calling." The children rush out to listen. While they are listening the women eat up the food; and when the children return, and begin to cry for their food, they say, "Oh! Unkulu-unkulu has taken it." Much of the reason of the difficulty of coming to safe knowledge in matters of this kind is, that the Kaffirs are naturally very shrewd, and singularly suspicious, when submitted to any very close examination, and readily jump to the conclusion of what it is that the interrogator wants, and oblige him with it. It once happened to myself that I had a dispute with a friend regarding the visibility of a certain well known mountain, at a certain spot. I asserted that the mountain was necessarily visible at the place, and that I had continually seen it thence. My friend maintained it was not visible there, and to prove his position called in a learned Kaffir, who had lived all his life in the neighbourhood, and was a high authority in colonial topography. The Kaffir immediately, under the close

questioning of my friend, decided that certainly no mountain could be seen. My friend, nevertheless, saw the mountain from that spot with his own eyes a few days afterwards, when the dispute was referred in appeal from the Kaffir to the fact. As a rule, all barbarous people are shy of answering truly, when questioned. It is not so much that they have any deliberate intention, or desire, to deceive, as that they are instinctively cautious of giving information that may, in some unsuspected way, compromise themselves. If you are very anxious to know something from them, you must have some reason for your anxiety, and it is, therefore, only a piece of common worldly prudence to ascertain why you want to know, before they let you into the secret.

I myself believe that there is another very important reason why it is not easy to get clear notions from the Kaffirs concerning some matters of this class—the fact, namely, that they have no very definite or clear ideas on the matters themselves. Some of their ceremonial dances are so dramatic and descriptive that it is difficult for the observer not to conceive that there is some meaning lurking in the performance. With this impression on my own mind I have again and again endeavoured to get an explanation of one particular dance, in which the women take part, and appeal moaningly and wailingly to the men, while these dance away, shaking the earth with their stamp, and piercing the sky with their assegais, but resolutely unconscious of the presence of the praying women. For a long time I believed there was some meaning which was intentionally concealed. I have now no doubt whatever that the Kaffirs who perform the dance do not know its meaning. The answer to all questions is simply, "We do so, because our fathers did so." Most probably the form of the dance has been given to it by some early incident; but that now the incident is forgotten and lost, although the form of the dance is transmitted, by the actual practice of it, from father to son.

Much of the Kaffir superstition is weird and dark. I will give one illustration of this, taken from the Zulus of the present day. A general belief prevails among the wild Zulus that certain evil disposed persons have the power of working harm to those around them by supernatural means. These evil doers are termed "Abatakati." Whenever a Kaffir dies, these Abatakatis set leopards and wild cats to work, to hunt out the spot where the body is buried. When the body is discovered it is restored to life by the administration of medicines, and the tongue is cut out, and the restored creature then becomes an "Umkovu" or hobgoblin, and is kept in reserve to carry out the evil purposes of the restorer. Under the instructions of the Abatakati, the Umkovu goes in the dead of the night to the neighbourhood of

some inhabited kraal, and shouts "Maya, Maya," which means something like, "Woe, woe, to the house of my father." This sound is held to be the death doom of some one in the kraal. When the Kaffirs hear this exclamation they remain terror-stricken and motionless. They believe that to speak, or to move hand or foot, would certainly bring the doom upon themselves. There is one quaint little appendix to this superstition, which goes far to connect it with the pale of daily natural life. The Kaffirs believe that idiots and half-witted people are "hobgoblins" who have not been perfectly restored in consequence of the physicking having been stopped, and the process interrupted, before the tongue could be cut out.

Life is now as secure among the Kaffir tribes of Natal, as it is in civilised England. But it is far otherwise among the Kaffir tribes that live beyond our frontiers; and this is especially the case among the Zulus. The chief there still exercises supreme power over the lives of his people; and murders under his orders or sanction are of almost daily occurrence. There is no formal trial adopted in Zululand for an alleged offence. The culprit is accused to the chief, and if he believes him to be a dangerous, or feels him to be an obnoxious subject, a sanction is given for his destruction, and an armed party is ordered to carry the decision into effect. The sentence generally involves the lives of the entire family of the offender. The mere suspicion that a man is contemplating leaving Zululand for the British territory, is quite enough to bring the arm of vengeance at once upon his head. Upon a recent occasion, Mr. Shepstone, the Secretary for native affairs, paid a visit to Umpanda, the Zulu king, and had to remove from the spot, where he was about to pitch his tent on arriving near the king's kraal, Umgungunhlovu, because it had been preoccupied by two dead men who had just been knocked on the head there. On the morning of the 7th of June, 1864, I was breakfasting with the Government border agent, at his residence near the Tugela River, when we were told that a party consisting of a young lad, four women, and two young men had just come in from Zululand by crossing the river in the night. I took the young lad, whose name was Matupa, away with me, and kept him until I left the colony in April last. This gave me the opportunity of ascertaining this lad's history, and his reason for leaving the lands of his fathers like a thief in the night. This is Matupa's history. His father had some little time previously made himself obnoxious to one of the Chief Ketchwayo's head men, and been accused, before the chief, of having betwitched certain people who had died. The chief sanctioned his execution, and he was killed. The boy's mother and twin brother were soon after destroyed in a similar way. The boy, another brother, and a sister, then went

off towards the Tugela, and settled down near it with a man called Umlazane, who was one of Ketchwayo's own messengers. A few days before my visit to the agent, at the Tugela, Umlazane had been over to Maritzburg to fetch some skins. Ketchwayo sent for him to ask why he had done this without permission. That night he was knocked on the head, and disappeared from the scene. On the following night the lad and six companions stole away, and succeeded in getting safely across the river to the shadow of the ægis of Queen Victoria; and I have no doubt had very good reason for doing so. Matupa proved to be one of the quickest and cleverest Kaffir lads that I have known. He made an excellent servant, and might be taught anything. One very amusing incident illustrates the lad's natural shrewdness. When he had been with me a few months, some strange men came up from the coast to see him, claiming to be relatives. He was very delighted to see them, but pulled me aside while they were talking, and although I could not understand his language, and he could not then speak half-a-dozen words of English, he managed at once to make me understand that his new friends had come up to see whether they could not bag the wages that had become due to him for service; but that I was not on any account to give them any money. I was to be sure to keep his "marley" for him. I need not say that I scrupulously obeyed the lad's instructions in this important particular.

The state of affairs in Zululand, and just beyond the north-eastern frontier of Natal, thus incidentally noticed, is connected intimately with some very remarkable passages in recent Zulu history, which time does not permit me to dwell upon, on this occasion. It will be sufficient here briefly to say that the brother of Dingaan, Umpanda, who was set up in his place by the Dutch Boers in the year 1840, still sits as king in the high place in Zuludom, and that the old king has steadily maintained the most friendly relations with the English authorities from the time of the annexation of the colony, down to the present period. But the old king has had a troublous time. As his sons have grown to man's estate the young men of the land have gathered round them, and parties have been formed. In the month of December, of the year 1856, a great battle took place near to our north-eastern frontier, in which the party of the second son, Umbulazi, was scattered and destroyed by the elder son, Ketchwayo. In this battle several of old Umpanda's sons were killed; but two of the younger ones of Umbulazi's faction, namely, Usikota and Umkungu, escaped as mere lads into Natal, and are now living there under British protection, greatly to the delight of the old king, but to the disgust of their brother, Ketchwayo. The old king is still counted "the head" of the people, and sits surrounded

by the peaceful old men, the Nestors and the Solons of Zuludom. But Ketchwayo is looked to as "the feet and hands," and is "as the rose of the fair state" to the restless young spirits who have only heard of the glorious days of Chaka and his legions. In this state of affairs, Ketchwayo very naturally views all disaffection from his own rule, and secession from his own adherents, with abhorrence, and looks at all unauthorised communication with Natal with suspicion. Upon one occasion, it is believed that he even conceived a plan for endeavouring to seize his young brothers in British territory. But the old king got news of the threatened treachery, and sent private intimation to the colonial authorities. For a considerable time the British Government has been more in favour with the general Zulu population, than the rule of their own chiefs; and the colonial authorities have hence found it necessary to discountenance the too easy passage into the colonial territory. This object is practically effected by returning all cattle brought into Natal by refugees, on their restitution being formally claimed by the Zulu chiefs, and by registering refugees and assigning them a term of three years' service to white men when they enter the colony. By such means is the remnant of the empire of the great Chaka now kept upon its legs. So, perhaps after all, we may ere long have to admit that our President *was* right when he said, "No Negro people has ever had the capacity to build up an empire or a monarchy of any extent and durability." Mr. Shepstone, the Secretary for native affairs in Natal, believes that, if these two restrictions were once removed, the Zulu power would instantly crumble into pieces.

The number of the Natal Kaffirs—that is, of the black people living in Natal territory, and rendering allegiance to the Government—has increased very rapidly. There were probably about ten thousand Kaffirs gathered round the white settlers in Natal in the year 1838. In the year 1843, when claims were made for land by the Dutch farmers and white settlers, there were more than 100,000 natives scattered about over the country. The number of Natal Kaffirs at the present is very near to 200,000. This increase, of course, has not been through the natural process of multiplication. It has been mainly due to the regathering of the remnants of the dispersed tribes, and to the constant accession of refugees from all directions, but principally from savage Zuludom. The question of the rate of natural increase among these people is one that is not easy of determination. My own impression is that the numbers do naturally increase, but at a much slower rate than among the civilised peoples of Europe. I have also no doubt that this rate of increase will be found to be considerably augmented, where the Kaffirs are settled under British rule.

The Kaffir attaches as many women to his household as he can buy for cows, and consequently the wealthy old men get rather more than their fair share of this marketable commodity. Polygamy is an institution that is so intimately interwoven with all the customs and modes of thought of the Kaffirs, that it will necessarily prove a very difficult arrangement to get altered. The practice remains in full force among the Natal tribes. But all constrained marriages are discountenanced by the magistrates, and offenders in this particular are punished whenever an appeal is made for protection. It is in contemplation to render the woman's declaration of free consent indispensable to a marriage contract. In the meantime two very important measures in the right direction have been taken by the authorities in modification of the old practice. Every marriage is now held to be irrevocable and final, so far as the interference of the parents of the women are concerned; and widows are now permitted to marry whom they please without any reference to the will of the natural guardians.

Mr. Crawfurd has remarked on the submissiveness of the Negro. This quality comes out in the Kaffir in a remarkable deference for the white man. The Kaffir instinct unquestionably is to look at the white man as a superior being. For this very reason the Kaffir is slow to follow the white man's example in social things. He thinks certain arrangements are intended for, and belong to, white men; but not to black men. One of the commonest answers missionaries get to their appeals to wild Kaffirs, is, "Oh, yes! That is all very right and true. There is a great spirit who looks after the white men, and who cares for them. But he has nothing to do with the black people—that is quite another affair." It is a very curious fact that the first operation of missionary influence among the Kaffirs is to destroy this feeling of instinctive deference, and to develope in its stead a very considerable amount of self-sufficiency and conceit. A very good tale is told in illustration of this, by a reverend missionary well known to me, and who stands foremost in the band of Americans who have so long and so assiduously laboured among these barbarians, as one of the first that entered upon the work. He was walking with some friends, through one of the streets of the city of Maritzburg, in its quite early days, when a knot of gaily dressed Kaffir converts burst out from a service just concluded at a Wesleyan Chapel, chattering, with a jaunty step, and with such fragments of noses as they possessed well up in the air, and deliberately elbowed the missionary and his friends off the path. The missionary stopped, and clenched his hands, and looked back after the bevy of converts with the exclamation, "If I were not a minister of Christ's church, I would give you interesting gentlemen a

lesson you should have cause to remember for the rest of your lives." The inference to be drawn from this remark, and this anecdote, is simply that the practical success of missionary enterprise among these barbarians very much depends upon the judgment and common sense that are brought to bear in the prosecution of the work.

The Kaffirs of Natal do not use the bow and arrow. Their arms are lances, or assegais, of various dimensions and patterns; shields, nearly as long as the men are tall, made of ox hides, stretched upon frames; and knobbed sticks, or clubs, which they throw with considerable dexterity. The natural mode of attack seems to be simply an excited rush made after the warriors have danced and shouted themselves into a transient frenzy. Chaka introduced a more artistic mode of proceedure, which has been already in some measure alluded to.

There is one interesting peculiarity among these people which deserves a brief notice on account of the light it throws upon some of their modes of thought, and their natural capacity for humour. The Kaffirs have no family names. Each individual is distinguished by a name invented for him at his birth, and this name is commonly changed, among the men, at adult years, for a name of renown. A very surprising stretch of ingenuity is exerted in contriving these appellations. Thus "Umgodi" is simply "the boy who was born in a hole." That is a birth name. "Umginqisago" is "the hunter who made the game roll over"—that is a name of renown. "Umomoye" is "the man with a broad face." "Usirishe" is "the man with the big beard." A lady, an acquaintance of my own, is "Unomaqala-qala," because she "looks out in all directions in order to see"—that is, glances from side to side as she walks. Another lady is "Unomaqekeqekana"—that is, "who goes off in little cracks"—because she walks with an elastic gait. "Isibikwana" or "the little window" is an intimate and valued friend of my own, who unfortunately is so short-sighted that he has commonly to use concave glasses before his eye.

Sir S. W. Baker has remarked that the Negro is in advance of white races in intellectual quickness during early childhood; but that he acquires his full intellectual development very soon (I think Sir Samuel believes as early as twelve or fifteen years of age), and does not expand, or advance, intellectually afterwards. This certainly is not the case with the Kaffir tribes. The children are quick and docile, and can be taught just anything. But the men grow with advancing years in intelligence and sagacity in a remarkable degree. Among the wild tribes the young men are nearly all restless, impulsive, turbulent, and boastful; the old men are quite all self-contained, astute, obedient to order, and full of

wise saws and instances. They are naturally great talkers, and this, I believe, is the proper explanation of the primitive education that goes on among them in even their rudest condition. It is still, of course, a moot point, what this capability may augur for the future of these people. The question is as important as it is interesting; too important and large, indeed, to be opened at the end of a paper. I will, therefore, only say, as in some way bearing upon it, that I know many Kaffir men in Natal who are now living in square upright houses, with their families around them, possessing property, earned by their own labour, in some instances of considerable amount, and contributing liberally for the support of schools for the teaching of their children. I know one Kaffir man who has purchased a sugar mill, entirely of his own head, at a cost of £700, and who, when I left the colony, was working his own machinery, and crushing his own and his neighbours' cane, without the slightest assistance from white hands. To complete my picture I am bound also to add that I know another Kaffir, who is also a very fair practical engineer, but who, upon one occasion, sat down upon the safety valve of his engine, when he wanted to quicken its work, in order that he might finish a certain crushing, and get away from a stipulated task. The Kaffir who sat down on the safety valve was, however, a young lad. The Kaffir who is crushing, and manufacturing, with his own machinery, is an old man. The young lad is undoubtedly clever and quick, but I am sure I am quite justified in saying he *will* give up sitting down upon the safety valves of steam engines when his intellect has attained the full development it is capable of.

APPENDIX.

No. 1.

Names of the Kaffir tribes which dwelt in the territory now included in the colony of Natal, before the invasion of Chaka.

1. Amacele
2. Amendelu
3. Amahlongwa
4. Amasomi
5. Amandhlovu
6. Amatuli
7. Amaganga.
8. Inyamvino
9. Amadunge
10. Amancolosi
11. Amantshunyasi
12. Amakabela
13. Amapepeta
14. Amazondé
15. Amaxamalala
16. Amampumuza
17. Magenge
18. Amafunze
19. Amabaca
20. Amambedu
21. Amangamvu
22. Amabambo
23. Amahlube
24. Amabele
25. Amazizi
26. Amakuze
27. Abatembu
28. Amapumulo
29. Amagwabe
30. Amawquswa

31. Amagadé
32. Awaosiyane
33. Amahlala
34. Elanyeni
35. Emalangeni
36. Amabiya
37. Amakanya
38. Amamemela
39. Enhlangwini
40. Amapemvu
41. Abamkulise
42. Amanyongoma
43. Amalanga

44. Abalumbi
45. Amakunyao
46. Amazelemu
47. Amahlongwa
48. Amaxesibe
49. Amagwanyana
50. Amasani
51. Macabise
52. Amadhlanyoka
53. Amangilo
54. Unqinambe
55. Unondaba
56. Emkulwini
57. Amawushe
58. Umbonjini
59. Amahlanyao
60. Amavangane
61. Abakwamiya
62. Amazizi
63. Amakuze
64. Amatolo
65. Amangwabe
66. Amagamedze
67. Amankabane
68. Amahlanyao
69. Amangondo
70. Sibenyakansale
71. Amandhlovu, another section of No. 5
72. Sivuku
73. Macindwaneni
74. Amantshele
75. Amakalolo
76. Amantambo
77. Amayobo
78. Amatolo, another section of No. 64
79. Nomabunga
80. Amantambo
81. Amacekwana
82. Jojo
83. Abatshwan
84. Amavundhle
85. Amandongela
86. Nomanhla
87. Tshobeni
88. Tshangase
89. Amambovane
90. Gwai
91. Amabambo, another section of No. 22
92. Amangcobo

No. 2.

Names of the Kaffir tribes residing in Natal at the present time.

Tribes that were in the district before the invasion of Chaka: —The first forty-three tribes enumerated in Appendix No. 1.

Tribes that have been formed by the mingling of fragments of other of the aboriginal tribes of the district:—

44. Amaduma
45. Ismkumbi
46. Amaximba
47. Tolani
48. Abatwa
49. Amaquanya
50. Esinyameni
51. Izembe
52. Nozitshina

Tribes found in Natal at the time of the British annexation of the colony, but not in the district at the time of the first Zulu invasion:—

53. Abasembo
54. Amabaso
55. Amabomvu
56. Amacunu
57. Amungwana
58. Amulata
59. Esibisini

XXVIII.—*On the Dissemination of the Arabian Race and Language.* By J. CRAWFURD, Esq., F.R.S.

[*Read November 20th*, 1866.]

THE dissemination of the Arabian race and language is matter of authentic history, and unique among Asiatic nations. As a legitimate subject of ethnological inquiry and illustrative of obscurer migrations, I shall endeavour to give an outline of it in this paper.

The native country of the Arabs and their language is a vast peninsula, separated from the adjacent parts of Asia to the north by a broad isthmus of sand, and every where else by the sea, consisting of the Arabian and Persian Gulfs and the Indian Ocean. The climate is tropical or sub-tropical; its most southern part being but twelve degrees distant from the equator, and its most northern but ten without the tropic. Arabia is a land of low hills and narrow valleys, with plains of desert sand computed to cover one-third part of its area, or about the extent of the kingdom of France. It has no range of high mountains, nor even an isolated mountain of great height, and consequently, with such a surface, it is hot, and deficient in water,—generally a sterile land, wanting the fertility which alluvial plains and great rivers confer on lands in the same parallels, such as India and China. Neither is Arabia rich in mineral wealth.

Arabia from one extremity to another is inhabited by a single race of man, apparently its aborigines, and speaking one language peculiar and complex in structure—their own creation. When the people of Arabia became first known to the rest of the world, they cultivated some cereals, such as wheat, barley, and millets, but subsisted chiefly as they do up to the present day on the fruit of the date-palm, seemingly a native of their own country, in which it grows more freely and attains a perfection which it does not reach in any other country. They had domesticated the horse, the ass, the camel, the ox, the sheep, and the goat, all probably natives of their own country; and among these the horse, at least, was of a quality superior to that of any other Asiatic people. They had acquired the art of fabricating malleable iron, but if they possessed gold, silver, copper, or tin, they must have received them from strangers, for they had them not of their own. The Arabs had invented a written character. They carried on a petty inland trade across the desert with Syria and Persia, across the two gulfs with Africa to the west and Persia to the east, and such of

them as inhabited the coast of the sea of Oman took their share in the maritime trade which brought the productions of India to the markets of Europe.

At the time referred to, the Arabs were certainly barbarians, but they were not savages; nor does even tradition hint at a time when they were so, although without a doubt they must, like all the other races of man, have passed through the undesirable stage. The very physical geography of their country must have early divided the Arabs into two usually distinct classes. These were and still are the nomadic shepherds for the desert, and the fixed agriculturists for the less sterile part of the country. The Arabian name was best known to the immediate neighbours of the Arabs, through the first of these in their not unfrequent employment as moss-troopers, and through the last when dwelling on the coast by their piracies.

Had the people of Arabia been African Negroes, or Malays, or even Hindoos, we may safely believe that in their inhospitable land, they never would have attained even the modest measure of advancement now described, but on the contrary, they would have been in the savage condition of some Africans or Red Indians, whose condition was far more auspicious. It was not so, however, for the Arab race is of higher intellectual quality than any other of Asia, in many respects not being surpassed even by the Chinese, and this superiority is evinced by the predominance they exercise when they come into contact with any of the other races of Asia.

The Arabs, although of the same race and speaking the same language, were divided into many tribes or clans, often hostile to each other, and never, as had been their nearest neighbours, the Persians, the Assyrians, and the Egyptians, and whether they had the inclination or not to quit their own for foreign conquest, they certainly wanted the power to do so. On the other hand, the poverty of Arabia held out no temptation to a foreign conqueror. The difficulties opposed to invasion by the obstacles of distance, broad deserts, and the courage of the Arabs, must have discouraged the most insane conqueror, and hence Arabia was never conquered. The Arabs being at the same time incapable of achieving foreign conquest, the result of both these causes was that the Arabs and their language, which afterwards acquired so wide a fame and dissemination, were nearly unknown to the rest of the world.

It is, however, to be observed that at some very remote and unknown time, a settlement of Arabs in the neighbouring country of Syria must have taken place. The only evidence for this, but it is unquestionable, is the existence in Hebrew of many words common to it and the Arabic, more likely to have been derived

from the Arabic, a language of complex structure, than from the Hebrew, one of simple structure, and as such having the character of a composite or derivative tongue.

With this obscure exception, the long continued isolation of the Arabs continued down to the first quarter of the seventh century of our own time. Then there arose among them a prophet, or at least one calling himself so, and so called by his followers, a man whose genius altered the history of the world. Mohammed, like the rest of his countrymen, was an idolator, but having as a trader visited Syria, he had picked up scraps of Jewish and Christian theology, and seeing the absurdities of his own idolatry, he resolved in his enthusiasm to frame a religion of his own. This was theistical and iconoclastic, borrowed from the Jewish, and the only vigorously proselytising one which the world had ever seen, save the Jewish at one epoch of its history, and the Christian at all times. The merits of those who accepted the new religion consisted in an implicit belief in its truth, and a strict conformity to its rather troublesome ritual and ceremonies; while the rewards of obedience to it in a future state were all of a mundane and sensual character. Experience, however, proved that it was well suited to the genius of Asia, and in due time the countrymen of the founder adopted it, and through it became for the first time well known to the world. Under its inspiration, they left their own country, and at once, and even during the life of the founder, commenced a career of conquest which, for rapidity and extent, has no parallel in the history of man. It was like the visitation of a terrible and persistent epidemic. Within the first century, it extended eastward and northward to the parent country of the Turks, and westward to the shores of the Atlantic; and before its progress was arrested, it had extended from Spain to the remote islands of the Asiatic Archipelago, and from Mongolia to the island of Java.

The Arabs, transplanted to better lands than their own, appear to have improved or fallen off chiefly in proportion to the quality of the race with which they commingled. They mixed most largely with Syrians and Egyptians, and were deteriorated, and their greatest social advancement was probably when they came into contact with an European people in the Spanish peninsula, where, although partially intermixing with a superior race, they were yet for many generations enabled to maintain their national independence, even their collisions with that race proving an advantage to them.

The advance in civilisation which the Arabs have made dates from their adoption of their new religion, and most of it took place, not in barren and isolated Arabia, where they might for ever have continued in the same barbarism as that in which they

had existed until the beginning of the seventh century. It was in foreign countries only that they made advance. Their literature and their architecture all sprang up in foreign countries. They were not themselves discoverers or inventors; and the benefit they conferred on civilisation consisted only in their being the agents through which the discoveries and improvements of other nations were widely disseminated. It was, for example, through their active mediation that the arts of distillation and paper-making, Chinese inventions, reached Europe; and the western world owes to them the introduction of many useful plants, as rice, cotton, the sugar-cane, the opium-poppy, the orange, and the melon.

The Arabian language is an invariable concomitant of the Mohammedan religion, and is even the character in which it is written, which has the one good effect of preserving etymological integrity. A smattering of Arabic is indispensable to every Mohammedan; for the Koran is not, like the Bible, in a theological sense translatable—a fact which contributes to the extension of its words.

The number of Arabic words introduced into foreign languages, varies with the influence exercised by the religion of the Arabs, and the capacity of the people to comprehend it. In the colloquial dialect of alien nations the number is moderate, but in the written languages it is indefinite; for with the learned almost any Arabic word is considered to have a lawful right of naturalisation. In pronunciation, Arabic words are necessarily made to conform to the phonetic character of the languages which receive them, and the change in utterance—or even in writing, when the Arabic characters is not adopted, is so great, they are often difficult of recognition.

Conformably to the stationary character of nearly everything that is Asiatic, the Arabic language has undergone little change in the twelve centuries which have elapsed since the compilation of the Koran, which is still considered classic; and most probably it had undergone little change for the same number of generations which had passed before the promulgation of that celebrated book.

The Arabic language has nowhere but in Syria, Egypt, and Barbary, made any approach to the supersession of the native idioms of the countries conquered by the Arabs, as did the Latin the languages of Southern Europe, and the Anglo-Saxon those of Britain. Neither has the Arabic, a language of complex structure, been anywhere broken down by loss of inflections into composite languages of simple structure, as the Latin was in Southern Europe, the Anglo-Saxon in Britain, and the Sanskrit in Northern India.

With the view of illustrating the effects which were produced on the state of society on the people conquered by the Arabs, I shall adduce the familiar example of the languages of the Spanish peninsula. The Arabs entered Spain A.D. 714, and the Spaniards captured their capital, Grenada, putting an end to their dominion, in 1492, an event which I have no doubt produced more exultation among ardent Spaniards than the discovery in the same year of a New World. Thus their power, of more or less extent, lasted from first to last 778 years. They were not finally expelled until 1609; so that their presence in the Spanish peninsula was, altogether, within five years of nine centuries' duration. They had subdued and occupied the finest part of Spain, but never the whole of it; and when they invaded the neighbouring country of France, they received a crushing defeat, which for ever arrested their conquests in Europe.

The long-continued dominion of the Arabs necessarily led to a considerable mixture of their blood with that of the previous inhabitants; and to this, and to frequent intercourse and collision with a race intrinsically superior to themselves, must perhaps be ascribed their having reached in Spain, as already stated, a higher civilisation than they attained in their own country, or in any of their Asiatic conquests; hindered from advancement in the first by an ungenial soil and adverse geographical position, and in the last by the presence of servile races, for the most part intellectually inferior to themselves.

When the Arabs invaded the Spanish peninsula, they found the language of the people a derivative from the language of their civilised conquerors the Romans, with an admixture of Teutonic words derived from their last conquerors. In the same manner as the Spanish language received Teutonic words from its Teutonic conquerors, it now received Arabic words from its Arabian. The great disparity, however, which existed between the manners, habits, and pronunciation of an European and an Asiatic people, made the number of Arabic words introduced into the Spanish comparatively inconsiderable, and their corruption very great. This last character was aggravated by the adopted Arabic words being written in Roman letters, contrary to the practice of most of the Oriental nations who have received an infusion of Arabic words into their languages, and who have generally adopted the Arabic writing, by which, as already noticed, at least the etymology is correctly preserved.

I may give a few examples of these corruptions. Many of the nouns have inseparably prefixed to them the Arabic article *al*, as if it were an integral part of the word itself. Thus we have in Spanish, and adopted from it into own language, alcoran, from *koran*, "the book"; alkali, from the plant *kali* or *salsola*, also

borrowed by us; *alcoba*, an alcove, from the Arabic *kăbah*, an arch; *almagro*, acid or sour, from the Arabic *măkar*, with the same signification; *albaquia*, residue, from the Arabic *baki*, residue or balance. Besides those which are preceded by the article, we find many without it, but with much alteration from the original, as *balcon*, a balcony, from the Arabic *bălăkhanah; karça*, a briar, from the Arabic *khar*, with the same meaning; *arroz*, rice, from the Arabic *ărăz*, and from the Spanish come the French and English names for this corn. The names of places are frequently taken from the Arabic, as Alcantara, from *kăntara*, "the bridge"; Almadan, from the Arabic *mădan*, a mine; and Alhambra, from the Arabic compound epithet with the article *hămbara*, meaning "care-free", the *sans-souci* of the French; Guadalquiver, from *wadi kăbir*, "the great river".

The corruption which the original word undergoes in the adopting language, is often so great as to make it difficult of recognition. Thus the Arabic words so familiar to European travellers as shekh and shrab, become in Spanish *xaque* and *xarave*. The best account that has fallen in my way of the Arabic contained in the languages of the Spanish peninsula, is to be found in a little work published in this country in the beginning of the present century, and in which the original words are given in the Arabic character.* According to this authority, the number of Arabic words in Spanish is but 286, and those in Portuguese, often the same, but 245, although I am told, on good authority, that the greater number is to be found in the last of these languages, and especially in the oral tongue. They appear, however, in both languages, at one time to have been far more numerous, some writers even estimating them by thousands; and, indeed, it seems not improbable that while the Arabs were in the ascendant, they followed the practice pursued by them with the Oriental languages, of intermixing native languages with words of Arabic, and even whole sentences, at pleasure.

The great majority of Arabic words in the Peninsular languages consist of nouns, being names of places, of fruits, flowers, utensils, weapons: verbs, participles, and adjectives are few in number, and there are no particles. Theological terms, so frequent in the Eastern languages, are, as might be expected, carefully excluded. Many of the words borrowed from the Arabic, are but synonymes of words taken from the Latin, as aceite, oil of *oleo; carça* or *zarça*, a briar or thorn, of *aspina; aldea*, a village, of *lugar; loco*, from the Arabic *luk*, mad, of *insano* or *demente*.

A few of the words in Spanish, considered Arabic, are in reality

* "Remains of Arabic in the Spanish and Portuguese Languages". By Stephen Weston, F.R.S. London: 1816.

Persian, which had been adopted by the Arabs who, before their invasion of Spain, had conquered and converted the Persians. Thus *aseña*, a water-mill, comes from the Persian *asiab; alcofa*, a basket, from the Persian *kufah*, with the same meaning, having the Arabic article prefixed; *aldea*, a village, from the Persian *dih*, also a village, having as usual the article preceding it. The name for the caraway plant, with the same prefix, *alcaravea*, is with little alteration the Persian *karawiya*. This last, like most of the Arabic words which have found their way into the French and English languages, comes directly from the Spanish.

The Arabic words which exist in the Spanish language, are said at one time to have been more numerous than they are at present; but it is evident, from the character of those which remain, that the number could never have been practically large. They amount, indeed, only to the few that could hardly fail to have crept into it in an intercourse of many generations. Contrariety of race, manners, and religion, hindered that amalgamation of the conquerors and conquered which would certainly have taken place had these obstacles not existed. This is clearly enough shown by the opposite results which followed the Norman conquest of England, by which, in less than three centuries, or one-third the duration of the Arabian dominion in Spain, not only were the conquerors and conquered blended into one people, but a new and improved language, resulting from an union of the languages of the two nations, had been created, and this in the same proportion of its elements as when Shakespeare and Milton, Bacon and Burke, wrote in it.

The effect of the Norman conquest of England was to promote civilisation, for the conquerors were far in advance of the conquered, and in race not inferior to them. The opposite effect resulted from the Arabian conquest of Spain; for the rude conquerors, when they achieved it, must have been greatly below the people of a Roman province at the moment in occupation of a Teutonic people, since at the time the Arabs had hardly been a century out of their own deserts.

XXIX.—*Archæology and Ethnology: Remarks on some of the bearings of Archæology upon certain Ethnological problems and researches.* By ROBT. DUNN, F.R.C.S., ETC.

[*Read Dec. 11th*, 1866.]

THERE is a fascination about the subject of Pre-historic Times and Pre-historic Man, about the revolutions of our globe, as revealed to us by geological investigation, and of the generations of mankind, by Archæological researches. The very obscurity, indeed, of the subject whets our curiosity and zeal in its investigation; for what can be more fascinating than the wonders of Geology, as we ponder over and upon the revolutions which our earth has undergone, as we seek out and search after the evidences of the first appearance of life upon its surface, and as we recognise, in its successive and changing phases, the varied animal forms, rising higher and still higher in the complexity and elaboration of their structure, up to the advent of man himself,—to us the crowning theme of all these wonders! For whom did he first appear? With excited curiosity and increasing interest, we ask with Professor Huxley, where must we look for primeval Man? Was the oldest *Homo Sapiens* pliocene or miocene, or yet more ancient? To this absorbing question what can we answer, save, that, in the fulness of time, when the earth was fitted for his reception, at the *fiat* of the Almighty, Man made his appearance. To use the emphatic language of Mr. Wallace (for I can use no words of my own, more clearly and forcibly, to give expression to my convictions) "from those infinitely remote ages when the first rudiments of organic life appeared upon the earth, every plant and every animal has been subject to the *one* great law of physical change. As the earth has gone through its grand cycles of geological, climatal, and organic progress, every form of life has been subject to its irresistible action, and has been continually, but imperceptibly, moulded into such new shapes as would preserve their harmony with the ever changing universe. No living thing could escape the law of its being; none could remain unchanged and live amid the universal changes around it. At length, however, man was brought forth, and there came into existence a being in whom that *subtle force*, we term *mind*, became of far greater importance than his mere bodily structure. Though with a naked and unprotected body—*this* gave him clothing against the varying inclemencies of the seasons. Though unable to compete with the deer in swiftness, or with the wild bull in strength, *this*

gave him weapons by which to capture or overcome them both. Though less capable than most other animals, of living on the herbs and the fruits which unaided nature supplies, *this wonderful faculty* taught him to govern and direct nature to his own benefit, and make her produce food for him, when and where he pleased. From the moment that the first skin was used as a covering, when the first rude spear was used to assist in the chase, the first seed sown or shoot planted, a *grand revolution* was effected in nature—a revolution which in all the ages of the earth's history had had no parallel, for now a *being* had arisen, who was no longer necessarily subject to change with the changing universe—a being who was in some degree superior to nature, inasmuch, as he knows how to control and regulate her action, and could keep himself in harmony with her, not by a change in body but by an advance of mind."* And in this *grand and characteristic attribute*, as you all so well know, lies the true grandeur and dignity of man.

Comparatively recent discoveries, indeed, give us glimpses of a period, and open to us a vista through which we see the human race existing on the earth, both in Europe and America, at a period more remote than had ever before been imagined. The men of the Drift must have shared with the mammoth, the cave bear, the woolly-haired rhinoceros, and gigantic deer, and with other species of animals, which became extinct many thousands of years ago, the forest-clad plains and valleys of Europe, when the British Isles were united alike with one another, and with the continent of Europe. Nay, more, seeing that the drift which fills the valleys of the Pyrenees had not reached that elevated spot where the cave of Aurignac is situated, and which has been so well explored by M. Lortet, it follows, as Sir Charles Lyell has well remarked—"If its fossil memorials have been correctly interpreted; if we have before us at the northern base of the Pyrenees a sepulchral vault, with the skeletons of human beings, consigned by friends and relations to their last resting place; if we have also at the portal of the tomb, relics of funeral feasts, and within it, indications of viands destined for the use of the departed on their way to the land of spirits; while among the funeral gifts are weapons wherewith on other fields to chase the gigantic deer, the cave lion, the cave bear, and woolly rhinoceros, we have *at last* succeeded in tracing back the sacred rites of burial, and more interesting still, a *belief* of a future state, to times long anterior to those of history and tradition."

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* Vide Mr. Wallace's memoir "On the Origin of the Human Race, and the Antiquity of Man, deduced from the Theory of Natural Selection" (Journal of the Anthropological Society of London, vol. ii).

But in this instance, unfortunately for the interest of ethnological science, the Mayor of Aurignac, when the discovery of the cave was *first* made, had the human bones collected and all reburied, thus depriving M. Lortet and science of the important and valuable evidence which his examination of the cranial configuration of these cave skeletons would have given us as to their racial type.

Geological evidence thus claims for man a higher and far more remote antiquity than do the Hebrew Scriptures, as they have been interpreted and understood since the time of Archbishop Usher and Petavius. In the well-known works of Sir Chas. Lyell and Sir John Lubbock, the Geological evidence of Man's antiquity is set forth with such fulness and perspicuity, as to carry conviction to the mind of every sincere searcher after the truth. But long before they wrote, two eminent and distinguished Ethnologists, namely, the first President of this Society, Dr. Prichard, and our learned honorary associate, the late Baron Bunsen, both strenuous advocates for the unity of the human species, had, independently of each other, arrived at the same conclusion, and from other and different evidence than that which Geology presents. Baron Bunsen, from purely philological considerations, (and I know of no man more able or better qualified to form a correct opinion on the subject,) claims for the human race, as the descendants from a common stock, an antiquity of 20,000 years. And again, Dr. Prichard, in a note on the Biblical Chronology, at the conclusion of his elaborate and valuable *Researches into the Physical History of Man*, aptly remarks, "Many writers, who seem by no means inclined to raise objections against the authority of the Sacred Scriptures, and in particular Michaelis, have felt themselves embarrassed by the shortness of the interval between the Noahic Deluge, and the period at which the records of various nations commence, or the earliest date to which their historical memorials lead us back. And although the extravagant claims to a remote and almost fathomless antiquity made by the fabulists of many ancient nations have vanished, before the touch of accurate criticism, still, he adds, after abstracting all that is apparently mythological from the early traditions of the Indians, Egyptians, and some other nations, it must be confessed that the probable history of some of them seems to reach up to a period far too remote to be reconciled with the short chronology of Usher and Petavius."

The pre-historic population of the earth appears to have lived in caves, or in rude dwellings on the banks of rivers, and at a later time in little villages built on piles in the shallows of lakes, obtaining the means of subsistence by fishing or hunting, and doubtless clothing themselves to some extent in the skins of the

slain animals, and making all their implements of stone or bone—the use of metals being to them an unknown art.

But still, be it remembered, that, save for the presence of animals long ago extinct, such as the mammoth, the cave bear, and woolly rhinoceros, there is little in the condition of these prehistoric men which cannot even now be paralleled among the various barbarous tribes still existing in various parts of the world. For instance, the rude tribe in the Valley of Somme, where so many flint instruments have been found—who appear to have lived upon the ice, which at that glacial period covered the river, making holes in the icy floor, through which they dropped their hooks to catch the fish in the waters beneath—led a life in many respects similar to that of some of the Esquimaux tribes of the present day. And, at the other extremity of the American Continent—in Terra del Fuego, with its densely wooded hill sides and extensive glaciers—there still exists a population of savages, in a condition strikingly similar to that of those of the *remotest* antiquity, whose remains we find in the flint tools and stone implements of the *drift*. They are unacquainted with the metallurgic arts, and use stone tools, flint knives, arrow and spear heads of flint or volcanic glass, for cutting bark for canoes, flesh, bladder and sinews, for knocking shell fish off the rocks, breaking large shells, and for weapons of defence. In every sheltered cave, where wigwams are placed, there are invariably heaps of refuse—shells and stones, offal and bones—which often appear very old, being covered deeply with wind-driven sand, or water-washed soil, on which there is a growth of vegetation, an exact counterpart of the *kitchen middens* of the *stone age* of Scandinavia. These heaps are from six to ten feet high, and from ten or twenty to more than fifty yards in length. But there—as in the kitchen middens of Europe—no *human bones*, we are told, would be found (unless dogs had dragged them thither), because the natives either burn the bodies of the dead, or sink them with large stones in deep water.

Now, archæology is the link which connects prehistoric man with history; and bearing in mind the light which geological investigations have thrown upon the history of the earth itself, it is not, I think, unreasonable to expect, that future and more extended archæological researches throughout the world, will continue to shed their illuminating rays upon the generations of the men of primeval antiquity. Sir John Lubbock has well observed—"While extinct animals leave only teeth and bones behind them, the men of past ages are to be studied principally by their works; houses for the living, tombs for the dead, fortifications for defence, temples for worship, implements for use, ornaments for decoration." In their modes of sepulchre we cannot

fail to recognise differences of race, and phases of civilisation. The tumuli, cromlechs, dolmens, and cistvaens, are alike characteristic and instructive in this respect,—the size and contents of the tumuli afford us a fair indication of the respect and estimation in which the deceased were held. Among the North American Indians and other savage tribes, nothing which the dead possessed was deemed too valuable to be interred with the body. The most costly dresses, arms, ornaments, and implements were deposited in the grave. "And," says the venerable Professor Nilsson, of Sweden, "the ancient inhabitants of Scandinavia, unable to imagine of a future altogether different from the present, or a world quite unlike our own, showed their respect and affection for the dead, by burying with them those things which in their life they had valued most; with ladies their ornaments, and with warriors, their weapons. They buried the house with its owner, and the grave was literally the dwelling of the dead. When the great man died, he was placed in his favourite seat, food and drink were arranged before him, his weapons were placed by his side, his house was closed and the door covered up; sometimes, however, to be opened again when his wife or children joined him in the land of spirits." It is abundantly manifest that the ancient tumuli do not belong to one period, nor to one race of the great family of man. "In Denmark, especially," says Sir J. Lubbock, "there was supposed to be so sharp and well marked a distinction between the tumuli of the stone age, and those of the bronze period, that the use of bronze might be considered as having been introduced by a *new race of men*, who rapidly exterminated the previous inhabitants, had *entirely* different burial customs, and were altogether in a much higher state of civilisation. The tumuli of the stone age were generally surrounded by a circle of great stones, and contained chambers formed of enormous blocks of stone, and the dead were buried in a contracted or sitting posture, with the knees brought up under the chin, and the arms folded across the breast. The burial places of the bronze age, on the contrary, had no circles of massive stones, no stone chambers; in general no large stones on the bottom, with the exception of stone cists placed together, which, however, are easily to be distinguished from the stone chambers, consisting, as a general rule, of mere earth, with heaps of small stones, and always presenting themselves to the eye as *mounds* of earth, which in a few rare instances, are surrounded by a small circle of stones, and contain relics of bodies which have been burned, and placed on vessels of clay, with objects of metal. And thus the burrows of the bronze age are distinguished from the tumuli of the earlier period, not only by the important fact that, instead of the simple and uniform implements and ornaments of stone, bone, and

amber, we meet, suddenly, with a number and variety of splendid weapons, implements, and jewels of bronze, and sometimes, indeed, with jewels of gold; but also because the construction of the tumuli themselves of the two periods was different, and the corpse, which in the stone age was always buried in a contracted or sitting posture, was in the bronze age burnt." Important and instructive as are the contents of these graves, the practice of cremation deprives us of a valuable source of evidence in reference to difference of race, since in the different forms of the skull we have indisputable proof of elevation and degradation of the racial type. Skulls, indeed, have been found in association with bronze implements and ornaments, so closely resembling those discovered in graves containing only implements of stone, that the inference becomes unavoidable, if the fact be admitted, that the use of bronze was introduced by a different and more highly civilised race, and that the ancient inhabitants were not altogether exterminated by their conquerors. But we have yet much to learn from the ancient tumuli, and when they have been more extensively and properly questioned, I join with Sir John Lubbock in the hope and expectation that we shall get most important information on many interesting points respecting life in these ancient times,—such, for instance, as whether, in Northern Europe, during the stone age, they had domestic animals, such as the ox and sheep, as would seem to have been the case in Switzerland. Again, what kind of clothes were worn, and what position woman held in reference to man, judging from the remains found with their skeletons.

All over the world are found relics of the stone age inhabitants, while the lake bottoms of Switzerland are of especial interest in Ethnological researches, as affording evidence among these lake dwellers of all stages of culture, from a rude and early stone age through an advancing bronze age, up to a well marked iron age. Thus placing before us the record of a supersession of an original stone age race, by a new bronze race, and of this again by an iron race, Dr. Keller, indeed, in his work recently published, *On the Swiss Lake Tribes,* maintains, that these dwellings were from first to last the works of *one* and *the same people,* who began, at a low stage of culture, with implements of stone, and from thence rose gradually to the use of bronze, and at last to that of iron. This he considers to have been the Celtic race. He is accordingly opposed to the hypothesis, which makes civilisation a test of race, and to the belief that races have never changed in the degree of their civilisation, Sir John Lubbock sums up his interesting, lucid, and admirable account of the Swiss Lake dwellers and their habitations, in these words—"We have traced them through the ages of stone and bronze down to the beginning

of the iron period. We have seen evidence of a gradual progress in civilisation and improvement in the arts, an increase in the number of domestic animals, and proofs at last of the existence of an extended commerce. We found the country inhabited only by rude savages, and we leave it the seat of a powerful nation. Changes so important as these are not effected in a day; the progress of the human mind is but slow: and the gradual addition to human knowledge and power, like the rings in trees, enable us to form some idea how distant must be the date of their commencement. So varied, however, are the conditions of the human mind, so much are all nations affected by the influence of others, that when we attempt to express our impressions, so to say, for the terms of years, we are baffled by the complexity of the problem."*

To the authors of the *Crania Britannica*, Drs. Davis and Thurnam, we owe a deep debt of gratitude for the indefatigable zeal and untiring industry with which they have pursued their valuable researches in Britain. All physiological psychologists are now agreed, that the brain is the instrument of the mind, and that the vesicular matter of the cerebrum or great hemispherical ganglia, is the substratum and seat of all intellectual action, and volitional power. Here it is that the ultimate molecular changes take place which precede the *mental stages*, and from *here* the mandates of the *will* issue. Nor is the fact to be forgotten, that although it is the brain which is the organ of the mind, its bony covering, the skull, is the outer measure and index of the brain's development. Nay, more, that from it we are enabled fairly to estimate the relative size and comparative development of the three great divisions of the brain itself, the anterior, middle, and posterior lobes; and thus among the typical races of man to recognise distinctive characters, impressed and stamped upon their skulls as indisputable evidence of degradation and elevation of type.

Now, many skulls have been obtained from the ancient tumuli of the stone age of Scandinavia. They are Brachycephalic, short and round, with heavy, over-hanging brows, and this cranial configuration, found to have prevailed so extensively in Denmark, France, and Switzerland, has led to the belief in the minds of some of the most distinguished archæologists, that the Pre-celtic inhabitants not only of Scandinavia, but also of Europe generally, were of Turanian origin, akin to the Laplanders. But Dr. Thurnam, at the Bath meeting of the British Association, adduced evidence in support of his opinion that the most ancient race of this country was not of the same *Brachycephalic* type as that

* "Prehistoric Times". By Sir John Lubbock, F.R.S. London: Williams and Norgate, 14, Henrietta Street, Covent Garden. 1865.

generally supposed to have spread over the whole of Norther Europe.

The skulls from the long barrows of the stone period in Britain are dolychocephalic, of a peculiar conformation, tapering equally towards the forehead and occiput, and to which Dr. Wilson has given the name of kumbocephalic, or boat-shaped. To these skulls of the chambered barrows, with which the sole material for the spear and the arrow was flint, Mr. Bateman has assigned the most remote antiquity. On the other hand, the skulls from the circular barrows of England of the Pre-Roman period are mostly brachycephalic; and the same *cranial* form is also found in tumuli of the same period, which contains implements and weapons of both bronze and stone, but sometimes of stone only.

It is indeed now considered to be fully established by human palæontology, that in pre-Celtic times there existed among the primitive peoples of Europe, both a dolychocephalic and a brachycephalic race, the latter greatly preponderating.

Now, after pondering upon these *typical cranial differences*, as revealed to us, by archæological researches, our minds seem to turn instinctively to that interesting speculation, *the condition of primæval man.*

Man, we are told, and I believe it, was formed on the moral image of his Maker—"In the image of God, created he him, male and female created he them."

In the words of Coleridge—

> "God made mankind to be one mighty family,
> Himself our Father, and this earth our home."

Justifying the exclamation of Shakspeare—

> "What a piece of work is man!
> How noble in reason, and in apprehension how like a God."

But whether or not as an adult he was first created with matured powers, and in the full possession of his faculties, of this at least we are certain, that he now comes into this world weak, dependent, and helpless. Dependent upon others for the very conservation of his being, and, during many years, for his every comfort. But then may I not ask, is it not that utter helplessness on the one hand, which awakens and developes, and this dependency on the other, which fosters and strengthens, those inherent feelings and affections which raise man so highly in the scale of being, and which progress, under the discipline of life, with the collateral development of his intellectual faculties, his bodily powers and physical energies to that maturity which is the perfection of humanity, and which assimilates man to his Maker, —*disinterested benevolence.*

It is never to be forgotten that man, of whatever race, is not born into the world a mere blank recipient of impressions, but that all the races of men, however they may differ in degree, are alike endowed with innate animal instincts and propensities, with social feelings and affections, with intuitions, moral and religious; and with intellectual faculties—reasoning and reflecting powers. The germs, so to speak, or essential elements of all their mental activities, sensational, emotional, perceptive, and intellectual as constituent endowments, are present from the first; for the human mind comprehends *implicitly, ab initio,* from its earliest existence, *everything* which its interior nature is calculated afterwards *explicitly* to evolve, as the successive phases of consciousness become developed. Still, however, when we compare civilised with savage man—our own condition with that of those whom the illuminating rays of civilisation have never reached, or among whom they have become extinguished, how striking is the contrast! And how irresistibly are those interesting speculations forced upon us as to the condition of primæval man, and whether or not there may have been more creations than one of man—more Adams and Eves than a single pair! Now as to the first of these interesting and important subjects for thought;—seeing that throughout animated nature, everything is perfect in its kind, and that there everywhere exists, as an all-prevailing principle of creation, a harmony and an adaptation of means to ends, so that the world throughout its constitution is framed in admirable suitability to the faculties of man, as an intelligent, moral, and religious being,—there are assuredly strong and valid reasons for the belief that primæval man came from the hands of his Maker, "mens sana in corpore sano," fitly and fully organised, in all respects, and every way duly in relation to external nature, and to the circumstances in which he was placed. But as we look at him now, and as we view, in contrast with their attendant *upright* or *projecting jaws,* the skulls of civilised and savage man, we at once recognise certain *distinctive differences* impressed and stamped upon them, as unmistakeable evidence of *elevation* and *degradation* of type. And then comes the question, are these types convertible, and if so, which of them was primordial? As bearing upon this latter point, I would for a moment refer to a paper read before this Society, on the 23rd April, 1845, twenty-one years ago, and published in the first volume of our journal, which was listened to with great attention at the time, and which I have lately read with deep interest. It is, *On the Human Mouth,* by Alexander Nasmyth, Esq., who was a fellow of this Society, and deservedly held in the highest estimation for his physiological and miscroscopical investigations. He has been dead for many years,—but he still speaketh, in support of the posi-

tion, that the original configuration of the human jaws was of the *vertical* or perpendicular type, and that, as a consequence, the varieties of development in the mouth are *deviations from a perfect form.*

He says truly—"that the natural action of the lower jaw upon the upper may push out, evert, or expand the arch of the upper jaw; but, on the other hand, that is utterly impossible, by any habitual or natural act performed by the mouth, or by the individual, in any way to bring in or contract that arch, so as to produce from the prominent prognathous jaw of the Negro, the vertical or perpendicular jaw of the Indo-European." And again, that when excessive functional activity is thrown upon the concentric arches of the anterior portion of the jaws, as in the usages of savage life, in seizing, tearing, and dividing the food, by the teeth, the front ones become exerted, the jaws prolonged, and thus, as in the case of the Negro and the Bushman, in addition to the law of inheritance, the *prognathous* type is perpetuated among them.

Now the inference from these anatomical and physiological facts, to all who believe in the unity of the human species, is clear and uncontrovertible, that in primæval man the jaws were *upright*, and not protuberent; and in truth, that the prognathic and other varieties of the ape-like mouth are deviations from a perfect form—due to the usages of savage life. We all rejoice, in the belief, that progress is the great law of nature, and in the fact beyond dispute of the progressive improvability of man, but we must not close our eyes to what is quite as patent and equally as well established—Man's tendency under adverse circumstances and conditions to degeneracy and degradation.

For, to reiterate what I said, in my last paper read to this Society. "Wherever and whenever ignorance and brutality, destitution and squalor, have for a long time existed, the prognathous type invariably prevails. It is not confined to the Negro of the Delta of Africa, but is equally characteristic of the Bushman and Australian savage, and has even been recognised in Ireland, in Leitrim, Sligo and Mayo."

Again, it is worthy of remark—as having a direct bearing upon our subject of inquiry—the condition of primæval man,—that the celebrated fossil skull, from the Cave of Engis, near Liége, considered to be a *relic of the Drift period*, may, in evidence, be fairly adduced. For, says Sir John Lubbock, "there seems no doubt that this skull really belonged to a man who was contemporaneous with the mammoth, the cave bear, and other extinct mammalia; and he significantly adds, "so far as its form is concerned, it might have belonged to a modern European." According to Professor Huxley, "there is no mark of degradation about

any part of its structure; it is, in fact, a fair average human skull, and might have belonged to a philosopher."

Surely the contemplation of such a cranial conformation as this, —of a man of the geological period of the Drift, and the contemporary of the extinct mammoth, and the woolly-haired rhinoceros,—bearing, as it does, upon it, the impress and stamp, not of degradation, but of elevation of type, must raise its possessor in our estimation high and far above the ape-like savage, with his low, receding forehead, and his massive, projecting jaws.

But it is not to be forgotten, or overlooked, that another, once celebrated fossil skull of a very different character, is in existence, found in a cave in the Neanderthal, near Dusseldorf, and for which, at first, not only an antiquity was claimed, equally as great as that of the Engis man, but an importance infinitely greater; for it was looked upon, by some, as "the missing link," in the chain of continuity between the monkey and man, and for which the advocates of the ape origin of the human species had been so earnestly in search. A scrutinising inquiry, however, into its *locale* and the history of its discovery, and a strict and rigid anatomical examination of its structural peculiarities, have, alas! for advocates of the ape theory of man, deprived it altogether of its prestige and importance. Sir John Lubbock observes—"It must be admitted, that, although the antiquity of the skull is, no doubt, great, there is no satisfactory proof that it belonged to the period of the extinct mammalia." Professor Busk sagely remarks —"We have yet to determine, whether the conformation in question be merely an individual peculiarity, or a typical character." And again, Dr. Barnard Davis, one of the editors of the *Crania Britannica*, and than whom I know of no man more able or better qualified to pronounce an opinion on the subject, maintains that it presents no race characters; that it is in reality an abnormal skull, an instance of an accidental conformation, arising from *synostosis of the sutures*, and that its conditions are compatible with those of a diseased modern skull. He dwells on the fact that there is no accompanying evidence, such as flint implements, to show that it had any claim to antiquity, and as to the physiological evidence, that went to prove that the individual to whom it belonged was in an abnormal condition, being *lopsided.* Similarly formed skulls of modern date are in existence, so that in point of evidence, in relation to our inquiry, it is utterly worthless.

But still, however, let the archæologist extend his inquiries; for if, as Sir John Lubbock* has observed—"Man constitutes a separate family of mammalia, as he does in the opinion of the

* "Prehistoric Times".

highest authorities (and such is my own firm conviction), that according to all palæontological analogies he must have representatives in Miocene times. But we need not expect the proof in Europe; our nearest relatives in the animal kingdom are confined to hot, almost to tropical climates, and it is in such countries, that we must look for the earliest traces of the human race."

Need I here remark that "*the missing link*" *is still wanting*, and that, as I opine, it never will be found. But, I ought rather to have said *the missing links*, for according to the ape theory of the origin of the human species, as expounded by Dr. Carl Vogt, of Geneva, and others, the different typical human races are the descendants from different ape ancestors. Now on this subject, I do most heartily join issue with what has so emphatically been said by our venerable President, however I may differ in opinion from him as to whether there may have been more creations than one; indeed, I need scarcely here observe, that the *monogenetic* and the *polygenetic* origin of man is still, and is likely to remain, an open question among ethnologists. In our much respected president, Mr. Crawfurd, the Nestor of our Society, we have not only an old, but an able advocate for the plurality of the human species, while in our late president, Sir John Lubbock, the hypothesis of the monogenesy of man has found an equally able advocate. In former communications, I have avowed my own adhesion to that of the unity of man's origin: and at present my mind rests on this conviction. After studying the varying forms of the human cranium in their relation to outward circumstances, social states, and intellectual culture, and, after endeavouring to trace out the influence of civilisation upon the development of the brain, among the different races of man, my belief in the unity of the human species has been more firmly established. The limits of this paper will not permit me to dwell upon the evidence which is furnished by *history* of the conversion, *in time*, of one type of humanity into that of another, under the influence of outward circumstances, social states, and intellectual culture. But the great antiquity of man on the earth has removed many obstacles to this hypothesis, which were once thought to be insuperable. Since the time that the hand of man fashioned the flints of the valley of the Somme, the geological conditions of the world have changed more than once, and the duration of these changes is incalculable.

During the long glacial period, a large portion of Europe became gradually covered with ice, and man receded step by step before the advancing glaciers, as they destroyed the mighty mammoth, and the woolly rhinoceros; it was by his intelligence and skill that he escaped this wholesale destruction from cold. By

striking flint against flint to fashion his primitive weapons, he perceived the rising sparks, and he learnt to retain them, and thus the first fire kindled for his rude feast, became afterwards his protection against the inclemency of a glacial climate and saved him from destruction. In conclusion, I would only add,* in the words of Dr. Carpenter, "that the supposition of a distinct number of creations, one for each principal region of the globe, is not, in my belief, needed to account for the extension of the human family over its present area, and it does not afford any assistance in accounting for the phenomena of their existing distribution, since each principal geographical area contains races of every diversified physical character, the affinity of whose languages makes it often next to certain, that they must have had a common descent."

* Dr. Carpenter, "On the Varieties of Mankind", in Dr. Todd's "Cyclopædia of Anatomy and Physiology", vol. iv, p. 1364.

XXX.—*On the Migration of Cultivated Plants in reference to Ethnology—Sacchariferous Plants.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read Dec.* 11*th*, 1866.]

I PROPOSE in this paper to give some account of the history and migration of plants cultivated for the production of sugar. The first saccharine matter used by man was honey, and since it is equally with any other, the produce of plants, and as both the plants and the bees can be and are cultivated, it may be properly included in the category I am about to render an account of.

Honey must have composed a large part of the food of the first men as it still does of all savages. Wherever there are flowers, there are bees, and consequently honey from the equator almost to the arctic and antarctic circles. In regions with a winter, the bee lays in a large store of honey, but within the tropics, and especially towards the equator, where there are flowers in bloom throughout the year, it lays in small and frequent stores of a poorer honey, and only to feed the larva. In temperate regions the bee is naturally provident, and has been often and immemorially domesticated, but in equinoxial ones it is more or less a wanderer; and I believe there is no example of of its being domesticated, unless at great elevations, as in the valleys of the Himalayas. The Greeks, the Romans, and the Egyptians very early domesticated the bee; but I believe that no great Asiatic nation ever did so. The abundance of plants in their countries yielding a ready and abundant supply of saccharine matter probably contributed to discourage the domestication of the bee among such civilised people as the Hindus and Chinese, and the extraordinary abundance of wild honey in Palestine, Syria, and Arabia, would conduce to the same result.

The general absence of other sources of saccharine matter, or ignorance of the art of extracting it from the plants that contained it, gave honey an importance among the ancient nations of the western world, which only ended with the establishment of an indirect communication with further Asia.

With a commodity of such universal production as honey, we should expect to find a special name for it in every different language, and this, no doubt, must at first have been the case, and generally is so at present. Thus our own name is, with very inconsiderable modifications, the same in all the Teutonic dialects, and the *mel* of the Latin itself taken from the Greek prevails

in one form or other, in all the languages derived from the Latin. The Sanskrit has its own name for honey, *madu*, but the Hindi, of which it forms the basis, has, in this instance, its own name, which is *machan*. In the Tamil the name is *teyre*; in Persian, *shahd*; and in Arabic, *asal*. There are, however, a few anomalies in this matter. For honey the Irish or Gaelic has *mil*, and the Welsh or Armoricans *mel*, in both these instances coming obviously enough from the Latin. In the same manner, the Sanskrit name (*madu*) is the only one in the Malay and Javanese. In both these cases, a term of the language of a more civilised people would seem to have supplanted the native one of a rude one. This probably arose from honey being an object of trade between the rude and the civilised people, when the name for it in the language of the civilised man might in time become familiar to the barbarian, and take the place of his own native one. This, as will be seen in a future paper, has actually taken place with the clove and nutmeg commodities, of which the popular names are taken from the Sanskrit, although the plants themselves are entirely local, and could have been known to the Hindus only as objects of trade.

Among the plants yielding the most abundant and easily accessible supply of saccharine matters are the palms, and most probably they afforded one of the earliest sources of sugar, wherever palms abounded. It is only necessary to boil down the sap of any palm, previously to its undergoing fermentation, which it does rapidly, in order to obtain a concrete impure mass of sugar. This crude commodity is the sugar chiefly consumed in southern India, in the Hindu-Chinese countries, and in the Malay and Philippine Archipelagos. All palms yield a sweet sap, convertible by boiling into such sugar, but those yielding valuable fruit, such as the date, the coco and the areca, are not put to this use. In continental India, the palm chiefly applied to this purpose is the Palmyra (*Borassus flabelliformis*), the same of which the leaves are used for writing on. In the Malayan Archipelago it is the gomuti or sagwine (*Borassus goomutus*), and in the Philippines it is the Nipa (*Nipa fruticans*).

The words gomuti and nipa are both genuine Malay words, and I may here observe that many of the names, both generic and specific, adopted by botanists, some of which have been naturalised in the European languages, have been taken from the Malay, owing to the plants having been first seen and described by Europeans in Malayan countries. In the Hindi language, the name of the palm sap is *tari*, usually corrupted by Europeans into toddy, and hence the name of the English potation, which it was thought by those who imposed the name resembled it.

Although the sugar obtained from palms be equally capable of

refining as that obtained from the cane, the produce of the latter is the main source of the sugar of commerce. The sugar cane is the *saccharum officinarum* of botanists, one of a genus of many species of tall grasses. Like most cultivated plants, it consists of several permanent varieties, differing in size, in the colour of the epidermis, and in the proportion of saccharine matter they contain. Like most of the cereals, the sugar-cane has not been traced to its wild state. In its cultivated state it has been found in many independent places, often remote from each other, and bearing independent names. Its geographical limits are nearly the same as those of cotton; that is, extending from the equator to about the thirtieth degree of latitude. Like cotton, its culture has been pushed up to the fortieth degree, but even with less success, for the cane takes a year to arrive at maturity, and is, therefore, liable to be cut off by severe frosts.

In what country the sugar-cane was first cultivated, it is out of our power to discover; but, as far as we know, it has been immemorially cultivated in the tropical and sub-tropical parts of Hindustan, in the Hindu-Chinese countries, in the tropical and sub-tropical parts of China and of Japan, in the Malay and Philippine archipelagoes, and in the tropical islands of the Pacific ocean. There is no evidence of its having been cultivated in any country west of the land of the Hindus. It was unknown as a wild plant in Australia and New Zealand, and is unquestionably an exotic in America.

In endeavouring to trace the migrations of the sugar-cane, and the history of sugar its produce, by lingual evidence, we have carefully to distinguish between the name of the plant and that of its produce; the first varying with the languages of the country in which the plant is cultivated, while the name of the last is essentially the same in many tongues. The cause of this is obvious, namely, that the plant was, without doubt, cultivated in every country in which it was found, long before any one thought of the process of extracting sugar from it. It is so at present throughout the tropical islands of the Pacific, in all the islands of the Malay and Philippine archipelagoes, and in the Hindu-Chinese countries, and even in southern India itself; wherever, in short, Chinese or Europeans have not introduced the art of sugar making. In all these countries the cane is a mere sweetmeat, sold in the markets, to be masticated for its juice.

When I was on a mission to the Burmese, supplies of sugar-cane were furnished to us regularly, along with honey and fruits. The same was the case in Siam, and the manufacture of sugar from the cane was only commenced in the latter country about twenty years before my visit to it in 1822, and this by the Chinese colonists; whereas the manufacture of palm-

sugar had been in existence in Burmah and Siam time out of mind or record.

With regard to the manufacture of sugar from the cane, I begin with India; by no means satisfied, however, that it originated in that country. In Sanskrit, the name for the cane is *ukh*, in Hindi *ganna*, and in Tamil *karampu*. In the Hindu-Chinese languages I find no fewer than seven distinct names for it, not necessary to enumerate. In Malay and Javanese the name is *lâbu*. It seems not improbable that, in all the countries in which these many names prevail, the cane was a native, and that it was not until the savage inhabitants had consumed the wild plant that they betook themselves to cultivate it, a process of no great difficulty, since the sugar-cane is easily progagated by mere cuttings stuck in the ground. Yet, the culture of the cane must have been subsequent to that of such necessaries of life as the yam, the batata, and the caladium; for to wait for twelve long months for the ripening of a mere luxury would tax the patience of the semi-savage.

With respect to the produce of the cane, or sugar, the Sanskrit language has two names for it, *sakara* and *gura*, both of which have had a very wide circulation, especially the first. The Sanskrit *sarkara* becomes in Tamil *sârkarai*, in Kanarese *sharkare*, in Persian *shakar*, in Arabic *sukar*, in Greek *sakkaron*, in Latin *saccharum*, in Spanish, with the Arabic article, *asucar*, in Italian *succhero*, in French *sucre*, and in English *sugar*.

The second Sanskrit name, *gura*, occurs in Hindi with the elision of the final vowel, as *gur*, and in the Malay and Javanese with the exchange of one liquid for another, as *gula;* the Javanese, however, in its recondite language, preserving also the first Sanskrit name in the forms of *sakar* and *srakara*. There can, then, be no doubt but that the names for sugar, in all the languages now referred to, came, directly or indirectly, from the Sanskrit.

But the Sanskrit origin of the word would by no means give to the Hindus the credit of being the first to discover the art of extracting sugar from the cane. It is probable that the Hindu manufacture never went beyond the production of the impure mass, consisting of sugar and molasses, obtained by boiling the sap of the cane, as is done with the sap of palms. This is, in fact, the *gur* or sugar of the Hindus; and, until instructed by strangers, they seem to have known no other. We come to this conclusion, from finding that sugar which has undergone a process of refinement bears foreign names. Thus clayed sugar goes under the name of *chini*, which signifies "Chinese"; while candied or crystallised, is called *misri*, which means Egyptian. As the first of these words is Persian and the last Arabic, we infer that the sugar of the Hindus was confined to the crude inspis-

sated sap of the cane or of palms, and that processes of refining were introduced after the Mohammedan conquest of India, one process from China, and the other from Egypt. The process of "clarifying" would probably be introduced by Mohammedan merchants trading with China. As the cane was unknown to the Greeks and Romans as an object of culture, it must have been first introduced into Egypt by the Arabs; and here, probably, it was that the art of crystallising the sap was first discovered by the nations of the west, and hence the name.

The processes of refining sugar were certainly of foreign introduction in India; and this we can readily believe, from the state of the arts among the Hindus, when we find the emperor Baber, in his *Memoirs*, complaining that they were ignorant of soap and candles in the beginning of the sixteenth century. The sugar of the Hindus, such as it was, was at first made from the sap of palms; and that of the cane, obtained by a more complex process, would not be had recourse to except where palms were scarce, and in rich lands in which alone the cane will flourish.

As to China, the cultivation of the cane, and the manufacture both of clayed and crystallised sugar from it, are of an antiquity beyond all record; and for this I have the highest authority, that of my friend Sir John Davis. In the Mandarine, or most ancient dialect of the Chinese, the name for the sugar-cane is "the sweet cane", and for sugar itself *tâng*.

The Hindus who settled in the Malayan islands, but more especially in the best of them, also the nearest to their own country, Sumatra and Java, may have taught the natives the art of making sugar from the cane; but here also the Sanskrit word equally applies to palm as to cane sugar; and the manufacture of true sugar was probably first introduced into these islands by the Chinese in very modern times. The Malayan names for clayed and candied sugar, are but the Sanskrit word with native epithets signifying "sand sugar" and "stone sugar"; the first of these being a literal translation of the Chinese name.

If the ancient Hindus were unacquainted with the art of refining sugar, and that their sugar was nothing else than the crude mass obtained from the sap of the cane or palm by mere boiling (the jaggery of Europeans, a word which Horace Wilson tells us is but a corruption in the Canarese language of the Sanskrit word *sarkara*), then India is not likely to have been the country which furnished the Greeks and Romans with the small quantities of sugar which reached them. The crude Hindu commodity is still an article of trade from one province of India itself to another, and might with its Indian name have perhaps even reached the neighbouring country of Persia; but it would certainly not have borne the expense of the distant carriage to Europe. Nor does it, indeed, answer in any respect to the description given of the

sakkaron of the Greeks, or the *saccharum* of the Romans. Pliny's account is the following: "Arabia produces *saccharon*, but that of India is preferable. It is a kind of honey which gathers on canes —white like gum, brittle under the teeth, of the size of a filbert, and is used only in medicine."

It is evident enough that Pliny had but a very vague notion of the origin of sugar. He ascribes the plant producing it, not only to India but to Arabia, where, in his time, it was as unknown as it was in Italy. Yet Pliny lived four centuries after Alexander's invasion of India, and many Greeks must have seen and described the sugar-cane and its produce if it existed in that time in Upper India, the quarter of the country chiefly frequented by them. The account, however, which Pliny gives of saccharon shows that he had himself seen and examined it. He describes it as white, like gum, brittle under the teeth, and of the size of a filbert, characters which very fairly represent a crystal of Chinese sugar-candy. If, then, as I suppose, the Hindus were in the days of Pliny ignorant of the art of crystallising sugar, it follows that the saccharon of the ancients was the produce of China: the Chinese, let it be added, always manufacturing their sugar-candy in distinct white crystals, an art unknown to the Hindus, and, indeed, even to modern Europeans.

If the saccharon was the production of China, it may be asked how it found its way to Rome; and the answer is obvious, by the same route, including a passage through Persia, by which the silk of the same country reached the Roman markets. Its use among the ancients was confined to medicine, sufficient evidence of scarcity and ignorance, and a strange contrast to its present use, when it has become nearly a necessary of life over all Europe.

But the channel through which sugar became known to the Greeks and Romans was not that by which it came to the knowledge of the modern nations of Europe, that which brought Europe and Asia into a more immediate and intimate relation than were possible in ancient times. The Greeks and Romans knew nothing of sugar, but as an article of trade, just as they knew silk and pepper. They were uncertain about the country which produced it, and ignorant of the plant which yielded it. The Arabs, on the contrary, brought the plant itself from India, with the Indian name of its produce, cultivated it in Syria, in Egypt, in Greece, in North Africa, in Spain, in Sicily, and in Southern Italy, manufacturing sugar from it in all these places. At what time the Arabs introduced the culture of the cane and the manufacture of sugar into Syria and Egypt is unknown, but it is ascertained that sugar was imported from the countries now enumerated into Venice at the end of the tenth century (991). The Crusaders found the cane cultivated in Syria as early as the beginning of

the twelfth century (1108), and sugar made from it, seemingly by very rude processes, so that the article would seem to be little better than the crude unrefined mass called by the Hindus gur and juggary. In the year 1420, or seventy-two years before the discovery of America, the Portuguese carried the sugar-cane to Madeira. In the fifteenth century the Spaniards carried the cane and manufacture of sugar to the Canary Islands, from whence they were conveyed to tropical America and its islands. In 1503, or but eleven years after its discovery, the culture and manufacture were fully established in Hispaniola.

Sugar was, however, an article of consumption in Western Europe long before the discovery of America, the countries furnishing it being, as already stated, Spain, Sicily, Barbary, Madeira, and the Canaries. When the production was extended to Brazil, the supply became enlarged. England was supplied from the emporia of Venice and Antwerp, and in the time of Shakespeare the name of the article was so familiar as already to have its secondary or figurative meaning, as in the expression, "sugared words," and in the well-known passage of Hamlet,—

> "'Tis too much proved that with devotion's visage
> And pious action, we do sugar o'er
> The devil himself."

For economic purposes there are other plants which yield sugar, but not so profitably as palms and the sugar-cane. The beet is largely cultivated with this view, especially in France, but the manufacture exists only under the protection of fiscal laws. In North America a species of maple (*Acer saccharinum*) yields a considerabe supply of sugar by tapping its trunk for the sap, which is boiled and refined in the same manner as the sugar of the cane. The sap continues to flow for from a month to six weeks, and an ordinary tree will, during the season, yield from twenty to thirty gallons, convertible into from five to six pounds of sugar, so that the maple is by no means so productive as the Palmyra palm. Such sugar-yielding plants are merely local, and hardly come under the class of plants of which I have now endeavoured to give an account.

It seems strange to us that the ingenious Greeks and luxurious Romans should have contented themselves with honey, and never have fallen into the art of manufacturing a solid sugar from indigenous plants yielding a sweet sap. They were well acquainted with the beet and the carrot, and, of course, with the grape, all of which would by an easy process have yielded a solid sugar. As savages they had invented the more difficult art of kindling a fire, and as barbarians the yet more difficult arts of making malleable iron and reducing the ores of copper and silver, but the art of extracting sugar from their own plants never occurred to them.

Obituary Notice of Dr. Conolly. By Sir JAMES CLARK, Bart., etc., etc.

[*Read June 12th*, 1866.]

AT a late meeting of this Society was announced the death of an esteemed member, Dr. Thomas Hodgkin, one of the originators and most zealous supporters of the Ethnological Society, and an eminent physician who has left his mark on the progress of medical science. We have now to record the loss of another valuable member, Dr. John Conolly, also a distinguished physician, and pre-eminent in the special department of his profession, to which he principally devoted the great powers of his mind. Dr. Conolly succeeded the late Sir Benjamin Brodie as President of the Society, and occupied the chair for the usual period of two years. He felt a great interest in the progress of ethnology, and never failed in his attendance at the Council and at the evening meetings of the Society, when his health, which had already begun to fail, permitted; and there are many among us who must well remember Dr. Conolly's graceful eloquence and conciliatory manner in the chair during his presidency. He contributed one paper to our *Transactions*, afterwards published in a pamphlet, entitled "The Ethnological Exhibitions of London."

Dr. Conolly was born at Market Rasen in Lincolnshire in 1794. His first entrance into life, at the age of eighteen, was as an officer in a militia regiment, in which he served for several years. He married at an early age the daughter of Sir John Collins, and about one year afterwards decided on entering the medical profession. In 1821 he commenced the study of medicine, became a student of the University of Edinburgh, and at the termination of his *curriculum* received the degree of Doctor of Medicine with great distinction. Insanity was the subject of his inaugural thesis; showing at how early a period of his medical life his mind was directed to the study of psychology. Dr. Conolly was much esteemed at the university. He was one of the Presidents of the Royal Medical Society, where he was remarked for the easy and eloquent expression of his views in the discussions of the Society, and in his addresses.

On leaving Edinburgh, Dr. Conolly settled in practice at Lewes, the county town of Sussex; but finding small scope for a physician there, he removed to Chichester, about the same time that the late Sir John Forbes settled in that town. Drawn together by congenial tastes and pursuits, the two young physicians formed a warm friendship, which ended only with the death

of the latter, a few years ago. It was soon found, however, that even the cathedral town of Chichester did not afford a sufficient field for the practice of two physicians, and Dr. Conolly again removed to Stratford-on-Avon, where he remained till 1827; he then settled in London, and soon after was appointed Professor of the Practice of Medicine in University College, London, a remarkable distinction, considering that Dr. Conolly was then only thirty-three years of age. He held the professorship for several years with marked distinction; but finding that the life of a London physician was not to his taste, he resigned and returned to the country, and took up his residence at Warwick, being appointed at the same time Inspecting-Physician of the lunatic asylums in that county. Here he remained till 1839, when he was invited to become Resident-Physician to the County Asylum at Hanwell, then the largest in England. Dr. Conolly now felt himself, for the first time, in the position which he had long desired. An ample field was afforded him for putting in practice his enlightened and benevolent views on the management of the insane, and he at once adopted the mild and humane treatment in its fullest extent, together with the total abolition of mechanical restraint, by far the greatest improvement ever introduced in the treatment of the lunatic. And here it may be interesting to take a brief survey of the origin and progress of the vast improvement effected since the conclusion of the last century in the treatment of the insane, and in the management of lunatic asylums; an improvement in which the labours of Dr. Conolly had so large a share.

Towards the end of the French Revolution, Pinel, an eminent and philanthropic physician in Paris, was selected to take charge of the Bicêtre, the largest lunatic asylum, or rather prison, in Paris, then in a frightful state of disorder. Pinel at once changed the whole treatment in the asylum. He abolished chains, and substituted a mild, humane treatment, for the harsh, cruel system which he found in practice, with the best effects. To Pinel, therefore, belongs the merit of first introducing the humane treatment of the insane, at a time when lunatics, throughout the whole of Europe, were treated more like wild animals than human beings.

Esquirol, the pupil and friend of Pinel, succeeded him as physician to the Bicêtre, and was indefatigable in carrying out the philanthropic and enlightened views of his master, both in his practice and by his writings.

The beneficial effects of Pinel's treatment became known in England about the time that the public were shocked by the frightful disclosures of the cruelties and neglect which disgraced the old York Asylum, and led to the establishment of the Retreat, near York, by the Society of Friends.

In this admirable asylum, chiefly under the advice and direction of William Tuke, the treatment of the insane was conducted for the first time on the most humane and enlightened principles. This was a great advance in the treatment of the lunatic.* The next step was the disuse of mechanical restraint, first introduced by the late Dr. Charlesworth and Mr. Gardiner Hill, in the Lincoln Asylum. Very soon after this, Dr. Conolly was fortunately appointed Physician to the County Asylum of Middlesex, where he at once adopted the non-restraint system, satisfied, by what he had witnessed in the Lincoln Asylum, not only that it might be frequently omitted, but that it was altogether unnecessary, and even injurious.†

By Dr. Conolly's unceasing exertion, often under considerable difficulties, during the four years that he held the appointment of resident physician to the Hanwell Asylum, he succeeded in establishing non-restraint as the invariable rule, and in satisfying the numerous physicians who came to witness the practice under his direction, not only of the safety but of the immense advantage of the system in allaying irritation and calming the most excited lunatics; and the publication of his admirable annual reports, recording the successful application and beneficial effects of the treatment, made it generally known to all who felt an interest in the unfortunate insane.

If to Pinel in France, and to Tuke in England, we may fairly ascribe the honour of being the first to introduce the mild, humane treatment of the insane, and to Dr. Charlesworth and Mr. Gardiner Hill that of being the first to adopt and carry out the non-restraint treatment in the Lincoln Asylum, to Dr. Conolly is due the merit of demonstrating its beneficial effects on a large scale, and for a series of years; and it was Dr. Conolly who finally established, by his practice, and by his eloquent and earnest writings, the non-restraint system as the rule in all asylums—the greatest boon ever conferred on the unfortunate and too long harshly-treated lunatic, —a work which will transmit Dr. Conolly's name to posterity as one of the greatest benefactors of mankind. Sir Thomas Watson, the President of the Royal College of Physicians, in his obituary notice of Dr. Conolly, thus speaks of him and his efforts in the

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* Tuke's account of the York Retreat, led the way, in this country, to an entire revolution of opinion and treatment in lunatic asylums.—Conolly's "Clinical Lectures".

† When Dr. Conolly entered on his duties at Hanwell in June, there were seventy patients daily under mechanical restraint; by September of the same year, every object of mechanical restraint and coercion was destroyed or removed; and henceforth no patient in the Hanwell Asylum has been placed under mechanical restraint—a circumstance to which Dr. Conolly might well refer with pride.

cause of the insane:*—"Dr. Conolly's renown will rest, and his name will go down to a late posterity, upon his having been the first and foremost in redressing and abolishing that hideous neglect, those cruel methods of restraint and even torture, which had been the scandal of our land, in respect of the treatment of the insane. He showed, not merely by eloquent and pathetic reasoning, but by the testimony of undeniable facts, that most of the shackles and privations which had been imposed upon those unhappy beings were unnecessary and hurtful, and that their release from needless bodily misery and degradation tended more than any other thing to restore, or, when restoration was impossible, to improve, their mental health. The spirit of John Conolly was congenial with the spirit of John Howard; and their noble example has left behind them, and encouraged, a similar spirit, which is actively and widely at work in this nation." To estimate the benefits which Dr. Conolly has conferred on society may also be adduced the opinion of the noble and philanthropic chairman of the English Commission of Lunacy, than whom no one is better acquainted with the past and present mode of treatment of the insane. "To understand," says the Earl of Shaftesbury, "the remarkable merits of Dr. Conolly, we must remember the state of things which prevailed in lunatic asylums some thirty years ago. The lunatic was treated without any regard to cure; being regarded as a savage beast, who was only to be cowed; and the lunatic asylum was worse than a prison. Now all that is changed, and nearly every vestige of barbarism has been effaced."

Dr. Conolly's attention was not confined to the lunatic; he evinced a great interest in ameliorating the long neglected condition of the idiot and imbecile, and took an active part, with the late philanthropic Dr. Andrew Reed, in establishing and superintending the Earlswood Asylum for Idiots, now so admirably conducted by Dr. Down.

In addition to his professional pursuits, of which the study of insanity formed the great part, Dr. Conolly was engaged during many years of his life in literary labours. He was associated with his friends, Sir John Forbes and Dr. Tweedie, in editing the *Cyclopædia of Practical Medicine*, a large and important medical work. Afterwards he joined Sir John Forbes, for some time, in editing the *British and Foreign Medical Review*, a publication which had no small influence in improving the state of medical literature in this country. No critical journal was ever conducted on higher or more disinterested principles, and the ability and unflinching honesty with which the medical publica-

* Annual Oration, 1866.

tions of the time were reviewed, contributed greatly to improve the loose and often illogical manner in which many of our medical publications were written at the time when that Journal was commenced; and what is still more important, the rational principles upon which the study and treatment of disease should be founded were in that journal ably inculcated; and its enlightened articles contributed largely to bring about that more rational and simple method of treating disease, which has happily taken the place of the polypharmic and so-called active system of treatment, which prevailed generally in this country some thirty years ago. Dr. Conolly also contributed some valuable papers to the publications of the Society for the Diffusion of Useful Knowledge, and many more to the medical periodical journals.

The total neglect of insanity as a branch of medical education in our universities and medical schools had long been a subject of regret to Dr. Conolly, and he offered to give a special course of lectures on disordered states of the mind when he was Professor of Medicine in University College, London. "The interests of the public," he remarked, "greatly require that medical men, to whom alone the insane can ever be properly trusted, should have opportunities of studying the forms of insanity, and prepare themselves for its treatment in the same manner in which they prepare themselves for the treatment of other disorders. They have at present no such opportunities." His opinion was that every public lunatic asylum should be available for practical instruction:—"It would be some compensation," he said, "for the unavoidable evils of public asylums, if each establishment of that kind became a clinical school in which, under certain restrictions, medical students might prepare themselves for their future duties to the insane. It is true that insane patients are not always in a state to be visited by pupils, and that a very strict discipline would be necessary to prevent disorder or impropriety, but such discipline is quite practicable, and such arrangements might be made as would at once guard those patients whom disturbance might injure, and yet present a sufficient number of instructive examples to the students."*

Dr. Conolly's observations on the absence in our medical schools of all instruction on the subject of insanity are noticed here, because they are still applicable to the state of our medical education. The Senate of the University of London have recently made a step in the right direction, by expressing their opinion that it was highly desirable that candidates for the M.B. degree should practically acquaint themselves with the different forms of insanity in a lunatic asylum, and for this purpose they recognise three

* "Indications of Insanity", preface.

months of such attendance as equivalent to the same period of attendance in a medical hospital.

In the University of Edinburgh the present Professor of Medicine, Dr. Laycock, has for the last ten years delivered a course of lectures on medical psychology and mental diseases during the summer sessions; and, although the course is voluntary, it has been well attended. This is a step to make the course a part of the regular medical curriculum.

When the opportunity occurred, Dr. Conolly did all he could to remedy this defect in medical education by instituting a course of clinical lectures in the Hanwell Asylum; showing, contrary to the opinion entertained by some medical men, that practical instruction might be given in all well-conducted lunatic asylums without disturbance to the patients.

The plan of conducting these lectures at Hanwell was admirably adapted for practical instruction. One day a week was devoted to them during the summer; the early part being occupied by Dr. Conolly and the assistant-physician of the asylum in conducting the students and young physicians who attended the lectures through the wards, making them acquainted with the character and phases of insanity as exhibited in the patients before them, directing their attention more particularly to the cases whom Dr. Conolly had selected for illustrating the afternoon lecture. No such complete course of clinical instruction was, I believe, ever given before or since, certainly not in this country; and when it is considered that they were continued for eight years and were entirely gratuitous, they afford a striking proof of Dr. Conolly's zeal in encouraging the practical study of insanity.

Having learned that my friend Dr. Gull had attended Dr. Conolly's clinical lectures at Hanwell, I asked him to write me his opinion of them, both as regarded their advantage to the students and their effects upon the tranquillity of the Asylum. The following reply of Dr. Gull is most satisfactory on both points:—

"22, Brook Street, Grosvenor Square, W.

"DEAR SIR JAMES CLARK,

"I regret your note should have remained so long unanswered, but I have not had a convenient time to reply to it, and I was unwilling to answer it cursorily.

"I had the advantage of attending the clinical lectures given by Dr. Conolly at the Hanwell Asylum. I do not remember the date at which they were given, but it must be more than twenty years ago. I retain the most vivid and pleasant remembrance of them. Two students were nominated from each of the metropolitan hospitals to form this clinical class. We assembled at Han-

well about noon once a week. We then made a visit through the wards in company with Dr. Conolly and Dr. Begley, receiving some words of instruction upon the cases in general, and having our attention especially directed to particular ones. This occupied, probably, near two hours ; I believe sometimes more. We thus, from week to week, saw almost every phase of mental disorder from acute mania to general paralysis and dementia. We also saw the application of the system of non-restraint, then on its trial, directed by that kind and calm and philosophic temper so very conspicuous in Dr. Conolly. I cannot express to you the charm we all felt in these visits. The Asylum in the country, apart from the noise and bustle of the town ; the novelty of the clinical work and teaching ; the new field of facts before us, contrasting with those afforded in the routine of our other hospitals ; the feeling of the peculiar advantages thus enjoyed—all combined to make us eager and thankful. I have often regretted that such great opportunities have been since neglected, and that year by year these large fields of knowledge have been lying waste and barren. If by any word you could awaken again the minds of those who govern and direct these institutions, so that they might make them available for medical instruction, after the manner inaugurated by Dr. Conolly, you would indeed prove a benefactor to us all. It is lamentable to think what ignorance yet prevails in and out of our profession, on the subject of insanity. So it will be whilst the matter remains a special study. The prejudice was too strong for even Dr. Conolly. He set a bright example, but the difficulties were too great, and it died out soon. I should, indeed, be glad to think that others should in long succession enjoy such opportunities as we had at Hanwell.

"I can also satisfactorily answer your inquiry respecting the effect of our visits upon the inmates of the Asylum. To the great majority it was a matter of indifference, or of some interest and to others it seemed to give pleasure. Generally the visit round the wards was with as little inconvenience to the patients as it would have been had it been round the wards of a hospital for general diseases. There were occasions when it was necessary to caution the students against approaching or addressing certain cases, when, from some mental peculiarity, any familiarity would have caused excitement. As such cases were known beforehand to the physician, they were easily avoided, whilst they, at the same time, afforded important clinical hints. I may here say that this course of instruction in the Asylum necessitated and enforced a careful demeanour of the students.

"The cases of acute mania requiring entire quiet and seclusion are rare in all asylums, but even these could often be seen unobserved through the wickets of the padded rooms in which they

were confined, without disturbance, whilst the physician supplied the closer facts of each case, and directed our minds to the proper consideration of them. When the severity of the attack was passing off, Dr. Conolly would, at his discretion, permit us to have a closer study of such cases, in the same way that in our general hospitals the severer diseases are guarded by the physician against injurious examinations. In all the visits I paid to Hanwell, I never saw anything caused by the presence of the students, which militated against the good order of the establishment or the welfare of the patients.

"From what I saw at Hanwell, and from my experience since, I have no doubt of the practicability of making the public lunatic asylums schools for medical men and jurists, without detriment to the inmates. On the contrary, if this were done, much good must accrue every way. Nothing developes those establishments so much as making them centres of scientific observation and practical instruction. Without this our large hospitals would have been but infirmaries, and the sick would certainly not have had the best treatment.

"The debt I owe to Dr. Conolly obliges me to incur the risk of being tedious, if thereby I may express my obligations to his memory.

"With the best wishes of this season, I am,
"My dear Sir James Clark,
"Yours sincerely,
"WILLIAM W. GULL.

"Dec. 25, 1866."

No opinion of the value of such clinical lectures as those given in the Hanwell Asylum could be more valuable than that of Dr. Gull, who has long been physician to one of the largest hospitals in London, one of our most zealous clinical teachers, and now one of the most eminent consulting physicians in London. I fervently wish with Dr. Gull that some powerful influences could be brought to bear on the directors of asylums to induce them to open their wards for practical instruction. It is with great pleasure I have just been informed that the directors of St. Luke's and Bethlehem have set the example of opening the wards of their asylums to medical pupils.

In these lectures Dr. Conolly was in the habit of pointing out the assistance afforded by phrenology in the diagnosis and treatment in many cases of insanity. He had studied at an early period phrenology as a branch of physiology, and, in a lecture on insanity in the Royal Institution, gave the following rational view of phrenology:—

"Although the doctrines of the phrenologists have met with little favour, and the pretensions of recent professors of occult

methods of acting upon the nervous system have thrown an air of absurdity even over the truths of what is called phrenology, no person not altogether devoid of the power of observation can affect to overlook the general importance of the shape and even of the size of the brain in relation to the development of the mental faculties. The head of an idiot always manifests defect in one of these particulars, if not in both. The head of a lunatic is irregularly developed in a very large majority of instances; and in the worst cases of insanity, where the tendency of the disorder is to pass into dementia, the anterior lobes of the brain are very defective. If we refuse to admit that the constitution, size, and shape of the brain have any relation to or connection with the extraordinary manifestation of particular faculties, in various instances, independently of all education, we must deny that the large lobes of the brain in man are of any use at all in relation to faculties which are certainly not seated in other portions of the nervous system. It is more reasonable to consider each of the large and marked divisions of the brain, and each of the convolutions, with their copious supply of grey or vesicular nerve-substance, as possessing distinct-offices; and the more or less perfect development of these several masses, and the greater or less nervous energy they possess, as circumstances connected with the varieties of mental character, and with the disordered manifestations of the mind. Each mass, or each subdivision of such masses, may, like each nerve, have a distinct office. Each, however excited, may only be capable of one kind of manifestation of the excitement. Each, when in a healthy state, may be excited simultaneously throughout; and each in disease may be excited irregularly, or too long, or lose the power of being excited altogether."

Dr. Conolly's literary and rather sedentary habits, coupled with his anxious professional duties, began to tell injuriously on his health long before he retired from practice. He suffered much from chronic rheumatism complicated by neuralgic complaints; and during the latter years of his life his nervous system gave evident indications of failing power, and his capacity for mental work became greatly diminished; he felt, he said, that age was creeping upon him, and he lately withdrew almost entirely from practice, and retired to his residence, Lawn House, near and in sight of the scene of his most important labours. Here, although he felt unequal to much mental exertion, his days were not spent idly, and he emyloyed much of his time in reading the best classical authors, and it was now that he wrote his last elegant little work *The Study of Hamlet.* In a letter to the author of this memoir, who had suggested to him to write his views on the insanity of old age, he agreed that the subject had not received the attention

which it deserves. "It is curious," he adds, "that the subject of the delusions of old age has been often and lately the particular subject of my thoughts; and I would willingly comply with your desire, but that mental energy is wanting." In another note, written only a few months before his death (Nov. 30, 1865), he evidently felt that his end was approaching, but wrote in a tranquil and even cheerful state of mind. "It is a great blessing," he observed, "to retain one's internal faculties and to be perfectly content and grateful to the Author of our being, on whom we all depend." From this time he continued to decline, and died on the 5th of March from an attack of paralysis complicated with convulsions, which proved fatal in a few hours.

If the state of a man's mind during the last years of his life may be taken as an indication of the feelings with which he looks back on the part he played in the position of life allotted to him, Dr. Conolly's retrospect must have been a highly satisfactory one; and the tranquil, contented, and happy state of mind which he exhibited during the period of his retirement, showed that it was so. He enjoyed the consolation of reflecting, that his life had been one of active benevolence and usefulness, and he had the further happiness of knowing that his labours in the cause of humanity had contributed largely to the permanent alleviation of human suffering in the most "calamitous of all diseases." To his benevolent disposition such reflections could not fail to prove highly gratifying.

Dr. Conolly was much esteemed by all who knew him. On his retirement as visiting physician in the Hanwell Asylum, rendered necessary by the increasing extent of his practice, the members of the profession, as a mark of their esteem and their admiration of his indefatigable and successful labours in the cause of the lunatic, presented him with a valuable and elegant piece of plate, with a portrait of himself by the late Sir Watson Gordon. It was in presenting this memorial that Lord Shaftesbury stated the vast improvements introduced by Dr. Conolly into the treatment of the insane, quoted in a former part of this memoir. At the same time, the Committee of Visitors of the Hanwell Asylum expressed to Dr. Conolly their unanimous request that he would accept the office of consulting physician for life, which he accepted with pleasure, although it was not altogether a sinecure. He was a frequent visitor at the Asylum, and continued his clinical lectures for years.

Dr. Conolly was for many years the chief consulting physician in all important cases of insanity. His opinion was much sought for in medico-legal questions, and he apppeared in nearly all the important lunacy trials of late years. His evidence was always clear and unimpassioned, and the verdict of the jury almost invariably

in unison with it. He was held in high estimation on the Continent as well as in his own country; was an honorary member of many foreign medical and scientific societies, and the University of Oxford conferred on him the honorary degree of D.C.L., when the same degree was conferred on his friends Sir John Forbes and Sir Charles Hastings.

Dr. Conolly was one of the founders of the Provincial Medical and Surgical Association, and, with Sir John Forbes, took an active part in assisting their mutual friend Sir Charles Hastings, who originated and was essentially the founder, and, as long as he lived, the animating spirit of the Association. The Association was a great success, and had a powerful influence in promoting the progress and the diffusion of medical science among the members of the profession throughout the whole kingdom. Dr. Conolly contributed a valuable paper in the first volume of the *Transactions of the Association* "On the Establishment of County Natural History Societies." The plan which he laid down was excellent, and embraced the collection of every kind of information connected with the health and well-being of the inhabitants, and, among other things, the formation of a museum of natural history. In the county of Worcester the plan was carried out, and a splendid Museum of Natural History now exists in Worcester, formed chiefly under the direction, and by the exertions of Sir Charles Hastings, who was President of the Society, and had given unremitting care to its management for many years, and continued to do so up to his death.

Dr. Conolly was a man of great natural talent and of a highly cultivated mind; he was an elegant writer and a most agreeable and persuasive speaker, more especially when pleading the cause of charity; as Sir Thomas Watson has well remarked, "There was a pleasing harmony between Dr. Conolly's aspect and manners, which were gentle and engaging, his oratory was easy, copious, elegant, and persuasive, and his written style correct, refined, and graceful."* He was a true and warm friend, and an agreeable companion whom it was always pleasant to meet.

At the recent annual meeting of the Medico-Psychological Association, of which Dr. Conolly had been twice president, held in Edinburgh, Dr. W. A. Browne, Commissioner in Lunacy in Scotland, who enjoyed the friendship of Dr. Conolly through life, thus spoke of him in his presidential address:—

"John Conolly displayed, within the university of this town, and in the arena of the Royal Medical Society—dear to many of those who hear me—those predilections and preferences which ultimately determined his destiny, and gave him a position of nearly equal rank among physicians and philanthropists. His

* Oration.

thesis was on Insanity, and formed the foundation of that work by which he is most popularly known. A physician in increasing practice, one of the editors and originators of the *British and Foreign Medical Review and Cyclopædia of Practical Medicine*, and a teacher in a University, John Conolly, I know, never felt that he had secured his true position, or that he had found a fair field for the exercise of his head and heart, until he was appointed medical superintendent of Hanwell. It is not affirmed that he made personal sacrifices in order to accept this distinction; but, like that of many other great and good men, his life was one of much sacrifice and much suffering. It is not my province here, however much it may be my inclination, to speak of more of his good deeds than of the assistance he afforded in the grand revolution effected in the management, and of the effects of his teaching in the propagation of sound views in the treatment, of the insane and of the idiotic. I cannot refrain from claiming him as an advocate—and as a philosophical advocate—of a medico-psychology founded upon induction. His ideas, it is true, seemed to have passed through his heart. and his feelings to have raised and rarefied his intellect. Perhaps it is because of the elegance and popular attractions of his style that his habits of thinking have been regarded as less logical than illustrative; but his *Indications of Insanity* show a familiarity with the laws of the human mind, and especially with the peculiarities and subtle defects by which it is disturbed and unhinged, requiring great perspicacity and penetration, as well as careful analysis.

"Sensitive in his rectitude, gentle and genial, he was to all men conciliating and courteous; to his friends, and I judge after an experience of thirty years, he was almost chivalrously faithful and generous; and the insane he positively loved."

At the same meeting, at which Dr. Browne pronounced this elegant and just encomium on his late friend, a resolution was passed to open a subscription, under the auspices of the members of the Association, to establish an annual prize in the form of an essay on Psychology, or some other fitting testimonial in memory of Dr. Conolly; and Baron Mundy presented the Association with a marble bust of the doctor, executed by the celebrated Roman sculptor, Cav. Benzoni.*

* Baron Mundy, a German physician, and one of Dr. Conolly's most esteemed foreign friends, had devoted much time in studying the nature and treatment of insanity, and had witnessed the treatment in the Hanwell asylum. No one appreciated more fully the value of Dr. Conolly's labours, or exerted himself more strenuously to diffuse a knowledge of them on the continent, and to impress upon the physicians of lunatic asylums, more especially, the great superiority of the mild and non-restraint system of treatment. The bust presented by Baron Mundy will, at the request of the Association, and by the consent of the President and Fellows, find an appropriate place in the College of Physicians of London.

Dr. Conolly's most important published works are those on insanity. In 1830 he published his *Inquiry concerning the Indications of Insanity*, an able and most valuable work, whether we regard the philosophic and judicious plan on which the whole subject is treated, and more especially the ability with which the functions of the healthy mind are examined and analysed as a foundation for the study of its disorders. This part of the work deserves the careful study of all who are engaged in the education of youth, and even of the fathers of families. They will find the most enlightened advice, in clear intelligible language, for promoting the healthy development of the young mind by the well-directed education of its faculties, and the prevention of mental injury, the consequence of their injudicious and misdirected exercise. To the members of the legal, as well as those of the medical profession commencing the study of psychology, we know no work so well calculated to give them sound views on the subject. This work placed Dr. Conolly in the first rank as a psychological physician.

In 1847 he published a volume on the *Construction and Government of Lunatic Asylums*, and in 1853 he brought out his valuable work on the *Treatment of the Insane without Mechanical Restraint*. In this work Dr. Conolly reviews the progress of the treatment of the insane since the close of the last century, when the mild, rational treatment of the lunatic was inaugurated by the philanthropic Pinel, to the middle of the present century, when the mild and humane treatment of the insane culminated in the total abolition of mechanical restraint by the persevering efforts of himself.

This is a thoroughly practical work, containing the most judicious rules for the application of the non-restraint system, and embraces the whole management of the Hanwell Asylum during the period of his direction of it. It ought to be carefully studied by all who are engaged in the treatment of the insane and the management of asylums.

Not the least important part of Dr. Conolly's writings are his *Lectures on Insanity*. Two courses in the Royal College of Physicians, London, the *Croonian Lectures*, and a full course in the Royal Institution. But his most important lectures are those which he gave in Hanwell Asylum. For the value of these lectures, and the judicious manner in which they were conducted, Dr. Gull's letter affords abundant evidence. It is impossible to read these lectures, which were published in the *Lancet*, without being impressed with Dr. Conolly's remarkable power of minute observation, and his deep insight into the disordered states of the human mind in their various forms, and the judicious rules for their treatment in the various conditions of the health in which

they occur. How much more impressive must these lectures have been when the subjects illustrative of them were under observation!

Dr. Conolly's last work, published a few years before his death, was his *Study of Hamlet.* An elegant philosophical essay, of which the principal object is to show that Hamlet's insanity was real; and perhaps in none of his works has Dr. Conolly given greater proof of his powers as an able psychologist than in the minute analysis of Hamlet's mind, by which he shows that much of his conduct is only explicable on actual insanity.

The failing of Dr. Conolly's mental energy, while his reasoning powers remained sound, is greatly to be lamented. There were several subjects connected with insanity on which he was desirous of writing, but he felt unequal to the labour of composition. We have thus, in all probability, lost some of the most valuable results of his large and matured experience.

The decay of mental energy which Dr. Conolly described so feelingly as occurring in himself, is experienced more or less by all who reach an advanced age, the earlier generally in proportion to the amount and anxious nature of mental work, and the constitution of the individual. It may creep on so imperceptibly as not to be observed for some time, and even when experienced may be reluctantly admitted; but, nevertheless, it is a physiological law of our nature, and it is true wisdom to bow reverently to it, and cease to urge the failing mental powers to a state of hopeless exhaustion, or it may be so as to derange the whole mental faculties. This failing shows itself in a different manner in different cases. It may be by a sense of lassitude, and disinclination for the usual work. Not unfrequently an early indication of overwrought brain is an inability to concentrate the attention for any length of time, a state generally accompanied with difficulty to unravel an intricate subject which would have cost little effort a few years before. These indications of failing mental power, whether affecting the mental functions generally, or limited to one or more faculties, should be regarded as warnings, which may not be safely neglected at whatever age they occur. They afford clear evidence that the mind is unequal to the efforts to which it has hitherto been subjected, and requires rest. Although there is a considerable difference as regards the period of life when these indications of over-wrought brain first appear, and the form which they assume, they never fail to show themselves sooner or later when the cause has existed. In delicate constitutions, with active or excitable brains, they generally occur earlier in life than in those differently constituted; but as Dr. Conolly remarks, "However well the brain is developed, and however well organised, its func-

tions, obeying the general laws of life, are still limited to a period, which differs much in different individuals."*

The remedy in all these cases is repose from labour for a time, or at least such relaxation as would admit of the nervous system regaining its natural state. But the most effective remedy is total abstinence from mental exertion for a period proportionate to the degree of failure experienced; and the adoption, at the same time, of means calculated to improve the general health, which is almost always impaired by the mode of living implied by the excess of mental labour. If these means are judiciously adopted, before the functions of the brain have been too far exhausted, such a degree of improvement may be effected in the general health and the mental energy, as to admit of a return to work, although it ought always to be diminished work, and that generally in proportion to the advanced age at which the brain began to fail. "The danger in these cases," observes Dr. Conolly, "arises from a return to active mental work after partial recovery. In a few years more the symptoms of exhaustion recur, and the brain becomes manifestly unequal to continued exertion."

It might have been naturally expected that, from his large consulting practice in cases of insanity and diseases of the nervous system generally, and the extent to which his opinion was sought in medico-legal questions, that Dr. Conolly would have died rich. It was far otherwise; and this may be chiefly explained by his professional position, during the greater part of his life,—a physician in small country towns, and afterwards as resident physician in the Hanwell Asylum, his income was barely sufficient to maintain his family. Dr. Conolly was also very liberal-minded in his practice, and gave little attention to financial matters. Still he had sufficient to supply all his wants during his retirement, and to leave something to his family at his death.

He left a son and three daughters, one married to a clergyman and two to eminent psychological physicians.

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* Instances may no doubt be cited of literary men, who have worked hard the greater part of their lives, and yet maintained their mental powers to a very old age. As a remarkable instance of this, I have much pleasure in referring to my friend our venerable and esteemed President, who, although he has passed his eightieth year, is known at this moment as one of the most active and energetic brain-workers of this brain-working metropolis. Mr. Crawfurd lately assured the writer of this notice, that he felt no diminution of his mental energy, but rather the reverse. The members of the Society will be delighted to know this, and will unite with the writer in the fervent wish that Mr. Crawfurd may long retain his great mental powers, to enlighten society, and to advance ethnological science, for which he has already done so much.

Note.—Although it was not without diffidence that I complied with our President's desire that I should write a notice of the life of Dr. Conolly for the *Transactions* of the Society, I readily admit that I have had great pleasure in doing so. I hope it may not be considered that I have extended my notice to too great a length. Independently of having to record the principal labours and the character of so eminent a member of our Society, the circumstances immediately connected with Dr. Conolly's professional life are, I am persuaded, of a nature so interesting as to be acceptable to the members of the Society generally. Dr. Conolly's life, in truth, comprises a very important period in the medical history of Insanity, and still more of the treatment of the insane, in both of which it will be seen that Dr. Conolly occupied a very prominent and important position.

J. C.

Obituary of Thomas Hodgkin, M.D. By RICHARD KING, M.D.

[*Read June 12th*, 1866.]

THE President and Council have granted me the privilege of writing the obituary of Thomas Hodgkin, M.D., a Member of the Society of Friends, and a Member of this Society, which has been granted, on two deaths only, that of Dr. Prichard and of Lieutenant Ruxton. The President never fails to record in his Anniversary Address, in appropriate terms, the loss of the Members of the Society who have died during the past year; but there must necessarily be reserved in the *Transactions* of the Society an obituary space for those ethnologists only who have laboured in this special field of science.

Dr. Hodgkin largely assisted in founding the Ethnological Society, the parent of the Ethnological Societies of Paris and America, and of the Ethnological branch of the Geographical Society of St. Petersburg. He was also mainly instrumental in founding the Aborigines Protection Society; and, through the formation of that Society, Ethnology took its place in science. The Aborigines Protection Society, where he laboured incessantly, will not fail to record the laborious part he took in its proceedings; and I may mention that he was associated in the foundation of the Aborigines Protection Society with men of combined mental power and benevolence, Sir Thomas Fowell Buxton, Bart., Thomas Clarkson, Joseph Sturge, William Allen, F.R.S., and Henry Christy—names that can never be forgotten by those who knew them. Henry Christy is also known to this Society as an active member of its Council, and a contributor to its Transactions.

Dr. Hodgkin was born on the 17th August, 1798, at Pentonville, then a beautiful village detached from London. He was educated by his father, a sound classic and mathematician, assisted by Peter Vincent Cassanet, a Frenchman, who was not only master of his own language, but who had a peculiar facility in writing elegant Latin, both in prose and verse, to whom principally Dr. Hodgkin owed the purity of his Latin style, and his facility in French, both as a written and spoken language. Natural and experimental philosophy he acquired under William Allen, the distinguished chemist. Having chosen medicine as his profession he attended Guy's Hospital as a pupil. He graduated at Edinburgh, and his thesis was not only characterised by his devotion to medical science, but by the purity of its Latin.

He spoke that language—a rare attainment now—as well as Italian, French and German, which rendered his correspondence both extensive and valuable.

He was elected licentiate of the Royal College of Physicians of London in 1825, and Curator of the Museum, and Inspector of the Dead, and Professor of Morbid Anatomy at Guy's Hospital. To have occupied such a position he must have possessed not only exact anatomical knowledge, but an amount of special and general scientific information, which few men attain. His classified catalogue of the Pathological Museum at Guy's Hospital is a masterpiece of talent and industry, and the Museum, which was his own creation, is not only the pride of this country, but the admiration of foreigners.

As Professor of Morbid Anatomy, and Inspector of the Dead, he had to test the physician and the surgeon as to the cause of death, and it would be a great boon to medical science, as well as a great blessing to mankind, if such a professorship were established in all the leading medical schools, in order that such a test should exist as to enable the student to become an accomplished anatomist, and more than that a morbid anatomist, and thus help him to a sound diagnosis at the bedside.

As a diagnostic physician, Dr. Hodgkin was not surpassed, and he was as great at the bedside as he was in the study, which he assuredly owed to his profound knowledge of morbid anatomy. Professors Louis, Blainville and Foville of France, well known morbid anatomists, stated, in my presence, that Dr. Hodgkin was the first morbid anatomist of the age, which *he* would *not admit*, but *it must be admitted* that he deservedly took rank with these distinguished Professors.

His writings were of most extensive character. His published works, *The Pathology of Serous and Mucous Membranes*, in two volumes; *The Influence of Physical Agents on Life; The Means of Preserving Health*, which went through two editions, and his *Classified Catalogue of the Museum of Guy's Hospital*, will always be works of reference, and he contributed largely to medical and scientific periodical literature, both at home and abroad.

On the formation of the University of London, he was appointed by Earl Russell a member of the Senate, and had a leading part in its organisation, and he never ceased to give it his untiring attention.

St. Thomas' Hospital, under difficulties, sought Dr. Hodgkin's assistance, and he reorganised the medical staff, taking upon himself for a time the responsibility of curator of the museum and lecturer on the practice of physic. With this vast labour on his hands he never lost sight of those studies which were dear to him, and must necessarily be the sphere of the accomplished medical man. His

natural historical knowledge enabled him to take part in all its branches, but his love of natural history centered itself in the study of the natural history of man. Let us refer to one of his earliest papers in the Transactions of the Ethnological Society.

He says, "As I have heard it remarked by Cuvier, with regard to zoology in general, so in this particular branch of it, it is obvious that there are two modes in which the subject is susceptible of being treated. By the one method, we should proceed from the original stock to trace the numerous subdivisions or ramifications into which it has branched out: but to adopt this course it would be essential that we possessed more numerous and more certain facts than either are, or can be within our power of attainment. By the other method, we should endeavour to trace the nations, tribes, and families of man in a retrograde direction towards their obscure origin. The oldest Ethnographer and Historian, the first inspired writer, has adopted the one method, and in his enumeration and description of the nations, tribes, and families of which he has left an account on record, he has traced them in the descending line from their great primogenitor. Attempts have been made in recent times to adopt this method, but the result is unsatisfactory." Dr. Hodgkin considered, therefore, that the society should adopt the second method and desire to receive and employ

1. Original information regarding the different groups of mankind furnished by individuals who had opportunities of collecting them.

2. Papers in which personal knowledge of race is seconded by reference to original authorities with constant regard to the past and present geographical distribution, so as to furnish data to those who may take up similar investigations concerning other races geographically connected with them.

The Society will find in their Transactions, papers of great scientific value and of high authority comprising the modes of investigation pointed out by Dr. Hodgkin. The papers of Mr. Crawfurd, who occupies the chair as President of the Society, which Dr. Prichard held before him, are a life study. He is unquestionably the most laborious Ethnologist since the time of Dr. Prichard.

Having spoken of Dr. Hodgkin as an Ethnologist, let us consider him as a Theologist, and these are his words:—"Dr. Prichard and Mr. Lawrence put the supposed case of a previously uninformed individual, seeing in contrast the extremes of colour and the extremes of civilisation and barbarism, by which he would almost be necessarily led to infer absolute distinctness of species. Lord Kames had previously stated that a similar inference must be drawn were not the declaration of Scripture opposed to it. "I

am glad to have this opportuuity of expressing my firm persuasion that religion has nothing to fear from the strictest scrutiny of the characters in history of the varieties of mankind or from the geological study of the globe on which they are placed. Having paid some attention to the ethnological grouping of human skulls, I confess that I have found very considerable difficulty in adapting points of characteristic difference, and in this very difficulty I find an argument in favour of the unity of our species, and of the differences which we observe being those of variety only. I cannot adduce a better illustration of this remark than that which is afforded by the skulls and portraits of American Indians. The unmixed Indians of North and South America form as well-marked and distinct a group of the human race as can be pointed out; and I have noticed greater differences in the form of the head between individuals of the same tribe than between those of individuals of different tribes, separated from each other by thousands of miles, and between which the most remote connection cannot be traced."

Dr. Hodgkin is supported here by a distinguished living member of the medical profession, Sir Henry Holland, Bart., whose works are various in kind and of acknowledged learning and value. I quote from his work entitled, *Medical Notes and Reflections*, which may be referred to again and again on other points than that which I am treating. "If there be an argument for the unity of creation more complete and comprehensive than another, it is that which is furnished by the recent progress of comparative anatomy, enabling the observer, by the uniformity of general laws, to predicate from a single minute part of structure all the more important generic characters of the animal to which it belongs."

Dr. Hodgkin's most important works were written under extreme suffering, according to his custom, between six and eight a.m., while reclining in bed; for the last few years, however, he had with little interruption good health up to his fatal attack. In conjunction with Sir Moses Montefiore, he had succeeded in inducing the Sultan of Morocco* to make important concessions to his Jewish subjects; and he had proceeded as far as Jaffa on a second mission for the purpose of advancing the interests of the suffering Jews when he was taken ill. There he died, in his 68th year, on the 4th April, 1866, and on the following morning was buried in the Protestant Cemetery.

Captain Moore, attached to the mission, wrote to Dr. Hodgkin's friends in England that "he complained of feeling ill on leaving

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* Dr. Hodgkin's narrative of the journey to Morocco on this occasion has been published since his death in a very handsome illustrated volume.

Alexandria, and the voyage to Jaffa distressed him. Dr. Chaplin, of Jerusalem, was consulted, but considered the symptoms not dangerous; on the third day, however, Dr. Loggi, his constant medical attendant, announced that his malady assumed the form of acute dysentery, and Dr. Chaplin was a second time consulted. He found inflammation of the bowel had set in, extending itself to the peritoneum, and the character of the diarrhœa showed extensive ulceration, and thus confirmed the opinion of Dr. Loggi. Dr. Hodgkin foresaw this difficulty. He maintained for years that the sigmoid flexure of the colon was diseased, or in other words he foresaw the cause of his own death.

Dr. Hodgkin was Member of the Senate of the University of London, and intimately connected with almost all the scientific bodies of this country. The Royal Geographical Society, the Ethnological Society, the Statistical Society, the Aborigines Protection Society, the Anti-Slavery Society, and the British Association for the Advancement of Science, had the benefit of his high talents and acquirements either as Councillor or as Hon. Secretary or Hon. Foreign Secretary.

In addition, he was Member of the Lyncean Academy of Rome, the Physico-Critical Academy of Sienna, the Philomathic Society of Paris, the Royal Society of Medicine at Marseilles, the Society of Natural Philosophy and Medicine of Heidelberg, the Academy of Natural Sciences of Philadelphia, the Massachusetts Medical Society, the Gœnian Society of Catania, the Iatrophysical Society of Palermo, and the Sandwich Islands Institute.

His last words were in a letter to his wife three days before his death—"The two last days at Alexandria knocked me up; the weather was oppressive. I have been in almost ceaseless agony, and the sufferings consequent upon my disorder have worn me down. My dear love to all my friends. I lament the little service I have done." These were the last words of this learned man, and yet so humble. *The little service I have done ! ! !*

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Nicolucci, Dr. Giustiniano, Naples.
Nillsson, Professor, Stockolm.
Nott, Dr. J. C., Mobile, Alabama, U.S.
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Perty, Professor, Berne.
Phœbus, Dr., Professor of Natural Philosophy in the University of Giessen.

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Rawlinson, Major Gen. Sir H., K.C.B., F.R.S., M.P., 1 Hill Street, Berkeley Square.
Renan, M., Member of the Institute, Paris.
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Steinhauer, Carl, Director of the Ethnological Museum, Copenhagen.
Sutherland, J. P., Esq., M.D. Natal, South Africa.
Thomsen, C. J., Esq., Copenhagen.
Waitz, Professor, Marbourg.
Walther, Dr. Philipp A., Darmstadt.
Wilkinson, Sir J. Gardner, F.R.S.
Wrangell, Admiral Ferdinand Von, St. Petersburgh.

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REPORT

OF THE

Council of the Ethnological Society of London.

MAY 1866.

The Council has again to report the satisfactory condition of the Society during the past year. Although the increase in its number of Fellows has not been great, yet it has continued steadily, and has been greater than that of the year preceding. A very small number of Fellows have retired during the past year, and death has robbed us of a few more. The following names have been added to the list of Fellows since the anniversary of 1865.

John Gray Macfarlane, Esq.
Manockjee Cursetjee, Esq.
General George Balfour, C.B.
Richard Temple, Esq.
George Maw, Esq., F.S.A.
Dr. Ronay.
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George Vaughan, Esq., Singapore.
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Arthur Pulford, Esq.
T. Valentine Roberts, Esq.
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Hon. George Campbell, Judge of the Supreme Court of Bengal.
William Marshall, Esq., M.P.
Archibald Campbell, Esq., M.D., F.L.S.
Professor Dadabhai Naoroji.
Reginald Stuart Poole, Esq.
William Blackmore, Esq.
Captain John Frederick Adolphus M'Nair.
Peter Dickson, Esq.
Samuel Timmins, Esq., F.R.S.L.
John Ussher, Esq.

Honorary Members.

Professor Max Müller, of Oxford.
George Folsom, Esq., of New York, President of the American Ethnological Society.

Corresponding Member.

Monsieur A. de Fultner.

The Papers read and discussed at the ordinary Meetings of the Society have been quite equal to those of any preceding year.

Many of them have appeared in the volume of Transactions published since Christmas, and others will be printed in the following volume, which is already in the press. The papers read since the Anniversary Meeting in 1865, and the Exhibitions which have led to discussions, are—

June 13*th*.

Remarks on the Peculiarities of the Skulls of the Andaman Islanders, and on Two Fossil Skulls from Gibraltar, by Professor Busk.

An Attempt to Explain Stonehenge, by Professor Nilsson.

An Account of a Religious Festival comprising Leaf-wearing and the Hanging or Cheddul, by Dr. Shortt.

June 27*th*.

A Report on the Indian Tribes inhabiting the Country in the Vicinity of the 49th Parallel of North Latitude, by Capt. Wilson.

July 4*th*.

On Craniology and Phrenology in Relation to Ethnology, by Dr. Donovan.

A Series of Photographs from Central America, communicated by Edward B. Tylor.

On Visible Speech, by Professor Bell.

November 7*th*.

A Series of Chinese Drawings and Inscriptions placed on the Temples at the Times of Certain Religious Festivals, exhibited by Mr. Mackie.

Report on the Ethnological Papers read in Section E at the Meeting of the British Association at Birmingham, by Thomas Wright, Esq., Hon. Sec.

Notes on the Manners and Customs of the People about Little Popo on the Bight of Benim, by Capt. Leveson Wildman, R.N.

On the Darien Indians, by Dr. Cullen.

November 21*st*.

On the true Assignation of the Bronze Weapons, etc., supposed to indicate a Bronze Age in Western and Northern Europe, by Thomas Wright, Esq., Hon. Sec.

December 12*th*.

A Collection of Flint Flakes from the Cape of Good Hope, sent by Professor Busk, exhibited by Sir John Lubbock, Bart.

On the Oriental Negroes by J. Crawfurd, Esq.

A Skull from the Early Ruins at Malta was exhibited by Professor Busk.

1866.

January 9*th*.

On the Physical Forms of the Lapps, by John Campbell, Esq.

On the Ethnology of the Indo-Chinese Nations and Tribes, by Colonel Phayre.

On the Characteristics of the South Sclavonic Races, by Miss A. P. Irby.

January 23*rd.*

A Letter from Mr. Thompson, a Merchant of the Cape of Good Hope, on the Supposed Discovery of the Ophir of Scripture, read by the President.

Remarks on the Andaman Islanders, from the Notes of Lieut. St. John, read by Sir Edward Belcher.

On the Patagonians, by Dr. Caddy, R.N.

February 13*th.*

On the Physical and Mental Characteristics of the European and Asiatic Races of Man, by John Crawfurd, Esq.

Notes and Sketches of the Niger, by T. Valentine Robins, Esq.

February 27*th.*

On the Somalis of the Eastern Coast of Africa, by Col. Rigby.

On the Origin and History of Written Languages, by John Crawfurd, Esq., President.

March 13*th.*

Sir John Lubbock, Bt., exhibited some Flint Implements upon which Remarks were made by Professor Busk and John Evans, Esq.

On the True Assignation of the Bronze Weapons, etc., by Sir John Lubbock, Bt., and Frederick Lubbock, Esq.

March 27*th.*

On the Adaptation of the Races of Man, by Rev. F. W. Farrar.

Notes on Mr. Crawfurd's Paper on Races, by Professor Dadabhai Naoroji.

April 10*th.*

On an Hindu Sacrificial Bell found in one of the Islands of the New Zealand Group, by John Crawfurd, Esq., President.

On the Invention of Writing Materials, by John Crawfurd, Esq., President.

Photographs of the Natives of the Nilgherry Hills, exhibited by Colonel Showers.

Copies of Inscriptions in the Ancient Hamyaritic Languages, from the District of Aden, in Arabia, by Colonel Playfair.

April 24*th.*

On the British Superstitions relating to the Hare, the Goose, and the Fowl, by John Thrupp, Esq.

On the Intercourse of the Romans with Ireland, by Thomas Wright, Esq., Hon. Sec.

May 8*th.*

On the Migration of Cultivated Plants in reference to Ethnology, by John Crawfurd, Esq., President.

On the Fishermen of Southern India, by Dr. Shortt.

Considerable additions have been made to the Society's LIBRARY and MUSEUM during the past year, and among them the Council

desires especially to make honourable mention of a considerable number of valuable works more or less illustrative of the science of Ethnology presented by the President, John Crawfurd, Esq., and of a series of important works relating to India sent to the Library from the India Office by order of the Secretary of State for India, Earl de Grey. A Catalogue of the Library is in preparation, and will shortly be printed for the use of the Fellows.

The Council has further to report that the sale of the TRANSACTIONS of the Ethnological Society continues to increase and to form an important article in the Treasurer's accounts; and that the latter are in so satisfactory a state that the Society will enter upon a new year of its existence with a large balance in hand than it has ever possessed before.

Statement of Accounts of FREDERICK HINDMARSH, *Treasurer, with the* ETHNOLOGICAL SOCIETY OF LONDON, *from* 23*rd May*, 1865, *to* 23*rd May*, 1866.

	£	s.	d.		£	s.	d.
To Balance, as per last Account on May 23rd, 1865	158	2	10	For Rent, Insurance, etc.	40	9	0
„ Subscriptions of Members for the current and past years (including compositions) .. 320 12 6				„ Refreshments and attendance at Evening Meetings	52	5	0
Commission .. 17 3 11				„ Reporting Proceedings	26	6	0
	303	8	7	„ Mr. Richards, for Printing ..	127	4	6
„ Cash of Mr. Murray, on sale of Society Transactions	20	2	4	„ Mr. Wright, for expenses and editing the Transactions for 1865 and 1866	66	6	0
„ Cash error in addition of Subscriptions	0	3	6	„ Mr. Cobbett, for Painting.. ..	4	17	6
„ Received difference of duty of Insurance	0	2	3	„ Balance	164	11	6
	£481	19	6		£481	19	6

(*Signed*) LIONEL BEALE, A. CAMPBELL, } *Auditors.*

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