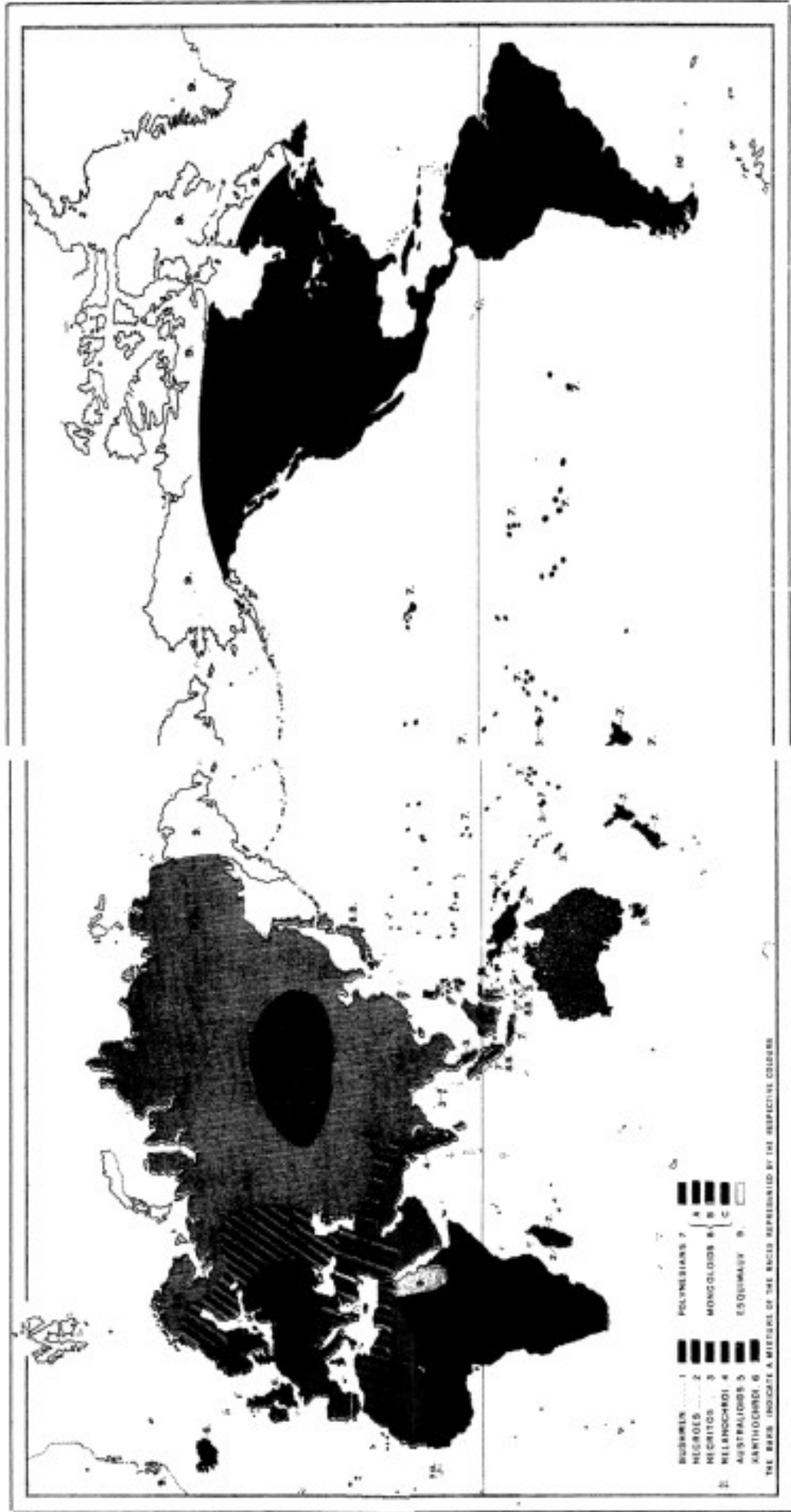


MAP OF THE DISTRIBUTION OF THE PRINCIPAL MODIFICATIONS OF MAN : OF MANKIND ACCORDING TO PROF. HUXLEY.



The PRESIDENT made the following communication :—

XXXVI.—*On the GEOGRAPHICAL DISTRIBUTION of the CHIEF MODIFICATIONS of MANKIND.* By PROFESSOR T. H. HUXLEY, LL.D., F.R.S.

THE centre of the accompanying map of the world (See *Frontispiece*) nearly corresponds with that of the Indo-Pacific Ocean, which is bounded on three sides by the great land-masses of the Old and New Worlds. Disjointed fragments of land separate the Indian from the Pacific division of the great ocean, and stretch like so many stepping-stones between the Malay peninsula and Australia, the latter, semicontinental mass of land lying almost halfway between Africa and South America. The indigenous population of Australia presents one of the best marked of all the types, or principal forms, of mankind; and I shall describe the characters of this modification first, under the head of

I. THE AUSTRALIOID TYPE (No. 5 tint on the Map).

The males of this type are commonly of fair stature, with well-developed torso and arms, but relatively and absolutely slender legs. The colour of the skin is some shade of chocolate-brown; and the eyes are very dark brown, or black. The hair is usually raven-black, fine and silky in texture; and it is never woolly, but usually wavy and tolerably long. The beard is sometimes well developed, as is the hair upon the body and the eyebrows. The Australians are invariably dolichocephalic, the cranial index rarely exceeding 75 or 76, and often not amounting to more than 71 or 72. The brow-ridges are strong and prominent, though the frontal sinuses are in general very small or absent. The *norma occipitalis* is usually sharply pentagonal. The nose is broad rather than flat; the jaws are heavy, and the lips remarkably coarse and flexible. There is usually strongly marked alveolar prognathism. The teeth are large, and the fangs usually stronger and more distinctly marked than in other forms of mankind. The outlet of the male pelvis is remarkably narrow.

These characters are common to all the inhabitants of Australia proper (excluding Tasmania); and the only notable differences I have observed are that, in some Australians, the calvaria is high and wall-sided, while in others it is remarkably depressed. No skulls are, in general, so easily recognizable as fair examples of those of the Australians, though those of their nearest neighbours, the inhabitants of the Negrito Islands, are frequently hardly distinguishable from them.

The only people out of Australia who present the chief characteristics of the Australians in a well-marked form are the so-

called hill-tribes who inhabit the interior of the Dekhan, in Hindostan. An ordinary Coolie, such as may be seen among the crew of any recently returned East-Indiaman, if he were stripped to the skin, would pass muster very well for an Australian, though he is ordinarily less coarse in skull and jaw.

In the accompanying map, therefore, the deep blue colour (No. 5) is given not only to Australia, but to the interior of the Dekhan. A lighter tint of the same colour occupies the area inhabited by the ancient Egyptians and their modern descendants. For, although the Egyptian has been much modified by civilization and probably by admixture, he still retains the dark skin, the black, silky, wavy hair, the long skull, the fleshy lips, and broadish alæ of the nose which we know distinguished his remote ancestors, and which cause both him and them to approach the Australian and the "Dasyu" more nearly than they do any other form of mankind.

It is a most remarkable circumstance that no trace of the Australioid type has been found in any of the islands of the Malay archipelago, all the dark-skinned people who occur in some of these islands and in the Andamans being Negritos. On the other hand, no Negroid type is known to occur between the Andamans and East Africa, the darker elements of the Southern Arabian population being Australioid rather than Negroid.

II. THE NEGROID TYPE (Nos. 1, 2, 3).

As the chief representative of the Australioid type is the Australian of Australia, so is that of the Negroid type the Negro of South Africa (including Madagascar) between the Sahara and what may be roughly called the region of the Cape.

The stature of the Negro is, on the average, fair, and the body and limbs are well made. The skin varies in colour, through various shades of brown to what is commonly called black; and the eyes are brown or black. The hair is usually black, and always short and crisp or woolly: the beard and body-hair commonly scanty. Negroes are almost invariably dolichocephalic. I have not met with more than one or two skulls with an index of 80, while indexes of 73, or less, are not uncommon. The brow-ridges are rarely prominent, the forehead retaining a good deal of the feminine, or child-like, character. The *norma occipitalis* is often pentagonal, but not so strongly as in the Australioid skull. Prognathism is general; and the nasal bones are depressed: hence the nose is flat as well as broad. The lips are coarse and projecting.

The Bushmen of the Cape area (No. 1) must be regarded as a special and peculiar modification of the Negroid type. They are

remarkable for their low stature, the males rarely much exceeding four feet in height, while the females may fall considerably below that stature. Both sexes are remarkably well made. The skin is of a yellowish-brown colour, the eyes and hair black, and the latter woolly. They are all dolichocephalic; and the brim of the female pelvis has its antero-posterior diameter longer than the transverse, in a larger proportion of cases than in other forms of mankind. One of the most curious peculiarities of the people is the tendency to the accumulation of fat on the buttocks, and the wonderful development of the nymphæ in the females. The Hottentots seem to be the result of crossing between the Bushmen and ordinary Negroes.

In the Andaman Islands, in the Peninsula of Malacca, in the Philippines, in the islands which stretch from Wallace's line eastward and southward, nearly parallel with the east coast of Australia, to New Caledonia, and, finally, in Tasmania, men with dark skins and woolly hair occur who constitute a special modification of the Negroid type—the Negritos (No. 3). Only the Andamans have presented skulls approaching or exceeding an index of 80; all the other Negritos, the crania of which have been examined, are dolichocephalic. But the skulls of the eastern and southern Negritos present, as I have mentioned, a remarkable approximation to the Australioid type, and differ notably from the ordinary African Negroes in the great brow-ridges and the pentagonal *norma occipitalis*. The best-known and the most typical of these eastern Negritos are the inhabitants of Tasmania and of New Caledonia, and those of the islands of Torres Straits and of New Guinea. In the outlying islands to the eastward, especially in the Feejees, the Negritos have certainly undergone considerable intermixture with the Polynesians; and it seems probable that a similar crossing with Malays may have occurred in New Guinea.

III. THE XANTHOCHROIC TYPE (No. 6).

A third extremely well-defined type of mankind is exhibited by the greater part of the population of Central Europe. These are the Xanthochroi, or fair whites. They are of tall stature and have the skin almost colourless, and so delicate that the blood really shows through it. The eyes are blue or grey; the hair light, ranging from straw-colour to red or chestnut; the beard and body-hair abundant. The skull presents all varieties of forms, from extreme dolichocephaly to extreme brachycephaly. On the south and west this type comes into contact and mixes with the "Melanochroi," or "dark whites," while on the north and east it becomes mingled with the people of Mongoloid type,

who bound it on that side. Its extreme north-west limit is Iceland; its south-west limit the Canary Islands; its south border lies in Africa north of the Sahara, in Syria, and Northern Arabia; its south-eastern limit is Hindostan; while in a north-easterly direction traces of it have been observed as far eastward as the Yenisei. I have not ventured, however, to draw the red bars which indicate the existence of this type, alongside of another, so far to the east, as one really knows very little about the people of Central Asia.

IV. THE MONGOLOID TYPE (No. 8).

An enormous area, which lies mainly to the east of a line drawn from Lapland to Siam, is peopled, for the most part, by men who are short and squat, with the skin of a yellow-brown colour; the eyes and hair black, and the latter straight, coarse, and scanty on the body and face, but long on the scalp. They are strongly brachycephalic, the skull being usually devoid of prominent brow-ridges, while the nose is flat and small, and the eyes are oblique. The Malays proper, and, I suspect, the indigenuous people of the Philippines who are not Negritos, fall under the same general definition.

On the other hand, the Chinese and Japanese, in whom the skin, hair, nose, and eyes are like those of the Mongoloids just mentioned, are dolichocephalic; and the Ainos, also dolichocephalic, are distinguished for the extraordinary development of hair on their faces and bodies.

The Dyaks of the interior of Borneo are likewise dolichocephalic; and these people, and the Battaks of Sumatra, the so-called Alfurus of Celebes, and the inhabitants of other easternmost islands of "Indonesia," seem to me to pass insensibly, through the people of the Pelew Islands, and of the Caroline and Ladrone archipelagos, into the Polynesians, in whom the straightness of the hair and the obliquity of the eyes disappear, while, in the majority, the skull is long and often approximates to the Australioid type. I have never met with a brachycephalic Maori, though I have examined a large number of New-Zealand skulls. Brachycephaly, however, occurs in the Sandwich Islands, and apparently in the Samoan Islands*

As linguistic evidence leaves no doubt that Polynesia has been peopled from the west, and therefore, possibly, from Indonesia, it becomes an interesting problem how far the Polynesians may be the product of a cross between the Dyak-Malay and the Negrito elements of the population of that region. I am inclined to think that the differences which have been over and

* The Easter-Island skulls I have seen are long.

over again noted between the elements of the population in Polynesia, and notably in New Zealand, may be due to such a mixed origin of the Polynesians.

To the north-east, the Mongoloid population of Asia comes into contact with the Tchuktchi, who are said to be physically identical with the Esquimaux and Greenlanders of North America. These people combine, with the skin and hair of the Asiatic Mongoloids, extremely long skulls. The Mongoloid habit of skin and hair is also visible in the whole population of the two Americas; but they are predominantly dolichocephalic, the Patagonians and the ancient mound-builders alone presenting unmistakable brachycephaly.

I have been much perplexed to know in what way to give a graphic representation of these facts. It seems quite impossible to draw any line of distinction, based on physical characters, among the so-called "American Indians;" and therefore a uniform colour is given to the area which they occupy (8 c). I have given the Esquimaux area a different colour (9) rather for the purpose of reminding the student of the very peculiar character of the type, when well marked, than because I conceive it to be sharply distinguished from that of the North-American Indians. This colour (9) has by misadventure been extended over the Aleutian Islands and Kamschatka, which should rather in all probability receive the same hue as 8 b. The strongly coloured area (8 a), finally, is intended to indicate roughly the distribution of the Mongols proper. It is a most singular circumstance that there is the same sort of contrast, combined with certain definite points of resemblance, between a Mongol and an Iroquois that there is between a Malay and a New-Zealander; and in the huge Americo-Asiatic area, as in the only less vast space occupied by the Polynesian islands, it is possible to find every gradation between the extreme terms.

The four great groups of mankind, the areas of which have now been defined, occupy the whole world, with the exception of western and southern Europe, cis-Saharal Africa, Asia Minor, Syria, Arabia, Persia, and Hindostan. In these regions are found, more or less mixed with Xanthochroi and Mongoloids, and extending to a greater or less distance into the conterminous Xanthochroic, Mongoloid, Negroid, and Australioid areas, the men whom I have termed MELANOCHROI, or dark whites. Under its best form this type is exhibited by many Irishmen, Welshmen, and Bretons, by Spaniards, South Italians, Greeks, Armenians, Arabs, and high-caste Brahmans. A man of this group may, in point of physical beauty and intellectual energy, be the equal of the best of the Xanthochroi: but he presents a great contrast, in other respects, to the latter type; for the skin,

though clear and transparent, is of a more or less brown hue, deepening to olive, the hair, fine and wavy, is black, and the eyes are of a like hue. The average stature, however, is ordinarily lower than in the Xanthochroi type, and the make of the frame is usually lighter. In Hindostan the Melanochroi pass by innumerable gradations into the Australioid type of the Dekhan, while in Europe they shade off by endless varieties of intermixture into the Xanthochroi.

I have great doubts if the Melanochroi are to be regarded as a primitive modification of mankind in the sense in which that term applies to the Australioids, Negroids, Mongoloids, and Xanthochroi. On the contrary, I am much disposed to think that the *Melanochroi* are the result of an intermixture between the Xanthochroi and the Australioids. It is to the Xanthochroi and Melanochroi, taken together, that the absurd denomination of "Caucasian" is usually applied.

Perhaps the most interesting fact which comes into prominence in the map of the distribution of these great groups of mankind, is the contrast between the broad and general uniformity which prevails over such an enormous area, exhibiting every diversity of climate and physical conditions, as that of the two Americas, and the singular variety crowded into a relatively small area elsewhere, as, for example, in the Pacific. Here, if we follow one and the same zone of latitude for a few thousand miles of longitude from east to west, we pass from Polynesian Mongoloids, in the Navigators, or the Friendly Islands, to Negritos in the New Hebrides, and to Australioids on the mainland of Australia.

A fact of this kind, taken alone, is sufficient to show that causes of quite a different character from mere changes of physical conditions, operating upon the same stock, must have been required to give rise to the phenomena presented by the present distribution of mankind.

DISCUSSION.

Mr. GEORGE CAMPBELL observed that it was difficult, on the spur of the moment, to approach so great a subject treated by so great an authority. With respect to the supposed connexion between the aborigines of India and the Australians, he would only at present say that all the information which he had collected respecting those primitive Indian races tended in the direction which Professor Huxley had pointed out. To what the Professor had said he might add that there was good reason to suppose that certain traces of lingual affinities between the Dravidian aborigines and the Australians existed. But these Indian aborigines presented a field for much further inquiry. There were great materials for further investigation, and great facilities now-a-days for obtaining more. He trusted that, when Professor Huxley's words went forth to the world, many zealous and capable

men on the spot would be prompted to follow out the line of investigation which had been indicated, and that a year or two hence we should be in a position to carry the matter much further.

On one other branch of Professor Huxley's great subject he would like with much diffidence and deference to say a few words. The Professor seemed to have put our old friends the Aryans and Semites into his crucible and melted them away completely, so that not a trace of them was left to us; but out of the material he had composed two other races whom he called Xanthochroi and Melanochroi. Now, doubtless, if he had gone further into the details the Professor might have been able to tell us of other features distinguishing those two races; but, so far as we had yet heard, the distinction was founded on the one single feature of colour alone. Nothing seemed to be as yet so little certain as the source and permanency of human colour. He was not going to try to set the Aryans and Semites on their legs again; in fact he very much doubted whether, looking to palpable physical features, it could be said that there is any such race as the Semites; but taking Aryans and Semites together under the old name of Caucasians, he would ask to be allowed to go to other features besides colour, and also for the present to omit language, and to suggest another classification of the Caucasian races with reference to the most palpable features. It seemed to him that certain Caucasian countries presented to the eye what he believed to be the extreme and perfect form of the Caucasian race, the handsome high-featured people best known in this country as the Jewish type. All who were acquainted with the north of India would testify to the great predominance of a very handsome type of this kind among the Afghans and peoples of the hills to the north-west of India; it was the uniform remark that these people were very *Jewish-looking*. These people were Aryans. It was the same type which prevailed among the Aryan Persians, and again among the Jews, Syrians, and Northern Arabians, commonly called Semites. But the Central and Southern Arabians, in fact the mass of the Arab people, were by no means of this type. Palgrave constantly contrasts the short, swarthy, small-featured Arabs with the tall, handsome, hook-nosed Persians. He (Mr. Campbell) believed then he might assert as a fact that the high-nosed, handsome-featured people occupied a continuous area from the Syrian shores of the Mediterranean through Northern Arabia and Persia to the sources of the Indus, including the ranges of the Caucasus, supposed to be the primitive seat of the Aryan family. These people are certainly, throughout this area, remarkably like one another; in fact in physical features they are quite undistinguishable. Notwithstanding the difference in language between the Syrians and proper Aryans, his theory was that this uniform-featured people of the area which he had described were the purest and truest type of the Caucasian variety of man. He imagined that when that breed was first developed it was in the form of a Jewish-looking man. He then supposed, as Professor Huxley seemed to suppose, that these true Caucasians descending towards the south and mixing with Australioids became

Hindoos, that in Southern Arabia mixing with some other race they became those Arabs whom Palgrave describes as more like Southern Hindoos than Northern Arabs. Again, descending to the north-west into Europe, he believed that our Caucasian fathers intermixed with some primitive races of cockle-eaters and such like, who (through our great-great-grandmothers) shortened our noses, detracted from our beauty, and rendered us the mixed and varied race that we now are. In fact, instead of distinguishing the peoples of Europe and Western Asia into Xanthochroi and Melanochroi, he would distinguish them into perfect and imperfect Caucasians. On the subject of skulls, while they might be one of the marks to distinguish very primitive races, Professor Huxley's statements had pretty well demolished them as a safe test of more advanced races, since he had shown that races otherwise very similar had very wide diversities of skull, *e. g.* the Tartars and Chinese among the Mongols—and, above all, the European peoples, any assembly of whom presented every form of skull. With respect to the predominance of round skulls in certain parts of Europe, he would suggest that possibly those were the parts which had been most mixed with round-headed Tartars or Mongols. In the part indicated by Professor Huxley there had been the great Hungarian invasions; and generally it might be said that the Mongol races had spread westwards in later times, and come more into contact with the Slavonians and later tribes of Europe, while our Norman and Saxon progenitors, being an earlier wave of immigration, had not so much mixed with Asiatic Tartars.

MR. ALFRED R. WALLACE said that, as a small contribution to the subject, he would venture to point out that there were certain mental characteristics which in two at least of the primary groups were as well marked and as constant as the physical characters by which Professor Huxley had defined them. The great Mongoloid group, for instance, was distinguished by a general gravity of demeanour and concealment of the emotions, by deliberation of speech, and the absence of violent gesticulation, by the rarity of laughter, and by plaintive and melancholy songs. The tribes composing it were preeminently apathetic and reserved; and this character was exhibited to a high degree in the North-American Indian, and in all the Malay races, and to a somewhat less extent over the whole of the enormous area occupied by the Mongoloid type. Strongly contrasted with these were the Negroid group, whose characteristics were vivacity and excitability, strong exhibitions of feeling, loud and rapid speech, boisterous laughter, violent gesticulations, and rude, noisy music. They were preeminently impetuous and demonstrative; and this feature was seen fully developed both in the African Negro and in the widely removed Papuan of New Guinea. This striking correspondence of mental with physical characters strongly supported the view that these two at least were among the best-marked primary divisions of our race.

The only point on which he ventured to differ from the classification of Professor Huxley was as to the position to be assigned to the brown Polynesians. These, as typically represented by the Tahitians,

appeared to him to be much more nearly related to the Papuans than to the Malays, and should therefore be classed as Negroid instead of Mongoloid. In all important physical characters, except colour, they agreed with the former; and the general testimony of travellers, from Cook downwards, showed that their mental characteristics were entirely Negroid, as evinced by their vivacity, demonstrativeness, and laughter. At the same time there was no doubt a large infusion of Malay blood; but that this was for the most part a comparatively recent event was shown by the language, which retained a number of Malay terms almost unchanged. He maintained therefore that the typical Polynesians were fundamentally Negroid with a considerable Mongoloid intermixture, and not originally Mongoloid with a Negroid intermixture.

Mr. LUKE BURKE maintained that differences in the colour of the skin and hair, and in the relative proportions of the skull, were only of trivial value, and should not be taken as a basis in defining the primary divisions of the human race.

SPECIAL MEETING, JUNE 21st, 1870.

[*Held in the Theatre of the Royal United Service Institution, Whitehall Yard, by the permission of the Council of the Institution.*]

PROFESSOR HUXLEY, LL.D., F.R.S., *President, in the Chair.*

The following paper was read by the author:—

XXXVII. *On the THREATENED DESTRUCTION of the BRITISH EARTHWORKS near DORCHESTER, OXFORDSHIRE.* By Col. A. LANE FOX, Hon. Sec. Ethn. Soc.

ALTHOUGH the subject is not in any way connected with the paper that is to be read this evening (Mr. Forbes's paper on the Aymarás), yet, knowing the interest which is taken by this Society in the preservation of our prehistoric antiquities, I venture to think that a few words in reference to the Dykes at Dorchester in Oxfordshire may not be without interest to the Meeting, owing to the report which has appeared in the papers since our last meeting, relative to the threatened destruction of these works by the owner of the property on which they stand.

The ancient fortifications of this place consist of two distinct works—one on the south and the other on the north bank of the Thames (see *Map*, Pl. XXVI. fig. 1). The former (on the south side) occupies the more eastern of two conspicuous hills, each of which is topped by a clump of trees, known as the Wittenham Clumps. This work is about a quarter of a mile to the south of the river-bank, and three miles to the north-east of Didcot Station on the Great Western Railway. The intrench-