

# "SAHARA OF AUSTRALIA"

## Lonely, Wind-swept Desert of Eyre Basin VANISHED RIVER

A vivid picture of lonely, barren wastes of the far north-east is given in the following article, by Professor T. Harvey Johnston, a member of the recent University anthropological expedition. It is, he says, the rainless sandhill country of the Lake Eyre region is essentially the same as that of parts of the Sudan and the Sahara.

By PROFESSOR T. HARVEY JOHNSTON

The region traversed by the recent University anthropological expedition is one which has loomed large in the history of Australia. It includes the eastern part of the Eyre basin and the lower portions of the Cooper and Diamantina. These two vast basins, on the east of the extensive river systems, comparable in former times with the present Murray-Darling, in fact, the days, the rainless Cretaceous sea left some huge shallow lakes into which flowed large rivers draining the greater part of western Queensland as well as Central Australia, south of the MacDonnell Ranges and east of the Musgraves and Evered. The Cooper and Diamantina, with their tributaries, the Georgina and Mulligan, and its continuations, the Warburton and Kallakoona, crossed the Finke, then a mighty river, the Albert, the Neales, and others or less

important. Climatic conditions became more and more arid, vegetation retreated or diminished and the rivers, dry, rocky and bed became more and more desiccated. As now there is the lonely wind-swept desert embracing an enormous area in the interior of the continent, and in areas of inland drainage in the world. It is only on very rare occasions that there are heavy courses, or some of them actually empty into Lake Eyre and its satellite claypans and dry lakes. This region is stated to have an average annual rainfall of about one inch, but this does not mean that about that quantity of rain can be expected each year. It means merely that on the average the amount received during the rare, sudden, heavy downpours, and the long droughts in some years' duration, we get such a figure.

**Remnants of Ancient Flora**  
Associated with the dryness, and caused by its action on certain types of rocks, are the "table tops"—remnants of an ancient flora covered by a thick, intensely hard, flinty layer, a foot or more in thickness. It is this which, with terminal boulders, is known as the siliceous gibbers and sand. The former disintegrate into small and smaller sizes, becoming more and more, and eventually shifting sand, under the action of winds and the diurnal and seasonal extremes of temperature. In the process they act as cutting implements under wind influence, polishing the stones and further abrading them until there is left a more stable, more or less level or gently undulating gibber country. The final stage is the formation of the remaining stones, and typical sandhill country is the result—in other words, Sturt's Desert, the Simpson Desert, and the MacDonnell.

At its west, this shifting sandhill country is essential to the Sudan and Sahara, and Egypt, as well as Central Asia. Professor Gregory was not far wrong when he said that the "Bible" of the "New World of Australia" for this Lake Eyre region. A detailed account of the physiography of this remarkable arid area will be given by other members of the expedition.

**Tragic Associations**  
This territory has played an important part in the earlier history of our State. It is associated with the names of Eyre, Burke and Wills, Howitt, McKinlay, and the others. It has been the scene of many tragedies. What tragedy links it with the ill-fated Burke and Wills Expedition? The water hole, Pandie, where it had to be found near Pandie, where we camped. We have been told that the ill-fated Burke and Wills Expedition after rains, or after a rain, had been after rain—the result of heavy rains in Queensland. The

muddy water may arrive in such quantity as to fill these ancient watercourses. The rivers and sand-filled overflows flow channelled, and the water covers the wide flood plain perhaps for 20 to 30 miles, depositing a fine alluvium on the level tracts, and by lines of yellow sandhills. The deeper parts of the rivers remain as waterholes for years, and play a very important part in the life of the natives, and of course are of value in connection with the pastoral industry.

Some of the heavy flocks, with the resultant abundance of fodder and water for a year or two afterwards, have been mainly responsible for the multiple building up of interest in the locality, many of them drifting back to ruin. There is a plenty of evidence of this to be seen at intervals along the track. Some of the ruins were associated with wells or with native stock, as indicated by the position of post-houses in the days when the mail service required stages for the changing of horses, and the accommodation for travellers and for a staff of assistants. Some of these places gained a reputation for wildness reminding one of conditions in the tropics, and have gone by. In one locality we passed a remnant of a building representing the site of a station, where the prize money for a single meeting would total £200. Now there is not an inhabitant within very many miles.

Further on, we saw the ruins of the solid brick structures representing all the splendour of the natives living of Kopperamanna, Etadinna, and so forth, erected by the Lutherans in connection with the position of the Diert and other tribes. It was as one of these that Reuther worked. His priceless manuscript is amongst the papers of the natives living to the north-east of Lake Eyre. It is to be hoped that this work will be published in the natives living in the companion volume (when suitably edited and illustrated) for Spencer & Gillen's monumental work on the neighboring lands, and the natives living to the north-west of Lake Eyre and including the eastern MacDonnell Ranges.

**Lonely Sentinels**  
These mission buildings were strongly built, and most of the walls are still standing, but the roofs, doors, and windows are all gone. Some of them left all of it probably having been utilised by passing drovers to give them some warmth during the cold winter months. Some of the cattle camps. There is a huge washout on one of the properties. One wonders if it is possible to dig out enough food to grow wool in a quantity such as a shed of such dimensions could house. All the animals that are left are nearly all dead, as it is 16 years since the Cooper came down in flood and supplied these lonely buildings.

These rocky buildings, erected methodically and strongly and neatly, are the sentinels of a great mission farm, now stand as lonely sentinels of the past—monuments of hopelessness, but with reminders of the relentless battle between Nature in her continuous arid moods and our primitive race in a wild environment. These stations once rounded to bustle and activity and were the centres of a pastoral and industrial community. Now there is silence, broken only by the harsh cawing of ravens and crows, the howl of the wind, or the creaking of blinding duststorm, or by the noise made by the hoofs of mobs of cattle and by their rattling wheels as they pass. It is as if the animals move along their way

southward, from water to water, journeying to Marree, there to be entrained for the Adelaide Abattoirs.

**Overland Cattle Trail**  
If it were not for the overland cattle trail—ending in the slaughterhouse at Marree—there would be little justification for attempts to colonise the region. There are a few pastoral holdings, but the only stock, and especially horses, are raised, but the edible vegetation is so sparse that huge areas are necessary for the maintenance of the stock essential for economic working of the properties. If it were not for the artesian bore, all of the water for the cattle would be placed at intervals of 25 to 30 miles apart along the route, man and beast would find travel almost impossible in that region.

Some of the bores, leased out by the Government, have a family of five or six, and are presently located beside them to take care of them, and to collect toll for each animal watered there. In the most of cases, the water flows upwards at a rate of about 12 to 15 miles a day, obtaining a drink every second day. The men are on the road for ten weeks on the road as they travel from the cattle station in the vicinity of Cloncurry, to the artesian bores. At the north of the sandhill country, to some of these bores the traveller is able to obtain accommodation, and for himself, fodder for horses and equipment and consequently such depots must necessarily carry a varied collection of articles. The drovers are their own men, and consequently the individual wages may be few and simple, a considerable amount of sundry articles is usually on hand to supply the needs of man, horse, camel and motor. In addition to all, petrol, and spare parts of cars, there is equipment for camel and pack-train transport; tools, foodstuffs, chiefly of the tinned and non-perishable type, flour, tea, sugar, bread made to order, and stock of various kinds. Goods are taken up from the south at heavy freight cost by train to Marree, and then onwards to these lonely outposts by truck or by camel train. No wonder petrol, chaff, and groceries can be purchased only at prices which stagger the city dweller, who is used to petrol pumps and competitive grocery stores.

Another Prize—Miss Miriam Hyde, our brilliant young Elder scholar overseas, must have recovered entirely from her recent breakdown, for her father (Mr. G. H. Hyde) received a cable message this week to say that he had won yet another prize—the Ernest Farrar Prize. The cable said:—"This year the prize for an annual volume of about 27 was awarded by the Hon. C. D. Farrar, Mrs. Ernest Farrar and her parents in memory of Second-Lieutenant Ernest Farrar, a distinguished scholar of the Royal College of Music, killed in France, September 16, 1918."

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## CRIG OF NATIVE RACE

### What Blood Tests Have Revealed

### INTERESTING RESULTS

One of the most important objects of University anthropological expeditions to Central Australia since 1926 has been to obtain blood-grouping tests of the aborigines. In the following article Professor J. B. Cleland, a member of the expedition, has been in the progress that has been made in the work and the inferences which they allow to be drawn regarding the probable origin of the native race.

By PROFESSOR J. B. CLELAND

On all the expeditions organised by the University to study the native blood-grouping has been an important item of the work done. This was first started in 1926 and 1927, and since then has been continued at Alice Springs. The results of this early work seemed to indicate that the Central Australian natives had peculiarities in blood constitution that were unique amongst the races of man.

Human beings are divided into four blood-groups, which are known as A, B, AB and O, respectively, according to whether they possess one or two of the characteristic A or B, or neither of these (O). The presence or absence of the characteristic A or B is determined by taking a suitable serum belonging to Group A, and a similar serum from Group B, and mixing with red cells to be tested, cause these red cells to run together into little red grains or clumps, leaving the supernatant liquid clear. In a white community such as ours, about 40 per cent. of the individuals belong to Group A, somewhat about the same to Group O, and the small balance will be divided between Groups B and AB. In various expeditions (including the last), 725 pure-blooded Australian natives and 275 of Group O. It will be seen that not a single example of Group B, or of Group AB, was obtained from the natives and Southern Australian groups which constitute the majority of the natives in ourselves. When we pass to the Asiatic races, it is a different matter, and it becomes quite a prominent feature in the blood.

"Pure Race Than Us?"

It would thus almost seem as though the Australian native was a pure race, and that the admixture of other races was very small. The opinion has been put forward that the factor A developed in human beings perhaps in Europe, and that the factor B was first introduced in Eastern Asia; and that the occurrence of B in Western peoples, and of A in the natives of the Orient, was the result of admixture of races. It is possible that the Australian native had separated off from the Western peoples, and that the factor A had been taken place; or it may be that the Australian native is the result of a cross-lood between the factor A and the factor B, and that amongst this small company of individuals the factor B was present in both his or his ascendants; in both his parents, or if the factor B is absent in both parents, the progeny cannot possibly have such a factor in the making of the blood. This important point may, of course, be of value in determining disputed paternity.

During the first expedition in 1926 a man who was known to be a half-caste was deliberately blood-grouped, and the results were found to be as follows: he was found to have the factor B. During the recent expedition, in the course of the routine tests, an example of a native of the factor B was obtained, and there was obviously no mistake. Here, if the subject was pure-blood, was a very unusual case, as the factor B had done nearly 700 tests altogether on pure-blood natives, and had never before met with an example of B. Enquiries were made of the doctor, and at this time the individual was partly stripped for the purpose of measurements, when it was found that the doctor had suggested that he was a half-caste. Mr. Tidale, on making his routine enquiries, unsearched the information that he had actually the case. We had to test one or two other half-castes during the expedition, and of the four, one was found to belong to Group O, one to Group A, and two to Group B. An intermixture with Chinese and Anglo-Saxons, which is probably likely to introduce the factor B. Several of these half-castes were tested so as not to hurt their feelings. Every native of the factor B was given a routine set of investigations, including measurements, stabbing the job of the factor B was not a simple job, and if any item was omitted the individual concerned would call attention to it, and feel very much alarmed. It is, of course, to be expected that half-castes, of course, did not recognize that our interest in them was less than that of the natives, and the information we sought being in great part only such as the pure-bloods could supply.

### No Difficulty in Making Tests

As on previous occasions, not the slightest difficulty was experienced in obtaining blood, due to the confidence the natives had in Mr. Reece, and their reliance on his statement that we were there in their own interests. Even little children sat on a kerosene case and held the job of the ear thoroughly washed for the first time in their lives, and sterilised with methylated spirit; the jobs of the ear, which is an area with very little sensitivity, was then lightly stabbed and the blood drawn up in a suitable receptacle, care being taken by the operator that the alcohol of his coat did not come in contact with the activities which are invariably going on amongst the hairs of the head. The red cells thus obtained are then tested against European sera belonging to blood groups A and B, and thus the blood-grouping of the native obtained. This result is controlled by allowing a further sample of aboriginal blood to be tested in the same way, to show how this behavior of the red cells of two members of the expedition, who belonged respectively to Groups A and B. In many cases, two tests of tests have been carried out between the blood sera obtained from the native and the whole blood, to see whether there were any unusual factors present in them which did not occur in Europeans.

Anthropologists in various parts of the world have been much interested in the results, which are only paralleled by the North American Indians, and amongst whom it is thought that both the factor A and the factor B are present in about 50 per cent. of the population.