SOME AMERICAN ASPECTS OF ANTHROPOLOGY.[1]

THE term 'prehistoric' stretches back from times just outside the range of written history into the remotest ages where human relics justify the opinion that man existed. Far back in these prehistoric periods, the problem of quaternary man turns on the presence of his rude stone implements in the drift-gravels and in caves, associated with the remains of what may be called the mammoth fauna. Not to recapitulate details, the point to be insisted on is, how the effect of a quarter of a century's research and criticism has been to give quaternary man a more and more real position. It is generally admitted, that, about the close of the glacial period, savage man killed the huge maned elephants, or fled from the great lions and tigers on what was then forest-clad valley-bottom, in ages before the later waterflow had cut out the present wide valleys fifty or a hundred feet or more lower, leaving the remains of the ancient drift-beds exposed high on what are now the slopes. The evidence of caverns such as those of Devonshire and Perigord, with their revelations of early European life and art, has been supplemented by many new explorations, without shaking the conclusion arrived at as to the age known as the reindeer period of the northern half of Europe, when the mammoth and cave bear and their contemporary mammals had not yet disappeared, but the close of the glacial period was merging into the times when, in England and France, savages hunted the reindeer for food, as the arctic tribes of America do still. The evidence increases as to the wide range of paleolithic man. He extended far into Asia, where his characteristic rude stone implements are plentifully found in the caves of Syria and the foot-hills of Madras. The question with which this section may have especial means of dealing is, whether man likewise inhabited America with the great extinct animals of the quaternary period, if not even earlier, — a question which leads at once into the interesting argument, how far any existing people are the descendants and representatives of man of the post-glacial period. The problem, whether the present Eskimos are such a remnant of an early race, is one which Professor Boyd Dawkins has long worked at. Since he stated this view in his work on cave-hunting, it has continually been cited, whether by way of affirmation or denial, but always with that gain to the subject which arises from a theory based on distinct facts. To be mentioned as preliminary are the questions, Were the natives met with by the Scandinavian seafarers of the eleventh century Eskimos? and, Whereabouts on the coast were they actually found? When the race of bold sea-rovers who ruled Normandy, and invaded England, turned their prows into the northern and western sea, they passed from Iceland to yet more inclement Greenland; and thence, according to Icelandic records, which are too consistent to be refused belief as to main facts, they sailed some way down the American coast. But where are we to look for the most southerly points which the sagas mention as reached in Vineland? Rafn confidently maps out these places about the promontory of Cape Cod, in Massachusetts; and this has been repeated since, from book to book. Mr. Tylor pleaded guilty to having cited Rafn's map, but now felt bound to say that the voyages of the Northmen ought to be reduced to more moderate limits. It appears that they crossed from Greenland to Labrador (Helluland), and thence, sailing more or less south and west, in two stretches of two days each, they came to a place near where wild grapes grew, whence they called the country Vine-land. This would therefore seem to have been somewhere about the Gulf of St. Lawrence; and it would be an interesting object for a yachting-cruise to try, down from the east coast of Labrador, a fair four-days' sail of a viking ship, and identify, if possible, the sound between the island and the ness, the river running out of the lake into the sea, the long stretches of sand, and the other local features mentioned in the sagas, thus throwing light on the southern limit of the Eskimos. The *skrälings*, who came on the sea in skin canoes (*hudhkeipr*), and hurled their spears with slings (*valslöngva*), seem by these very facts to have been probably Eskimos; and the mention of their being swarthy, with great eyes and broad cheeks, agrees tolerably with this. If we may take it that Eskimos eight hundred years ago, before they had ever found their way to Greenland, were hunting seals on the coast of Newfoundland, and caribou in the forest, their life need not have been very unlike what it is now in their arctic home. Some day, perhaps, the St. Lawrence and Newfoundland shores will be searched for relics of Eskimo life, as has been done with such success in the Aleutian Islands by Mr. W. H. Dall; though on this side of the continent we can hardly expect to find, as he does, traces of long residence, and rise from a still lower condition.

Surveying, now, the vast series of so-called native or indigenous tribes of North and South America, we may admit that the fundamental notion on which American anthropology has to be treated is its relation to Asiatic. This kind of research is, as we know, quite old; but the recent advances of zoölogy and geology have given it new breadth, as well as facility. The theories which account for the wide-lying American tribes, disconnected by language as they are, as all descended from ancestors who came by sea in boats, or across Bering Strait on the ice, may be felt somewhat to strain the probabilities of migration, and are likely to be remodelled under the information now supplied by geology as to the distribution of animals. It has become a familiar fact, that the Equidae, or horse-like animals, belong even more remarkably to the new than to the old world. There was plainly land-connection between America and Asia, for the horses whose remains are fossil in America to have been genetically connected with the horses re-introduced from Europe. To realize this ancient land-junction of Asia and America, — this 'tertiary-bridge,' to use Professor Marsh's expres-

[1] Abstract of an address to the section of anthropology of the British association at Montreal, Aug. 28, 1884, by EDWARD B. TYLOR, D.C.L., F.R.S., president of the section.

sion, — it is instructive to look at Mr. Wallace's chart of the present soundings, observing that an elevation of under two hundred feet would make Bering Strait land, while moderately shallow sea extends southward to about the line of the Aleutian Islands, below which comes the plunge into the ocean depths. If, then, we are to consider America as having received its human population by ordinary migration of successive tribes along this highway, the importance is obvious of deciding how old man is in America, and how long the continent remained united with Asia, as well as how these two difficult questions are bound up together in their bearing on anthropology.

To clear the obscurity of race-problems, as viewed from the anatomical stand-point, we naturally seek the help of language. Of late years the anthropology of the old world has had ever-increasing help from comparative philology. Within America the philologist uses with success the strong method of combining dictionary and grammar in order to define his great language-groups; such as the Algonquin, extending from Hudson's Bay to Virginia, the Athapascan, from Hudson's Bay to New Mexico, both crossing Canada in their vast range. But attempts to trace analogies between lists of words in Asiatic and American languages, though they may have shown some similarities deserving further inquiry, have hardly proved an amount of correspondence beyond what chance coincidence would be capable of producing. Thus when it comes to judging of affinities between the great American language-families, or of any of them, with the Asiatic, there is only the weaker method of structure to fall back on. Here the Eskimo analogy seems to be with North Asiatic languages, presenting in an exaggerated form the characteristic structure of the vast Ural-Altaic or Turanian group of Asiatic languages.

The comparison of peoples according to their social framework of family and tribe has been assuming more and more importance since it was brought forward by Bachofen, McLennan, and Morgan. One of its broadest distinctions comes into view within the Dominion of Canada. The Eskimos are patriarchal, the father being head of the family, and descent and inheritance following the male line. But the Indian tribes farther south are largely matriarchal, reckoning descent, not on the father's, but the mother's side. In fact, it was through becoming an adopted Iroquois that Morgan became aware of this system, so foreign to European ideas, and which he supposed at first to be an isolated peculiarity. No less a person than Herodotus had fallen into the same mistake over two thousand years ago, when he thought the Lykians, in taking their names from their mothers, were unlike all other men. It is now, however, an accepted matter of anthropology, that, in Herodotus's time, nations of the civilized world had passed through this matriarchal stage, as appears from the survivals of it retained in the midst of their newer patriarchal institutions. For instance: among the Arabs to this day, strongly patriarchal as their society is in most respects, there survives that most matriarchal idea that one's nearest relative is not one's father, but one's maternal uncle. He is bound to his sister's children by a 'closer and holier tie' than paternity, as Tacitus says of the same conception among the ancient Germans. Obviously, great interest attaches to any accounts of existing tribes which preserve for us the explanation of such social phenomena. Some of the most instructive of these are too new to have yet found their way into our treatises on early institutions: they are accounts lately published by Dutch officials among the non-Islamized clans of Sumatra and Java. Among the Malays of the Padang Highlands of Mid-Sumatra, who are known to represent an early Malay population, not only kinship, but habitation, follows absolutely the female line; so that the numerous dwellers in one great house are all connected by descent from one mother, one generation above another, children, then mothers and maternal uncles and aunts, then grandmothers and maternal great-uncles and great-aunts, etc. There are in each district several *suku*, or mother-clans, between persons born, in which marriage is forbidden. Here, then, appear the two well-known rules of female descent and exogamy; but now we come into view of the remarkable state of society, that, though marriage exists, it does not form the household. The woman remains in the maternal house she was born in, and the man remains in his. His position is that of an authorized visitor; if he will, he may come over and help her in the rice-field, but he need not: over the children he has no control whatever; and, were he to presume to order or chastise them, their natural guardian, the mother's brother (*mamak*), would resent it as an affront. The law of female descent, and its connected rules, have as yet been mostly studied among the native Americans and Australians, where they have evidently undergone much modification. Thus, one hundred and fifty years ago, Father Lafitau mentions that the husband and wife, while, in fact, moving into one another's hut, or setting up a new one, still kept up the matriarchal idea by the fiction that neither he nor she quitted their own maternal house. But, in the Sumatra district just referred to, the matriarchal system may still be seen in actual existence, in a most extreme and probably early form. If, led by such new evidence, we look at the map of the world from this point of view, there discloses itself a remarkable fact of social geography. It is seen that matriarchal exogamous society (that is, society with female descent, and prohibition of marriage within the clan) does not crop up here and there, as if it were an isolated invention, but characterizes a whole vast region of the world. If the Malay district be taken as a centre, the system of intermarrying mother-clans may be followed westward into Asia, among the Garos, and other hill tribes of India. Eastward from the Indian Archipelago it pervades the Melanesian islands, with remains in Polynesia; it prevails widely in Australia, and stretches north and south in the Americas. This immense district represents an area of lower culture, where matriarchalism has only in places yielded to the patriarchal system, which develops with the idea of property, and which, in the

other and more civilized half of the globe, has carried all before it, only showing in isolated spots, and by relics of custom, the former existence of matriarchal society. Such a geographical view of the matriarchal region makes intelligible, facts which, while not thus seen together, were most puzzling. Though it is only of late that this problem of ancient society has received the attention it deserves, it is but fair to mention that its scientific study began long ago, in the part of the world where we are assembled. It is remarkable to find Father Lafitau already pointing out, in 1724, how the idea of the husband being an intruder in his wife's house bears on the pretence of surreptitiousness in marriage among the Spartans. He even rationally interprets in this way a custom which to us seems fantastic, but which is a most serious observance among rude tribes widely spread over the world. A usual form of this custom is, that the husband and his parents-in-law, especially his mother-in-law, consider it shameful to speak to or look at one another, hiding themselves, or getting out of the way, at least in pretence, if they meet. The comic absurdity of these scenes, such as Tanner describes among the Assineboins, disappears if they are to be understood as a legal ceremony, implying that the husband has nothing to do with his wife's family.

It is obvious that in this speculation, as in other problems now presenting themselves in anthropology, the question of the antiquity of man lies at the basis. Of late, no great progress has been made toward fixing a scale of calculation of the human period; but the arguments as to time required for alterations in valley-levels, changes of fauna, evolution of races, languages, and culture, seem to converge more conclusively than ever toward a human period, short, indeed, as a fraction of geological time, but long as compared with historical or chronological time. While, however, it is felt that length of time need not debar the anthropologist from hypotheses of development and migration, there is more caution as to assumptions of millions of years where no arithmetical basis exists, and less tendency to treat every thing prehistoric as necessarily of extreme antiquity; such as, for instance, the Swiss lake-dwellings and the Central-American temples. There are certain problems of American anthropology which are not the less interesting for involving no considerations of high antiquity: indeed, they have the advantage of being within the check of history, though not themselves belonging to it.

A brief account may now be given of the present state of information as to movements of civilization within the double continent of America. Conspicuous among these is what may be called the northward drift of civilization, which comes well into view in the evidence of botanists as to cultivated plants. To see how closely the two continents are connected in civilization, one need only look at the distribution on both of maize, tobacco, and cocoa. It is admitted as probable, that, from the Mexican and Central-American region, agriculture travelled northward, and became established among the native tribes. This direction may be clearly traced in a sketch of their agriculture. The same staple cultivation passed on from place to place. Agriculture, among the Indians of the great lakes, is plainly seen to have been an imported craft by the way in which it had spread to some tribes, but not to others. The distribution of the potter's art is similarly partial. With this northward drift of civilization other facts harmonize. Now that the idea of the mound-builders being a separate race of high antiquity has died out, and their earth-works, with the implements and ornaments found among them, are brought into comparison with those of other tribes of the country, they have settled into representatives of one of the most notable stages of the northward drift of culture among the indigenes of America.

NOTES AND NEWS.

IN order to facilitate the work of the Electrical conference to be held in Philadelphia, the chief signal-officer has issued to the members of the conference the following subjects, as suggested for discussion, with a view to recommending proper observations and reports: 1. What unpublished records exist in the hands of electric-lighting, telegraph, and telephone companies, relative to ground-currents and atmospheric or auroral influences? 2. What is the general experience on east-west, north-south, and other lines? 3. What records can be kept by managers of all lines without interfering with daily business? 4. What special observations can be made? 5. What special lines can be, perhaps, wholly devoted to the continuous record of the phenomena? 6. Do, or can, the noises and currents, as observed on telephone and telegraph lines, give information as to the location and future movement of a thunder-storm, aurora, rain, cold wave, etc.? 7. Are observations on buried lines, or those covered with metallic tubing, or double aërial lines, specially desirable? 8. How can we best secure a complete daily electric survey of a given small portion of country, and a general survey of a larger region? 9. What is practicable in the way of securing a daily map of the distribution of atmospheric and terrestrial electric potentials? 10. Who will maintain self-recording electrometers?

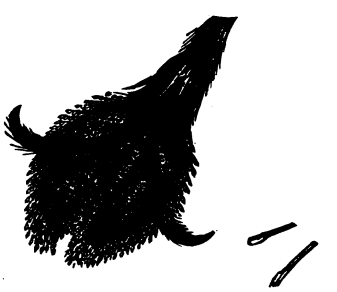

FIG. 1. FIG. 1a.

FIG. 2.

— The ability of flies to walk on glass and other polished surfaces receives a new explanation at the hands of Dr. J. E. Rombouts in the *Archives du*