

species of black, red, brown, yellow, and white men, and these again separated into the distinctive races of each species of man. Not only was this true of the men, but the same things happened there, in the development of the apes, monkeys, and other so-called quadrumanous animals, which in this continent, and its subsequent group of islands, came into existence, and spread from there before all the dry land connections with the other continent were broken up, thus passing into Asia, Africa, and elsewhere, so that their offsprings are still to be found most abundantly in the lands around the shores of the Indian Ocean to the present time. It is a strange coincidence that while all naturalists and ethnologists place the primitive home of men in former lands in what is now the Indian Ocean, that this should also be the situation in which the Hebrew scriptures have located the garden of Eden, in which was placed the earliest home of the first man, and it is still more extraordinary that this original home is described as being there sunk beneath the waters, and destroyed by a deluge; and that the Babylonian and Assyrian inscriptions should also there locate the lands, which were destroyed by their deluge, and where the *antedeluvians dwelt*, when the hero of their Epic went to consult with them concerning this deluge and other matters. Was this only coincidence, or tradition, or how else came this knowledge down to them? All the necessary conditions were present in this former land in what is now the Indian Ocean, in the Miocene times, to especially fit it for the development of men, as well as the other primates, apes, monkeys, etc., by the abundant heat, moisture, and vegetation, fruit, roots, nuts, seeds, all then easily obtained in this land since submerged. In the Eocene time they may there have sprung from a common ancestor, as we know so many other groups of animals did, and then each branching off and there developing upon distinct lines, the apes to live in trees, and to progress on their four limbs, and the men to walk erect on the ground, on their two limbs only, using their hands and arms to gather fruits, roots, and seeds, or to battle with their enemies. By the Miocene time the men were quite distinct from all other animals, and had learned how to make fires and chip flint implements, which no other animal had then, or ever since, learned how to do, or to imitate men doing although the examples were before them so frequently. The continuous heat and the abundant vegetation yielding many fruits, roots, and grains, and much other vegetable food, such as those primitive men chiefly lived upon, continued through the long continuance of the Miocene age, and enabled them to wander from their original home of development into the lands of Asia, Europe, and Africa, where they appeared and left their remains in the strata of that age. Then as the climates got colder, and the vegetable food less abundant, they became hunters and fishers, eating the flesh of other land animals or catching fish to save themselves from starving, and keeping up fires to keep themselves warm and to cook their food. It is not to be expected that the men of the primitive or earliest type will ever be discovered, for they are buried beneath the Indian Ocean, but in the countries surrounding the Indian Ocean are still to be found several kinds of the primary men who wandered from their original home, some of these are yet to be found in the Andaman Islands, others are the Negritos of Equatorial Africa and the Bushmen of the Cape Colony, also the Negritos of India, the Phillipines, and Melanesia, also the peculiar man found in Java by Dr. Duboise, and the Papuans of India, Indonesia, and Melanesia. The original white race as it wandered off into Europe is represented by the relics of the Canstadt race found in various European countries.

The red race, after wandering into Africa and making its way into the north of that continent, in the first hot time (inter-glacial) of the pleistocene, wandered from North Africa into Europe, and its relics are found around the Mediterranean and in Italy, Spain, France, and Great Britain. The yellow men wandered into South Africa as the Bushmen, and into East Asia as the Mon and other peoples there, and the present forest tribes of the Malay Peninsula, and other primary men in those Asian regions.

So low in type were the skulls and other bones of the primary men that have been found in Java, Europe, and elsewhere, that even

anatomists have hesitated whether not to place them altogether outside of mankind, but fuller knowledge has shown that they were men, although very rude and humble specimens.

The great land where mankind came into existence, lying chiefly within the tropics on both sides of the equator, neither clothing, fires, nor anything but vegetable food would be required as long as they remained in this continually hot country, and therefore hunting and fishing would not have to be carried on there, nor would the building of shelters or any fixed abode be necessary, therefore their lives would be very much like what the old traditions have made them to be in the so-called golden age, and thus from their original parentage they would be able to rapidly develop, until they had with abundant food, become like the primary men we have recovered the relics of, after they had wandered, during the warmer times of the Miocene Age, into European and other lands.

## FOLK-LORE OF THE AUSTRALIAN ABORIGINES.

By R. H. MATHEWS, L.S.

### I.—Arrival of the Thurral Tribe in Australia.\*

In the remote past all the animals that are now in Australia lived in another land beyond the sea. They were at that time human creatures, and resolved to leave that country in a canoe, and come to the hunting-grounds in which they are at present. The whale was much larger than any of the rest, and had a canoe of great dimensions; but he would not lend it to any of his fellows, who had small canoes, which were unfit for use far from the land. The other people, therefore, watched, in the hope that an opportunity might present itself of the whale leaving his boat, so that they could get it, and start away on their journey; but he always kept a strict guard over it.

The most intimate friend of the whale was the starfish, and he conspired with the other people to take the attention of the whale away from his canoe, and so give them a chance to steal it, and start away across the ocean. So, one day, the starfish said to the whale, "You have a great many lice in your head; let me catch them and kill them for you." The whale, who had been very much pestered with the parasites, readily agreed to his friend's kind offer, and tied up his canoe alongside a rock, on which they then went and sat down. The starfish immediately gave the signal to some of his co-conspirators, who soon assembled in readiness to go quietly into the canoe as soon as the whale's attention was taken off it.

The starfish then commenced his work of removing the vermin from the whale's head, which he held in his lap, while the other people all got quickly into the canoe and rowed off. Every now and again the whale would say, "Is my canoe all right?" The starfish, who had provided himself with a piece of bark to have ready by his side, answered, "Yes, this is it which I am tapping with my hand," at the same time hitting the bark, which gave the same sound as the bark of the canoe. He then resumed his occupation, scratching vigorously about the whale's ears, so that he could not hear the splashing of the oars in the water. The cleaning of the whale's head and the assurances as to safety of the canoe went on with much garrulity on

\*At the request of some of our readers, we have reprinted the first portion of this narrative.—ED. SCIENCE.



the part of the starfish, until the people had rowed off a considerable distance from the shore, and were nearly out of sight. Then the patience of the whale becoming exhausted, he insisted upon having a look at his canoe to make quite sure that everything was right. When he discovered that it was gone, and saw all the people rowing away in it as fast as they could go, he became very angry, and vented his fury upon the starfish, whom he beat unmercifully, and tore him almost to pieces. Jumping into the water, the whale then swam away after his canoe, and the starfish, mutilated as he was, rolled off the rock on which they had been sitting into the water, and lay on the sand at the bottom till he recovered. It was this terrible attack of the whale which gave the starfish his present ragged and torn appearance; and his forced seclusion on the sand under the water gave him the habit of keeping near the bottom always afterwards.

The whale pursued the fugitives, and in his fury spouted the water into the air through a wound in the head received during his fight with the starfish, a practice which he has retained ever since. When the people in the canoe saw him coming after them, the weaker ones were very much afraid, and said, "He is gaining upon us, and will surely overtake us, and drown us every one." But the native bear, who was in charge of the oars, said, "Look at my strong arm (a). I am able to pull the canoe fast enough to make good our escape!" and he demonstrated his prowess by making additional efforts to move more rapidly through the water.

This voyage lasted several days and nights, until, at length, land was sighted on ahead, and a straight line was made for it. On getting alongside the shore, all the people landed from the canoe, sat down to rest themselves. But the native companion, who has always been a great fellow for dancing and jumping about, danced upon the bottom of the canoe until he made a hole in it with his feet, after which he himself got out of it, and shoved it a little way from the shore, where it settled down in the water, and became the small island now known as Gan-man-gang, near the entrance of Lake Illawarra into the ocean. When the whale arrived shortly afterwards and saw his canoe sunk close to the shore, he turned back along the coast, where he and his descendants have remained ever since.

## 2.—Destruction of Mullion, the Eaglehawk.

Long ago an eaglehawk, Mullion, had his nest in a very large, high tree, which grew on the Barwon River, near Girra (b). The eaglehawk used to go out and catch a blackfellow, and carry him away to his nest to feed the young eaglets and their mother. This was continued for a long time, and the blacks were unable to help themselves, because the tree was of enormous girth at the base, and reached almost to the sky. It

was composed of several different trees all amalgamated into one. There was first a gum tree, a box tree next, then a coolabah, then a belar, and lastly a pine tree, making a united height of five trees, one in continuation of the other—all of them being of unusual and marvellous size. In the top of the pine tree was the large nest, or eyry, of the eaglehawk. If a blackfellow went out hunting alone, Mullion would swoop down upon him, and carry him away in his talons to his nest. The bones were thrown out, and were scattered about for some distance around the base of the tree. Two of the head men, Murriwunda and Koomba (c), who were very clever doctors, went to the foot of the tree and held a consultation as to the best thing to be done to prevent the further ravages of Mullion. They determined to try and climb up the tree, carrying a piece of burning stick with them, and set the nest on fire. Koomba was the first to make the attempt. He climbed up a long way, until he was unable to go any further, so he came down again, and fell prostrate to the ground from exhaustion. After he revived, he said to Murriwunda, "I went up a great distance, but could not even see the top from where I was. You are lighter than I am, and may be able to reach the nest." Murriwunda then took the burning bark, and fastened it on the top of his head, and started away up the tree, going round and round the trunk in spiral fashion as he ascended. He got to the top of the gum tree, then went on to the box tree, next the coolaba, then the belar, until he at length reached the pine tree. This climbing occupied most of the afternoon, and Koomba saw small pieces of bark from the several kinds of trees falling to the ground, by which he knew that his friend was going right up to the nest.

When Murriwunda reached the top of the pine tree, he took the firebrand, which he had carried in his forehead-band, and secretly inserted it in the underside of the eaglehawk's nest, which was of great dimensions. He told the fire not to burn the nest till he got down again to the ground. The work of descending the tree was very tiresome, but was accomplished in much less time than the ascent. On reaching the base Murriwunda was so completely exhausted that he lay down upon the ground to rest. Having in a short time recovered his strength, he and Koomba started away towards their own camp, but he did not tell his comrade the result of his climbing. When they got away some distance they caught an iguana, which they cooked and ate, and sat for a while to rest themselves beside a small waterhole. Murriwunda then said, "I could not reach Mullion's nest; I don't know what we can do to get rid of his incursions." Then he gave the usual laugh which blackfellows always indulge in when they say anything which is the opposite of the truth. Shortly he added, "You watch towards the sky in the direction of the tree." Koomba turned his eyes in the direction indicated, and as the shades of evening were by this

(a.) The native bear has very large and strong forelegs, in proportion to the rest of his body.

(b.) The Rev. W. Ridley briefly mentions this legend in his "Kamilaroi and Other Australian Languages," 1875, p. 136.

(c.) The Wiradjuri men at Trangie on the Macquarie River told me that in their version of this story the names of the two clever men were Tinban and Alloo.



time beginning to fall, he could see a bright blaze in the distance like a large star, which kept increasing in size with great rapidity. Both of them were then very glad, and commenced to sing some of their tribal incantations and beat their boomerangs together.

As before stated, Murriwunda had told the fire not to burn until he had time to get out of danger. It then commenced to smoulder, and the young eaglets who were in the nest feeling the unusual heat under them, began to move restlessly under their mother's wings. They said they would feel cooler if they came out and sat on the edge of the nest. When they got out they commenced playing, and shoved against one of their father's spears, which was sticking into the side of the nest. He was sitting on a branch close by, and seeing his spear bent over, went and caught hold of it, and feeling angry with his children for disturbing it, he said, "I'll stick the spear so firmly into the nest that you can't move it," and so saying, he caught hold of the spear, and gave it a strong shove downwards. The moment he did this the fire which was smouldering underneath burst through the opening made by the spear in a torrent of flame, and burnt them all to death. The fire continued to burn downwards, consuming the branches and the barrel of the tree all the way to the ground, and continued along the roots in all directions. Some of the large roots, which were only a few feet beneath the grass, were completely consumed, leaving a cavity all along their course, into which the top soil fell, forming sinuous depressions in the surface of the ground like small watercourses. Some of these hollows can be traced as far as Kuddi, several miles from Girra, where the great tree stood (d).

(d) The natives point out what they believe to be the site of this mystic tree. There is a natural depression in the ground, with a few small watercourses running into it from different directions, in which water flows in time of flood. The central hole is supposed to be where the tree stood, and the channels represent the roots which were burnt.

### THE UNSTABLE EARTH AND ITS SINKINGS OR SUBMERCENCIES.

MANY persons who should know better speak of the earth as firm, immovable, steadfast, solid, &c. Others write of the unchangeable bounds of the seas; the continents ever the same, and the oceans ever unaltered, &c. Now, all this is not true and reliable, but false and nonsense. It will be easy to show that great areas of land rise above the surface of the waters for thousands of feet, and then sink again as much below. Some of these alterations of levels are still going on; others have happened in recent centuries, and still more of them in the times of paleolithic men. We will take from well-known works the following facts, so as to support the above assertions, and then give those best known so as to confirm them:—

"In the pliocene era the climate was warm. *The unbroken Continent of Europe extended beyond Great Britain and Ireland and the Faroe Isles, and these were only separated by a narrow channel of the North Sea from the West Coast of Norway.* These were lands of great rivers, forests, and a moist climate. The hippopotamus swarmed in these waters; the southern elephant and the big-nosed rhinoceros roamed in these great forests and along these great rivers which flowed where the English Channel now is, carrying off the waters from Southern England, Ireland, Normandy, Brittany, and other

countries. *Then a subsidence of these lands began slowly and admitted the encroachments of the sea which at length covered the whole of East and West Flanders and extending to the Straits of Dover.* Then began a gradual rising of all these lands again, and the pleistocene or quaternary period was ushered in, and a colder climate commenced and increased until the first glacial age was established. As the cold increased the animals and plants which could not migrate were killed by the advancing snow and ice fields, which continued to increase until the whole of Europe, Asia, and America, up to the parallel of 40deg. N. lat., was covered with glaciers and ice sheets. Those animals which could escape from the North, had wandered through the passing centuries, driven by the increasing ice, until they were living between 40deg. N. and the Equator, and with them were the sabre-toothed lion, several kinds of bears and deers, which had come from North-East Asia, Africa, &c. At the beginning of this first ice age it was accompanied by torrents of rain, which washed off and bore away at Renaix, in Flanders, and in other places, *five hundred feet in thickness of the pliocene and miocene deposits.* Then came the glacial sheet which was 3,000 feet high over Ireland, Scotland, and North Britain, and the European Continent as far south as the Alps, all of which continents were of arctic severity. Then, after centuries, it passed away and a warm period slowly came into being *and great areas of land had again sunk under the sea.* Then the cold again began to increase and the ice to advance from the North *and the land again rose above the sea* covered with glaciers. Again, this was followed by another hot age, and as the ice retreated the animals and plants again advanced towards the North, and at this time there were several distinct races of men living near the banks of the Meuse and the Seine. *The land again began to sink and so continued, until Scotland, Wales, and Derbyshire prove by the sea deposits on their hills that they were then from 2,300 to 1,200 feet below the present levels.* Then, again came another period of great cold *and of earth elevation,* when England, Scotland and Ireland were again joined by dry land to the European continent. Then followed the next hot period, and the plants and animals had again time to spread themselves over the ice denuded lands, but then by that time the hippopotamus and the small-nosed rhinoceros had disappeared from Europe. Then, succeeding cold and hot periods followed each other until the pleistocene or quaternary period had passed away. The human races that had struggled to live through this period by retreating before the advancing ice, and following it back to the North, were as follows:—1st. The oldest in Europe was the Constatd or Neanderthal race, with a cephalic index of 70 to 72. The second was the Mediterranean or Berber, with cephalic index of 71. Next came the Cro-Magnon, 73.76 index. Next, two races whose remains were found near Furfooz, with indices of 79.31 and 81.39. Fifthly, the Grenelle, Brachycephalic people, 83.33 index. Sixthly, the La Truchere race, with index of 84.32. These last four resembled Lapps, Ainos, Finns, and Mongols. The Mediterranean race of the red species of man were in neolithic times found as Berbers, Libyans in North Africa, and as Iberians, etc., in the Pyrenees and to the plains of Brittany.

The above will show how frequently the surface of the earth even in Great Britain, has moved up and down for thousands of feet, above the sea and below it. In America the land has done the same the Mississippi Valley rising and falling. In the gulf of Cutch an enormous area of land in recent times covered with buildings and population sunk below the Arabian sea, so that a naval officer standing upon a tower projecting above the sea, could in no direction see dry land. Natural History and Palaeontology and Hydrographic surveying proves, that a great land once existed where the Indian ocean now rolls above it. Plato and others tell of the great lands in the Atlantic, which sunk beneath that ocean, and marine surveying by the officers of Great Britain, and of U.S. America show exactly the situation of, and depth at, which these lost Atlantes are lying submerged. Australia was formerly connected by dry land to New Guinea, New Zealand, and to Tasmania, but the sinking has now disconnected them and left the Barrier islands and reefs along the