A recent discovery (April, 1911) of an aboriginal burial-ground at Swanport, on the River Murray – a small settlement about 3 ½ miles below Murray Bridge – is of more than usual interest, not only on account of the large number of interments that have taken place within a very limited area, but also, and more particularly, from the fact that they all occurred before the arrival of the first colonists in South Australia. Thus there can be no question that these remains represent the pure strain of aboriginals, whose methods of interment, moreover, have been uninfluenced by the practices of civilization. Whether the cause of what, at first sight, appears to be an unusual mortality is attributable in any way to such influence, direct or remote, will be part of the object of the present inquiry.

The Crown Lands Department of South Australia, having of recent years initiated a policy of reclaiming, for agricultural purposes, various swamp lands bordering on, and at times overflowed by, the River Murray, began a work of this kind in April 1911, on a submerged area lying immediately to the north of Swanport, on the right bank of the river. As an essential part of this project it became necessary to remove soil from the adjacent dry ground to provide material for an embankment designed to exclude the river waters from the swamp.

This soil was, in part, taken from a small Government reserve abutting both on the river and on the southern end of the swamp itself (plate ix.).

Opposite to the water frontage of the reserve, at a distance of 60 or 70 yards from the bank of the river, which here takes a trend in an east-south-east direction, an isolated granite mass shows above the surface of the water at ordinary levels. This for many years was a bare, exposed rock, but a willow truncheon planted some years ago in a crevice has now grown into a tree which effectively conceals it from view. The navigation of the channel lies in the wider portion of the stream between this rock and the left bank. Within the area of the reserve, close to the water’s edge and right opposite to the rock in the river, a group of several other large masses of the same material emerges from the ground and, I understand, that a ridge of granite connects the latter with the former, rendering the intervening channel too shallow for navigation except for small boats. Along the adjacent river margin, and for some distance lower down, willows have been planted at the water’s edge and have grown luxuriantly. About 200 yards below the reserve is a small island between which and the right bank is a narrow channel. This island, like the adjacent bank, is thickly overgrown with closely planted willows.
Both the isolated rock in the river and the neighbouring group on the banks are portions of a long line of granite outcrop running, approximately, from west-north-west to east-south-east. Other portions of the same outcrop can be seen on the farther side of the river and in the opposite direction on solid ground beyond the swamp that is being reclaimed. The line of outcrop extends much farther in either direction.

Within a few feet of the river the natural surface of the ground rises, with a gentle incline of about 1 in 10, away from, and in a direction at right angles to, the river bank, and, as one stands on the back to the latter looking up this incline, the ground surface shows a similar gentle slope to the right and left. Thus the section parallel to the river and across the incline, which was that actually made in the removal of soil, shows a gentle and even convexity (plates ii., iii., and iv.)

In the former days a group of the indigenous Cypress Pine (Callitris Sp.) grew upon the slope, but they have now all disappeared from that immediate locality, though a few trees still remain in the neighbourhood.

Recourse was had to this bank to provide material for embankment, and the removal began at its lowest part within a few feet of the stream, and, of course, as the cutting advanced away from the river the deeper the face of the exposed section.

The geological characters of this section will be described directly.

Early in April, 1911, and soon after this work had begun, there appeared in the daily Press notices of skeletons, presumably those of aboriginals, were being exposed in the course of the removal of the earth, and, on the 5th of the month, intimation was received from Mr. A. [6]

White, Assistant Superintendent of the Works, to the effect that bones were being met with in considerable numbers. He advised also that as some of them were being thoughtlessly or wilfully damaged it would be desirable that steps should be taken to secure them. Accordingly Mr. F.R. Zietz was instructed to go to the locality on the following morning to act on behalf of the Museum.

On reaching Swanport he found a large number of bones had already been exposed, most of them having been promiscuously thrown into a hole, while others had been shovelled with the soil into trucks and tipped on to the embankment. Mr. Zietz, who was present on the spot during part of April 6 and during the whole of April 7 and 8, with the assistance of Mr. White and of Messrs. Bott, sen. And jun., rescued as many as possible of these bones, but owing to the indiscriminate way in which they had been treated, the individual identity of all the skeletons so handled was unfortunately lost. During Mr. Zietz’s stay, however, other skeletons were exposed as the cutting advanced, but never in such numbers as before his arrival; but these, however, he was able to secure more or less completely.

I visited the locality myself for the first time on April 14, when the cutting had advanced about 25 yards from its beginning. The length of the exposed section was then about 50 yards and its height, at the centre where it was highest, about 6 ft., and, from what has been said of the contour of the ground, it will be understood that the height of the section gradually diminished to vanishing point towards either end.

The face of the section showed the following features :- The top layer was the undisturbed, rather sandy, surface soil, about 8 in. to 1 ft. thick where it was intact, though most of this had been
previously scraped off by the scoop. Below this was a dark, in parts almost black, layer about 18 in. thick. Its basis was sand, with which were intermixed immense quantities of mussel (Unio) shells, broken into small fragments, with some unbroken valves, ashes, and fragments of limestone blackened by fire. A few hammer-stones were also found in this layer (plate v.)

This extensive, dark layer covering the whole section evidently formed a great accumulation of kitchen-midden material, indicating long usage as a camping ground.

Underlying the above was a layer of reddish sand from 2 to 3 ft. thick (plate v.), descending into which were occasionally seen extensions of the material of the kitchen-midden layer. At the bottom of such leads bones were usually found, thus showing that such had been buried after the accumulation of some, at least, of the kitchen-midden material, or in other words, that the site was used as a camping ground subsequent to these burials. In fact, those who were engaged in the work told me that the presence of such a lead might always be taken as evidence that bones would be found underneath. In other parts, generally speaking, the line of separation between the kitchen-midden layer and the subjacent red sand was fairly distinct.

Below the red sand was a horizontal band of travertine limestone (plate iv.) varying in thickness from 6 in. to 1 ft., which was of moderately hard consistency towards the northern end of the section, but much softer towards the opposite extremity. Underlying the travertine was a layer of rubbly limestone, the full depth of which was not exposed by the section.

On the occasion of my second visit to the locality on May 4, during which I had the advantage of the company of Mr. Howchin, cutting the cutting had advanced a few yards further into the rising ground, and its vertical face had consequently increased in height, the increase being due to the exposure of a greater thickness of the sand and limestone rubble beneath the travertine. The super-jacent layers were unaltered in their depth or relations. Bones were still being met with but sparsely, and most of them were in a friable condition.

GEOLOGY (Figure, P 7).

For the following description of the site from the geological point of view and for the sketch of the section, here given, I am indebted to Mr. Howchin, F.G.S.

The ground in which the remains were found forms a river terrace on the right bank, having an average height of 10 ft. above high-water mark.

The bed-rock of the locality consists of the well-known Swanport granite, which is quarried nearby for building purposes. There are large irregular outcrops of this granite fronting the river, at the base of the bank which has yielded the aboriginal skeletons.

Resting on the granite is a layer of calciferous sandstone of Eocene Age (Murray Bridge freestone), having a thickness of 2 or 3 ft.
This calcareous bed has given rise to layer of imperfectly consolidated travertine limestone about 2 ft. in thickness, which at one time formed the surface of the ground. The upper portion of the bed forms an irregular crust, and the lower part is marly and sandy rubble.

At a later stage, before the site was used as an aboriginal burying-ground, the limestone became covered with blown sand, forming a capping about 4 ft. in thickness on the limestone. This deposit of sand is divided into two very distinct portions – the lower 2 ft. 6 in. consists of clean red sand with small pockets and thin layers of Unio shells, while the upper 1 ft. 6 in. is a dark-coloured sand mixed with black pellets of travertine limestone and a large quantity of Unio shells broken into small fragments.

The red colour, present in the lower portions of the sand – bed, is a characteristic feature of deposits of this nature, in all arid climates, when left for a long time undisturbed. The colour is caused by the presence of iron oxide carried down by the rain-water from the surface, as a mineral residue from the decomposition of vegetable organisms. When exposed to the weather and blown by the wind the sand loses this colour by friction and bleaching.

The upper part of the sand-bed has taken its dark colour from the fires made by aboriginals on the spot. The charcoal and ashes from the fires, as well as a certain amount of animal refuse, became mixed with the superficial sand, imparting a dark colour to it. The considerable thickness of this deposit, besides the large quantities of broken Unio shells in the kitchen-midden, gives evidence of a prolonged occupation of the site.

The presence of man is indicated contemporaneously with the building up of the lower portions of the sandhill by the pockets and thin layers of Unio shells referred to above, but only as an occasional visitor. It seems probable that the utilization of this ground as a burying-place was long anterior to its becoming a regular camping-ground, as it is not likely that the aboriginals would bury their dead where they lighted their camp fires. There seems to be three successive periods indicated by the section:– (a) An early evidence of man’s presence before the period of many burials, when he occasionally visited the spot and ate his meals; (b) a period of crowded burials in which the sandhill became disturbed by digging graves; (c) a comparatively late period, when probably the remembrance of the burials had passed from the mind of the local tribe, as shown by the selection of this site for a camp, which must have been frequently visited.

**POSITION AND ATTITUDE OF THE SKELETONS.**

Unfortunately that part of the ground in which the skeletons occurred most numerously and in closest juxtaposition had been disturbed by the workmen before the arrival of Mr. Zietz on the field. Bones and earth had been picked down together in a confused mass, and in consequence, so far as these skeletons were concerned, both the identity of the individuals and the opportunity of noting the positions and attitudes were lost. As already stated, Mr. Zietz rescued as many as possible of the bones that had been previously removed under such unfavourable circumstances, and he was able, also, to take care that those subsequently exposed were removed with proper precaution. The skeletons, however, never again occurred in such remarkable profusion as before his arrival.
Fortunately, Mr. J.T.S. Bott, a resident in the locality for many years, was present from the time of the first exposure of the bones, and for what I have to say under the present heading I am chiefly indebted to his information or to the observations of Mr. Zietz, who, coming later on the scene, made best use of his opportunities. The great bulk of the bones were found at the level of the bottom of the red sand, lying just above the travertine band, and the majority were concentrated within an area of about 50 X 30 ft., situated a little south of the centre of the rise. In the case, however, of one skeleton that was removed during my visit – and there were a few others of which the same may be said – the hole made for their reception had penetrated the travertine, and the bones lay at this level or even partly below the latter. At this place the travertine was very soft and presented little obstacle to penetration, while a little farther to the north it was of harder consistence. Such a position, however, was quite exceptional, and the greatest bulk of the bones lay, as stated, just above, or on, the band of travertine, which was about 4 ft. below the surface of the ground. Mr. Zietz further noted that the bones found at the lower part of the slope were in a much better state of preservation than those found further away from the river, which might indicate a later date of interment in the former position, but he also remarked that bones found resting on travertine were liable to be decomposed, owing probably to the continued action of the water, to the drainage of which this more impervious stratum presented an obstacle.

As regards attitude, the majority of the skeletons were found in the trussed position in which many Australian tribes bury their dead – that is to say, the body was in a sitting position with knees drawn up to the chest, the elbows bent so that the hands are brought up to the face, and the head bent forward over the flexed knees. Sometimes in this trussed position the body lay on one side. In some instances, as was the case with the skeleton exposed during my first visit, the body had apparently been thrown into the grave anyhow; none were seen lying stretched out straight in a supine position. In only a few instances two, but not more than two, skeletons lay in one hole, and in some of these cases they were those of an adult and child. Even where the bodies lay in closest juxtaposition they had still apparently been buried separately.

Not infrequently the skull and other bones were found covered with a tenaciously adherent black encrustation, as if from prolonged exposure to smoke, and in some cases, and in some cases the surface of the bones has been charred, or even, the whole of the thickness destroyed. In several instances, as indeed in the skeleton that I saw removed, the cranium – usually so conspicuous an object in an exhumation – could not be found after the most careful search, though in this particular case a lower jaw of remarkable size was present. Once, the cranium being absent, two lower jaws were found accompanying the rest of the skeleton. Very frequently the small bones of the foot and hand were absent, and the remaining bones did not occupy their proper relative position, and occasionally the long bones of the extremities were found broken.

Many of the conditions and deficiencies just recorded can be accounted for by burial custom of the Narrinyeri tribe, to which the natives of this locality belonged. It was their practice, among other elaborate procedures, to place the bodies of their dead upon a platform and subject them to a prolonged process of smoking over a slow fire. This will explain the blackening occasional charring of the bone.

Mr. Talpin, in his account of the Narrinyeri in “Native Tribes of South Australia” (1, 20), describes the smoking process, but says nothing of the subsequent burial. In his “Folklore”, etc.
(2,37), he mentions that at the conclusion of the long smoking and drying process the body “was put on a stage in a tree and after a time buried.” How long it was left on this tree platform before burial Mr. Taplin does not say, but I know that is was sometimes left in this position for years—so long, in fact, that it would seem as if no further disposal of it had been intended. This, however, may have been because of the discontinuance of their proper native customs due to the influence of the whites.

In the course of this long exposure, as I have repeatedly seen, the small and easily detached bones, such as those of the feet and hands and even, the lower jaw, were apt to fall to the ground or be removed by carrion-eating birds, and, if afterwards the bones were buried, it can be easily understood how some of them should be missing and others relatively displaced.

The not infrequent absence of the cranium, which, from its size, is not likely to have disappeared in this fashion may not unreasonably be accounted for by the practice among the Narrinyeri, as indeed among some other Australian tribes, of utilizing skulls as vessels for carrying water. (2)

Of the bones found broken it is possible that the more fragile ones might have been fractured by rough usage such as dropping them, or the body, into a deep hole; but this would scarcely account for the fracture of such strong bones as those of the thigh, which, were not unfrequently found broken into two or more pieces. Some of these fractures (1) may have occurred during life and have formed the injury, or a part of the injuries, or a part of the injuries, causing death, for it is evident, as shown by a considerable number of the bones, that broken limbs were not uncommon. Some of these fractures had become united so satisfactorily that the resulting union would have done credit to a skilled surgeon. In other cases the union, though very strong had taken place in bad position. There was nothing in the character of the fractures of the exhumed bones to suggest that they had been for the purpose of obtaining the marrow. (3)

Associated with the human remains that they collected, after the promiscuous removal of those first met with, were bones of the dingo, including a perfect skull, and odd bones of the kangaroo, opossum, bustard, pelican, turtle, and fish (3), and closer examination of the remains may possibly reveal the presence of bones of other animals. Whether these had been actually buried with the human remains or, belonging properly to the kitchen-midden layer, had accidentally become mixed with the latter cannot be stated with certainty. A few articles of human manufacture were also found in like association with the skeletons, viz., some hammer and anvil stones, one small quartzite implement which may have been used as an engraving or boring tool, two awls made of
kangaroo fibulae, a few stone chips and a few blackened stones that had been used for cooking. No emu remains have been so far identified, and not a single fragment of iron, glass, pottery, or other white man’s material was seen.

Resting immediately over a few – but only very few – of the skeletons were large oval of a composite material of the consistency of soft and friable mortar, and composed of sand, white earth, small fragments of limestone, burnt clay, broken Unio valves, and, occasionally, pieces of charcoal. The largest of these slabs was 1 ft. 9 in. X 1 ft. 3 in., and 5 in. thick at the thickest part; another was 1 ft. 3 in. X 12 in. X 3 in. Fragments of others were found, but as to their significance in relation to the interments I am unable to speak. They may, however, come into the same category as the “window caps”, actual or conventional, that were placed in the graves by the natives higher up the river, or the “Kopai” stones similarly used in the Darling River District.

(3) It is curious that so few remains of fish were found when we remember that it is a favourite food of the natives and that the adjacent river abounds with them.

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THE NARRINYERI TRIBE. (4)

As this tribe has been mentioned in connection with the remains found at Swanport and will be further noticed it may be convenient to give some particulars as to its geographical distribution.

According to Mr. Taplin (1, 1 and 2, 34) this tribe inhabited a large, triangular tract of country bounded on two sides by lines drawn from a point 20 miles above Wellington to Cape Jervis and Kingston respectively, and on the third side by the sea. Having an immense frontage to the fresh waters of the river and lakes and to the salt waters of the ocean and the Coorong, they were exceptionally well favoured in the matter of food supplies. As Swanport is, in a direct line, about 15 miles above Wellington it stands nearly at the northern apex of the Narrinyeri territory. The tribe was divided into eighteen local divisions or clans, each having its own geographical distribution, and, collectively, they formed a powerful body whose numbers, in 1840, Mr. Taplin reckoned at 3,000 individuals, though he gives no grounds on which his estimate is based. The many camping- and burial-grounds that are found all along the shores of the lakes and river are, however, quite indicative of a numerous population.

On the north, east, and south their neighbours were the Moorundie, Adelaide, and Tatiara tribes respectively.

The Narrinyerri have some historical interest, as it was members of this tribe who were concerned with the death of Captain Barker at the Murray Mouth in 1831, and with the murder of the shipwrecked passengers and crew of the “Maria” at Lacepede Bay in 1840. It is the remnants of this once numerous tribe, now chiefly half-castes, that form the population at Point MacLeay Mission Station, or that lead a nomadic existence along the lake and river shores. A few more have a permanent camp at Brinkley below Wellington, on the left bank of the Murray just before it enters the lake.
Though the word Narrinyeri is, according to general custom used as a tribal designation it has not this significance, as Mr. Taplin explained (1, 1). According to this writer the term properly signifies “belonging to men”, meaning that this people considered themselves par excellence as men contradistinction to other natives whom the Narrinyeri considered as inferior beings.

An old blackwoman, to whom further reference will be made, implied that the term signified the native race generally, and she spoke of the subdivisions of the Narrinyeri as separate tribes, but she could hardly be considered as an authority on ethnological terminology.

PREVIOUS HISTORY OF SWANPORT.

Mr. Bott, whose name has been mentioned in connection with these remains, has been a resident of Swanport for the last 30 years. His predecessor lived there one year, and before him, again, was a resident of twenty years’ standing. This takes us back for a period of fifty-one years or so to 1860. During the whole of that time the fact that the place had been used as a burial-ground was completely unknown to any residents, and, certainly, no interment had taken place during those years, though, since the memory of the white man, it had been constantly used as a favourite camping-ground. (5)

If, therefore, some of the interments took place after the great accumulation of the kitchen-midden material - and that this happened in some cases at least is shown by the leads of this layer into the sudjacent sand – it betokens a very ancient occupancy of the site.

MONTEITH.

Before passing on to the consideration of the question whether the presence of so many skeletons in one limited area is due to a special cause, I may mention that, on the occasion of my second visit to Swanport, I was able to examine a spot about 1 ½ miles lower down the river, on the left bank, where I was informed that many skeletons had been exposed by the drifting sand some years ago.

The site was at the top of a high sandy bluff which, pushing itself right to the river bank, separates the reclaimed flat, formerly known as Monteith’s swamp, from an un-named and un-reclaimed swamp to the north of it. From the facts of its exposed situation, the sandy nature of the ground, and the thriftless was in which it has been denuded of vegetation 5 or 6 ft. of superficial soil has been blown away to accumulate elsewhere as drifts over a considerable area, leaving exposed the underlying surface of indurated sand. On this floor, and over a considerable area, occur very numerous and, sometimes, very large heaps of broken Unio shells and many blackened cooking-stones, indicating long occupancy by the natives. The age of these cooking-stones was indicated by the fact that their surface had become

For some years a ferry-boat service was maintained at Swanport (formerly known as Thompson’s Crossing), and in the course of the removal of the bank it was found that the lower end of a buried portion of one of the wooden slabs used in the construction of the ferryman’s house had come into close contact with a skeleton. The house was, in fact, built right upon the burial site, and some of its chimney-stones still remain upon the spot (see plate vi.). The native name for the spot was Kongorong (31, 123).
almost polished by the long action of the driven sand. No human bones, however, were visible, though a hammer-and an anvil-stone and a few quartzite flakes and chips were found.

Mr. Bott told me that when, some years ago, he saw the recently exposed skeletons they were lying in a row side by side.

THE ALLEGED PANDEMIC.

From what has been said the actual manner of disposal of the bodies at Swanport affords no conclusive evidence of the incidence of some sudden and great mortality among the natives, of such a catastrophic character as would cause them to substitute a more hurried method of burial for their more ordinary mode of interment, and although the facts that two bodies were sometimes found buried together, and that others seemed to have been thrown in without care, may be taken to show that sometimes all may not have been quite in order, there was, at least, no sign of such promiscuous and collective burial as occurred in the “plague pits” of the mediaeval epidemics of Europe. The number of bodies represented by the remains, apart from the fact that it does not constitute a record (3, l., 217), is not in itself conclusive, for the accumulation in this one place may be explained equally well on the assumption that it may have been a burying-ground for a very long period of years; and, moreover, if some great mortality did actually occur in the district there is no evidence to show that Swanport, more than any other of the numerous burying-grounds along the river, was made a special place of sepulture for the victims of the supposed malady. In any case Swanport was, no doubt, only one of many which would have been put to a similar use in a great emergency.

Nevertheless there is such an accumulation of evidence that not only the Narrinyeri, but many other of the native tribes were at some time, and possibly on more than one occasion, smitten with an epidemic disease of great virulence and destructiveness that it may be of some interest to present the available information bearing on the subject. In the inquiry it will be necessary to investigate the origin and nature of the disease and the course taken by it in its spread throughout, as we shall see, a large part of Australia.

Unfortunately for such an inquiry, the living persons who are old enough to have spoken with natives who were themselves alive at the time of the occurrence of the supposed epidemic are few in number. Most of the old pioneers are dead, and so are most of the aboriginals who, though they might not be old enough to have lived at the time of its supposed occurrence, might yet have heard of it from eye-witnesses.

Still, as I shall show, some evidence of this kind is fortunately yet available. Mr. Bott, whose long residence of thirty years at Swanport has been mentioned, informs me that in his early days three old blacks were living in the district, viz., Billy Poole, Jimmy Giles, and Jimmy Duck. Their names are still well remembered by old colonists. Billy Poole was the eldest of the three and was, at the time of which Mr. Bott speaks – that is, about 1880 or 1881 – probably seventy years of age. Assuming this estimate of age to be correct Billy Poole’s personal recollections might have gone back to 1815. These old blacks, Mr. Bott told me, often spoke to him about a great sickness which, when they were quite young, fell upon the natives along the river, causing their deaths in such numbers and with such rapidity that the living were at their wits’ end to know how to dispose of the dead
quickly enough; and they also described how in the sickness they came out all over spots and quickly died. The rapid onset of decomposition after death, and the unavailing efforts to find an effective remedy among the plants of the scrub. (6)

This evidence does not enable us to fix the time of the occurrence, except to the extent that it was certainly before the coming of the white man as a permanent settler.

There is still alive and in full possession of all her faculties an unusually intelligent old woman of the Narrinyeri tribe, well known to all the inhabitants of the Lake Districts, who has often told me an unavering story of her first sight of the white people. It occurred to me that she might have some recollection of the great sickness, and accordingly I sought an interview with her at Wellington West on May 21. She had been camping at Poltalloch Station, on the south side of Lake Alexandrina, but she readily came to the place mentioned when told that I wished to see her.

This old black's married name, under which she is generally known, is Mrs. Karpeny, (7) or Louisa Karpeny (plates vi., vii., viii.), but her own proper name is Köntinyeri (the exact vowel sound of the first syllable being represented by the German modified o). She has, or had, two sons and six daughters and twenty eight grandchildren. She spends her life wandering from place to place along the shores

(6) Or, as Billy expressed it, "Long time ago big one sick; big one tumble down all about 'long river; die very quick; cant bury quick enough; big one very quick stink, blackfellow big one frightened; all run away."

(7) In pronunciation of this name the accent is upon the first syllable and second is short.

[ 17 ] of the Lower Murray and lakes from Wood's Point to Point MacLeay, sometimes camping for various periods on the stations and sometimes staying at a native camp at Brinkley. In her younger days she was often employed on the stations at shearing-time, and she told us how much better than the white men she and other natives did their work in the woolsheds.

Mrs. Karpeny related her reminiscences with much dramatic vividness, and as they are interesting in themselves I will make no apology for giving them at some length, even when they refer to other matters than the immediate object of my inquiry.

On the occasion of our interview she told how, when she was quite a little girl and encamped with others of the tribe on what is now Poltalloch, she and her young brothers and sisters were much alarmed at the sight of two soldiers in red coats, and another man on horseback, one of the soldiers having a "feather sticking out of his hat". In their fear the children went into the water and stood hidden, among the reeds until the soldiers had passed out of sight. This could not have been before December 1836 (the date of the proclamation of the colony), but it was probably not long afterwards, for, according to her story, this episode occurred some time - she thought two or three years - before the wreck of a ship (the "Maria") which occurred in 1840. Though living at Poltalloch at the time, which place, however, is not a great distance from the Coorong, when the episode took place, she seemed to know all about the affair, the natives concerned in it, and the punishment inflicted upon some of the supposed participators in the murder of the crew and passengers, for she related, with much circumstantial detail, that two of the natives were hanged and two shot, a
statement which agrees with that given by Mr. Taplin (1, 5). At that time she said, indicating her height, she was “quite a big girl”, about ten or twelve years of age, as she thought.

Then, on being questioned, she spoke of the coming of the great sickness which she called small-pox. She said it occurred some time before the episode of the white soldiers, and that she was a very little child at the time.

Now, assuming that Mrs. Karpeny was of the age she stated at the time of the “Maria” incident, she would have been about seven when she saw the white soldiers – which, as we have said, could not have been before 1837; and if she were actually alive at the time (a point on which she insisted) it would fix the date of the epidemic at not earlier than 1830 – a date which it is important to remember – and her own age at not less than eighty, which I think is not at all improbable.

If this be approximately the date of the epidemic which Mrs. Karpeny was a witness as a child it was, as we shall see, some years later than that which we must assign to the one of which Mr. Taplin speaks in his account of the Narrinyeri, to which I shall refer directly. But Mrs. Karpeny was quite certain that the sickness of which she spoke was the only one that occurred during her lifetime, nor before that occurrence had she ever seen any blacks marked with the disease, though afterwards there were many such.

This old black spoke of the coming of a strong west wind which made the reeds all tremble, and this, she said, was taken as a sure sign that the sickness was coming – which it did very quickly. In making this statement, which she repeated two or three times with great earnestness, she held out her two hands and made them quiver. With much gesture she described how the faces of those affected with the disease came out all over spots, and how many died of it, including many children. Ashe herself escaped, but her aunt, who is still living, (8), and who, she says, is considerably older than herself, caught the disease and has her faced marked. She told of the remedies they sought, one being young reed shoots pounded and administered from a mussel (Unio) shell used as a spoon; another was boiled leaves of mallee eucalypts gathered in the scrub. She also mentioned the use of other plants which I could not identify, but which she said could point out. Nothing, however, did any good. Several of these statements were repeated two or three times, and always with adherence to the same version.

When asked whether they buried those who died of the sickness she said, “No, we smoked ‘em”, and that led me to ask her about the ante-burial rites of the Narrinyeri. Her replies conformed to the account given by Mr. Taplin, but she gave more explicit information about the subsequent and final interment, stating that the bones were put into the ground two or three years after they had been finally placed on the platforms.

She had never been as far up the river as Swanport, and knew nothing of the burials there.

Bearing in mind the frequent absence at the locality of the cranium from the other parts of the skeleton, I asked Mrs. Karpeny whether, in her young days, it was a common custom to convert the skulls into drinking vessels. She said it was, and that she herself had often carried two of them.

(8) Since these lines were written this old woman has died. She will be again referred to.
She described, without hesitation, how they took the skull from a platform (“knocked off the head” were her actual words) and put it to soak in the water until freed from the soft parts; and when cleaned they carried it about by means of a handle made of string. “Lot of ‘em”, she said, were used this way. This statement affords a satisfactory explanation of the missing crania at Swanport.

Mrs. Karpeny knew the three old blacks mentioned by Mr. Bott, and reminded me of a forgotten episode in which one of them had taken charge of my brother and me as boys. She also named several other natives who were well known round the lakes in the early days.

From Mr. Paul Martin, now of Appila – Yarrowie, I have some information on the same subject. He write me, under the date May 17, 1911, to the effect that he went to live in Strathalbyn about 1845, being then about eight or nine years of age. He remained there until 1852, when he went to the Victorian gold diggings. Returning afterwards to South Australia he went to live on the lower Finniss. There he saw many pock-marked blacks, and one of these – an intelligent man of thirty or thirty-five told him that when he was a little boy “big one wind” came from the east (cf. Mrs. Karpeny’s account ante); then, pointing to his marked face, “this one come”. He also said that many blacks in the district were affected and many died. It is striking that in the accounts given by both Mrs. Karpeny and Mr. Martin’s informant the coming of the sickness is associated with a strong wind, though the direction given in the two statements is diametrically opposite. In this respect Mrs. Karpeny’s statement is an exception, for most of the statements speak of the disease as coming from the east.

Turning now from the oral to the written evidence bearing on the subject, and, first, as it relates to the Narrinyeri, The Rev. George Taplin, writing in 1874 (which is the date of the first edition of his account of this tribe), says (1,44) :- “They have a tradition that sixty years ago a terrible disease came down the River Murray, and carried off the natives by the hundreds. This must have been small-pox, as many of the old people now have their faces pitted who suffered from the disease in childhood. The destruction of life was so great as to seriously diminish the tribes. The natives always represent that before this scourge arrived they were much more numerous. They say that so many died that they could not perform the usual funeral rites for the dead, but were compelled to bury them at once out of the way. I think there must have been more than one visitation of this kind, judging from the age of those who are pock-marked.”

In this writer’s “Aboriginal Folklore” (2, 45) he makes the same reference, with the omission of the period at which the disease is supposed to have occurred. Assuming, however, the epidemic of which he speaks to have occurred at about the time referred to in the first-mentioned account the approximate date of its occurrence would be 1814 or thereabouts, or more than twenty before the foundation of the colony.

Mr. Howitt, also (4,195), speaks of certain propitiatory rites as having been proposed by certain riverine tribes to avert the consequences of a great sickness that they heard was coming down the Murray, and there are other statements to the same effect to which reference will be made later. What has already been said, however, is sufficient to establish, as a starting point for my inquiry, the fact that at some time prior to the arrival of the white man the natives of the Lower
Murray were afflicted with a pestilence of great fatality, and that the Murray riverine system formed a principle channel for its transmission. What the pestilence was and how it originated we shall have also to inquire.

ORIGIN OF THE DISEASE.

Had there existed any evidence of the existence of disease, a widely-spread disease such as small-pox, among the Australian aborigines before the first colonization settlement in New South Wales in 1788 its presence, or its past effects, would probably not have escaped the notice of the earliest voyagers such as Dampier and Cook. The former came intimately in contact with a particular tribe on the north-west coast of what is now Western Australia and gave many details of them, for the most part of an uncomplimentary nature (24, I., 464); while Captain Cook, at different times, saw a good many natives and wrote concerning them, but neither of these travellers make any mention of any characteristic affection such as that of which we are speaking; indeed, the later traveller expressly states that he saw no marks of disease or sores upon their bodies (25, III., 634). There is also no evidence to show that any disease was communicated to the natives by the white sailors of either expedition.

The circumstances and possible influence of two subsequent expeditions to Australia will require a closer scrutiny. The first of these was that of the English fleet which brought the first convicts to the then newly-founded settlement of New South Wales. This was under the command of Captain Arthur Phillip (who subsequently became the first Governor of the colony), with Captain John Hunter as second in command. The expedition arrived in Botany Bay in January, 1788, and shortly afterwards moved to Port Jackson. Of the circumstances attending the start of this expedition it will be necessary to speak further.

Five days after these English ships had reached Botany Bay two French frigates, the “Boussole” and the “Astrolabe”, under the command of La Pérouse, arrived at the same harbourage, and in March following sailed away, to be lost with all hands, as was subsequently discovered, on one of the islands of the Santa Cruz group.

There are good grounds for excluding from suspicion the crews of the French ships as a source of any communicated disease. A perusal of the account of the voyage (5, I.) will show that the expedition was fitted out with great care and foresight, and that in the instructions to the commander a whole chapter is especially devoted to the precautions which are to be taken in order to preserve the health of the crews (5, I., 55). That these were effectively carried out may be gathered from the statement, several times repeated, that there was no sickness on board, and in a letter written by La Pérouse on February 4, 1788 (5, IV., 201), after his arrival at Botany Bay, he says :- Nous sommes arrivés à la nouvelle hollande sans qu’il y ait eu un seul malade dans les deux bâtiments.” These facts will sufficiently establish the freedom from disease of the sailors of the great French navigator, and we may dismiss them from suspicion as propagators of disease of any kind.

In April, 1789, fifteen months after the departure of the English ships and thirteen after that of the French, no other ships having visited the locality meanwhile, a virulent and fatal epidemic was found to be raging among the natives living round the shores of Port Jackson. The event is thus described by Colonel David Collins, Judge-Advocate and Secretary of the colony (6, 65) :-
“April. – Early in the month (1789), and throughout its continuance, the people whose business called them down the harbour daily reported, that they found, either in excavations of the rock, or lying upon the beaches and points of the different coves which they have been in, the bodies of many of the wretched natives of this country. The cause of the mortality remained unknown until a family was brought up, and the disorder pronounced to have been small-pox. It was not a desirable circumstance to introduce a disorder into the colony which was raging with such fatal violence among the natives of the country; but the saving of the lives of any of these people was an object of no small importance, as the knowledge of our humanity, and the benefits which we might render them, would, it was hoped, do away the evil impressions they received of us. Two elderly men, a boy, and a girl were brought up, and placed in a separate hut at the hospital. The men were far to overcome by the disease to get better of it; but the children did well from the moment of their coming among us.

“From the native who resided with us we understood that many families had been swept off by this scourge, and that others, to avoid it, had fled into the interior parts of the country. Whether it had ever appeared among them before could not be discovered, either from him or the children; but it is certain that they gave it a name (gal-gal-la); a circumstance which seemed to indicate a previous acquaintance with it. . . .

“May. – Of the native boy and girl who had been brought up in the last month, on their recovery from the small-pox the latter was taken to live with a clergyman’s wife, and the boy with Mr. White, the surgeon, to whom, for his attention during the cure, he seemed to be much attached.

“While eruptions of this disorder continued upon the children, a seaman belonging to the ‘Supply’, a native of north America, having been to seen them, was seized with it, and soon died; but its baneful effects were not experienced by any white person of the settlement, although there were very several young in it at the time.

“From the first hour of the introduction of the boy and the girl into the settlement it was feared that the native who had been so instrumental in bringing them in, and whose attention to them during their illness excited the admiration of everyone that witnessed it, would be attacked by the same disorder; as on his person were found none of these traces of its ravages which are frequently left behind. It happened as the fears of everyone predicted; he fell a victim to the disease in eight days after he was seized with it, to the great regret of everyone who had witnessed how little of the savage was found in his manner, and how quickly he was substituting in its place a docile, affable, and truly amiable deportment.”

The same writer again refers, with a few additional but not essential details, to the outbreak in a chapter dealing with the disease of the natives (p. 596).

In the foregoing account the following points are of importance and will be further noticed :-

1. The long period – fifteen months – elapsing between the departure of the English ships and the outbreak of the disease, or, in the case of the French, thirteen months.

[ 23 ]
2. The pronouncement presumably either made or acquiesced in by the chief medical officer to the settlement (Surgeon-General White) that the disease was small-pox.

3. Neither the whites, generally, nor the white children were affected, and that while the two native adults died of the disease the two affected children recovered.

Captain Hunter (7, 132) also gives an account of the outbreak which is assumed to be small-pox, and it is again alluded to by Barrington (8, 31) “as a disorder in appearance like the small-pox”, and similarly by Tench (9, 18 and 27).

These are the earliest references to this outbreak, made by those who were living in the settlement at the time of its occurrence, and they leave no doubt of the main fact, viz., a virulent malady that was either small-pox or so like it as to be readily taken for it.

At this stage, and before tracing the further progress of the disease, we must return more particularly to the question of its mode of origin. We have seen that there are no grounds for attributing its source to the French sailors, whose ships show an exceptionally clean bill of health right up to the shores of Australia. There remains, then, for further consideration the English ships, and it becomes necessary to examine their health record more minutely from the commencement of their voyage.

The facts in this connection are recorded by John White, Surgeon-General to Captain Phillip’s expedition and, afterwards, of the settlement (10, 2 et seq.), and as their correct interpretation is of such importance I must at some length quote the author’s own words (the italics are his i.e. White’s):

While the main part of the fleet destines for the new settlement was lying in Spithead previous to sailing it was joined by two additional transports, on one of which was the Surgeon-General, and immediately afterwards “I visited all the other transports, and was really surprised to find the convicts on board them so healthy. When I got on board the ‘Alexander’, I found there a medical gentleman from Portsmouth, among whose acquaintance I had not had the honour to be numbered. He scarcely gave me time to get upon the quarter-deck, before he addressed me – ‘I am very glad you have arrived, Sir: for your people have got a malignant disease among them of a most dangerous kind; and it will be necessary for their preservation, to get them immediately released.’ Surprised at such a salutation, and alarmed at the purport of it, I requested of my assistant, Mr Balmain, an intelligent young man, whom I had appointed to the ship for the voyage, to let me see the people who were ill. ‘Sir,’ returned Mr. Balmain, taking me aside, ‘you will not find things by any means so bad as this gentleman represents them to be: they are made much worse by him than they really are. Unlike a person wishing to administer comfort to those who are afflicted, either in body or in mind, he has publicly declared before the poor creatures who are ill, that they must inevitably fall a sacrifice to the malignant disorder with which they are afflicted; the malignity of which appears to exist only in his own imagination. I did not, however,’ continued Mr. Balmain, ‘think it proper to contradict the gentleman; supposing from the consequence he assumed, and the ease with which he had given his opinion, or more properly his directions, that he was some person appointed by the Secretary of State to officiate for you till your arrival. When you go among the people you will be better able to judge of the propriety of what I have said.’ Mr. Balmain had no sooner concluded than I was between the decks, and found everything just as he had represented it to be. There were several in bed with slight inflammatory complaint; some there who kept their bed to avoid the inconvenience
of the cold, which was very piercing, and whose wretched clothing was but a poor defence against the rigour of it; others confined to their bed through the effects of long imprisonment, a weakened habit, and lowness of spirits; which was not a little added to by the declaration of the medical gentleman above mentioned, whom they concluded to be the principal surgeon to the expedition. However, on my undeceiving them in that point, at the same time confirming what Mr. Balmain had from the first told them, viz., that their complaint were neither malignant nor dangerous, their fears abated."

The Surgeon-General then goes on to say that he informed the patients that he would give the orders for the supply of clothing to those who were in want of it, and that as they had been nearly four months on board on a diet of salt provisions he would endeavour to get some fresh for them while in port. “This short conversation had so sudden an effect on those I addressed, and was of so opposite a tendency to that of the gentleman alluded to, that before we got from between decks, I had the pleasure to see several of them put on such clothes as they had, and look a little cheerful . . .

“on returning to the quarter-deck, I found my new medical acquaintance still there; and before I could give some directions to Mr. Balmain, as I was about to do, he thus once more addressed me – ‘I suppose you are now convinced of the dangerous disease that prevails among these people, and the necessity of having them landed, in order to get rid of it.’

Not a little bit hurt at the absurd part the gentleman had acted, and at his repeated importunity, I replied, with some warmth, that I was very sorry to differ so essentially in opinion from him, as to be obliged to tell him that there was not the least appearance of malignity in the disease under which the convicts laboured, and the necessity there was for an application to the Secretary of State upon the occasion, that I could no longer keep my temper; and I freely told him, that the idea of landing them was as improper as it was absurd. And, in order to make him perfectly easy on that head, I assured him, that when any disease rendered it necessary to call in medical aid, he might rest satisfied I would not trouble him; but would apply to Dr. Lind, Physician to the Royal Hospital at Hasler, a gentleman as eminently distinguished for his professional abilities as his other amiable qualities; or else to some of the surgeons of His Majesty’s ships at Portsmouth Harbour, or at Spithead, most of whom I have the pleasure of knowing, and on whose medical knowledge I was certain I could depend.”

The Surgeon-General subsequently adds that notwithstanding the salutary effect on the patient of a change of diet to fresh beef and vegetables, with the addition of some wine and other necessities, “the report of a most malignant disease still prevailed; and so industriously was the report promulgated and kept alive by some evil-minded people, who either wished to throw an odium on the humane promoters of their plan, or give uneasiness to the friends and relations of those engaged in the expedition, that letters from all quarters were pouring in upon us, commiserating our state. The newspapers were daily filled with alarming accounts of the fatality that prevailed amongst us; and the rumour became general, notwithstanding every step was taken to remove these fears, by assurances (which were strictly true) that the whole fleet was in a good state
of health, and as few in it would be found to be ill, at that col's season of the year, as even in the most healthy situation on shore. The clearest testimony that there was more malignity in the report than in the disease, may be deduced from the very inconsiderable number that have died since we left England; which I may safely venture to say is much less than ever known in so long a voyage (the numbers being proportionate), even though not labouring under the disadvantages we were subject to, and the crowded state we were in.”

It is to be noticed that, in addition to the overcrowding, the condition under which the convicts made their voyage were evidently very unsanitary, for we are told that the Surgeon-General proposed white-washing with quicklime, those parts of the ships where the convicts were confined, as a means for correcting and preventing the “unwholesome dampness which usually appeared on the beans and the sides of the ships, and was occasioned by the breath of the people.” Here are, at all events, favourable conditions for the development and spread of disease.

Whatever may have been the exact nature of the “malignant disease” of the unnamed Portsmouth doctor there is other evidence to show that all was not quite right at the start from a health point of view, for Tench (11, 1), in speaking of the long stay of the ships at Motherbank, says :-

“In this period, except a slight appearance of contagion in one of the transports, the ships were universally healthy and the prisoners in good spirits”. Note here, again, the dominant idea of contagion. Now, while a certain amount of difference of opinion between doctors is unfortunately not unusual, at the present time of improved medical knowledge, one is scarcely prepared to find, even in those days, so great a divergence as appears to have existed in this case. Between a disease, thought to be characterized by malignity, and the effects of cold, aggregated by malnutrition, close confinement, and insanitary conditions generally is a wide gulf, and it is impossible to avoid suspicion that the Portsmouth doctor, whose reiterated opinion the official medical officer treated with so much contumely, may have been right after all. Such a suspicion is strengthened by a significant remark made by Tench (9, 18), who sailed with the expedition as captain of the marines. He is endeavouring to discover the origin of the Sydney outbreak, which he assumes to be small-pox, and, in a footnote, he mentions that “no person among us had been afflicted with the disorder since we had quitted the Cape of Good Hope, seventeen months before”. Surely this may be read as equivalent to an admission that the disease had existed in the previous part of the voyage. (9) If this was so it is curious that the principal medical officer (Surgeon-General White) makes no mention of such an occurrence in his account of the voyage, though he alludes to an outbreak of mumps soon after sailing and, later, of dysentery, from which one man died.

It must thus be admitted that strong suspicion attaches itself to the English expedition as a potential source of some disorder

[9] The fleet arrived at Table Bay on October 13, 1787, and left on November 13. It arrived in Botany Bay on January 20, 1788.

[27] of a contagious kind, but if that be so the question must be asked why did not the outbreak in Sydney take place until the lapse of so long a period after the arrival of the ships which, under this view, must have contained the germs of the disorder? For, as mentioned, it did not appear until fifteen months after the ships had actually left Sydney or seventeen months after they
had left the Cape, since which time there had been, according to Tench’s statement, no disease on board.

Mr Curr (3, l., 226) attempts to account for these facts by supposing that the disease emanated from clothes that had become infected on board and had been distributed to the natives. It is well known that disease may be, and is, distributed in this way, even after a long interval has elapsed since the articles were exposed to contagion, and that may possibly be the explanation in this case. Still, under the particular circumstances of the case, one would like to know what was done with the infected clothes during all this long period, which included the time occupied by the voyage from the Cape when the clothes had been put aside, and kept away from human contact, for nearly a year and a half before they were distributed. Otherwise why did not they communicate infection to the white folk who handled, or wore, them in the interval? Or if they were given to the natives soon after the arrival of the ships why did the disease not break out earlier among them?

These are questions that cannot be answered and it would seem impossible to pursue the inquiry further in this direction. We may conclude, therefore, that the Sydney outbreak may have originated from the English ships, but that it is not absolutely proved.

A little later we shall consider another possible origin, also of an extrinsic nature, but before doing so it will be desirable to trace, as far as possible, the march of events subsequent to the Sydney outbreak in relation to this or to some similar disease affecting natives in other parts of Australia.

SUBSEQUENT EPIDEMICS.

In this part of my inquiry I am much indebted to an interesting chapter of Curr’s “Australian Race” (vol. i., chap. viii.), on the diseases and decline of the aboriginal race, in which the author summarizes all the information he could gain either from published books. Some details on this subject are also given by Brough-Smyth (28, l. 253).

The Sydney epidemic occurred, it will be remembered, in 1789; that outbreak appears to have run its course and died out, for, so far as the records are concerned, we hear no more of any similar occurrence until about 1830 or 1831, or more than forty years later. About that date an outbreak is reported to have occurred at Bathurst, New South Wales, and King’s Plains, 27 miles west of this place. Under the native word Nguya (pustule) Teichelmann and Schürmann (12, 34) add a note to the effect that, about the same date, 1830, a disease (small-pox) was universal among the natives of the Adelaide tribes and diminished their numbers considerably. It is also, there, stated that it came from the east of River Murray tribes. The disease is again reported from Scone, New South Wales, 200 miles north of Sydney, about 1833-5, and from various other places in Victoria or New South Wales between 1840 and 1845. Besides these reports, referring to definite outbreaks, the dates of which are approximately fixed, there will be found in the chapter of Curr’s work referred to many other statements from people who, writing some years after the actual outbreaks, has seen the blacks bearing pock-marks.

One such reference may be particularly noticed here. It appears that at a date which, according to the context of the letter reporting it (3, l., 218), may be put about 1807 small pox has committed “awful ravages” at Swan Hill, on the Murray.
Farther north Mitchell (22, I., 26) records in 1831 an outbreak of which he himself was a witness at Curringài, in the Liverpool Range; and later, in 1835 (22, I., 218), he speaks of having seen pock-marked blacks at Fort Bourke and at several other places lower down the Darling, and he alludes to the native population of this river as having been reduced by small-pox. Sturt also (21, I., 105) in speaking of the natives of this river, says, “that their tribe did not bear any proportion to the number of their habitations. It was evident that their population had been thinned.”

It will thus be seen that all the outbreaks, so far mentioned, occurred in eastern and south-east Australian; that nearly all of them were among the blacks of the Murray riverine system; and that while most of those of which the dates are definitely stated occurred between 1830 and 1845, one outbreak (Swan Hill) may have occurred as early as 1807. After 1845 the disease seems, if not to have once more disappeared from these regions, to have, at least, subsided in extent and virulence.

In Western Australia Curr records outbreaks of, apparently, the same disease occurring at various localities on the north-west coast, of which most took place between 1865 and 1870, and he states that as early as 1829 pock-marked blacks were seen in the neighbourhood of Perth (3, 219).

According to Foelsche (13, 7) small-pox broke out among the natives around Ports Darwin and Essington about 1862, and he makes mention of a plant juice of which is used as a remedy.

Wilson also in his account of a voyage made in 1828 (14, 319) gives in his vocabulary of the Raffles Bay tribe a word, Oie or Boie, for small-pox which shows that they had, even then, experience of it.

Other references to the existence of small-pox in the Northern Territory about 1865 will be found in Curr’s chapter.

That small-pox had existed as far into the interior as Lake Eyre appears from Gason’s account of the Dieyerie tribe (1, 283), and Foelsche, who knew the natives well, states (13, 8) that “no doubt it spread a long distance inland, as pock-marked natives are found among all the inland tribes”.

There is evidence also of its presence still further north, for Mr. Gillen, whose work in conjunction with Professor Spencer on the Central and Northern Australian tribes is so well known, writes me (May 24, 1911) that thirty years ago when he lived in Alice Springs it was a common thing to see old natives pitted with small-pox all along the telegraph line from Charlotte Waters to Barrow Creek; but he saw no young natives similarly marked. Old blacks of the Arunta tribe, which occupies a large part of the tract of country just mentioned – that is the heart of Australia – had a tradition that a terrible disease traversed their country and destroyed great numbers of their people. When Mr. Gillen went to live at Moonta ten or twelve years ago he found that a similar tradition obtained among the Yorke Peninsula (Narrunga or Narrang-ga) tribe, and an old man told him of a place – an old camping-ground- where many of the victims had been buried, but he was never able to find it.

The disease is also recorded from Central Australia by Tietkins (13, 112), who mentions that out of fifteen or twenty blacks who visited his camp at the Rawlingson Ranges (24° 30’ southern latitude, 127° 42’ longitude) in 1873 eight were unmistakably marked by small-pox.
According to Curr it never made its appearance in Gippsland, nor, according to the same writer, is there any record of it among the natives of the Australian Bight, though he appears to have overlooked a reference to its former presence at Streaky and Fowler Bays (13, 112), where it was believed to have come from the north.

As regards Queensland, the only mention of the occurrence of the disease in this State by an early writer that I have so far discovered is made by Lang (23, 340), who speaks of it as a “variolous disease, somewhat similar to the small-pox”, and as affecting a tribe of natives on the Upper Brisbane River. He further mentioned that vaccination was a specific.

Later, in 1904, Miss Petrie states (26, 65) that when her father first came to North Pine (16 miles from Brisbane) pock-marks “were strong on some of the old men” (this was not long after 1837), who told him that the sickness had come among them long before the advent of white people, killing off numbers of their comrades. “Pock-marks they called nurram-nurram – the same name as that given to any wart. From this Neuram-Neuram Creek gets its name.”

References to outbreaks in other localities might be given, but enough has been said to show that a disease, which is always described either as small-pox or one very closely resembling it, has been spread so widely, and perhaps more than once, among the Australian natives as to deserve the term pandemic.

THE QUESTION OF A POSSIBLE CONNECTION BETWEEN THE SYDNEY EPIDEMIC OF 1789 AND THE SUBSEQUENT OUTBREAKS.

We must now return to the inquiry whether any connection can be traced between the Sydney epidemic in 1789 and that, or those, occurring subsequently in many places.

Dealing first with the manifestations in eastern and south-eastern Australia – where such a connection might most reasonably be expected to be traceable – if such a connection had existed it is remarkable that for more than forty years we find no sign of recrudescence of any epidemic similar to that in Sydney.

Where was the infection during these years? Did the next observed outbreaks, of which several seem to have occurred in 1830 or a few years afterwards, originate independently, or did the embers of the Sydney disease remain smouldering, somehow and somewhere, during this long period, to burst into flame again forty years afterwards? These are not easy questions to answer, and either supposition involves difficulties.

If the later outbreaks of 1830-5 were the aftermath of the epidemic of 1789 then we are quite unable to trace the connection between the two. For, apart from the length of the interval, it is difficult to see how, in the case of natives who wear no clothes and have few personal and permanent belongings, the seeds of the disease could be kept alive for so long, and if it were actually kept alive why did they not germinate in human bodies?
If, on the other hand, the 1830 epidemics arose de novo and without any connection with the outbreak that had proceeded it forty years earlier, then, for their cause, we are without even the uncertain facts that we possess concerning the possible origin of the Sydney epidemic from the English ships. If, however, we could explain the origin of the outbreaks of 1830 it would not be difficult to trace to them those others which, in New South Wales and Victoria, seem to have occurred, between that date and 1845 or thereabouts, at intervals of, at most, a few years, and at places between which geographical features would have afforded a ready means of transmission.

There is, of course, a third alternative, viz., that these later epidemics of which we are speaking may have been transmitted from the north - a question which will be discussed directly – for it has been mentioned that Wilson (10) found evidence indicative of its presence among the Raffles Bay tribe prior to 1826, and, in face of difficulties attending other explanations, this is perhaps the most reasonable, as it is the simplest, view to take concerning the manifestations in New South Wales in 1830 and the years following.

As regards the later outbreaks in Western Australia – that is to say, those occurring for the most part between 1865 and 1870 – most of them seem to have taken place at points along the north-western coast, and a continuation of this to the north and east brings us, after no very great distance, to that of the Northern Territory, where we have seen that the disease made its appearance about the same period.

It is generally supposed, and indeed it is more than probable, that to the latter coasts the disease was brought by the Malay trepan fishers who have paid annual visits to these localities for many years.

Flinders, whose voyage to the northern coasts of Australia was made in 1803, was at some pains to ascertain the facts concerning visits of the Malays to these shores. According to the information given him by the captains of a detachment of one of these fishing fleets (11) that he encountered at the English Company’s Islands, and subsequently

(10) Loc. Cit.

(11) Flinders’ statement (27, II., 230) that the whole of this fleet comprised sixty prahus and 1,000 men will indicate how numerous were these visitors.

[ 32 ] by Dutch officers at Koelpang, in Timor, these annual visits had begun only about twenty years previously, i.e. about 1783 (27, II., 231 and 257). This date is suggestive, for it permits the possibility that the disease might have existed in Australia even before the 1789 outbreak in Sydney, and it is therefore also quite possible that the latter might have originated in this way, and not from the English ships. We have already alluded to the difficulty, under the latter hypothesis, raised by the long delay of fifteen months before the disease manifested itself. Moreover, the very long interval of forty years which elapsed between the first outbreak and those
occurring on the east and south-east in 1830 and subsequently, without any apparent connection, also suggests a fresh introduction, and for this the only source we know of is the northern coast.

And, if contact with the Malays was, as Mr. Foesche and others believe, the origin of the epidemics occurring in the Northern Territory about 1862-5, it would have been a natural process for the disease to have spread down the Western Australia coast – indeed, as we have said, most of the outbreaks in that State occurred between 1865-70.

To account for its presence in Perth before 1829 (the date of its settlement) we should have to look to an earlier invasion, which might, however, have had, as we have suggested, a similar northern origin and have been transmitted along a similar route. In this instance, however, we have not, as in the case of later epidemics of north-western Australia, the history of a whole series of outbreaks the occurrence of which at about the same time, and in localities more or less adjacent both to one another and to the districts visited by the Malays, is strongly suggestive not only of the place of origin of the disease, but of a progressive onward march. Still, even in the absence of similar evidence of continuous progress in the former case, it is easier to suppose that in this, also, it had the same origin and travelled the same route than to believe that the disease, having originated in the east, passed to the west throughout the whole length of the continent, which hypothesis would, moreover, have involved its transit through very sparsely-populated and desert regions.

It is therefore to be regarded as more probable that the various epidemics of Western Australia resulted from the transmission, down the coast, of the disease originating from the Malays than that it, or they, should have spread from the east across the whole width of Australia.

To account for its presence in Central Australia we must suppose that it reached this region from the east or from the north, or even from the south, where we have evidence of its presence at an early date. As Mitchell reports it to have been prevalent all along the Darling it might well have reached the centre from this direction, though a northern derivation is, perhaps, equally probable, as there is a succession of contiguous tribes all the way from Port Darwin to the MacDonnell Ranges, and no physical obstacles stand in the way of its transmission.  

**THE NATURE OF THE DISEASE.**

So far we have, without argument, assumed that the disease the origin and spread of which we endeavoured to trace was small-pox, and though the inquiry into its true nature is essentially a medical question, it is necessary to give some consideration here.

It will have been noticed in what has proceeded that the disease was considered to be small-pox by all those witnesses of the first outbreak in Sydney who have mentioned it, though I can find no direct medical pronouncements to that effect, save such as have been stated.

In nearly all of the later epidemics occurring in New South Wales, Victoria, or South Australia it was either definitely called small-pox or spoken of as a disease exactly like it; and the various eruptive and other symptoms that were described, sometimes by medical men, when associated with it severity; contagiousness, and mortality certainly correspond with those of small-pox and to no other disease.
The outbreak at Bathurst and its neighbourhood which has been mentioned as occurring in 1830-1 excited so much attention that Dr. Mair, Assistant Surgeon of the 39th Regiment, was sent from Sydney to investigate it. Unfortunately he arrived too late to be an actual witness of the disease in progress, but he made inquiries on the spot and embodied his results in a report to his Government. I have not been able to refer directly to the full text of this report, as no copy of it exists either in the Public or Parliamentary Libraries of this State; but Bennett, when discussing this part of the subject at some length (15, I., 148) gives Dr. Mair’s own synopsis, which may be advantageously quoted here as summarizing his conclusions:

(12) Spencer and Gillen have pointed out (29, 20) that the line of transmission as represented by the handing on of corroborees from tribe to tribe of certain other changes in tribal practices, has always been from north to south and never vice versa.

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1. The eruptive febrile disease, which lately prevailed among the aborigines, was contagious, or communicable from one person to another, and capable of being propagated by inoculation.

2. It approached more nearly in its symptoms to the character of small-pox than any other disease with which we are acquainted, particularly to that species of small-pox described by Staff-Surgeon Marshall as occurring in the Kandyan Provinces in 1819 (quoted in Good’s “Study of Medicine”, vol. iii., p. 82).

3. The mortality attending the disease varied from one in three to one in five or six, but might have been less if the persons labouring under it had been sheltered from the weather, and attended by physicians.

4. Vaccination (13) seemed to possess a controlling power over it, as three blacks who been successfully vaccinated, although equally exposed to the disease, escaped the infection.

5. It was not confined to the aborigines, but in one instance attacked a European in the form of secondary small-pox, and proved fatal to a child with symptoms resembling confluent small-pox.

6. In several cases it occasioned blindness, and left many of the poor blacks in a very debilitated and helpless condition, with marks which could not be distinguished from the pits of small-pox on different parts of their bodies.

7. It was never observed to attack any of the aborigines a second time, and it spread alarm and consternation among them.

Bennett (15, I., 148), himself a qualified medical man, besides quoting the forgoing summary, comments at some length on Dr. Martin’s report, and the perusal of the chapter with other available
evidence will, I think, leave little doubt in the mind of any doctor familiar with the subject that the disease could have been no other than true small-pox. Yet there are circumstances frequently mentioned in connection with the various outbreaks which are not quite consistent with the known behaviour of this disease when epidemic amongst unvaccinated white people.

1. If Mair’s estimate of its mortality during the Bathurst outbreak is correct – for it is not stated how it was arrived at, nor to what number of cases it referred, and, in any case, it could scarcely have been accurately estimated – it falls below that of English epidemics, whereas one would have expected that the mortality rate of a people affected for the first time by a severe zymotic disease, and in whom there could be very little acquired immunity, would have been very high.

2. In Collin’s account of the Sydney epidemic it was stated that “its baneful effects were not experienced by any white person of the settlement, though there were several very young children in it at the time.” And again in the same work (chap. VIII, p. 597) he says “notwithstanding the town of Sydney was at this time filled with children, many of whom visited the natives that were ill of this disorder, not one of them caught it.” Curr (3) and Bennett (15), in their notices of various outbreaks, also frequently allude to the fact that children either did not take the disease or were affected by it less severely than adults. Now, among the European races, young children are more liable to small-pox than older persons, and, moreover, the mortality from small-pox is greatest in the first years of life (see footnote). In fact, in prevaccination days small-pox was regarded as a “disease of childhood, just as whooping-cough and measles were and are.”

3. White adults seem to have enjoyed a similar immunity, as will appear from special mention of this circumstance by those writers quoted in the case of the exemption of children, and this notwithstanding the fact that no special precautions seem to have been taken to avoid communication with the affected blacks.

In spite, however, of these abnormalities in the incidence and effects of the disease we shall, I think, still come.
whites than small-pox, in Fiji in 1875 it is estimated that one-third of the native population of the islands perished (17, I., 56).

[14] Although the exact proportion cannot yet be given it is evident that the Swanport remains cannot contain a considerable number of young children.

[36] to the same conclusion as that so often expressed by those who were actual witnesses of its symptoms and behaviour, viz., that it was true small-pox. If it were not small-pox, the medical science has no name for it.

ADVANCE OF THE DISEASE TO THE LOWER MURRAY.

Having so far attempted to discover the origin of the introduction of this epidemic disease, to trace its course throughout the land, and to discuss, very briefly, its nature, it is time to consider the evidence on which it may be considered to have reached Swanport and other localities on the Lower Murray.

Speaking from the standpoint of South Australia there seems to have been a very general belief, which finds frequent expression both in the statements of the blacks and in written accounts, that the disease came from the east and eventually travelled down the Murray.

Published notices directly making, or implying, this statement are to be found in Teichelmann and Schürmann (12, 34), Curr (3, I., 2, 16), Eyre (18, II., 379), and Howitt (4, 195), and separate facts, some of which have been mentioned by Bennett, Curr, Mrs. Langoh Parker (19, 39), and other writers as having been subject to outbreaks are situated on, or close to, tributary streams of the River Murray system – some on their upper waters, some lower down.

Thus from Curr we hear of it from an eye-witness of a case near Echuca in 1841 or 1842; at Towanniney (Towanninie), which is near the Murray; and at Swan River, on the Murray, at a date estimated to be 1807. Its presence at Swan Hill is also alluded to by Mr. Joseph Hawdon in his “M.S. Journal” (20, 40), a copy of which is in the possession of the Public Library of South Australia.

There is thus ample evidence of the existence of the disease at many places situated on, or near, the banks of the two great tributary rivers that by their junction at Wentworth, form the main stream of the Murray, and this soon afterwards enters South Australian territory.

From the Darling River and Victorian Murray districts, southwards, I have not been able to trace its successive stages

(17) As this Journal has never been published, and therefore not generally accessible, I will quote the writer’s words - “In the evening some of the blacks came to Swan Hill, where we were encamped. After holding a little conversation, with us across the river they swam over to us. They were fine, well-made men, about 5 ft. 11 in. in height; their faces were nearly all marked with small-pox, but otherwise their features were pleasing.”

(18) At this place, which is 3 miles below Blanchetown, Eyre was stationed as Resident Magistrate from 1841-4, and he alludes to the existence at some previous period of a disease very similar to small-pox, and leaving similar marks in specified localities until we come to Moorundie.
upon the face (18, II., 379), though he himself had never seen a case. He states further that it is reported to have come from the eastward.

The Moorundie natives are, as we have mentioned, the northerly neighbours of the Narrinyerie, and we can see, therefore, the facilities that would have been afforded for the transmission of the disease along the broad highway of the river, whose banks were frequented by a numerous native population. We know, indeed, that they navigated the river in their mungos, or bark canoes, the last remaining example of which is now in the National Museum.

That it did, however, reach and decimate not only the Narrinyerie, but the adjacent Adelaide tribe, there can be no doubt; to this the written testimony of early writers such as Mr. Taplin, Messrs. Teichelmann and Schürmann, and others as well as the traditions of the natives and oral statements, (19) bear witness; and although, as we have seen, the actual circumstances of the interments at Swanport do not afford any conclusive evidence that this place, more than any other, had any special association with the incidence of the disease, we shall, I think, in our minds regard its numerous remains as a silent testimony of the event.

When, however, we endeavour to fix a date for this calamity, possibly the one great event in their lives, we are on more uncertain ground. Still, there is a certain amount of evidence bearing on the question which we will examine.

We have some reason to believe (3, I., 218) that an outbreak occurred at Swan Hill, on the Murray, about 1807, though it must be admitted that this date, based as it is upon

(18) G.F. Angus states (30, I., 123 and II., 226) that he had himself “seen two aged men from high up the Murray, beyond the North-West Bend, who were deeply marked with the effects of small-pox.” He also states that the natives of South Australia spoke of the disease as having come down the Murray from the country far to the eastward, and almost depopulated the banks of that river for more than 1,000 miles. For these references I am indebted to Mr. T. Gill, I.S.O.

(19) Since the above was written I have received a letter (May 17, 1911) from Mr. Paul Martin, now of Appilla-Yarrowie, in which he informs me that when, as a boy, he lived at Strathalbyn from 1845-52 and subsequently on the Lower Finniss, he saw numbers of pock-marked blacks, and on one of them, an intelligent man then 30-35 years of age, told him that it came from the east (cf. The statements of Eyre and Angus ante).

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a mere estimate of an elapsed period of seventy years, rests on a very uncertain foundation. Hawdon (20) reports it from the same place at some period antecedent to 1838, the year in which he visited the locality.

As Swan Hill is the nearest place to the South Australian boundary at which a date can be approximately fixed for the alleged occurrence of the epidemic the event is of some importance to the present part of the inquiry.

If Mr. Taplin’s similar estimate of a long period of past years, the actual duration of which, cannot either in his own case or in that of Swan Hill quoted by Mr. Curr, be accurately determined, is to be regarded as approximately correct the date of the Narrinyerie outbreak would be fixed about 1814 (1, 44).
If then, we might assume that there is no great error in the estimates on which these two dates, 1807 and 1814, are fixed they might be considered as coming near enough together for us to consider that the Sawn Hill outbreak was the for-runner of that occurring among the Narrinyerie.

Moreover, the view that there may have been an epidemic among the natives of the lakes about this time, or at least, at a period anterior to 1830, receives some support from information recently received from Mr. G.G. Hacket, J.P., of Narrung, Lake Albert, a resident of this district of very long standing. He writes, under dates May 17 and June 1, to the effect that in 1864, when a young lad, he saw pock-marked blacks in these districts. To the best of his recollections these natives were at the time between fifty and sixty years of age, and it would seem, as Mr. Hacket observes, that they must have had the disease in infancy, for they had no recollection of their own particular illness and referred to it in a legendary sense. (21) Now, a native fifty years old in 1864 would have been an infant in 1814, which is the date arrived at on Mr. Taplin’s estimate, while one sixty years of age would have been only four years of age, or little more than an infant, in 1807, which is the estimated date of the Swan Hill outbreak.

(20) Loc. Cit.
(21) In the story the blacks told Mr. Hacket the idea that the disease came down the Murray is again prominent, and they also believed that it was brought by an evil spirit. The natives further said that it affected the old and young, that the dead were buried where they died, and that in many cases the sick were abandoned and left in their wurleys. Speaking of the skulls used as water vessels Mr. Hacket mentions that he saw them, and that their use was more general about Wellington than round the lakes.

But, according to Messrs. Tiechelmann and Schürmann, a date of the disease among the Adelaide tribe was, by a similar uncertain method of computation, about 1830; or, as those writers put it, “about a decennium” before they wrote, which was 1840. Now, obviously, a retrospective estimate of ten years based only on the memory of the blacks is less likely to err than one of sixty or seventy years similarly computed, and, if this was the date at which at which the Adelaide tribe was affected, it is almost certain that this would have been the time at which its neighbours – the Narrinyerie – also suffered. Further, this date of 1830, or thereabouts, is particularly suggestive, for it falls into line with a period at which, as we have seen, several outbreaks are accurately known to have occurred in New South Wales and Victoria.

Moreover, if the statement of the old black, Mrs. Karpeny (on whose very positive and unvarying tale I am disposed to rely), that she was alive at the time when the catastrophe occurred among her people is correct, its date, on that basis, might be fixed some time between 1830 and 1835 – that is to say, at the period which would correspond to that of the active manifestation of the disease at Bathurst, New South Wales, and at other places in eastern and south-eastern Australia.

This date would also, to some extent, harmonize with the information given by Mr. Bott’s three old black men, for, is they were men of sixty when they told their story in 1881, the personal memory of the oldest of them might well have gone back to 1830, but not to 1807 or even to 1814. If, however, the eldest was seventy he might, as a child four – which would have been is age in 1807 – have retained the memory of a disaster of such magnitude occurring at that date.
On the whole, therefore, and using the admittedly rather uncertain evidence that is available, the most probable view is that the date of the outbreak among the Narriyeri and Adelaide tribes was during the quinquennium 1830–5. And if Mrs. Karpeny is correct in her assertion that she never saw pock-marked blacks until they had become thus affected, as the result of the epidemic she claims to have witnessed as a young child, then, so far as the Narrinyeri are concerned, there has been only one such epidemic since the beginning of the last century, and the earlier date of 1814 computed by Mr. Taplin must have been based on an overestimate of years that had elapsed. Whether a similar explanation applies to the supposed outbreak at Swan Hill in 1807, or whether there really was an earlier manifestation of the disease in that locality, it seems impossible to say. There is, however, some evidence in favour of the view that there was more than one period at which outbreaks occurred in South Australia.

The conclusions stated in the foregoing paragraph have been based upon facts and statements, often of a very indefinite nature, that have been related in the preceding pages; but since they were reached they have, so far as they relate to the date at which the epidemic occurred among the Narrinyeri and their neighbours, received additional support of a more precise kind than has generally been found available in this inquiry. In a paragraph in the South Australian Register of July 5, 1911, the death is reported, at Poltalloch, of the old black woman who was stated by Mrs. Karpeny to have been her aunt; whether this was the actual relationship according to our nomenclature I cannot say. The old woman, who was known to the whites as Jenny Pongie (native name Clul-lul-owrie), spoke English well and retained her faculties almost to the last. She was, according to her own statements, a grown woman when the epidemic descended on her people, and, according to her account, it came shortly after Captain Sturt’s voyage down the Murray. As the explorer reached the lakes on February 9, 1830, old Jenny’s evidence fixes the date with considerable definitiveness as occurring during the quinquennium mentioned, and probably, it would seem, in the early part of this period.

She too, spoke of a peculiar noise, as of a wind, just before the arrival of the disease, which she said came from the east. The writer of the paragraph referred to, Mr. A. Redman, superintendent of Point MacLeay Mission Station – as, indeed does another correspondent, Mr. G.G. Hacket – suggests that the noise might have been referable to an earthquake, which is not improbable, for, writes the latter, in the last event of that nature the earth tremors were accompanied by a rushing wind such as the natives described, and he has heard the natives themselves refer to a similar occurrence.

(22) If, then, we may consider Jenny’s age as “a grown woman” to have been sixteen at the date of the occurrence, which, it might be claimed, represents female maturity in her race, this old black would have been ninety-seven years old at the time of her death; and if sixteen is considered to be an unnecessarily early estimate of full growth it would only be required that she should have been three years older for her to have died a centenarian. And, indeed, she was considered by the old residents to have passed the century by three or four years. In any case she affords a remarkable example of longevity in a race that has been assumed without justification, if the evil influences of civilization are excluded, not to be long-lived. Though at the time of my interview with Mrs. Karpeny, recorded on a previous page, I did not attach importance to the accuracy of her estimate of long periods of years I must, with this confirmation and in justification of her statement, now say that on that occasion she told me her aunt must be more than 100 years old.
SUMMARY.

Epitomizing the principal points of the foregoing investigation –

1. There is clear evidence of the occurrence in 1789 of a virulent disease among the aborigines of Port Jackson which was at the time considered to be small-pox; and

2. Doubtful evidence that this originated from the English ships that brought the first convicts to Sydney more than a year previously, though there is a possibility that it may have done so.

3. This outbreak having apparently subsided, nothing more is definitely recorded of a similar disease until about 1830 and the years following, when it reappeared at Bathurst, New South Wales, and similar outbreaks seem to have continued at other places in New South Wales and Victoria up to 1845. There is also some uncertain evidence that the disease may have reappeared still earlier, viz., at Swan Hill about 1807.

4. There is no evidence to show how this later series of epidemics arose, but

5. There is good reason to believe that an outbreak took place in the coastal regions of the Northern Territory between 1862 and 1865, which was presumably brought by the Malay trepan fishers.

6. As the Malays seem to have visited the north coasts of Australia as early as 1783 and to have continued their visits, annually, until the present time they may have been the source both of the Sydney epidemic of 1789 and of those of 1830 and following years in eastern and south-eastern Australia; almost certainly of those occurring in north-western Australia between 1860-70, and possibly of those which, there is some evidence to show, took place still earlier in the nineteenth century both in eastern and western parts of the continent.

7. However originating, there is abundant testimony to the fact that the disease at some time spread throughout almost the whole of Australia, reaching even the heart of the country.

8. In its symptoms, progress, and behaviour the disease corresponded to genuine small-pox, though in its incidence and effects it differed in some respects from this disease as it occurs among unvaccinated white people.

9. As regard South Australia, there is considerable testimony to support the belief that the disease came from the east, probably by river routes, and was transmitted down the Murray, making its effects severely felt among the Narrinyeri and Adelaide tribes, probably between 1830 and 1835 – at any rate before the advent of the white settlers in 1836. If, however, Mr. Taplin and some others are correct in their estimates of the length of a long period of elapsed years, without any facts to guide them as to its real duration, there may have been outbreaks both in Victoria and South Australia earlier this century.
10. To Central Australia the disease may have come from either the north or the east or even from the south – none of these routes would have presented difficulties in transmission; but the invariable migration of certain practices from north to south is suggestive of the first-named direction.

11. In the actual circumstances of the Swanport burials there is no very distinct evidence of the disease in such a catastrophic form as to have caused the natives to abandon their ordinary methods of interment for a promiscuous sepulture, though, according to their tradition, the onset was sudden and the mortality great.

CONCLUSIONS.

I had hoped in this account to have been able to give some brief survey of the general characters of the Swanport remains. This, however, I am not yet in a position to do, for, apart from the fact that the inquiry pursued in the preceding pages has proved a longer task than I had anticipated, the number of remains is so considerable, and the bones so mixed, and, in many cases, so broken that the task of sorting and mending is still far from complete, though the whole of our available staff has been engaged in the work ever since the arrival of the remains at the Museum. Besides, their number is still being increased by further additions from the same locality. All I can say now is that the total number of individuals represented by the remains actually received at the Museum, though in many cases only odd bones or fragments of bones, will probably be found to be about 160. Probably the number actually met with was still greater, for some of the remains have, no doubt, found other destinations. In age they vary from extreme senility, as shown by the edentulous condition of the jaws, to that of children under six months. In some of the remains pathological conditions are present.

At a further date I hope to report further on these remains from a craniological, osteological, and pathological point of view, but as this work will necessitate many hundreds of measurements and calculations of indices it may require some time. It will also be necessary to make provision for the requisite and now extensive literature bearing on the subject, and for an osteometric outfit.

Finally, I desire to express my thanks to the Commissioner of Crown Lands of South Australia, the Honourable Crawford Vaughan, M.P., who, by his sympathy and prompt action, has made it possible for the National Museum to acquire these interesting relics of a vanishing race. So, also, I must acknowledge the assistance of Mr. T. Duffield, Secretary to the Commissioner; of the Surveyor-General, Mr. E.M. Smith, for allowing his Department to supply me with the accompanying map, and for other facilities in the prosecution of this investigation; of the Government photolithographic department for the reproductions which illustrate this paper; and of Mr. Walter Howchin, F.G.S., Chairman of the Museum Committee, who drew for me the sketch of section and has otherwise given his valuable assistance in regard to geological details. Mr. Kellett, Superintendent of the River Murray reclamation works; Mr. A. White, who, it has been stated, first brought the discovery under notice of the Museum; Mr. E. Baxter, ganger in charge at Swanport; and Mssrs. Bott, sen. and jun., have also given much assistance and, often, personal service in the work of recovery. To Mr. Bott, sen., Mr. G.G. Hacket, and Mr. Paul Martin I am indebted for valuable information that has been recorded in the preceding pages, and to Mssrs. J.W. Bakewell and A.C. Minchin for the photographs from which the illustrations have been reproduced. I desire to acknowledge the zeal and energy with
which Mr. Robt. Zietz performed his task as the representative of the Museum. The assistance of all these gentlemen has greatly aided me in my task.

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4. “Native Tribes of South-East Australia”, A.W. Howett, 1904.

11. “Narrative of the Expedition to Botany Bay” by Captain Watkin Tench, 1789.
17. “At home in Fiji” by C.F. Gordon Cumming, 1881.
20. “Manuscript Journal of a Journey from New South Wales to Adelaide, the Capital of South Australia, performed in 1838” by Mr. Joseph Hawdon (in the possession of the Public Library of South Australia).

21. “Two Expeditions into the Interior of Southern Australia during the years 1828, 1829, 1830, and 1831” by Captain Charles Sturt, 1833.


24. “A new Voyage Round the World”, by Captain William Dampier, 1729 (Collection of Voyages”, vol. i.).


27. “Voyage to Terra Australis . . . in 1801, 1802, and 1803”, by Matthew Flinders, 1814.


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31. “Nomenclature of South Australia” by Rodney Cockburn, 1908.

EXPLANATION OF PLATES.

Plate II.

View of Swanport, looking south, from the southern end of the swamp, which is seen in the foreground. The cutting from which the bones were obtained is shown in the distance between two eucalyptus trees, and just to the right of Mr. Bott’s house. The surface of the sandbank is seen rising to the right. The tramway in the foreground was used for the transportation of the soil to form the embankment.

From a photograph by Mr. J.W. Bakewell.

Plate III.

The cutting in its condition on April 14, 1911, taken from a point nearer to it than in plate ii.;
Plate IV.

The exposed face of the cutting from a near-point. The band of travertine mentioned in the description is plainly shown crossing the pick-handle standing against it a little below its top end. Patches of broken mussel shells are visible in the kitchen-midden layer. The stones on the top of the bank formed part of the ferryman’s house which formerly stood here.

Plate V.

Another view of the face of the section which shows, towards the right, and just above the pick-handle, the line of demarcation, here distinct, between the kitchen-midden deposit and the subjacent layer of red sand. A skeleton, without cranium, was removed from the circumscribed excavation of which the travertine forms the floor. The figure is Mr. Bott, sen.

Plate VI.

Mrs. Karpeny.

From a photograph taken in 1907 by Mr. J.W. Bakewell.

Plate VII.

Mrs. Karpeny.

It will be noticed by her grey beard that Mrs. Karpeny is a good example of the condition known as hypertrichosis, or excessive hairiness, which is not uncommon among the Australian aborigines; but in her case is confined to the face. Her beard would be longer still did she not habitually trim it. Her head is unusually massive, her colour lighter than is usual among her tribe, and her height 5 ft. 2 in.

From a photograph by Mr. A.C. Minchin., 1911.
Plate VIII.

Mrs Karpeny.

From a photograph by Mr. A.C. Minchin.

Plate IX.

Map of the Murray, from Murray Bridge to Swanport. The bones were taken from the small Government reserve abutting on the river marked “RES.”

From a plan supplied by the Surveyor-General.