



The Ethnology of Polynesia.

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JUNE 25TH, 1878.

JOHN EVANS, Esq., D.C.L., F.R.S., *President, in the Chair.*

The minutes of the previous meeting were read and confirmed.

Dr. PAUL TOPINARD, Professor à l'École d'Anthropologie de Paris, was announced as an Honorary Member.

The following new Members were also announced—H. W. Jackson, Esq., M.R.C.S., Dr. Dunkley, and the Rev. H. W. Watkins.

The following presents were announced, and thanks were ordered to be returned to the respective donors for the same :—

FOR THE LIBRARY.

From the ACADEMY.—The Transactions of the Academy of Sciences of St. Louis. Vol. III, No. 4.

From the SOCIETY.—Proceedings of the American Philosophical Society. Vol. XVII, No. 100.

From the ASSOCIATION.—Transactions of the National Association for the Promotion of Social Science, 1876.

From the SOCIETY.—Journal of the Bombay Branch of the Royal Asiatic Society. Vol. XII, No. 35.

From the EDITOR.—Revue Internationale des Sciences. Nos. 24 and 25, 1878.

From the EDITOR.—“Nature” (to date).

From the BERLIN ANTHROPOLOGICAL SOCIETY.—Zeitschrift für Ethnologie. No. 6, 1877.

From the SOCIETY.—Proceedings of the Royal Society. Vol. XXVIII, No. 187.

From the EDITOR.—Revue Scientifique, Nos. 50 and 51, 1878.

The following papers were read :—

The ETHNOLOGY of POLYNESIA.

By Rev. S. J. WHITMEE, F.R.G.S., C.M.Z.S.

IN this paper I shall endeavour to show the distribution of races of men in the intertropical islands of the Pacific. The map with which, by the liberality of the Council of the Institute, the paper is illustrated, presents to the eye what is here recorded. In its main features this map agrees with the ethnographic charts of the Pacific already published, but it gives

more details than any preceding map. It has been constructed entirely from my own personal knowledge of the people, or from information obtained from persons who have lived on, or travelled amongst, the islands in various parts of the Pacific. Hence, so far as it is worth anything, it may be regarded as an independent confirmation of the researches upon which previous ethnographic maps of the Pacific have been based.

Possibly some members of this Institute may be doubtful whether I am justified in taking for granted the existence of the different races of men which the map indicates. At least one eminent naturalist—Mr. A. R. Wallace—has within the past few years declared his belief that all the people inhabiting the islands of the Pacific, from the Hawai'ian Islands in the North to New Zealand in the South, and from the Solomon Islands and the New Hebrides in the West to the most distant Eastern islands, are but varying forms of one great Oceanic race.

As some of you know, I have already controverted this view.* And I have the satisfaction of knowing that several eminent men of science and Ethnologists who have given attention to the subject think Mr. Wallace is wrong. As far as I am aware, however, he has not up to the present time admitted this; but he has not attempted to disprove the argument, or explain the facts which have been adduced in opposition to his view. Last year a friend told me Mr. Wallace had said he had not given any further consideration to the subject since the publication of his "Malay Archipelago." Now that he is engaged in editing the volume on Australasia and Polynesia in Mr. Stanford's "Compendium of Geography and Travel," perhaps we may hope he will be led to reconsider this question, and to give us the benefit of his views after further study.

I shall not at the present time attempt further disproof of Mr. Wallace's theory, or recapitulate the race characteristics of the Polynesians. But in this connection I wish just to mention the lecture on "The Native Races of the Pacific," recently delivered by Professor Flower, F.R.S., at the Royal Institution. I am glad to find that from craniometry Professor Flower arrives at results similar to those which I have reached from a study of the external and mental characteristics, the manners and customs, and the languages of these people. We all know that in such questions the convergence of different lines of research in the same point of agreement, adds immensely to the probability that what they agree on is correct. Professor Flower finds the crania of the black people in the western portion of the Pacific

* "The Contemporary Review," February, 1873.

to differ greatly from those of the brown people occupying the central and eastern islands; in fact, he believes them to be totally distinct. In some places, however, the crania obtained indicate more or less admixture between the races. This is what other lines of research indicate.

There are *three* divisions of the people marked by the three colours in the map. The *blue* colour in the west represents the *black Melaneseans*; the *pink* in the eastern portion, including the Hawaiian Islands and New Zealand, represents the *brown Malayo-Polynesians*; the *purple*, chiefly north of the Equator, represents the *Micronesians*, a people differing in several respects from both of the other races. The *pink* bands running through groups in the Melanesian area indicate the admixture of that people with the Malayo-Polynesians, the proportion being roughly shown by the number of bands.

I.—THE MELANESIANS. These people were, without doubt, the earliest of the present occupants of the Pacific Islands. Probably we may regard them as the aboriginal inhabitants. Possibly they were more widely distributed in former times than they now are. I have not lived among these people, but I have visited some of the islands where they live, and have seen natives of Fiji, the Loyalty Islands, New Caledonia, and the New Hebrides, and have given a little attention to some of their languages. Everything I know about them indicates that they are essentially one people, modified in the various islands by the different circumstances which have affected them, and by more or less mixture with the brown people.

I am not prepared to pronounce a very definite opinion as to the affinities of the blacks of Polynesia with other peoples of the world. My studies in this direction have not been such as to warrant such an expression of opinion. But, considering that aboriginal black populations have been found in most of the continents and larger islands of the southern hemisphere, I should naturally expect to find more or less affinity between them all. As far as my reading has gone, it has tended to confirm this view. I certainly believe the blacks of Western Polynesia have close affinities with the Papuans of the Indian Archipelago. Probably they are remotely related to the people of Africa. In taking this view I am following, as you are aware, that of some of the most eminent comparative Ethnologists.

I will not attempt to say how these Melaneseans came to occupy the islands in which they are now found. We have evidence as to the way in which the brown race may have spread, but none whatever as to how the earlier black race came to inhabit these remote and isolated positions. The brown

people are all navigators. This is not, however, the case with the blacks. Indeed, I have often thought wherever the blacks are found to be navigators there are indications that they have learnt the art from contact with the brown people. There is every reason to believe that these two races have come into contact with one another at various points in the Melanesian area. In many places there has plainly been a mixture of blood. But even where this is not the case, or where this mixture has taken place to only a slight extent, the habits and customs of each race may have been affected by their contact with one another.

We will now briefly run over the area occupied by this Melanesian race, and I will point out how far I believe the people to be mixed.

New Guinea is properly outside the region which this paper takes up, as I reckon that with the Indian Archipelago. But in passing it may be remarked that in the eastern peninsula of that island there seems to be a considerable admixture of races. The Rev. W. G. Lawes, who lived several years on Niuë, or Savage Island, in the Malayo-Polynesian area, and who has recently spent four years in this portion of New Guinea, has there found people resembling very closely the brown Polynesians. Evidence of this has been given in the excellent paper on the "Motu" of Port Moresby, by Dr. W. Y. Turner, which was read before the Institute last February.* And I hope Mr. Lawes, who is now in England, will soon give us further information on this point.

As far as we have information respecting the people of New Ireland, New Britain, and the neighbouring smaller islands, they seem to be pure Papuans or Melanesians. But we know at present very little about them, and further information may show them to be mixed. My experience in studying this subject has been that the more we have learnt about the people in this Melanesian area, the more evident it has become that they have some mixture of brown Polynesian blood. Hence I should speak with the utmost caution, and only provisionally, about purity of blood where our opinion is necessarily based chiefly on negative evidence.

I have no certain information which would indicate that the Solomon Islanders are mixed with the Malayo-Polynesians. But there are a few things which would, to my mind, furnish presumptive evidence that they are.† Some of these people

* See "Journal Anthro. Institute," vol. vii, p. 470.

† Since this paper was read, the Rev. J. Inglis, long resident as a missionary at Aneityum, in the New Hebrides, has informed me that the late Bishop Patteson told him he had no doubt but the Solomon Islanders were largely

are described as being fine large men—much larger than the blacks usually are. I have not visited these islands; but my knowledge of the people on other islands would lead me always to suspect a mixture of blood where the blacks are large in size. These Solomon Islanders are also good navigators, and build excellent large canoes. In this respect they are very different from the pure Melanesians.

Passing through the Santa Cruz and Banks Islands, where the testimony of the late Bishop Patteson is in favour of our regarding the people as mixed Melanesians, we come to the New Hebrides. Some of the inhabitants of this group may probably be regarded as pure and typical Melanesians. But in most of the islands the blacks have a strain of brown blood; and in at least four places pure Malayo-Polynesian colonies are found, viz., at Niuē, Futuna, Mel, and Fil. The two latter are small islands on the coast of Efat. These colonies keep themselves distinct from the blacks. And the difference between the two races is so great that it at once strikes the most casual observers. The names of two of the islands occupied by these colonies—Niuē and Futuna—may indicate the region whence they came; for these are the names of two islands between Fiji and Samoa.

Although these colonists keep themselves distinct from the blacks, it is highly probable that their presence would more or less affect the population around them. Black men generally like lighter-coloured wives. By fair means or foul some of these Melanesian men would probably gain possession of women belonging to the colonies. The blacks are more likely to become mixed in this way than the brown race. I have always found the lighter-coloured people to look down upon the blacks; and, as a rule, the brown men would not take black women for their wives except when they could not obtain any others.

In the Loyalty Islands there is some considerable mixture of the two races. On the island of Uvea there is a brown colony, and there the two people have kept somewhat distinct. They retain two languages, although they are, as would naturally be supposed to be the case on such a small island, a good deal mixed. The name Uvea or Uea seems to indicate the island whence the brown people came. viz., Uvea or Wallis Island, west of Samoa. When missionaries from Samoa first visited the other islands of the Loyalty Group, more than 20 years ago, they found some brown Polynesians living among the people. These had come from Tonga. I saw some of these Tonguese there in 1863, and again in 1870. They had lost their

mixed with the brown Polynesians, and especially in the eastern part of the group. November, 1878.

way at sea, and had been carried by the winds and current to the Loyalty Islands. In this way the population of these islands has doubtless been considerably modified from the pure Melanesian type. This is also the case on the neighbouring large island of New Caledonia.

On Rotuma there is also a mixture of the two races, although the Melanesian largely predominates. In fact it is probable that this island contains a mixture of the three peoples of Polynesia. The Rev. G. Turner, LL.D., mentions some people, probably from the Gilbert Islands, who were cast on that island.*

Coming now to Fiji we find the inhabitants considerably mixed, especially in the eastern portion of the islands. I have never felt inclined to adopt the view usually advocated to account for the mixture of races in this group, viz., that this was the last stage in the journey of the Malayo-Polynesians in their migration, before they broke up and spread over the eastern islands. Those who adopt this view think they made a considerable stay in Fiji, and hence the mixture of the people. Such a theory is extremely improbable, and it is altogether unnecessary in order to account for the present population of these islands.

It is well known that for a long time there has been frequent intercourse between the Tongan Islanders and the Fijians. It is on the eastern side of Fiji, nearest to Tonga, that the people are most mixed. Tongans have settled there, have exercised a great influence over, and have intermarried with the original Melanesian population. The population of some of the eastern islands appears to be nearly as much Tongan as Melanesian. Even many of the Fijians who appear to be pure Melanesians have probably some brown Polynesian blood in their veins. The people generally are much larger than the unmixed blacks are usually found to be. This, at any rate, is the case with the coastal tribes. I am not certain whether the mountain tribes are as large as those on the coast. We have adopted the Tongan form of the name for these islands; the original Viti being changed by them to Fitsi, and from that we have Fiji.

We have gone over all the islands where the Melanesian element in the population predominates. Although in some of these there is more or less brown Polynesian blood, the black element very largely exceeds the other; the brown element can be regarded as only infused. There are, however, some islands peopled by the brown race, where there appear to be traces of a Melanesian element in the population. This is the

* See "Nineteen Years in Polynesia," p. 359.

case in New Zealand. I think we have evidence which tends to show that there was an aboriginal black population in those islands previous to the arrival of the Maori. There is probably a little admixture of blood in Samoa, but it is very slight, and may doubtless be accounted for by connection with Fiji. I am strongly inclined to think there is a Melanesian element in the Marquesas Islands. My reasons for thinking so are very slight, and probably will fail to be convincing to others. The Marquesas Islanders are a very savage set of people, they appear to be broken up into hostile tribes, and are cannibals. Their language also differs in different parts of the group. Indeed, there are, if my information be correct, at least two different dialects there.

Now in these respects the Marquesas Islanders differ from most of the pure Malayo-Polynesians. When they were first discovered by Europeans these brown Polynesians were not a very savage people. Early navigators were generally well received by them. And all our subsequent intercourse with them has proved that they are not naturally a race of bloodthirsty savages. The unfortunate massacre of members of La Perouse's expedition in Samoa, and the killing of Captain Cook in Hawai'i do not disprove this. Such deeds were either the result of indiscretion, or something worse, on the part of their white visitors, or of a misunderstanding on the part of the natives. They were not the deeds of bloodthirsty, treacherous savages.

As a rule, these brown Polynesians were not cannibals. I very much doubt whether cannibalism can with any justice be regarded as one of their race characteristics. Where people belonging to the race indulged in this horrid custom, I believe it may be accounted for by exceptional circumstances. These may be (1), contact and admixture with the black race, which is always cannibal wherever it is found in Polynesia; (2), the result of hardship and want during long voyages, when the wretched people have been driven by sheer want to eat their companions, and have afterwards retained the habit thus contracted; or (3), the occasional indulgence of a spirit of revenge manifesting itself in biting or even eating a portion of a slain enemy.

Further, the brown Polynesians were not broken up into hostile tribes, having no intercourse with one another. On some islands they were often engaged in war with one another. But in the intervals between their wars, there was much communication between them. Their wars were between those who were generally friends; and after their differences had been settled by a fight, and by the killing of about an equal number of men on both sides, they would settle down again, and

amicably carry on their intercourse with one another until another cause of dispute arose. Owing in great part to this frequent intercourse between the people, we always have found one language to prevail in a whole group of islands.

The Marquesas is the only group peopled by the brown race in Polynesia where two very distinct dialects are found.

All of these characteristics which have been mentioned as not being usually found in the Malayo-Polynesian race are invariably found in the Melanesians:—viz., a savage, blood-thirsty disposition, the practice of cannibalism, the existence of hostile tribes in the same islands who have little or no intercourse with one another, and, as a consequence of this, the existence of different languages in one group of islands, or even on the same island. As these characteristics are found in the Marquesas Islanders, I am inclined to suspect a mixture of Melanesian blood in those people.

II.—THE MALAYO-POLYNESIANS. From what has already been said respecting the brown Polynesians, you will gather that I believe the ancestors of this race entered Polynesia subsequent to the occupation of many of the islands by the black race. It appears to me that there can be little doubt in the minds of those who have given attention to the subject as to the direction of their migration. They evidently went from the Indian Archipelago to the islands they now occupy. I believe we can, with at least great probability, trace them thus far, and show their relationship to the Malays still in that Archipelago, and also to the Malagasy of Madagascar. Whether they can be traced further I am not prepared to say. You are aware that, in a recently published book, a gentleman resident in the Hawaiian Islands—Mr. Fornander—has tried to show that these people have sprung from a pre-Malay race which once dwelt in the Indian Archipelago; and from thence he thinks he can trace them to Western Asia. This gentleman has also ventured to give the probable date of their migration across the Pacific.

I do not intend to examine here those views. Some of them appear to me to be very wild. I will merely say that, as far as my reading on the subject has gone, I have failed to meet with any evidence that the ancestors of the brown Polynesians were a people who occupied the Indian Archipelago before the ancestors of the present Malays arrived there. My own opinion is that the brown Polynesians and the Malays, and also the Malagasy, all sprung from the same stock, but I do not regard the Malays as representing that stock. Probably the Polynesians represent it more nearly than the Malays, for the latter have been more changed than the Polynesians. As

to the date of their separation I can say nothing, except that it doubtless was before the Malay or Javanese languages were affected by the Sanskrit. My faith in pre-historic chronology of every kind is very weak indeed; and I certainly cannot put much confidence in Polynesian chronology derived from legends and genealogies. Still, if we allow margin enough, we may, by a comparison of genealogies, arrive at what we may regard as approximate dates. Mr. Fornander thinks the great migration across the Pacific was made towards the close of the first, or early in the second century. I would like a little more evidence before adopting that date.

A difficulty is felt by many as to the possibility of such an eastward movement, directly against the prevailing trade winds and the usual currents. But it is well known to voyagers in the tropical regions of the Pacific that sometimes there are strong westerly winds blowing there; and also that occasionally there are strong currents setting from the west to the east. These are exceptional. But the probability is that, if the voyage were involuntary, the people would be more likely to be taken off their guard by exceptional winds and currents than by those which usually prevail. If, on the other hand, the people went of their own will—a vanquished tribe determining to seek a new home in the east—I imagine their canoes would lie close enough to the north-east trade wind to fetch the Samoan or Tongan Islands.

Probably they came down by the Solomon and New Hebrides Islands, but finding these occupied by the blacks, they were unable to effect a permanent settlement there. Then they went on until they found unoccupied islands, or some with a population so small that they were able to conquer them, and either occupy the islands conjointly with them, or entirely to destroy them.

We know these brown Polynesians were adventurous voyagers long before their islands were known to Europeans. It is certain that there was frequent intercourse between Tonga and Fiji, between Tonga and Samoa, and also between the Society Islands and Hawai'i. We have several recent well-authenticated instances of people being blown away and passing from the east towards the west. I knew a man who was drifted 1,200 miles in 1862, and who spent eight weeks on his journey. During my residence in Samoa, a boat with some labourers who had escaped from Tahiti, reached those islands. I have already mentioned some Tongans who were drifted to the Loyalty Islands, and whom I saw there in 1863 and 1870. In 1861, some natives of the Tokelau Islands were driven by adverse winds to Samoa, nearly due south. We have not, however,

such well-authenticated examples of people going from the west to the east, except in the North Pacific.

I have by me several accounts of Japanese junks having been driven across the North Pacific, some of which I shall particularly mention by-and-by in connection with the peopling of Micronesia. The best account of a boat from the west reaching Central Polynesia which I know is one obtained from Fotuna or Horne Island (lat. $14^{\circ} 48' S.$, and long. $178^{\circ} 18' W.$). The people now living on that island say, many years ago a large boat with about 40 people in it reached their shores. The natives attacked the crew, and in the fight many of them were killed. Others, however, were spared and allowed to land on the island, and form connections with the natives. The French Roman Catholic priest on the island, who is familiar with the story, says the party consisted of both men and women. These people taught the natives of the island to mark their bark cloth with peculiar patterns, which are at the present time found only in Fotuna and the neighbouring Uvea, or Wallis Island. I have been credibly informed by a gentleman who visited Fotuna and made inquiries on the subject, that drawings of the vessel in which these people arrived, and of various strange utensils and implements which they had with them, are still preserved on the island. It is said that the progeny of the strange people after a time becoming numerous, the pure natives feared they would outnumber them and acquire supremacy over the island, and that in consequence of this fear they killed them nearly all off.

The French priest and the gentleman who gave the information to me, believe these people were either Japanese or Chinese. I never visited Fotuna myself, and therefore can only give the story as I have received it. But it is probably not too late yet to obtain more certain knowledge on the subject from the island; and perhaps the original drawings said to exist (or at least copies of them), might be obtained. I commend the matter to the attention of some gentleman who may be intending to take a yachting cruise through the Pacific.

I think there is every reason to believe that story is, in the main, trustworthy. The killing off of most of the people, and so diluting the foreign blood mixed with the natives could be paralleled by at least one other case which I know of; and it would be a very likely thing for the pure natives to do under the circumstances. It appears to me highly probable that this vessel may have gone from the neighbourhood of the Philippine Islands. And in Fotuna it reached the neighbourhood of Samoa and Tonga, whence it is most likely the Malayo-Polynesians spread abroad to the various groups they now occupy. It

appears to me that a good deal may be said in favour of Samoa having been one of the earliest, if not the first, permanent settlement of these people in Central or Eastern Polynesia. The traditions of many islands point to Samoa as the place to which the inhabitants directly trace their origin.

In his "Myths and Songs from the South Pacific," Mr. Gill tells us (p. 25) the Karika family of Rarotonga expressly state that their ancestors came from Manu'a—the most easterly cluster of islands in Samoa. This, you will see, makes them to have gone in a south-easterly direction.

You are aware that the traditions of nearly all the brown Polynesians and of the Maories, speak of Avai'i, Hawai'i, or Hawaiki, as the original home of their ancestors. These names are found as the names of the largest island of Samoa, and of the Sandwich Islands—under the forms of Savai'i, and Hawai'i. Still it appears to me doubtful whether the Samoan Savai'i is the Hawaiki and Avai'i of tradition. And it is not upon this name that I rest for evidence that Samoa is probably the centre whence most of the other islanders have reached their present places of abode. The traditions of many mention Samoa (generally as Hamoa or Amoa, they being unable to pronounce the S), or some of the islands of the group by name as the place whence their fathers migrated.

Some of the migrations from Samoa are comparatively recent: for example, that of the Ellice Islanders. These people evidently went thence only a few generations ago. The island from which they went may with great probability be determined by the family names borne by some of them. The staff of the chief of the migrating party is still in existence. This staff was given to my brother-in-law, the Rev. G. A. Turner, M.D., of the Samoan Mission, four or five years ago. It is a long staff such as is always used in Samoa by orators when they stand in the *malae*, or place of public assembly, to make a speech. These staves are handed down from generation to generation as a valuable heirloom. They frequently bear the names of great orators who belonged to the respective families. The wood of which this Ellice Island staff was made does not grow in those islands, but is a Samoan wood. As the original wood decayed, it has been patched with other wood indigenous to the Ellice Islands. The traditions of these people record the arrival of two distinct parties from Samoa, one a considerable time after the other.

All the brown Polynesians occupying the islands coloured pink in the map, resemble one another to a remarkable degree, considering the wide area over which they are found, and their consequent isolation from one another. The differences in their

languages are also much fewer than we should naturally have expected them to be, when we consider the long time which must have passed since the people were separated. Still, these differences are greater than they are popularly supposed to be. I have recently prepared a brief sketch of the principal characteristics of these languages for the Philological Society, which has been printed in that Society's Journal. It will not therefore be necessary to say anything here on that subject. Those interested in it can see the paper mentioned.*

III.—THE MICRONESIANS. These people occupy the Caroline, Marshall, and Gilbert Archipelagoes. They differ considerably from both of the other races of Polynesians, and they differ somewhat among one another. I have seen natives from all three of the above-named archipelagoes, although I have visited only the Gilbert group. Some Caroline Islanders who were taken to Samoa to labour on a plantation there, differed in several respects from the Marshall and Gilbert Islanders. They had less stamina in their constitutions than the others. The Caroline Islanders died off very rapidly, while the others stood the work and change of food very well. All of these people are of a light colour; but the Caroline Islanders I saw were more yellow in complexion, while the Gilbert and Marshall Islanders are darker than most of the brown Polynesians. The hair of all is straight and black, and they have little or no beard. In size they are smaller than the brown Polynesians. Some of the Caroline Islanders, however, were of a good size—rather tall and moderately stout; but the people of the other two groups are decidedly small, and of a very spare habit of body.

When I commenced collecting material for a comparative Grammar and Dictionary of the Polynesian languages, I thought those of these people were near enough to those of the brown Polynesians to be grouped together with them. But I soon found them to be very different, and that they form a different family of the Polynesian tongues.

Our information is not sufficiently full to warrant us in speaking positively as to the affinities of these Micronesians with other peoples. The traditions of the Gilbert Islanders indicate that those islands were peopled both from the west and the east. Those who arrived from the east are said to have been from Samoa; those from the west were probably from the Caroline Islands. These greatly predominated over those from the east, and it is probable from the traditions that most of those from Samoa were destroyed. There are traditions of the arrival of other strangers at some of these islands; and it is possible

* *Transactions, &c.*, 1877-9.

—perhaps probable—that Chinese and Japanese junks have been cast upon the islands, and that in this way the original population may have been mixed.

My own opinion respecting these people generally is that the bulk of their ancestors came from the Philippine Islands or some other portion of the Indian Archipelago at a period much later than that at which the migration of the brown Polynesians across the South Pacific took place. But they have become mixed with people who have reached those islands from other localities, viz.: from China and Japan, from the brown Polynesian area, and possibly also from the Melanesian region. I have formed this opinion not only from the traditions of the people, and from their physical characteristics, but also from a few things in their languages. We need, however, much more information respecting these Micronesians before we can speak with confidence respecting their exact relations to these other races.

I have mentioned China and Japan among the probable sources whence people have reached Micronesia. It would not be a very remarkable thing if Chinese junks were blown out of their course and taken across to these islands. Indeed, it would be one of the most natural things to expect. But it may be thought extremely unlikely that any Japanese vessels should be taken there. There are, however, several well-authenticated instances of Japanese junks, with living people in them, having been found in various parts of the North Pacific, and to me there appears to be no reason why some may not have reached Micronesia.

In 1814 the British brig "Forester" was cruising off Santa Barbara in California (about lat. 30 N.) when a Japanese junk was met with. It contained three living men, and there were fourteen dead bodies on board. The three who were rescued recovered from their weakness. In December, 1832, a Japanese junk arrived at the Hawaiian Islands. The crew had originally consisted of nine persons. Of these four were living. They declared they had been 10 or 11 months at sea. Their junk was bound from one of the southern islands of Japan to Yeddo, laden with fish, when they encountered a typhoon which drove them out of their course. Their water-vessels contained a supply for only three weeks. When that was exhausted they had only the water they could catch when it rained to supply their wants.

These junks crossed the Pacific much farther north than the Micronesian Islands. But if it be possible for them to cross there, it is also possible for them to go farther south; and vessels running south-east would be very likely to reach one or

other of these islands, which stretch a great distance across the Pacific.

The only island outside the Micronesian area occupied by this people is Nui, in the Ellice group. The people living there say they came from the Gilbert Islands because they were wearied with the wars constantly raging there: that doubtless means that they were defeated and escaped from their conquerors. Going south, they reached Nui and settled there. Their language is the same as that spoken in the Gilbert Islands, with a few verbal differences. At the present time these people form a very flourishing community, much in advance of any of the Gilbert Islanders. I visited their island some years ago and was greatly pleased with what I saw there. All the people are nominal Christians and are advancing in civilisation. Statistics taken during twelve years show the population to be increasing. Under the instruction of their Christian teacher, who is a native of Samoa, they are being very rapidly elevated in every respect.

I intended to discuss the probable future of the Polynesian people. But having already made this paper longer than I at first thought would be needful, I must reserve my remarks on this subject for another occasion. Suffice it to say that I have great hope of the continuance of many of these people; and I believe I could show that, under the influence of a Christian civilisation, they may be raised to occupy a respectable and useful position among the peoples of the world.

DISCUSSION.

Professor FLOWER pointed out how completely Mr. Whitmee's observations on the two principal races of the islands of the Pacific and their distribution accorded with those of Captain Cook, who exactly a hundred years ago first systematically investigated their ethnology. In the words of Forster, who accompanied Cook as naturalist, on his second voyage, "We observed two great varieties of people in the South Seas—the one more fair, well-limbed, athletic, of fine size, of a kind, benevolent temper; the other, blacker, the hair just beginning to become woolly and crisp, the body more slender and low, and their temper, if possible, more brisk, but somewhat mistrustful. The first race inhabits Otaheite and the Society Isles, the Marquesas, the Friendly Isles, Easter Isle, and New Zealand; whilst the second peoples New Caledonia, Tanna, and the New Hebrides, especially Mallicollo."

Anatomical observations upon crania, though still insufficient from want of material, perfectly corroborate this view. Skulls of the two races when pure present the greatest possible contrast; the first or true Polynesians are brachycephalic, straight-faced, narrow-

nosed, and with round orbits; those of the second race (Melane-
sians) are dolichocephalic, prognathous, broad-nosed, and with low
orbits. Undoubtedly there is a great mixture of the two races in
many of the islands—a mixture which is taking place at a con-
stantly accelerating speed. All information as to their exact limits
where pure, and to the proportions in which they are blended in
other regions, is of great value, and no time should be lost in
collecting it. Professor Flower inquired how far Mr. Whitmee's
observations confirmed the views of Hale and Quatrefages on the
migrations of the Polynesians?

On PALÆOLITHIC IMPLEMENTS from the VALLEY of the LEA.

By WORTHINGTON G. SMITH, F.L.S., &c.

THE first discovered implement of Palæolithic age belonging to
the gravels of north-east London was found by Mr. G. H.
Gaviller in gravel dug on Hackney Downs in 1866. It is an
ovate implement about four inches long. Later on, in 1868,
Mr. Norman Evans picked up a knife-like or scraper-like
instrument, nearly five inches long, in a gravel pit near
Highbury New Park; both these objects are described and
illustrated by Mr. Evans in his book on the "Ancient Stone
Implements of Great Britain," pp. 523, 525. Still later a rude
pointed implement was found in Dunlace Road, Lower Clapton,
and presented to the Geological Museum in Jermyn Street by
Mr. Ancombe.

The Highbury and Lower Clapton positions are two miles
apart from west to east, and the Hackney Downs position is
exactly intermediate. I am not aware of the finding of any
other implements than the three just mentioned in north-east
London, till my discoveries made during the present year. My
work has been principally confined to Shacklewell (half a mile
north-west of Hackney Downs) and Upper and Lower Clapton;
both the latter positions being in close proximity with the River
Lea. Bones and tusks of large size have at different times been
dug up in various neighbouring localities, once near De Beauvoir
Square, a mile south of Hackney Downs.

I will take the Shacklewell position first, where the surface
is 85 feet above the sea level, the pits being near the north-east
corner of West Hackney Church, and less than 300 yards west of
the Old Hackney Brook, which is now obliterated. The gravels of
this place have been completely described by Messrs. Prestwich
and Evans, so that I need only say in reference to them that
the gravel and sand vary greatly in thickness and disposition