

Notes of a Journey from Israelite Bay to Coolgardie,  
Western Australia.

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*Read before the 33rd Ordinary Meeting of the Royal Geographical  
Society of Australia, 9th March, 1895.*

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THE slight sketch I propose to give of our latest Australian Gold Field as seen by me in October, 1894, and will I hope serve to place before you some features of a Colony on which recent gold discoveries have conferred an importance undreamed of a short while ago. As you are doubtless aware Western Australia has the largest territory of any Colony in the Australian group, its area exceeding a million of square miles. Owing to the scarcity of streams and fresh water, a great porportion of it was once looked upon as uninhabitable and valueless. The question now presenting itself for solution is, whether much of this presumed desert region may not teem with mineral wealth.

Many who are present to night had the pleasure recently of meeting Mr. David Lindsay, who led the latest exploration into the wilds of Western Australia, and whose highly interesting journal and map are accessible to Members in the Society's library. It cannot be doubted that this expedition, which but for the munificence of Sir Thomas Elder, of Adelaide, might never have been undertaken—was largely instrumental in directing attention to the auriferous region now in course of being opened up. I was much impressed at the time with the explorer's description of the Fraser Range, east of Coolgardie, and the prospects he held out of valuable auriferous developments in the vicinity, and in the month of June, last year, I organised a small prospecting party to proceed to that locality. Our party consisted of three

besides myself, and we had with us a cart drawn by two horses, containing tents and three month's provisions, but the weight our animals had to draw necessitated our travelling on foot. As we were unable to carry horse feed, our movements were wholly dependent on the herbage to be found on the route. Our original plan was to disembark at Esperance Bay, about 200 miles east of Albany, and we accordingly took our passage in a coasting steamer from Adelaide bound to that port, but, calling at Eucla, in the Australian Bight, the reports we then heard of the Esperance Bay track were so unfavorable, that we were induced to leave the steamer at Point Malcolm, near Israelite Bay, 130 miles east of our intended destination. By the courtesy of Messrs. Ponton Brothers, we camped in their wool-shed at the point, the only building in the neighbourhood, their sheep coming 120 miles from the station to be shorn. We were here made familiar with the "ship of the desert," destined to play such an important part in the future of West Australian exploration. All round the telegraph station at Israelite Bay were camped numbers of camels, for the most part brought from South Australia, and finding food on the scrubby sand hills around where a horse could not have lived. Some were in charge of Europeans, others tended by stalwart Afghans, clad in their native dress. With them were many young camels called "calves" or "colts," according to their age, the whole presenting a picturesque scene that made us doubt if we were in Australia. Many of them had come long distances, having left Hergott Springs, in South Australia, and travelled over land by way of the Australian Bight. A man in charge of a "string" of thirty camels, going to Feltum Ras Mohammed, a large owner of camels at Coolgardie, told me that by the time he reached his destination he would have traversed on foot fully 2,000 miles. In his company and also on foot was a Queensland prospector, bound to the same place, who had come 500 miles further. There are few British possessions where a land journey of this extent would be practicable. The animals were in good condition though, including stoppages they had averaged fourteen miles a day from the time they started. A "string" of camels, as it is termed, has hitherto been a rare sight in Australia, and they are at all times picturesque object in what is often a very dreary landscape. Headed by

some tall Afghan they come on in single file, kept in line by a thin cord secured to a wooden stud passed through the animal's nostril. The cord is fastened to the tail of the next camel, and so on with the rest of the convoy, thus enabling one man to control the whole line. One or two men bring up the rear in case of accident to the loading. The load on each beast, which varies from 300 pounds to 600 pounds or even more, according to the strength of the animal, is carried on a peculiar saddle, shaped like a large collar, that slides over the hump, the loading being kept in its place by cords passing under the animal's belly. It is said that the South Australian bred camels are larger and stronger than the imported ones. A few years ago they could be bought in Adelaide for £25 a head, but since the demand for them has sprung up in West Australia their price has risen to £60, and even more in exceptional cases.

We left Point Malcolm on 3rd July, our course being nearly due north, and passing one end of the Russell Range, which lies about 30 miles distant. The track was over a loose sandy soil, covered with heath and stunted mallee, abounding for the first twenty miles in bright colored flowers, some of which were quite new to us. We camped the first night at what are locally known as "rocks," where we found good water but little feed. These rocks usually of granite formation, are unlike anything to be seen in the Eastern Colonies of Australia, and on account of the water they generally contain, play an important part in West Australian locomotion. Near the coast we found them occur at intervals of a few miles, in the form either of flat granite floors, covering a few acres in extent with shallow hollows, or in low terraces, sometimes rising into rounded masses of considerable height, which gather and retain the rare rainfall. Far inland some of these masses cover hundreds of acres, and hold on their slopes cavities containing large quantities of excellent fresh water, capable of almost indefinite increase at small cost. Without them, travelling would be impossible, for creeks containing water are practically unknown, and clay pans, the other source of supply, are scarce and often dry. On the loose sandy soil the rain soaks in as it falls and is lost, but falling on this hard surface it is preserved, either being collected in the hollows, or draining off to the base of the rocks, where

the soil is more retentive. This latter constitutes the "soak" so often heard of in Western Australia, and a hole being sunk in the ground, water usually of excellent quality is obtained as from a well. By deepening the well the supply is increased, and by judicious extension of the drainage area, large supplies could be obtained. Fortunately for the country these granite formations are very numerous, and sooner or later will be made available for the storage of water in considerable quantities. On the road between Southern Cross and Coolgardie, the Government has lately done much to develop this form of water supply, though unfortunately the dryness of the past season has to a great extent, made their efforts abortive. In other places nothing has been done except by private enterprise, and that, of necessity, in an imperfect manner. It was most mortifying to travellers suffering from thirst to find that millions of gallons of the priceless fluid brought by passing showers had evaporated or drained away out of reach. The occurrence of these outcrops along our line of route—viz.  $123^{\circ}$  to  $124^{\circ}$  East longitude—showed that the granite formation extended farther to the eastward than the limit assigned to it by many geologists.

After passing the strip of heavy sand, extending ten or fifteen miles from the coast, we came into the limestone formation, which in one form or other, either in rocky ridges of trifling height or in innumerable nodules, resembling marbles, scattered over the surface of the ground, continued for hundreds of miles, though often broken by outcrops of granite and other rocks. Limestone may in fact be considered the leading characteristic of this portion of Western Australia. Giving place sometimes to belts of auriferous country, where the lime is replaced by nodules of iron and sandstone, it reappears when least expected, right into the heart of the gold-fields. I was told by a digger from the alluvial goldfields of Kurnalpi, that he had seen limestone in the same shovelful of earth that contained the gold. Wherever the limestone appeared vegetation deteriorated, the timber became smaller and the feed poorer, and all the surroundings suggested the presence of a sea-bed at some remote period. At thirty miles from the coast we passed Mount Rugged—sometimes called Mount Ragged—at one end of the Russell Range, a striking rocky hill, apparently 1,500 to 2,000 feet

in height. A small creek in a gorge afforded us some water, but in the plain beyond we saw no watercourse such as we might have expected in the neighbourhood of high land. The timber on the mount was scanty and poor, and there were no signs of animal life. It was emphatically a silent landscape. We now came abruptly into the plain, the grass and timber improving slightly, but all flowers disappearing. The horizon was bounded by low lines of mallee scrub, with open patches of grass, but without a hill to break its monotony. But if wanting in undulation we could see from the steady strain on the traces that we were gradually rising towards the elevated table land on which the goldfields are situated. To our great relief, as we advanced the road became harder, for what with heavy drawing and poor feed, our horses were losing condition rapidly. At sixty miles from the coast we came to Scott's "cattle ranch," called Daralinnia, and fifty miles further brought us to Ponton's sheep station, a nice little patch of grass and salt-bush country, with a bold outcrop of granite, which has enabled the owners, to provide themselves with a good supply of water for their stock. Both here and at Scott's the proprietors were most liberal in giving us the use of their water supply. Here we came on camels and teams bound to the Kurnalpi goldfields—popularly known as Billy Billy, and we employed a day, during which we spelled our horses, in picking up most useful information as to the country. Here, too, we saw something of the aboriginal native, and formed a very favorable opinion of his intelligence and general qualities. The whole of the station work has been done by their labor, as well as the fencing and water conservation, and from all I observed I should say that the Aborigines of Western Australia are fully equal to their dark brethren in other parts of the Continent, though the conditions of their existence in a wild state must be most miserable. It is easy to see from their appearance that they are usually short of food. To the absence of clothing they seem indifferent, and if they possess it will remove it at night, though the frosts are very severe, lighting a small fire on each side of their bodies and sleeping in a recumbent position with their backs uppermost. From the time of passing Ponton's we came on rocks of grander proportions, with intervals of miserable mallee scrub and waterless limestone country, in which salt lakes began to make their appearance, the country in their

vicinity resembling the sea-shore and producing principally salsolaceous plants. Passing the head of one of these lakes, whose dry sandy bed stretching far away to the eastward was crossed by bars of slate and sandstone, we came to Neumann's Rocks, at the foot of Fraser's Range, the latter being occupied by a Mr. Dempster as a sheep ranch, and affording the best feed by far we had seen in Western Australia. Before us rose a massive pile of granite boulders and terraces, containing good waterholes on their slopes, whilst at their foot was a capacious soak, with a considerable supply of water suitable for stock. This was the work of a Mr. Neumann, a Swede, who has resided in Western Australia for several years, and devoted much time to exploring this part of the country, but strange to say, though one of the first in the field, without any success in his search for gold. His efforts at water conservation however were much appreciated by parties of camel drivers, with whom this spot has become a favorite camping ground. From a strapping Afghan in charge of a string of thirty-two camels carrying stores for Kurnalpi, we replenished our supplies. He was accompanied by three other natives of Northern India, all fine men, picturesquely attired in their native dress. One of them was a discharged soldier from a Beloochee regiment of the Anglo-Indian army, part of whose uniform he still wore. With the Afghans I had a long conversation, and it gave one a strange feeling to hear them talking in a British colony of their king Abdur Rahman, and of affairs in Cabul, which they had left a few months before. There was something impressive in the idea of our gold discoveries, having attracted to the wilds of Australia those strangers from "farthest Ind." The arrival and departures of successive teams of camels, their encampments, and all the work of loading and unloading went to make up a picture quite unknown in any other colony of Australia.

Fraser's Range is only of moderate height above the plain, apparently scarcely 1,000 feet. In Dempster's home paddock were some reefs of white quartz, which had been sunk upon by previous prospectors without showing gold, and our mining expert did not think the indications on the range sufficiently good to tempt a prolonged exploration; moreover very disquieting reports were

coming in of the dryness of the country ahead. We therefore decided to make for Simon's Hill, at the other extremity of the Range, where we understood there was good water and feed, much needed by our jaded horses. For the first time since leaving the Russell Range we found ourselves in gently undulating ground, though there was a continued absence of creeks, which at last we ceased to look for. There was a change in the timber, which became larger though still keeping its mallee character. The bark of some of the trees was often very ornamental, being highly colored, mottled and smooth, with the appearance of having been oiled or varnished. Between the range and Coolgardie we saw the same trees at times in great numbers, and generally where auriferous indications were present. The West Australian colonists call it gimlet wood, but it appeared to me merely a variety of mallee. On arriving at Simon's Hill, where it became necessary to give our horses a rest, we found a number of prospectors, who had been driven back from the outlying districts by want of water, and it became very evident that we should have some difficulty in reaching Coolgardie. The season was threatening to be a dry one, the signs of rain appearing and disappearing time after time without result. Clouds would gather for days together till their black masses seemed ready to discharge themselves in a deluge, but after a few hours of tantalising expectation they cleared away, leaving only a blue sky and parched soil behind them.

Forced to make a short delay here by reason of our horses' sore shoulders, it was resolved to explore some reefs said to exist about sixty miles to the northwards, and leaving one man in charge of our camp, we accordingly started on foot, our tents, tools and supplies for a fortnight being carried on two pack horses. Our way lay through thick mallee forest, the horse feed that grew around Simon's Hill soon changing to poor camel bushes. At thirty miles we came to the most imposing masses of granite rocks we had yet fallen in with, covering more than a square mile of country, and containing numerous rock holes, in which clear water was still to be found in small quantities. Some of the larger cavities, called by the blacks "Gnamma" holes, are shaped like a bell or cup, the hollow below the mouth being enlarged so that they are capable of holding consider-

able quantities. The whole mass of rocks, and the spaces between, afford facilities for water conservation on a grand scale, and as yet, have been quite neglected. It occupies, however, an important position, with possible gold fields at no great distance, and if its capabilities were developed, would be an invaluable centre for the exploration of an extensive auriferous region extending to Queen Victoria's Spring, which, at the time I speak of, was unapproachable even with camels. From the highest point of the rocks, the eye ranged over a thick mallee forest to the east and north, without a hill to break the view. Proceeding fifteen miles to the N.W., we came to Fitzgerald's Lagoon, once a sheet of fresh water six feet in depth, now a dried up depression, in which water could not even be got by sinking. Ten miles more brought us to the reefs we were in search of. These we found of a very massive appearance, but they had evidently been prospected before, and like our predecessors, we were unable to find gold in them. Had water been procurable, it would have been interesting to follow up the promising indications that presented themselves in the neighbourhood, but we were now experiencing such privations that it was imperative to get back to the rocks we had just left.

Around us were numerous salt lakes, but no fresh water was to be had nearer than 17 miles. Its absence was evidenced by the dearth of animal and bird life, the latter represented by a single crow, the former by the tracks of a wild dog, bound in the direction of the fresh water referred to. The signs of salt were present everywhere, even the crevices of the quartz reef we broke into being full of salt crystals. Returning to the rocks we found that passing camels and horse teams had seriously reduced the supply we had depended on, and on the morning of our departure every drop had vanished. The thirty miles therefore that divided us from our camp at Simon's Hill had to be traversed in one stage, not without difficulty both to men and horses.

The situation now became serious. The weather continued dry, water was becoming scarce all round us, and there was danger of being imprisoned at Simon's Hill for an indefinite period, an apprehension which was causing other prospectors to disperse in various directions. Our only route to Coolgardie was by way of



Binnerinnia 75 miles distant, where we were assured of a plentiful supply of water, provided only we were able with our jaded horses to get over the waterless stage of 60 miles that intervened—a sorry prospect, but one that we were compelled to face. Fifteen miles through well grassed country brought us to a small reservoir in the rocks of Fraser's Range, known as Peter's tank. Camped around it were numerous men and horses who had all but exhausted the water provided by Mr. Dempster for this portion of his run. We longed to spell our horses for a few days, but the want of water compelled us to go on. A few miles after leaving the tank we came into a poor sandy country, waterless and bare of feed, the heavy sand and stunted vegetation unmistakably indicating the neighbourhood of salt lakes, which soon came into sight. None, however, were of any size until we reached the shores of Lake Cowan, 10 miles from Binnerinnia. Here the road became so heavy that our exhausted animals were unable to draw their load through the deep hillocks of sand, and it had to be abandoned and left in charge of one of the party till fresh horses could be obtained to bring it on. The lake stretched away for 96 miles to the north-west, its shores broken by bay and promontory, and its dry bed, pierced here and there by bands of rock and ironstone, and an occasional islet. At the narrow arm we crossed dwarf cliffs of sandstone and diorite rose abruptly from the firm sandy floor, while across the broader part to the westward in the blue distance appeared the long low line of wooded country known as the Dundas Hills. As we neared the rounded masses of granite that rose above the plain at Binnerinnia, we observed with intense satisfaction numerous camels and horses being watered at the "soak," which proved to be the best we had yet met with. The country also showed a great improvement, the mallee merging into larger timber, frequently as much as two feet in diameter, termed "salmon gum" from the color of the wood.

Here the prospect of recruiting the powers of our long suffering horses made us delay a few days. Close to Binnerinnia are some large reefs that have been prospected without success, but within ten miles is a belt of auriferous country of a promising description extending for some distance, and although our efforts, hampered as they were by an unfavorable season, were again

unrewarded, there is every reason to believe from appearances that in time valuable discoveries will be made, as the country between that place and Coolgardie is rich in auriferous indications. We heard that fifty miles away to the eastward a small lead of alluvial gold was being worked with difficulty, the miners there having to send in for water every few days, each tankful thus involving a journey of 100 miles. To the southward are the Dundas Hills, where reefs are actually being worked; the most recent discovery, named the "Norseman," presenting a very encouraging appearance, and with the first rainy season there should be a fair prospect of discoveries in the vicinity of Lake Cowan. The existing drought with the certainty of its being intensified during the coming summer forbade the exploration that surrounding indications would otherwise have prompted.

Slowly advancing towards Coolgardie we at last came to Lake Lefroy, on the beach of which we made our camp. Opposite to us, in a small gully, were the alluvial diggings of Wagemoola, which at one time attracted a considerable number of diggers; now, owing to the dry season, they were almost deserted. Lefroy is a large lake, its length being estimated at 150 miles, and in its bed are numerous islands of varying size. As we sat at our lonely camp fire in the moonlight, the night wind blowing keenly over its dry sandy bed, one could not help the imagination flying back to the dim past, when a prehistoric sea, of which this and the other salt lakes of West Australia are apparently the vestiges, rolled through the central part of the present Continent, its waters teeming with extinct forms of life some day to be revealed to geological research, and its shores trodden by gigantic marsupials of the tertiary epoch such as have been exhumed in the adjacent colony of South Australia. No one who gazes for the first time on these singular natural features of the country, unlike anything to be seen in other parts of the globe, can avoid these speculations. Their probability forces itself continually on the mind, on account of the corroboration that exists on all sides. The sand, and the water contained in it, in spite of the rains of thousands of years, have a saltness beyond that of the ocean, suggesting the belief that when the sea retired, owing to the upheaval of its bed, the water became imprisoned in the lower levels, and for long periods of time, until at length it dried up, leaving

behind it a concentration of saline conditions exceeding those of the sea itself. The present supply of water in these lakes is derived from the clouds, and is obtained by sinking to a depth ranging from 3 feet to 6 feet and upwards. In dry seasons it sinks deep down in the sand, in wet ones it rises to the surface, but at all times it is intensely saline, as may be seen by the thick blocks of salt that have to be broken out of the condensers after a few days use.

On the shores of Lake Lefroy are to be seen almost innumerable quartz reefs. Their numbers, indeed, are bewildering, for it would take a life-time to explore them all. Our investigation was, unfortunately, much interfered with by the want of a natural supply of water, and by the poor feed round the lake. Condensed water was obtained, though at heavy cost, but nothing could supply the absence of sufficient food from which our horses were suffering. At this time, moreover, grave differences of opinion among the members of the party arose to intensify our difficulties, and with great regret I was forced to consent to a break up of the party at the very time that all the indications around should have induced us to continue our search. We, therefore, had to go on to Coolgardie, our track being through a country abounding in mineral indications, but becoming more and more bare of the food and water we needed ; so that the 52 intervening miles was traversed with great difficulty.

Coolgardie was then but a small town constructed of wood, iron, and canvas, its permanent population probably not exceeding 3000, though that number is largely increased when prospectors flock in. Its main street, of about a mile in length, is 200 feet wide, bordered by the low buildings of galvanized iron and canvas seen on all new gold fields, but painfully deficient in the verandahs usual in these Eastern Colonies. At the eastern end of the street a few gum trees have judiciously been preserved, and, judging from the destruction that has overtaken the other timber that once adorned the environs, they will soon be looked upon as curiosities. At present the town is terribly bare and shadeless, while the red dust that blows down the unwatered street is an experience to be remembered. When we were in Coolgardie the *salt* water was selling at 12s. 6d. per 100 gallons, and the demand exceeded the supply. The distilled fluid is brilliantly clear and

attractive looking, but rain water very inferior in appearance is considered preferable. In all directions are seen printed announcements, such as "Water reduced in price," "Water sixpence per gallon," etc. Customers come with their canvas water bags and carry off the precious fluid to their abode—or more commonly—their tent. Horses are brought with larger bags, slung on either side of a pack saddle; camels come with their barrels or drums; people from a distance with a cart containing an iron tank. Clattering down the dusty street you see half a dozen ponies or donkeys brought to a horse trough, their afternoon drink costing their owner several shillings a head. Behind them, in charge of an Afghan, come a string of camels, swinging along with slow and noiseless tread on their way to the Afghan camp outside the town. Next comes a solitary riding camel, on which are two white men, riding one behind the other. They have just come in from the bush with a bag of quartz specimens, which they carry into a sharebroker's office. The animal is made to squat down in the street, and is "kneehaltered" with a thin cord or strap secured round his doubled-up foreleg; there he will patiently remain for hours without food or water till released by his owner. The street is full of life. Loaded teams, with six horses, are coming in from the west; empty ones are returning from the opposite direction. In some bye-street or open space may be seen scores of horses feeding at long canvas troughs or lying beside their waggons, the tea-master camping with them under the cloudless sky; dusky aborigines, surrounded by an admiring crowd and engaged in mimic combat, with their spears; Salvationists and their converts kneeling in the roadway singing hymns to a drum accompaniment, and the sounds of a matinee performance at the canvas theatre close by, all combine to make a picture of digging life rarely seen in the nineteenth century.

There is no cultivation round Coolgardie, nor did it seem to me that there was any probability of it, notwithstanding the anticipations of sanguine settlers. For many years to come, in my opinion, the wants of the diggings population must be supplied by the other colonies. The timber on the gold fields plateau, though plentiful, is not of large size, and a scarcity of timber, both for mining purposes and fuel, is a foregone conclusion ere many years shall have elapsed.

Where the quartz is sufficiently rich to admit of it, it is not improbable that crushing will be conducted at Perth (the capital), or at some nearer point where water is abundant, as soon as the contemplated railway is in operation. Coolgardie is distant 110 miles from Southern Cross, the present railway terminus, and the existing road is a terror to loaded teams. One long waterless stretch, over what is called the twenty-mile sand plain, strewn with the bodies of dead animals seemed to me especially bad, accustomed though I had been to sandy roads. Along this track the Government had expended large sums in the endeavour to ensure water for horse and camel teams, but with only partial success at the time I passed over it.

Opinions have been expressed in the other colonies that the West Australian gold fields are superficial, and will be quickly worked out. I cannot endorse that opinion, though circumstances prevented my journey being extended to the northward of Coolgardie, where rich and extensive discoveries have been made. I saw enough to satisfy me that, so far as reefs are concerned, the gold-fields are in their infancy. In no part of Victoria that I am acquainted with are quartz reefs to be seen in such extraordinary abundance, and the majority of them have never yet been properly tested. My own anticipations is that within the next two or three years the yield of reef gold in Western Australia will have increased to a surprising extent. It cannot be expected, of course, that in a country so deficient in water, not merely at the present epoch but evidently during past ages, the yields of alluvial gold will compare in any way with those obtained in other colonies, which have been blessed with an ample rainfall.

With my arrival at Southern Cross, where the sight of the Railway Station reminded one of the return to civilised conditions of existence, my journey came to a close. It is an important place now as the entrepot of a large carrying trade, but on the completion of the line to Coolgardie its prosperity must decline. Reefs however of moderate richness are being worked close to the town, and from the indications visible their numbers may one day increase. The surrounding country, except for the salt lakes, is devoid of water, and, having a limited and precarious rainfall, can never, in my opinion, be advantageously cultivated. I could not help feeling, however, that the mineral resources of the locality had not been by any means developed as yet, and that any day may witness golden discoveries possibly not inferior to those of Coolgardie itself.



# TRANSACTIONS

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ROYAL

# Geographical Society

OF AUSTRALASIA.

VICTORIAN BRANCH, INSTITUTED 1883.

Edited by the Authority of the Council of the Society,

BY

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ASSISTANT SECRETARY.

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VOLS. XII & XIII.

ISSUED MARCH, 1896.

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Melbourne :

VICTORIAN PRINTING WORKS, 441-43 LAW COURTS PLACE

1896.