

## JOURNAL

061433

of the

EXPLORATIONS EASTWARD OF YORK TO THE LIBRARY.

WELCOME HILL, AND THENCE  
TO LAKE BROWN, WONGAN  
HILLS, MOORE RIVER AND  
UPPER SWAN.DEPARTMENT OF CONSERVATION  
& LAND MANAGEMENT  
WESTERN AUSTRALIA

By The Surveyor-General,

Captain J.S. ROE, R.N.

in

1836

Copied from Capt. Roe's original Field Notes  
(registered as Field Books 4 and 5) by Lands  
Department Staff in 1976.

Note inside front cover of Field Book 5:-

York Gum	-	Tworta
Fan Gum	-	Wooruk
White Gum	-	Wondo
High species gum	-	Mallart
Jam Tree	-	Mungiet
		Menung
Gum tree nankeen		
bark	-	Gnecleruk

JOURNAL

5th October, 1836. -- At 2.55 p.m. took leave of Mr Bland at a good ford over the Avon, in three feet of water about 100 yards below his house, and struck SE b.E½E which for ½ a mile took us along the road to Mr Hardy's farm. Land grassy, mixed with hach pink everlasting flowers. Soil, brown loam, in places light, producing jam and wattles, some good grass &c.

3.40 p.m. In 2¼ miles crossed a shallow watercourse with grassy bed dipping to Avon on right: country undulating more grassy.

3.50 ¼ mile further crossed a stream bed, rocky, water in many trap pools: dipping ENE, grassy banks, strong brown loam.

4.5 ¼ mile: Mt. Bakewell N 319 E. - 5-6 miles. Entering forest of white-gum: less grass.

4.30 1 mile: crossed two small dry waterbeds: in later, grass land, good brown loam - wondo wooruck &c. Undulating.

4.20 - Reached a low ridge height, and saw in an open space to the SE<sup>d</sup> an uneven hill of moderate elevation (? Junction Peak) 11 or 12 miles to N 149½E. Good red loam: gravel in places. Wooruk, wondo tworta.

5.20 - ½ mile came on white-gum forest land sloping to southward in long gentle descent forming a wide valley - soil sandy and gravelly, some grass. Country then improves, more open and grassy, gently undulating: timber and water. Wondo grass trees a few, York nut and wattles.

5.45 - In one mile over forest land tolerably grassy, came to the River Mackie, in long pools 3 to 5 yards wide, salt, and lined with casuarina and tea tree. The bed was also filled with patches of samphire. Tracing it up for one-third mile in an easterly direction we came to some small fresh pools, and halted for the night. The feed very scanty and best in the river bed which comprised a width of 18 or 20 yards in places in which were several pools.

Made this day about 5 miles SE b.E ½ E  
Summit "a" of a wooded ridge N 59E, 3 miles  
SErd.

Oct. 6. - Having marked a base line tree ① we proceeded on our journey at 7.15 a.m. : crossed to left bank of Mackie and steered SE b.E ½ E. In one third mile entered open forest level land of chiefly wondo with some wooruk growing in small graceful clumps. Soil, light brown loam.

7.45 - Came again on better land in which York gum was growing among better grass, and in a few yards came again on the Mackie in pools, quite fresh, trending to the north. Crossed to the right bank, timber small : 1½ miles from bivouac - river 100 to 50 yards on right.

8.00 a.m. - Travelling along bank of long pool, salt, 12 to 15 yards wide. Half a mile - ducks. Crossed to left bank, river coming from NE b.E. Soon light, sandy, brown loam, better at 100 yards. Enter white-gum forest again & for 1¼ mile eastward in it till 8.25 a.m. where emerged upon more grass land, York gum, jam, and some mallart.

8.35 Half a mile. Summit "a" N ½ E, 3 miles. Crossed a deep grassy bed dipping north to the Mackie. Country nearly level : some grass, wondo, wooruk, tworta, mungiet &c. Brown loamy soil varying in character. In ¼ mile came to and crossed a streamlet dipping to SE and ESE in a

considerable hollow, with grassy flats on each side to 150 yards. Water in it nearly salt and in large pools fringed with casuarina—on other side land good and grassy - brown loam - wattles, nut, &c.

9. a.m. - In  $\frac{3}{4}$  mile further halted on left (right) bank of stream just below the junction of a small dry tributary from left. Took sights for chronometers.

Longitude  $1^{\circ} 1' 18''$  E. from Perth.

9.35 - Resumed. Ascended . . ? . . slope to examine it. Traversed good grassy loam, mixed as usual with much yellow flowers. Elevated plain, jam, nut &c.

10.5. -  $1\frac{1}{4}$  miles. Saw an elevated woody tract 17 miles to N  $159^{\circ}$  E, and one with double summit 14 miles N  $175^{\circ}$  E.  $\frac{1}{2}$  mile further a dry grassy tributary from east.

10.25 - Half a mile beyond. Summit "a" 5 or 6 miles to N  $336^{\circ} 20'$  E. Scrubby forest land.

10.48 - In  $\frac{3}{4}$  mile entered good grassy land, best seen since leaving the Avon. Twoorta, mayall, &c.

11.8 - On top of a high ridge, grassy, red brown loam.  $\frac{3}{4}$  miles since 10.48. :-

Mt. Bakewell 15 or 16 miles (Mackie?) N  $315\frac{1}{2}^{\circ}$  E.

Summit "a" 6 or 7 miles 318 $\frac{1}{2}$

A hill 5 or 6 miles 194 $\frac{1}{2}$

Distant view of the country in advance, but nothing remarkable appeared.

11.25 - Granite cropping out (specimen). Descended a gradual slope, and at 11.35 in  $1\frac{1}{4}$  miles from 11.8 halted at bottom of it where a small watercourse, with pools in it, was winding to the SE through a tolerably grassy valley. This grass was not of the best quality, and was growing amongst jam and nut trees.

Obs. the Latitude . . .  $31^{\circ} 57' 27''$  S.

Longitude . .  $1^{\circ} 10' 30''$  E. from Perth

by Chronometer.

Near our halting place three native huts, semi-circular, thatched with grass-tree tops: occupied two or three nights ago.

Marked a white gum  $\diamond$  and at 2.45 resumed our journey. (2 miles). While in the act of doing so Mr Moore's gun nearly did mischief by going off while lying on the ground, and the shot passing among horses and men.

In  $\frac{1}{2}$  of a mile came to the Mackie 5 yards wide, salt. Crossed to left bank: coming from eastward: light soil.

3.20 - In  $1\frac{1}{4}$  miles came on left bank (at an elbow) of a tributary coming from E: dry and grassy: undulating land: Jam and . . .  $\frac{1}{4}$  of a mile beyond entered upon open plain covered with scrub and a species of grass tree different from usual sort: the inner section of their more slender leaves being of yellow ochre and ends tipped with same colour. This continued for  $2\frac{1}{2}$  miles till 4.30 p.m. when country dipped E, but was still very poor. Left a grassy valley on our right trending from S. after crossing it in its progress from W: tributary to the Mackie.

4.50 - After a long descent came upon same valley as last crossed, dipping apparently to the N. with a watercourse in it containing pools of water, good.  $\frac{3}{4}$  of a mile since 4.20. Consider this is still the Mackie. Here we halted for the night among tolerable grass, having accomplished this day and  $14\frac{1}{4}$  miles SE by E  $\frac{1}{2}$  E.

Oct. 7 - At 7.10 a.m. proceeded on our journey after marking a white gum off the left bank of the stream  $\diamond$ . Steered ESE: in 30 yards crossed a tributary from the NE: dry and grassy: main branch coming from the South. Immediately above, its banks passed through a narrow vein of bare forest land of York gum and mallart amongst which was a thick undergrowth - made then a long ascent.

8.10 - At  $2\frac{1}{2}$  miles from the bivouac: from top of a long scrubby ascent arrived on a ridge lying N and S, and saw a detached hill, round, 24 miles N 99 E "C". A peaked summit of a range 20 miles (wooded) N 105 $\frac{1}{2}$  E "b". Descended ESE  $\frac{1}{4}$  and E by S  $\frac{1}{2}$  S for 1 mile: the latter over an open sandy plain covered with low scrub, 200 yards wide. Between them (at 8.42) an open forest of wondo, wooruk and casuarina with grass trees and scrub. Country undulating - Kangaroos large. Steered E b. S  $\frac{1}{2}$  S.

9.5 - Arrived on rocky ironstone summit of next ridge  $\frac{3}{4}$  mile in advance lying N-S: and entered a clump of trees at west end of a flat-topped hill N 13° 10' E  $3\frac{1}{2}$  miles dist. Scrubby, poor, forest land, wondo, wooruk, casuarina and jam.

9.45 - In  $1\frac{1}{2}$  miles over poor forest land, came to and crossed a dry watercourse with shall grassy bed 4 or 5 yards wide winding to the south through undulating country.

10.10 - In one mile more through very poor forest, came to open scrubby plain.

10.30 - Arrived on opposite side of plain in  $\frac{3}{4}$  mile. Plain extending  $\frac{3}{4}$  miles NNW, and in SE direction beyond our view of 2 miles. Immediately on the margin numerous old huts, simply constructed of branches placed against prostrate trees, and thatched with bark from the adjoining wooruk trees. Grass now began to show itself, and the pink everlasting flower gave hopes of water. In this and the screaming



of white cockatoos we were not deceived, and in 5 minutes (about  $\frac{1}{4}$  mile) came on a stream bed 6 yards wide with a shallow grassy bed dipping to the southward. Pools of good fresh water being in the bed and the land passed over since bivouac ② having been of a very bad description - destitute both of water and grass - we search for the best place for our horses and halted at 11 o'clock for the heat of the day and to dine. - marked a wooruk ◇ (8 miles E b. S  $\frac{1}{2}$  S.)

At 1.40 p.m. resumed our journey E b. S  $\frac{1}{2}$  S.

2.5 - Came to an open scrubby sandy plain 3 miles long.

Hill "b"	12 miles	N 103° 30' E
----------	----------	--------------

Hill "c"	14 miles	N 95° 00 E
----------	----------	------------


sloping to E - 150 yards wide, since dinner 1 mile

2.30 - Crossed a small stream bed winding to northward from a rocky ridge  $\frac{3}{4}$  mile to the south. Country nearly level sloping gradually. Poor stiff clay with stunted timber of wooruk, wondo, mallart, &c: abominable thick scrub. 1 mile since 2.05

2.55 - Came upon a vein of forest land, nearly level, and timbered mostly with a variety of scrub called by the natives gnardruk, having a tall straight stem twisted, or fluted, and of a dark sepia colour. Their tops are formed like the wooruk, and, like them also, their leaves glisten as if wet. 1 mile since 2.30. Brushwood, clayey loam soil hardened by the sun: country very poor, without grass. A few York gums and some grass-trees for 300 yards when the land was again bare of any covering except stunted wondo and casuarina. In  $\frac{1}{2}$  mile from the last vein another declined about a  $\frac{1}{4}$  mile broad, beyond which a dry waterbed was crossed in its passage apparently to the south. A band of thick, tolerably good grass, was on its eastern side, at which we allowed our horses a crop of 5 minutes, and proceeded onwards at 3.40.  $1\frac{1}{4}$  miles since 2.55.

4.50 - In 2 miles came out on a open plain:-

Hill "b" . . . . . N 107½ E.

4.50 - In ¼ mile came to west margin of a shoal salt lake 1 mile NNE-SSW, and ½ of a mile wide : the sandy clay bed covered with low samphire and other salt plants : shores low and sandy. Crossed its northern side to the NE in ½ mile, and then steered SE among spearwood tough scrub in the hope of intercepting any stream which might fall into the lake from the hills to the eastward. In a few minutes we came on another lake, nearly dry, but containing among some brushwood a quantity of good water deposited by the last rain. At this welcome pool we watered, and filled empty vessels, after which we proceeded E b. S ½ S towards hill "b" : we encountered a chain of similar shoal lakes to that we first came upon, with the exception that they are smaller and contain some fresh instead of salt water. The shores not having a blade of grass upon them, we made for the higher land to the south, and after ¾ mile among the lakes, just as the sun was disappearing and after ¼ mile, halted on the margin of a lake almost dry, where very coarse grass in distant tufts was the only feed to be had for our famished horses. Marked a small mallart tree  A very extensive open down (rather elevated in contrast to that we have passed over previous to coming to the first lake) skirts the north side of the lake range for several miles

8th Oct. - Early in the morning a dense fog hung over the lakes. At 7 o'clock we proceeded E b. S ½ S through a dense thicket of young saplings of the gnardruk and mallart, growing in a nearly level land of light reddish soil. ¾ mile to 7.25 : a belt of mallart alone then for 300 yards, and then wondo of small growth in same soil and level country : water lodges in places. After passing through another belt of gnardruk branching out immediately they leave the ground. At 7.45 came to open plain in ¾ mile, extending southward beyond valley a mile & W ½ a mile. ¼ mile since 7.45.

7.55. - From scrubby ridge in the plain, a hill "b"  $2\frac{1}{2}$  miles to E  $\frac{1}{2}$  S: hill "d" miles N 57 E.

8.2. - Re-entered forest of wondo and gnardruk plain  $\frac{3}{4}$  mile wide E-W. At 8.10 crossed head of a dry watercourse in a level soil and dipping Wd. at 8.30 in 2 miles came to a watercourse winding its way westward from the hills: some pools of good water in it and the country improves: jam, wooruk, mallart, wondo, and some grass.

Hill "b"  $\frac{1}{2}$  mile distant.


8.45. - Having crossed over a narrow ridge of quartz and granite, halted in a small valley at base of hill "b" and let the horses feed on some tolerable but scanty grass while I ascended the hill with Mr Moore and Smythe. On the summit observed the sun's alt. for Longitude by Chronometers and sextant. (Baring Peak)

Hill "c" (Althorpe Peak)	$3\frac{1}{4}$ miles	N 72° 30' E
County Peak	12 - 14 miles	252 40
Flat hill on same range	15 miles	256 50
Small peak on same range	14	253 40
A flat topped hill before set	15 - 16	319 30
S. end of large Down at N. side of salt lake	1	285 30
Mt. Caroline	16 or 18 miles	24 45
High, and more level summit	20	21 40
A flat top hill, long summit, centre	16 - 17	340 20
High, peaked summit of wooded range	25	220 45
Summit of a long range of high distant land	20	233 30
A wooded flat topped hill	16	257 20


To the southward the country appeared still to be elevated, but the nearest wooded ridge 2 to 3 miles distant intercepted all view in that direction, except of some wooded land of still greater elevation which could occasionally be seen overtopping the

nearer trees. In all other directions extensive open downs or plains, without a tree, were numerously interspersed amongst wooded lands apparently of the character we had passed over yesterday and to-day but of greater dimension, and extending to the north and south as far as we could discern.

Our elevation appears to be about 200 feet above the lakes near which we last night slept.

Hill "b" is a mass of quartz, split into small stones and fragments by exposure to the weather, with some of the largest, as big as a man's head. We constructed a heap round a log of wood 5 feet high, and near it marked a tree  and spirally round its stem.

The horses having been conducted to the best part of the valley in which we left them where pools of water were in the bed of the water-course already mentioned, we descended north  $\frac{1}{4}$  mile to join them and at noon I observed the latitude to be  $32^{\circ} 3' 32''$ .

Stream bed at our halting place comes from SE and trends to westward: its commencement about  $\frac{3}{4}$  mile to the SE and its valley nearly  $\frac{1}{4}$  mile broad: soil light brown here. Marked a tree 

2.30 - Resumed E b. N  $\frac{1}{2}$  N. First  $\frac{1}{2}$  mile over grassy land, York gums, 2 kinds York nut, jam trees, then open plain, sandy country grass and scrub, having hill "d" about one third mile on left. Native fires smoked up twice Ed. of hill "c".

3.30 - Entered close wood of York gum, wooruk, wattle and scrub at 2 miles from dinner : soil, hard clay covered with coarse sand. Plains with numerous kangaroo, and extending to northward. Ascended rocky scrubby hillside, with patches of good red soil and in two-thirds of a mile forced our way to the summit of an intervening rocky ridge, 100 yards beyond which, up a steep ascent of granite rocks we reached the western of two granite peaks bearing from each other N 78 E. and S 78 W one-fifth of a mile apart.



The appearance of the country being very unpromising, and extensive open plains or downs occupying the principal part of the surface, especially in the direction of my intended route E  $\frac{1}{2}$  S, we descended at 4.40 to search for the most suitable place for encamping our horses for the night. Marked jam tree near the summit  $\Delta$

Proceeding ENE along the southern side of the rocky peaks, their slope was observed to be tolerably well furnished with grass, and the rich red soil at their base produced also jam and nut trees, small casuarina and other trees of small growth. Large bare sheets of granite rock frequently occurred, and by following down a small water channel which the rains had grooved in the ground at the eastern base of Hill "c" a pool of good fresh water was found  $\frac{1}{2}$  a mile eastward of it amongst good grass ... and we bivouacked for the night. Numerous footsteps of the Natives had been noticed while traversing these granite peaks, and by their fires we concluded they were at no great distance. Marked a casuarina tree  $\diamond$  situate in a beautiful clump of wattles in full yellow flower, amongst which we rested for the night.

Oct 9. - At 7.25 having breakfasted and filled about 2 gallons of water we resumed our journey, proceeding E  $\frac{1}{2}$  S to pass over the dreary and uninviting country seen yesterday from hill "c".

Ascending the sloping side of our little valley we soon got beyond the limits of grass, and entered a thick scrubby forest of wooruk, gnardruk, &c for  $\frac{1}{4}$  mile, after which we traversed an open sandy plain covered with low scrub. E  $\frac{1}{2}$  S and East until 8.55 when we arrived on the wooded crest of one of the rising grounds, and found it supplied with a coating of grass among casuarina, jam, and nut trees. Granite rocks projected in places, and the soil was a light red loam.

Hill "c" three miles North 272° East.

9.10 - Proceeded N 111E towards next hill 3 miles distant, which appeared grassy and a native fire was smoking on its northern brow. As we advanced, other smokes shot up from a line of trees on our left, and were answered by natives 10 or 12 miles to the eastward, showing that both the region was inhabited, and that the Natives had become aware of our approach. Traversing the same description of sandy clay plains covered with low scrub, we entered a wood at foot of hill "f" where a well of good water was found near some tolerable grass, and we halted at 10.35 to ensure both to our horses and to dine. A plentiful supply of water was obtained

by enlarging the well.

Having dined we marked a York gum Tree  $\Delta$ , Mr Moore accompanied me to the top of hill "f" while the baggage followed more at leisure. We found the ascent of a long  $\frac{1}{2}$  mile more or less grassy or scrubby amongst York gums jam &c, and a small water-course was grooved in the slope, trending to the Wd and NW. From the summit - which was one bare smooth mass of granite containing 2 holes full of excellent rain water:-

Hill "c" bore N  $283\frac{1}{2}$ E dist 7 miles

Very high piece of land N 278 E dist 30 miles

County Peak N 291 20E

Small wooded rise in direction of our route.  $102^{\circ} 30'$

Country more wooded to the E than in any other quarter, and the hills at 12-15 miles distant appearing grassy under the trees.

3.35 p.m. - Baggage joined and we proceeded E b S over  $\frac{1}{4}$  mile of grassy granite surface, then over very small scrubby plains for  $\frac{1}{2}$  mile more when a Native was seen on our left, and, presently afterwards several more. On beckoning them they came to us, and after a moment's hesitation entered into free and familiar dialogue. The numbers increased from several quarters so fast that in a few moments they amounted to between 40 and 50 most of whom seemed to rejoice at the interview, while others kept aloof, handling their spears and throwing sticks, and looking sulky.

Attempts were made to learn from them some tidings of the object of their journey, but the question of "Where is Moleyeen" they pointed NNW, and explained that they were then on their way to "Cabba" which has hitherto been explained by them as the last stage to it from York. They knew nothing of the country to the East. Some of them had been seen on the Avon, and others to the North.

After some loud and vociferous dialogue, and receiving half a biscuit apiece, they all departed on their respective routes in good humour.

4.30 - We proceeded E b S and in  $\frac{1}{4}$  mile crossed at junction of a dry watercourse from SE with one trending to NE.


5.0 - Steered N 61 E for a bare hill "g" 2 miles distant, having made good about 4 miles E b S since dinner.

Descended an open plain for  $\frac{1}{2}$  mile on which were as usual many kangaroo, and at its extremity traced a shallow water drain to the southward, but without finding water.

The ascent to hill "g" was over a red loam soil, producing grass and low soft herbage, amongst jam, nut and York gums. On the western side of the large smooth granite rock which crowns this hill we halted for the night as the sun disappeared, and had plenty of excellent water in a small channel from it which was almost running.

We are now in a part of the country which for the last 2 miles and for the next 8 or 10 miles at least, dips to the north eastward a circumstance which leaves room for the hope that we shall very shortly meet with a favourable change in the nature of the country. Coarse granite, casuarina chiefly.

Oct 10 - "g" Mount Bebb.

Breakfasted, marked a York gum  and while the pack-horses were preparing I ascended the hill "g" which has several summits, the highest of which was about 300 yards ESE from our horses, and consisted of a large round smooth mass of granite, almost entirely bare.

From this position a distant hill, not much wooded, bore N 345 E 15 miles (Mt Caroline ?) A woody elevation at S-W extremity of a long ridge N 145½ E, 4½ miles appearing beyond an open plain. A small elevation "h" and similar to hill "g" 1½ miles N 152½ E.

Wooded summit "i"	.. 3 miles	174½
Granite hill "j"	.. 5 miles	68½

Country in advance more wooded and less studded than usual with open plains, and no remarkable feature presenting itself, although there was reason for concluding the country was improving a little eastward.

7.25 - Baggage having been delayed, started W ½ S? (E ½ S)

7.50 - In 1 mile on a gradual descent crossed a dry waterbed dipping NE from direction of hill "h", being the first indication of water flowing eastward.

Country thinly wooded with stunted wondo - soil light and sandy; country then grassy - jam, nut, &c - nearly level till 8.3 for ½ mile, then crossed junction of a tributary from E b. S with a water course from SSE, which then dipped northward.

Ascended gradually light sandy land, wondo, gnardruk, tworta &c for 100 yards, then about level : thick forest of gnardruk. In ½ mile from 8.3 came on the tributary winding through very thick scrub.



8.55 - In  $\frac{1}{4}$  mile more had arrived on summit of a scrubby ridge:-

Hill "g"  $2\frac{1}{4}$  miles N 277 E

Hill "h"  $4\frac{1}{2}$  miles N 247 30E

Rainy squalls from the westward.

9.10 - proceeded W  $\frac{1}{2}$  S? (E  $\frac{1}{2}$  S) passed very slowly through thick brushwood 10 to 12 feet high, through which we had much difficulty in forcing our way.

10.15 - In  $2\frac{1}{4}$  miles through very scrubby thick brush for the most part. A considerable hill "j"  $2\frac{1}{2}$  miles distant bore  $349^\circ$ ; apparently resembling "g" and "h": occasional open scrubby plains of sandy soil. In 10 minutes, or  $\frac{1}{2}$  mile we came to a watercourse among jam, nut, and York gums, and on following it up southward for 300 yards came to a small well. This was soon deepened out, and furnished enough water to water all the horses in a few minutes, at 2 feet below the surface in a bed of coarse sand among granite rocks. Country nearly level, with some grass 150 yards on each side.


10.50 - Proceeded E  $\frac{1}{2}$  S. Descended  $\frac{1}{2}$  a mile over an open plain, and entered forest of York gum; jam, nut and wattles growing in a brown clayey loam producing some grass and much of the pink everlasting flowers which betokens the vicinity of water. White cockatoos also were screaming about, and several of them were added to our larder.

Proceeding SE b. E in  $\frac{1}{4}$  mile, land grassy, rapidly improving, and soon thick with grass among wattles, jam, and nut trees. E  $\frac{1}{2}$  S  $\frac{1}{2}$  mile came to a watercourse 3 yards with grassy bed in which was a good well of water. Here, halted to dine, amongst some very good and thick grass, the best we have met with since leaving the Avon. Its extent seemed to be confined to  $\frac{1}{2}$  a mile in the directions of N, E and Wd. The watercourse comes from some granite rocks about  $\frac{1}{4}$  mile NE and above the well is joined by a smaller branch coming from the SE. The main branch then dips SW and NW through good grassy land and brown loamy soil.

Obs. Lat.  $32^\circ 3' 52''$  S.

This place seems to be a great resort of the Natives, whose old fires surrounded with Kangaroo bones, are to be observed in great numbers. The well, which was 14 inches deep with water, had been roofed over by them with dead branches and covered with soil, leaving one small opening only, which they probably closed up when absent from the vicinity in order to exclude all animals and birds, and to keep off the sun's rays which (on the South Coast at least) they are of opinion injures the water.



Marked a tree near the well 

Having dined, at 3.20 we proceeded on our route E b S following up stream bed in which were many pools among granite rocks for  $\frac{1}{2}$  of mile. Then a scrubby, sandy ascent, nearly without grass, with granite at surface.

When  $\frac{3}{4}$  mile from our dining place, on summit of an eminence bare of trees, at 3.40 :-

Distant wooded hill "k"

visible over trees	20 miles	N 105°	45' E
Hill "j"	4	321	
Mt Stirling ?	28	327	
Mt Caroline ?	25	323	20

At 4 p.m. proceeded E b. S $\frac{1}{2}$ S towards hill "k". Entered a wood in  $\frac{1}{4}$  miles, then alternately thick close woods and scrubby plains. Soil light brown loam, in places caked hard by the sun.

4.40 - In  $1\frac{3}{4}$  miles crossed a small dry water drain trending to the southward.

5.50 - In  $3\frac{1}{4}$  miles arrived on summit of 3rd or 4th ridge since 4.40 - a bare mass of granite from which an extensive view to the eastward of woods and plains.

Being anxious for our horses night quarters, and the vicinity becoming grassy, search was made to eastward: and in  $\frac{1}{2}$  a mile we came to a shallow water hollow, apparently dipping to the NE through forest of gnardruk and wooruk, amongst which was a little grass. Halting the baggage here, I rode forward with Mr Moore to reconnoitre which terminated in our halting for the night  $\frac{1}{4}$  mile further to the N, where water was found in pools in a small watercourse coming from the NW and dipping in the opposite direction through grassy land thinly sprinkled with jam, nut, wattle, and York gum,

The grass appeared very backward for the season, and a similar circumstance which we have frequently had occasion to remark since leaving the Avon, coupled with the great scarcity of watercourses, would lead one to suppose this part of the country is badly watered, especially in summer.

We have hitherto found the vicinity of masses of granite which cover the detached hills, to be most productive of both grass and water. During this day, although we have passed through much thick brush and scrub and totally useless forest land, the country may be pronounced to have improved: the grassy spaces have become more extensive than yesterday, and the scrubby open plains of less frequent occurrence.

We are, however, still among the gnardruk, wooruk, and wondo; none of which in general seem to be tenants of superior soil.

Marked a gum tree 6

11th Oct. During the night the barometer fell considerably accompanied by a fresh breeze from the westward which, by daylight, had increased to a gale from the southward with rain.

Being however, unwilling to delay, we proceeded on our journey at 6.50, steering E b. S  $\frac{1}{2}$  S. In  $\frac{1}{4}$  mile the stream had a bed 2 to 3 yards wide, banks 4 feet high : winding ENE and joined by another smaller from westward.  $\frac{1}{2}$  a mile further another, dipping to NE. Ascended at 7.30 in terrible scrub. Saw the interior country to north eastward. Peak "e" bearing N  $58\frac{1}{2}$  E 10 miles.

8.0 a.m. - In  $1\frac{1}{4}$  miles crossed watercourse trending to NE b. E in a narrow grassy hollow in a slightly waving forest country: soil reddish brown loam: gnardoruk, wondo, &c, on the uplands - York gum, jam, and nut, in hollow. Valley  $\frac{1}{2}$  a mile on left.  $\frac{1}{4}$  mile further, came on nearly level grassy land with flat sheets of granite at the surface. Proceeded  $\frac{1}{4}$  mile NE b. E to a small granite elevation, but could obtain no view

8.15 - Proceeded E b. S  $\frac{1}{2}$  S and in  $\frac{1}{2}$  mile were on top of a bare granite hill, supposed "k" from which a body of open water, apparently a lake, in bed of a river lying N-S bore N  $50\frac{3}{4}$  E 2 miles

Hill "l"	N $43\frac{1}{2}$ E	dist 6 miles
Hill "m"	46	" 5 miles
Peak "n"	111	-
Peak "e"	$73\frac{1}{2}$	14 or 15 miles
Peak "k1"	163	$1\frac{1}{2}$ miles

at 8.50 descended NE  $\frac{1}{2}$  E toward the open water: grassy, wattle, jam, nut; sheets of granite.

9.15 - In  $1\frac{1}{2}$  miles came to the water : found it a shoal fresh lake, the water in it apparently the residue of late rains : extensive samphire flats around it. Skirted to the eastern side of it : a few ducks, herons etc. on the water : shores sandy, land about it low. Another lake 30 yards to eastward.

Steered NE  $\frac{1}{2}$  E along north west side of the latter lake and passed over a series of numerous flats covered with low tufts of tea-tree and tall spearwood.

9.50 - Crossed over a belt of 200 yards forest land of light loam, and came on another lake nearly circular 250 yards in diameter and quite salt: broad sandy beach, water about a foot deep. Grass on southern side. Deep prints of an Emu's foot, and those of a dog close behind it. Timber on borders, stunted casuarina and gnardoruk. At its SE corner we were 2 miles distant from 9.15.

10.10 - In  $\frac{1}{2}$  mile more arrived at NE margin of the flats, and gradually descended NE  $\frac{1}{2}$  E through forest of gnardruk and woorak, with undergrowth: then open plain, red loamy soil, and scrub.

11.15 - In  $2\frac{1}{4}$  miles arrived on summit of hill "m" at its NW pitch: flat granite rocks around, rough at the summit. Hastened to descend in order to observe the latitude at our proposed halting place to dine. SE b. S  $\frac{1}{2}$  mile came upon outward track, and at 11.45 halted in a slight hollow where cockatoos were screaming their alarm, and some tolerable grass was thinly scattered. Water on the granite rocks. Summit of hill "m" N 5 E  $\frac{1}{4}$  of a mile. Jam, nut, wattle, York gum, and some other trees of small size.

Noon. Observed Lat.  $32^{\circ} 2' 39''$

Strong gale at W b. N: cloudy, with occasional sprinkling rain.

After dinner Mr Moore accompanied me to the summit of hill

"m" from which:-

"1"	Bore	N 13 E	$\frac{1}{2}$ a mile dist.	
"1 <sub>1</sub> "	"	296 $\frac{1}{2}$	3 miles	" (bare granite hill)
"1 <sub>2</sub> "		300	3 $\frac{1}{2}$	(bare granite hill)
"k"		215 $\frac{1}{2}$	4	
"p" hill shewing a bold front to the SE		312 $\frac{1}{2}$	4 $\frac{1}{2}$	
Summit of range from "k <sub>1</sub> " to Wd		223	6	
a summit (? "k", set at 3.40 p.m. 10th)		158	5	

Country to the eastward, of same character, but apparently more grassy. Marked our halt by bevelling a York gum  $\diamond$  and at 2.40 resumed journey on bearing E $\frac{1}{2}$ S.

3.10 -  $\frac{1}{2}$  a mile hill "1<sub>3</sub>" : a considerable mass of granite with smooth round summit: N 5 E to rock. Land grassy, soil gravelly and bare and covered with fragments of quartz and granite, bare flat granite sheets on the surface, jam, nut, York gum &c.  $\frac{1}{4}$  mile further crossed small watercourse dipping to NNW

3.30 - In 1 mile more crossed a watercourse with a good pool in it, dipping NW. Ground on W side of it much broken, and water had lodged in holes: on south side, jam, nut, wattles and indifferent tufty grass: undulating country: brown loam sprinkled with coarse gravelly sand. Hereabouts met with a plant we had not before seen, a pendulous sort of acacia with narrow long leaves, and bearing yellow bitter pithy fruit flattened in appearance and strongly lined into 4 quarters.

3.50 - Crossed a watercourse dipping NNW through a grassy hollow: good thick grass for 200 yards on left bank and continues on opposite side over next hill which sloped round and smooth, with good red loam: grass thick on the slope to left.



In  $\frac{1}{4}$  mile from last stream-bed, another dipping NNWd, beyond which rose a thick forest of gnarled oak and underwood, but forest not so thick and more grassy than yesterday's and previous. In  $\frac{1}{2}$  mile arrived at a broken hill of undurated clay resembling ironstone.

Hill "q" 3 miles N 117 E

Hill "r" 8 or 9 miles 128 $\frac{1}{2}$

Proceeded for hill "q" over a scrubby descending plain which had been burnt last year by the Natives, and upon which we disturbed a family of 2 large Emus and 3 small ones. They were early aware of our approach, and took to the thicket before we could get within reach.

At foot of the descent numerous footmarks of the Natives were observed on the edge of a belt of woodland which surrounded hill "q". Pushing through this and over some level sandy land which seemed occasionally to be under water, we ascended the hillside and soon got upon grassy open land upon which jam, nut, and wattles prevailed. A watercourse descended to the SW from the N side of the hill, and upon its bank we halted amongst good thick grass and wattle, in a brown loamy soil, at  $\frac{1}{2}$  past 5 o'clock.

Numerous marks of the Natives had been left on this spot, and many of them not more than 24 hours old, including the holes that had been dug by the women in search of roots, and about 5 dozen short sticks 18 inches in length, an inch in diameter, the use of which we could not conjecture unless they had been used by the youngsters in practising throwing the "dowart" or "Kylie" - the former a straight round stick 18 to 24 inches in length which they throw with a good aim and kill bandicoots, kangaroo rats, wallaby, birds &c, and the latter a curved flat piece of wood of the same length, flat on one side, and convex on the other, rather sharpened at the sides and edges, and is used by them in fighting and in killing game.

Oct. 12 Ascended hill "q" after breakfast. Named it "Emu Hill" and took the following bearings:-

Peak "r"	6 miles	N 132	20 E
A woody peak	3 $\frac{1}{2}$ "	206	20
Hill "k" ?	5	246	30
Hill (Cumining?)	2 $\frac{1}{2}$ -3	274	30
Good grassy land visible	1 - 2	SE by S	
Good grassy land commencing	$\frac{1}{2}$ mile in direction	ESE.	

Country appearing grassy in many places and decidedly improved. To the eastward ridge upon ridge.

This hill has several summits of less altitude, all sheets of granite rock of coarse texture.



Bivouac 7 300 yards

Marked a Forking York gum on left bank of the stream which contained abundance of good running water  $\diamond 7$  and at 7.15 proceeded on our journey.

Passed E over the northern brow of Emu Hill and steered E  $\frac{1}{2}$  S. Cork trees, wattles &c. and the first kangaroo we have met since leaving the Avon. The valley of our bivouac continues eastward, and good grass visible over top of the opposite ridge. In  $\frac{1}{2}$  mile E  $\frac{1}{2}$  S we were at foot of hill "q" : where less grass. On the hill excellent grass and good red loam. A very large sheet of granite of very coarse texture. On left a small stream winds to eastward in good grass valley. Descended over good grass and scrubby forest alternately. Grassy left and right for  $\frac{3}{4}$  mile.

7.50 - In  $1\frac{1}{2}$  miles from Emu Hill crossed small shallow watercourse dipping to right (southward).

8.15 - Hill "r" N  $140\frac{1}{2}$  E, 5 or 6 miles : 1 mile since 7.50. Poor forest land, gnardruk, wooruk, and a species of white gum with glazed smooth bark.

9.20 -  $2\frac{1}{2}$  miles over close forest, much dead wood of the gnardruk lying prostrate. Last 2 miles over land at times under water, and nearly level and covered with close tufts of spearwattles. At 9.20 the marks of inundation were 30 inches above general surface. Here we found on the surface numerous fragments of limestone of secondary formation.

Close thickets of spearwattle, small gnardruk, wooruk, and other species of eucalypti mixed with scrub for 4 miles till 11.20, soil sometimes sandy and frequently good reddish brown loam, and water remaining on nearly the whole space in rainy season. Country so nearly a level that it is not easy to say in what direction the winter rains would drain, but I think to the eastward.

At 11.20 we were upon an open "Down" of yellow sand over clay : covered with coarse rushy grass and low scrub. Continued to eastward: in  $\frac{1}{2}$  mile saw a round topped woody hill,  $3\frac{1}{2}$  miles, bearing N  $181\frac{1}{2}$  E. Trees on summit of a round grassy hill N  $347\frac{1}{4}$  E, 4 or 5 miles. Plain extending N and S  $2\frac{1}{2}$  miles and E and W 1 mile.

Proceeded E  $\frac{1}{2}$  S  $\frac{1}{2}$  mile to its eastern margin, where halted at noon for observation of Latitude and Barometer, but the weather being very cloudy with a gale from the westward, the former was a very indifferent observation.

12.5 - Proceeded E  $\frac{1}{2}$  S through thickets of scrub by the creek, and close forest till 1 p.m. where at  $1\frac{1}{4}$  miles passed 5 huts entirely constructed of sticks bent together and thatched with bush. A large hole near it had once contained water. Soil in

places good red loam, in others, sandy.

1.50 - In 1 mile descended rather abruptly to a place where water had once lodged near a tea-tree brook: white sandy clayey soil: country dipping generally eastward.

2.5 - In  $\frac{1}{2}$  mile more, came to water in a slight hollow lying SE-NW, at SW foot of an open rising plain of light soil covered with an apology for grass, and old dead scrub. Watered the horses, and at 2.25 proceeded E  $\frac{1}{2}$  S.

Finding the grass tolerable as we ascended, further examination was made E  $\frac{1}{2}$  S, NE, Nd, and NW and at 2.50 we halted our tired horses to refresh amongst the best grass we could find. Whilst doing so a large Wood-or-Mountain Duck, or a Gnow, flew past to the North.

Both horses and men having made a fatiguing march to-day of 14 or 15 miles through thick brush and scrub, we made this our Bivouac 8 and remained for the night: the nature of the country passed through to-day leaving great doubt whether we might find better feed for our animals by proceeding onwards.

During the evening we thought we distinguished to the northward the note of a black swan.

About 300 yards to the N, a pool of excellent water 7 yards by 4 yards lies in the bed of a watercourse dipping apparently to the NE on the margin of the forest land.

Where all the waters of the last 30 or 40 miles, or, indeed, of the last 60, go to in the rainy season is a problem which our experience is unable to solve: watercourses being exceedingly scarce and with a very doubtful inclination, whereas numerous holes have been passed - especially this day - in which large quantities of water lodge and sink into the ground.

Our discovery this day of the Secondary limestone formation gives us hope that a favourable change in the country may not be far distant.

Passed many White Ants Nests to-day and yesterday, which had been dug out and robbed of their contents, apparently by Natives 8.

Oct. 13 - During the night we were visited by a depredator in the shape of a native dog, who was daring enough to carry off bridle and padded horse rug, from a bush within 5 yards of our fire. Both these and several of the horses tether ropes were found much gnawed in the morning, when the culprit was seen sitting close to one of the horses. Before a gun could be brought, he decamped, but as it is likely he may now follow in our tracks, we shall try tonight what virtue lies in a trap or rifle ball.

Watered at the pool near us, where we marked a guarderuk tree  $\diamond$  and at 7.55 proceeded thence E  $\frac{1}{2}$  S over an ascent of good red loam: grassy plain after, but the grass was very backward for any time of the year. On summit of the slope in  $\frac{3}{4}$  mile. Observed more elevated land 2 miles northward, between which and where we stood, a valley of low land stretched north-eastward in continuation of the low scrub through which we forced our way yesterday. Entered thick forest land, and continued in it and thick scrub for  $1\frac{1}{2}$  miles until 8.30 when we entered upon an extensive open sandy plain covered with scrub, and extending ENEd and WSWd interspersed with much tall, and thick brush : soil light sandy.

9.35 - From a scrubby plain, continuation of the last, a grassy granite hill 6 or 7 miles bore N 303E. A wooded summit just appearing over the trees, 10 or 12 N 286 E. A grassy granite hill higher than the above 7 or 8 - N 294 E.  $1\frac{3}{4}$  miles since 8.30.

Close to this spot was a second (met this morning) of 2 circular excavations in the ground, the sandy soil ..... being raised very regularly in a circle. The diameter of the excavation about 12 feet. We conjectured it was a grave, and dug to 2 feet to examine it when the fragments of an empty nest led us to believe it had been a large nest robbed of its contents by the natives.

$\frac{1}{4}$  mile further on :-

Hill "r"	10 or 12 miles (?)	N 286	20E
----------	--------------------	-------	-----

A patch of white sand on the distant land	12 miles	N 198	20E
---	----------	-------	-----

$\frac{1}{2}$  a mile further :

A wooded peak on a range	8 miles	N 233	30E
--------------------------	---------	-------	-----

A large hill	6	239	
--------------	---	-----	--

High hill	18 or 20	313	45
-----------	----------	-----	----

A  $\frac{1}{4}$  mile further to 10.20 from summit of the ridge:-

A low Granite hill "u" (grassy)	6 or 7 miles	101 $\frac{1}{2}$
---------------------------------	--------------	-------------------

A long bare hill "s"	5 or 6 miles	90 $\frac{1}{2}$
----------------------	--------------	------------------

Notched Range	9 ("n1 & n2")	64 to 69 $\frac{1}{2}$
---------------	---------------	------------------------

Summit ditto (two peak)	- ("n1")	67 $\frac{1}{2}$
-------------------------	----------	------------------

Woody Peak	12	92
------------	----	----

No elevated land visible to eastward, and horizon rather uniform: wooded country with some open plains.

10.35 - Proceeded E towards the long bare hill "s" Descended  $\frac{1}{3}$  mile, then entered close wood of small trees and undergrowth : soil light, sandy.

11.50 - In 2 miles through much scrub, halted to observe altitude of barometer.

12.8 - Proceeded up an ascent : open and scrubby, upon which were numerous traces of Emu : then through scrubby thickets and brushwood for the most part, through which with great difficulty we forced our way. Soil in many places good rich red loam, cracking with what an agriculturalist would call its own fat



in other situations, light and sandy. Timber small and stunted, consisting of *Guardsia*, a species of *Eucalyptus* with a light coloured shining bark, and several others.

One great impediment to our progress was presented by the very numerous fallen trees or saplings, which crossed each other and sometimes defied a passage. Fire seems very seldom to pass over this land, the trees rotting where they fall, and many decaying where they stand. The opposing element, water, seems to have a more extensive range - more than half the country having the appearance of being at times under water. The almost total absence of waterdrains in the land throughout many miles, leads one to conjecture that all the rain is absorbed by the land itself - a supposition which is strengthened by the appearance of the surface itself, which bears numerous indications of having retained water for some time at its surface.

At 2.50 having made good since noon about  $3\frac{1}{2}$  miles E we halted on the west side of a long bare hill where a stream was trending to the westward, and grass was in tolerable plenty. Both horses and men being nearly done up with the day's exertions we halted here for the remainder of the day. After dinner Messrs Moore and Smythe accompanied me to the summit of the hill "s" which is a solid mass of granite lying SE-NW :-

Hill "r"	20 miles	N 249 E
Wooded summit beyond a plain	6 miles	12
Notch Range - North foot		28
" " - Summit	$4\frac{1}{2}$ miles	32 30
" " - South foot		40
Notch Range, granite : wooded, and apparently grassy round base.		
Round wooded hill "n <sub>1</sub> "	6 miles	45 30
Broken granite hill "n <sub>2</sub> "	5 miles	49 45
Trees peak	10 or 12 miles	76
SUN setting		263 45
Smooth granite hill	20 miles	290
Hill "t"	5 or 6 miles	78
Hill in line, a granite, grassy neighbourhood "s <sub>1</sub> " $1\frac{1}{2}$ to 2 m distant. Close to the west side of summit of "s" is a lower ridge of bare granite lying N° and S° for 300 yards, and a similar ridge lies close to its south side.		

Many sheets of bare flat granite occupy the surface of the ground elsewhere in the vicinity of the grass.

Timber small, consisting of dark stemmed casuarina, jam, nut, wattles, and a larger tree of the white-gum kind on one of which we marked ⑨ to denote our 9th bivouac from York.



At the distance of 6 to 10 miles in a southerly direction the horizon presents one uniform unbroken line of open plain for many miles without a tree.

Oct. 14

At 7.20 proceeded on our route E by N. Passed over many bare sheets of granite, the detritus of which forms a light loamy soil. In  $\frac{1}{2}$  mile a conspicuous granite hill  $2\frac{1}{2}$  miles N 152 E "u".

8.0 - In  $1\frac{1}{2}$  miles from Bivouac 9 came to an elevated sheet of granite "s<sub>1</sub>" surrounded with grass : long ridge N° and S°.

8.25 - In 1 mile arrived at upper and east end of a considerable open plain, covered with low scrub partially burnt.

Hill "s"  $2\frac{1}{2}$  miles N 242 E

$\frac{1}{4}$  mile further, over ridge, then :- N 14 E

"n<sub>1</sub>" Notch Summit 36

"n<sub>2</sub>" 42

Descended a long slope of brushwood and scrub, then passed over close forest land of gnardruk, wooruk, casuarina, & c. but not so thick as yesterday and previous. Completed  $4\frac{1}{2}$  miles since last bearings to -

10.50 - at base of hill "t" skirted its north side, and from its NE summit saw :-

Bare granite Hill "u" N 234 10 E

Summit "t"  $\frac{1}{4}$  mile about South

Hill "s" 6 miles N 255

Low Granite hills  $2\frac{1}{2}$  miles 255 and 245

Notch Range summit 6 306

"n<sub>1</sub>" (granite) 4 311

"n<sub>2</sub>" (wooded granite) 5 318 30

2-Tree Peak 12 95 30

Hill "t" a mass of bare granite lying about NE and SW, with indifferent grass around its base growing chiefly among dark stemmed casuarina. Water on the rocks, in holes.

At 11.45 halted for noon observation and to refresh the horses at the SE foot of "t" hill. Marked a casuarina ☐

4.15 - Resumed, E  $\frac{1}{2}$  S. Forest land of gnardruk, mallart, and a white gum with shining bark, clumps of spearwattle intervened and much brushwood occasionally.

5.45 - In  $4\frac{1}{4}$  miles came out on open scrubby down, covered with Ironstone.

6.5 -  $\frac{3}{4}$  mile up plain very scrubby: Hill "t" 279° dist. 5 miles. With much difficulty forced our way through a close thicket of brushwood  $\frac{1}{3}$  of a mile to top of ridge, which proved of broken ironstone, with an abrupt broken descent to a close valley dipping to the north.

500 or 400 yards from this we came upon clearer land and patches of excellent grass heavy in seed, at foot of a small ironstone knoll. Finding a hole of good water here on the side of the hill we brought up for the night, much to the satisfaction of our horses, who revelled in their pasture with right good will.

This totally unexpected windfall in the midst of abrupt ironstone hills, established the locality as bivouac  $\diamond 10$  which was accordingly marked on a white gum tree.

It is remarkable that we have not seen a kangaroo or emu yesterday or today. A pair of cockatoos were seen yesterday, but none today. Parrots and other birds have also become scarce, as well as the kangaroo rat or "bandicoot" which is usually started up from underfoot in other places every few minutes.

One view this afternoon while travelling, displayed to us the Northern horizon at the distance of 8 to 10 miles, nearly as level as that of the sea. The general dip of the country has been to the NEd. but it was more decidedly so yesterday, than today.

In course of this day much land has been traversed over which water lodges during heavy rains, but the country had so little inclination or dip, it was not easy to conjecture which way it would drain off, or indeed, to form any opinion as to what can become of the water which at times must fall over the last 100 miles we have passed over. Appearances as yet are in favour of its having drained off to form a river in the NE.

Soil at our halting place a rich red loam, nearly as bright as brick dust. In course of the afternoon the same, but not so good: occasionally nearly all sand.

Near our bivouac Carbonate of Lime was found in a broken part of the ironstone ridge, under ironstone.

Oct. 15, 1836.

7.15 - Proceeded E  $\frac{1}{2}$  S and E  $\frac{1}{2}$  N round northern side of ironstone knoll and a second 100 yards to the east of it: a considerable valley on the left.

8.10 - In 2 miles E  $\frac{1}{2}$  S through thick close forest land:-

Woody Hill at S extremity of a ridge      5 miles N  $44\frac{1}{2}$  E  
Hill to N of "t" hill      7 or 8 miles 291

$\frac{1}{4}$  mile further: then SSE  $\frac{1}{2}$  a mile to top of an open rising ground from which the northern horizon was visible between NE and WNW but nothing remarkable. Surface covered with ironstone, and a new kind of shrub to us, about 12 to 15 feet high, straight and narrow, growing like a larch but with a soft grey bark, spear headed leaves, and the young flowers about to burst from buds resembling bunches of figs.

8.55 - E  $\frac{1}{2}$  S towards rising wooded land  $\frac{3}{4}$  mile distant. In 200 yards came to shallow water-drain, scarcely deserving the name, dipping to NE. Followed down  $\frac{1}{4}$  mile - no water. Resumed E  $\frac{1}{2}$  S. In  $\frac{1}{3}$  mile came to a small ironstone summit, at E foot of which a small valley with good grass. Searched up to the south and down northward for water-found none. A smaller branch coming from the S. E.

9.45 - Proceeded E  $\frac{1}{2}$  S up opposite ironstone hill, passed along its northern slope, crossed over, and descended into another dry ironstone valley: opposite to which was a ridge as scrubby and rocky as before.

Our horses wanting water much, followed down a small drain to the N at 9.55. Finding it led us to the NNW, in  $\frac{1}{2}$  mile NNW steered north.  $\frac{1}{3}$  mile to top of an ironstone hill: observed all uniform around to NE and NW. A small opening in the land 4 or 5 miles to the N. W  $\frac{1}{2}$  W with an intermediate valley giving hope of finding water, we proceeded for it at 10.20. Passed through much thick scrub, almost impassable, for  $\frac{1}{2}$  mile to 10.35 when:-

Granite bare hill "s"	15 or 16 miles N	264	15E
Granite bare hill "t"			
Wedge shaped: sloping to northward	8 or 9 miles	270	
Large hill of granite	7 or 8 miles	285	
Broken hills in direction of course		334	

10.40 - Proceeded through almost impassable scrubby land  $1\frac{1}{2}$  miles to 11.45, then, from a ridge, observed a prospect of water to the NNW and steered NW  $\frac{1}{2}$  W towards low part of valley. Descended  $\frac{1}{2}$  a mile over more open down than usual and at 11.55 halted to observe the Sun's merid. alt.

12.30 - Proceeded NW  $\frac{1}{2}$  a mile through very thick scrub, and west  $2\frac{1}{2}$  miles to 1.25 over more open land sandy light soil clear of trees. When in a slight hollow of the long ascent of the last 2 miles a native well appeared in view, with dampness at the depth of 3 feet. Deepening it out with the lid of an iron pot, sufficient water flowed in to admit of giving the horses a quart of muddy stuff each, while a little grog was mixed for the men.

2.0 - Proceeded West:-

2 Tree Peak N  $84^{\circ}$  10' E . . . . 4 or 5 miles

2.30 - In  $1\frac{1}{4}$  miles scrubby and partly open. Steered N  $235^{\circ}$  E for Hill "t" 4 miles distant: very scrubby and thick: soil, light and sandy. At  $\frac{1}{4}$  mile from the hill's base could scarcely penetrate the thicket of brushwood growing on a rising of quartz rock.

4.30 - Halted for the night near yesterday's dining place



much fatigued, and the horses unable to proceed further, having had no water since middle of yesterday.

From summit "t" - (in addition to those of 14th instant from its NE summit):-

Woody Peak "r"	18 or 20 miles	N 251	40 E
Woody Hill	6 or 7 miles	73	30
Notches summit	5 or 6 miles	308	
"n <sub>1</sub> "	4 miles	313	40
SUN set		262	20
Wooded summit of a rocky hill Ironstone?	7 miles	324	50
Small rocky knoll Ironstone? east of last night's bivouac		94	
Ditto West of last night's bivouac		94	30
Oct. 16 -			

Intending to make a short march this day we did not break camp till 8.55, when a course was shaped northward for "n<sub>1</sub>" where I hoped to arrive early and halt for the remainder of the day.

9.10 - Came to flat sheet of granite in scrubby open country in  $1\frac{1}{4}$  miles from "t". Pigeons and footmarks led us to about seven holes of water in the rocks: a native well - 6 inches water at a foot below the surface - at the E end of the rocks. Country, sandy soil: no grass; scrub.

10.5 - in  $2\frac{1}{4}$  miles more, arrived at SE foot of "n<sub>1</sub>" : bare, steep, granite.

From SW pitch "n<sub>1</sub>" about  $\frac{1}{6}$  mile SSW from summit:-

Notch summit	about $1\frac{1}{4}$ mile	N 298	30 E
"n <sub>2</sub> " summit (wooded)	1 mile	2	30
"n <sub>3</sub> "	$3\frac{1}{2}$ miles	332	30
"r" peak	18 or 20	244	40
Long bare hill "s"	5 or 6	230	30
Bare granite "u"	5 or 6	205	50
Granite, part wooded	8 or 9	178	
Low rugged bare granite patch	$\frac{3}{4}$	168	
Granite patch, partly bare	5 or 6	155	
Hill "t"	4	135	
Low granite rocks	2	100	
Low granite hill beyond a plain	3	245	50

Country destitute of grass and Notched Hill not appearing more promising, we made further search and found some very good feed for our horses on the N.E. side of "n<sub>1</sub>"

Here we pitched our camp at  $\frac{1}{2}$  past 10 for the remainder of the day: a rest much needed by all the party after our late severe scrambling through so close a country. Availed ourselves of this opportunity to wash and repair clothes, shoes &c., and examine firearms and make good a few damages.

From summit "n<sub>1</sub>" observed Lat 31° 58' 27" S.

Woody hill .. .. N 9 40 E.

Halting place, Noon 12  $\frac{1}{8}$  mile NE b. N

Ridge near here NNE and SSW  $\frac{1}{2}$  a mile, N point low.

Summit "v" appearing over a valley 10-12 miles N 336 15E

"n<sub>3</sub>" Woody, apparently grassy summit 5 miles 330

"n<sub>4</sub>" " " " 5 miles 340 30

Summit, NE end of long level ridge 10 miles 322 20

"r" peak, in line low granite hills 3 miles 244 40

A summit 14-15 miles 247 50

2-tree peak 15-16 miles 87 40

Between "n<sub>1</sub>" and Notch Range an open plain  $2\frac{1}{2}$  miles in length

N-S and averaging  $\frac{1}{2}$  a mile wide: broadest at N end.

Elevation of "n<sub>1</sub>" above the plain on its S side 104 ft by barometer, and the plain about 50 ft above level of the valley about  $\frac{1}{2}$  a mile beyond.

This afternoon Mr Smythe unfortunately cut his knee badly with an axe, which will prevent him walking through the thick country with as much ease and readiness as could be desired.

In the afternoon we had a fresh breeze from the NW with cloudy weather, but it died away towards sunset, and at midnight blew fresh and cold from the N.

Very numerous footmarks of Natives throughout this day, but all seemed treading to the Northward.

Oct. 17 :-

SUN rose N 103 50 E at 4.50 a.m. by chronometer 2144

Marked a casuarina tree with dark stem 12

"n<sub>1</sub>" is a mass of bare coarse granite in which are embedded many lumps of quartz. Veins as usual extending through the granite N and S.

7.20 - Proceeded N 20 W towards "n<sub>4</sub>"

9.30 - In 5 miles arrived on summit of "n<sub>4</sub>" : a large mass of granite half bare of vegetation. Pools of water on the rocks: a native well about  $\frac{1}{2}$  mile from summit, and a small stream bed winding to the SE d.

From summit "n<sub>4</sub>"

Hill "v"	8 or 9 miles	N 329 E
"n <sub>3</sub> " summit, granite and trees	1 1/4 miles	288
Summit NE end of ridge	7 miles	307 30
Granite summit of a long N and S range	7 miles	234 30
Range beyond Notch (SW foot)	4 miles	205
Range beyond Notch (Summit) (NE foot behind notch)		196 30
Notch Range - SW foot		190
Summit		181
NE pitch		175
NE foot		168 1/2
"n <sub>2</sub> "		158 40
"n <sub>1</sub> "		161 1/2

Very little grass on this hill. Some few good patches of very small extent on summit. Its ridge extends towards Notch and opposite. Some good soil this morning - red loam.

10.0 - Proceeded towards "v" hill over open scrubby plains: soil sandy.

11.10 - In 2 1/4 miles crossed sandy stream bed dipping NWD through forest land, gnardruk and white gum, with close under growth of spearwattle and eucalypti brush: light sandy soil.

Noon - Halted in bottom of valley to observe barometer and Sun's meridian altitude 1 1/2 miles since 11.10.

12.30 - Proceeded NxW. Passed over an open down covered with scrub, then through thick brush and poor sandy land for most part until 2.10 in 3 1/2 miles. "v" range then in view : N 1/2 E 1 mile and WNW 1 1/2 miles. Summit of "v" N 3/4 W 3/4 mile

2.15 - Proceeded NW 1/2 W towards appearance of grass.

2.40 - 1 mile - A steep broken watercourse at foot of "v" winding to SW. Steered SW amongst ironstone rocks and gravel. In 1/2 mile came to good thick grass in abundance growing amongst dwarf casuarina, white gum, wattle tree and "men-ung" and pools of water in the stream bed. Here we encamped for remainder of the day, and marked 15 on a casuarina.

After dinner ascended summit of "v" with Mr Moore:-

Double hill apparently granite and wooded	- 6 miles
West Hill ... ..	N 4 10 E
East Hill ... ..	6 00 E

Highest land visible eastward 12 or 14 miles 42

Wooded land under the sun setting 7 or 8 miles 261 50



Southern termination of "v" ridge S : and in other direction W and SW forming a curve. On a part of the ridge  $\frac{1}{4}$  mile WSW from the summit, very good grass is to be found among wattles and casuarina, and some excellent grass lies on NW side of the summit at foot of the bare rock.

Several pools of excellent water are at this time to be found among the granite - the 2 largest on the summit - but very many have already evaporated, and the others are speedily following.

Granite, very coarse and containing much quartz. Soil in vicinity a good light brown loam, very little granite is visible from this hill, although the grass in its immediate vicinity is better and infinitely more abundant than at any other of our halting places.

No improvement in the nature of the surrounding country visible, nor can anything deserving the name of a hill be seen. Scrubby downs and tiresome thickets are the prevailing appearances and as we were a long mile from our bivouac when the sun dipped behind them we hurried from the scene in the hope of tomorrow falsifying our anticipations.

Many small birds, parrots, crows &c.

Two watercourses meet close to our bivouac and flow to Sd where there is much grass.

Mr Smythe's wounded knee having rendered him unable to walk as usual, the 5th packhorse was now dispensed with as such, and his load distributed among the others who were less loaded than on leaving York.

Oct. 18 -

Towards daylight the breeze freshened as usual, and blew strong from the Nd., accompanied by thick weather and small rain.

Being anxious however to proceed on our journey, we broke up the camp at 7.50 and proceeded Nd over grassy part of "v" range, then over much bare granite in which the morning rain which was falling thick with a strong westerly wind had already made many pools.

To our left at foot of the ridge 200 yards distant, a cliff of white (apparently) clay was on the right bank of a broken rocky stream bed winding to the SWd and draining the waters of the range.

Entered immediately scrubby plains and steered NxE towards Double Hill.

9.0 - In  $\frac{1}{4}$  mile northward and 2 miles NxE from bivouac 13, passed  $\frac{1}{2}$  mile eastward of a patch of grass - 5 or 6 acres. Plains open, very slightly undulating, not so thick as usual with scrub and having a sprinkling of grass upon them, and of inferior

quality. Saw here 4 black cockatoos, being the first, we have seen for several days. Kangaroos seen to have long since deserted the country, one red having been met with for the past week. Light sandy soil, sprinkled with ironstone gravel.

10.0 -  $2\frac{1}{2}$  miles country much burnt-track of a large emu- some bandicoots.

10.40 - In  $1\frac{1}{2}$  mile reached lower part of eastern summit of Double Hill: scrubby and high, no grass: sandy soil

10.50 -  $\frac{1}{4}$  mile further, summit "v" N 184 E Steered NE, N, and NNW round the high brow for a view, in hopes of being able to descry some feed for our horses.

11.25 - Eastern summit of double Hill N 164 E,  $\frac{1}{2}$  a mile. Steered NW. A piece of flat rising ground with trees on summit N  $77\frac{1}{2}$  E, 12 or 14 miles: no appearance of grass. NW  $\frac{1}{4}$  mile WxN  $\frac{3}{4}$  mile to 12.10 then Nd for clearer country, the thickets being almost impassable :  $\frac{1}{2}$  a mile Nd, thickets closer, steered NW.

1.50 -  $1\frac{1}{2}$  miles up ascent to summit: bare granite in small sheets where water had once been. Scrubby, sandy.

2.15 -  $\frac{3}{4}$  mile further to bottom of wide valley on other side in which we had hoped to find grass and some water : but the only sign of either was a very little old grass of last year among the scrub.

Here we halted at 2.30 to dine and give the tired horses an hours rest. Scrubby open land : no trees.

In bottom of hollow, no watercourse. But as the valley has a decided dip to the Nd and was promising, we commenced following it in that direction at 4.20.

5.15 - had followed 2 miles this scrubby hollow, then entered a forest of small gnardruk, close, with underwood. Steered NW.

5.38 - 1 mile over top of a scrubby ridge lying E and W, entered on a very extensive open down, sandy, covered with ironstone gravel and scrub : no moisture in the bottom of it.

6.18 - reached opposite summit. Small trees in 2 miles from 5.38.

While crossing the down 2 or 3 smokes rose up a mile on our right, and Mr Smythe thought he saw 2 natives, but the distance was too great for that, and as it appeared likely the woods might have been burnt for hunting purposes, we did not deviate from our course.

Another clump of trees on a rising ground 2 miles to the NWxW leaving yet a faint hope, we proceeded there and arrived at 5 minutes before 7. But not a blade of grass was to be seen, and we

were under the necessity of tying our horses up for the night without any.

Marked a blue pine tree of small growth 14 gave horses 3lb of biscuit each which, when broken and mixed with a little bran that had been used for packing, was accepted by most of them.

Oct. 17 -

7.30 - Proceeded SSE $\frac{1}{2}$ E for the purpose of making for last bivouac 13 - provided we did not previously fall in with food and water, our horses not having had either since yesterday midday. Scrubby open land, in hills of small elevation.

8.10 - In  $1\frac{1}{2}$  miles arrived on ridge, and steered SxE for western brow of a gentle rise  $2\frac{1}{2}$  miles distant.

9.5 - In  $2\frac{1}{4}$  miles, on top of ridge, where a little water was found in some small holes in a sheet of granite environed on all sides by thick brush and scrub. This was soon emptied by our horses, and at 9.15 we proceeded SxE thro' very thick brush.

9.50 - A distant wooded hill - the summit of a ridge - at 16 or 18 miles ... N 229 E. 1 mile since 9.50.

During the next mile - to 10.20 saw two of the birds called by the natives "gnow" about size of a barn door cock or a large drake, with belly and throat speckled like a turkey, brown on back, black and white tail tipped white at extremity and like a turkey hen's. Wings small, and not adapted to long flights.

10.20 - On ridge of ironstone gravel and then S  $\frac{1}{4}$  mile, then SxE,  $1\frac{1}{4}$  miles to

11.25 - through much thick scrub and open scrubby plain. Soil yellow sand. Saw then a granite ridge "w" at 4 miles N 238 E. Proceeded towards it

11.55 - halted to make noon observations. 1 mile SW x W

12.20 - Proceeded SW x W and soon afterward hill "w" S 63 W - 2 miles. Land descended to a wide extensive valley to the south, and there was a dip or hollow between us and hill "w"

1.0 - In  $1\frac{1}{2}$  miles halted at a small watercourse winding to the SEd through some tolerably good grass about  $\frac{1}{2}$  a mile from the ridge of hill "w".

After examination up and down, plenty of water was found in the former direction, and we encamped among some casuarina and wondo close to the stream, which was slightly running. Marked a wondo tree 15



Ascended the ridge "w" after dinner : found some good grass amongst the granite rocks and many pools of water. The upper part was an extensive plain, whence a large sheet of granite, very little wooded and supposed to be "v" bore N 132 E to 135 E - 9 or 10 miles distant.

Summit of ditto N 134 46 E 9 miles. Peaked wooded hill beyond ditto, 11 or 12 miles, N 131 E.

To the NW and northward, in which directions alone a view could be had from trees, the face of the country is scrub and brushwood - the surface being tolerably level to the westward and northward of the summit of the granite at foot of which we have encamped.

Among the granite some good loam : elsewhere, soil light. Pigeons abundant and more birds than usual of the other descriptions that are found near the granite hills, including one which invariably indicates the vicinity of grass, and whose note - all in one cadence - may be understood to be 99 999

Two Native huts near our encampment.

Oct. 20

Thermometer at sunrise 45° with a sharp southerly breeze. Having several little things to do to detain us this morning we did not break ground until 8 o'clock, when a NW course was taken to ascent the ridge for sake of a view, it being desirable in every respect that we should make our way from hill to hill in a northerly direction, for the purpose of ensuring grass and water. In 100 yards, after crossing the watercourse, ascended the granite ridge, which is quite bare in patches.

In ½ mile on summit of the rise, a level sandy scrub; no granite. A small woody peak N 331 E.

Attempted NW but were repulsed by impenetrable scrubby thickets. Returned 100 yards and proceeded northerly ½ a mile. Then an open view to the NW a large native fire was smoking up 3 miles to N 342 E. Steered W, WxN, and NW, 1½ miles to

9.15 - when:-

A wooded hill	18 or 20 miles	N 231½ E
And " "	15 or 16 miles	238½
A small wooded elevation	3 miles	131
E. Foot "w" (granite & grass)	1 mile	115
Wooded small peak	6 mile	336

On a considerable granite wooded elevation from which the land dipped NW for a mile and N for 2 miles towards lower land.

Crossed bottom of hollow to NW: very thick young forest, soil

light.

On opposite ascent, in a close thicket, came to another of the circular holes which have so often attracted our notice in this region, and as it appeared to have been freshly scratched about by a bird, we commenced an examination by cleaning out the sand, ironstone gravel and rubbish, of which it was composed. At the depth of 18 inches pieces of a fresh egg with a dirty yellow coloured shell and some of the yolk of a brown colour, made its appearance embedded with dead leaves, sticks and rubbish. An extensive layer of dead leaves from trees not within many yards occupied the space from 6 to 20 inches below the surface, and a hole was found about 6 inches in diameter taking an oblique direction 3 feet down. We enlarged to  $3\frac{1}{2}$  feet deep and 4 feet diameter, but the above was the extent of our information gained, and we were obliged to abandon further search until one of the nests might occur near some future bivouac where we might prosecute investigation to the fullest extent.

10.50 - Proceeded NW: having made  $1\frac{1}{2}$  miles since 9.15.

11.30 - Having made 1 mile steered WxN for clearer ground.

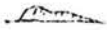
11.40 - Granite summit SW summit of "w"? N 147 E  $3\frac{1}{2}$  m  
At  $\frac{1}{4}$  mile further WxN :-

A granite summit "w"? 5 miles N 119 20 E

12.20 -  $1\frac{3}{4}$  miles W by N up a long scrubby ascent: saw then:-

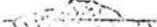
A granite hill "x" .. 3 miles .. N 194 $\frac{1}{2}$  E

SW summit of "w" .. .. . 106

At  $\frac{1}{4}$  mile further, a wedge shaped hill - 15 miles - N 230 E   
another, in line with a bare granite ridge - 2 miles distant

On a ridge of granite in various stages of granite in various stages of decomposition, from one of its small rounded knolls, saw:-

Wooded small hill - 6 or 7 miles - N 282 E

A hill  10 or 12 miles 229

A hill in line a granite ridge -  
2 miles

A granite hill 1 mile 180

A granite hill  $1\frac{1}{4}$  mile 191 $\frac{1}{2}$

Bare granite hill "y" - 3 or 4 miles 305

Proceeded for the latter at 1.5 p.m. over open plains of small extent, and scrubby forest land: some good soil in hollows  $2\frac{1}{2}$  miles to

2.20 - Arrived at SE angle of ridge "y" - a large bare mass of granite of circular form: small watercourse at its

foot winding to SE with a few pools in it. Followed it upwards among some good grass, wattles, jam, nut, casuarina, and white gum.

North for  $\frac{1}{2}$  mile, when, large pools being found in holes at the summits of the granite rocks and the grass being excellent on the slopes, we halted for the day at 2.50.

Dined, and marked on a dark-stemmed casuarina

16

After dinner, Mr Moore went with me to the summit of "y", about  $\frac{1}{3}$  mile to the WNW and 100 feet above present level:-

Small woody peak	$3\frac{1}{2}$ miles	N 265 E
2-tree peak	10 or 12 miles	308
Granite Hill	3 miles	143 30

While taking the above bearing and looking round I discovered a fire blaze up  $\frac{1}{2}$  a mile to NE and on looking with a glass distinctly made out 8 or 10 natives on the move, some running to and fro, others crouching on their hands and knees, while others stood or sat under the adjoining bushes.

Perceiving we were discovered, or that natives were aware of the presence of our party on the hill; and having only one gun between us, we finished our scrutiny of the surrounding country and rejoined our party. Previous to our doing so the natives had hidden themselves among the bushes, or taken themselves off having first made their fire blaze up again as when we first saw it - no doubt for the purpose of exorcising or driving away the Evil Spirits which, they must have felt satisfied, stood before them on the summit of the rock.

The remoteness of our position - about 150 miles from the nearest settlement of York - leaves little room for supposing that the natives of these parts have ever seen white people, nor does the nature of the intermediate country render it likely that sufficient intercourse takes place between the aborigines of the two districts for these people even to have heard of us.

Our hopes of a favourable change in the country have been additionally excited by our having got again among white cockatoos - 2 of which have flown over our camp.

Oct. 21 -

The weather being very unsettled this morning after a rainy squally night and westerly gale, we remained at our good grassy halting place to see what change might be produced by noon. In the interval our horses were tethered in the best position, firearms were cleaned and put in order, and various repairs effected where required.



Having observed the Sun's altitude for longitude by chronometer I ascended the hill immediately over our bivouac, from which the following bearings were taken:-

Summit of "y" yesterday afternoon's	
☉ 1/3 mile	N 315 E
Bivouac 16 1/6 mile	NE x E
Small wooded peak 3 miles	N 269 E
Wooded summit high apparently granite ridge 14 or 15 miles	261 30
Sumt. apparently granite hill 9 - 10 miles	202 30
High bare granite hill 18 - 20 miles	192
High granite ridges, partly wooded, partly bare	190 & 193 30
Granite Hill 21 miles	190
Granite Hill 2 miles	167
Summit of high granite hills on same ridge as last 2 1/2 miles	149
Bare granite ridge (grass) 2 1/2 miles	95
Bare round granite "y" range (the part first made yesterday) 2/3 mile	108
Bare granite hill 2 miles	76 30
Flat top granite wooded hill 6 miles	33
Wooded peak, app. granite "z" 4 or 5 miles	17
A wooded rise 7 or 8 miles	355
A SW abutment of "y" ridge (bare granite) 3/4 mile	224

General direction of summits "y" range - NW by W - SE by S, but many branches from it and the whole occupying considerable space, with small valleys of good grass. One valley between ☉ and summit of "y" contains good grass and a stream flowing at this time with a small run to the SWd.

The natives seem to have taken a SW direction, their fires at this time being visible 1 1/2 miles to WSWd.

The rain having cleared off and weather only squally, we dined early and at 12.55 resumed our journey for peak "z" N x E 1/2 E.

2.20 - In 3 3/4 miles over open scrubby downs and last 1/2 mile thick scrub, all ascending, crossed over ridge and began to descend. Steered N 4 E for a granite hill "a" 4 1/2 miles to the N 4 E.

3.40 - In 3 miles reached brow of a long ascent through some thick scrub and occasionally open forest of gnardruk and a different species of eucalypt called by the natives "gnce-le-ruk" with a yellow nankeen-coloured smooth bark, and branching much lower down than usual in the other kinds.

The land then undulated in a gradual ascent on which ironstone frequently broke out, and was mixed with fragments of quartz on a light soil : surface scrubby. In a mile and a half more, at

4.10 - came to a patch of excellent grass about  $1/3$  mile from summit of "a", between 2 watercourses which came from the Eastward and united at this spot previous to dipping S. westward. In the furthest which drained a green grassy hollow 100 yards wide was a large deep native well 10 feet in diameter and containing a depth of 4 feet of water, some of which is apparently permanent.

Here we pitched our camp 17 at  $\frac{1}{2}$  past 4 o'clock amidst our old and valued acquaintances - York gum (tworta), jam, wattles, casuarina &c.

From this spot, hill "a" rises in several bare rocky masses of granite, containing at this time small pools of the late rain water, and crowned on the summit by trees.

The land on each side of the summit consists of open downs on a continuation of an elevated ridge. The summit bears from our camp about N x W -  $\frac{1}{2}$  a mile.

This well is a great resort of the natives, whose marks are visible in considerable numbers all round, as well as of emu, small birds, and animals of the kangaroo rat kind. No parrots: but a pair of white cockatoos were heard, as well as the grass-bird, watt bird, pigeons, &c. The well is a spring.

Before sunset Mr Moore accompanied me to the top of the ridge but, except to the westward where the country dips generally to a wide valley, the view was very limited, and land nearly level for a mile.

Oct. 22 -

At 7.30 resumed our journey : proceeding Nd for a view from top of the ridge.

8.0 -  $1\frac{1}{4}$  miles : had descended over the ridge of hill "a" to a gentle slope of scrub and brushwood and saw a conspicuous granite hill 8 miles N  $313$  E with one tree on its summit and four on its northern slope. Proceeded N x W.

8.25 - In  $1\frac{1}{4}$  miles crossed a small hill drain descending to SE - dry.

8.30 - Small drain to Nd - dry.

8.39 - A winding drain to SW - dry. Ascending since 8.30 - forest land underwood - some good red loam.

8.55 -  $1\frac{1}{4}$  miles from 8.25 arrived at summit of ascent, and emerged from forest of gneclruk, guarderuk, and tworta (a few) to open scrubby plain slightly dipping to NW. Light sandy soil.

Proceeded NW x N to avoid a thicket on right  $\frac{1}{2}$  a mile then N by W up clear scrubby ascent, near top of which, close thicket.  $1\frac{1}{4}$  miles to summit, then level.

9.45 - NW  $\frac{1}{2}$  W to avoid a thicket on right,  $\frac{1}{4}$  mile, then N x W.

10.40 -  $2\frac{1}{2}$  miles N xW over undulating scrubby land about level but gradually ascending. Left 1 mile to Wd a granite wooded ridge with 2 summits lying NNE-SSW of each other  $\frac{3}{4}$  mile apart. Passed on through much scrub on a level rather descending, and at 11.45 in 2 miles came out on more open land, and saw a bare round granite top 6 or 7 miles "d" N 35 E : proceeded for it with prospect of obtaining grass and water.  $\frac{1}{4}$  mile further halted for noon observation. Lat  $51^{\circ} 25' 53''$  S

12.25 - Proceeded N 35 E down a descent towards forest land, which we entered in  $\frac{1}{2}$  a mile - gnecleruk chiefly. Crossed 2 small water drains dipping Ed and at 12.45 in  $1\frac{1}{2}$  miles from 12.25 came to some little grassy forest land dipping E; grass thin in patches.

12.50 - Small dry water drain dipping Ed toward deep valley. Summit of ridge  $\frac{1}{2}$  mile on left.

1.0. - Two water drains to SE and land very recently burnt by natives whose footmarks are evident.

1.5 - A watercourse to Ed. patches of grass more frequent as we ascended a slope to a granite hill "c". Good grass among wattles, nut, jam trees half a mile from the hill - along the SE of which our course led us.

About 2.40 - in 4 miles from 12.45 - halted close to SE corner of granite ridge of "c" where excellent grass in great abundance and a grassy well of pure water 6 feet in diameter and 18 inches deep (a spring) ensured a good time for our horses.

The neighbourhood seems to be of the same good description for a considerable distance around. Pigeon, crows, grass-birds, and other small birds are about, and near the well (which is in the bed of a small water-course dipping to SEd) we disturbed a pair of white cockatoos.

We had unloaded the pack horses and were preparing to encamp, when Mr Smythe - who had made a circuit of a few hundred yards to the left to look for water - reported several fires of natives to be near, and one at the distance of 300 or 400 yards. We therefore removed our baggage to a more commanding position 50 yards higher up the ridge, and encamped for the night.

Messrs Moore and Smythe accompanied me to the summit of "c" after dinner and saw:-



Hill "d" ("d" is lower than the land to north-westward of it)	1 $\frac{3}{4}$ miles	N 55 $\frac{1}{2}$ E
Round sumt. of long high granite ridge	12 or 14 miles	61
Round bare granite hill	3 miles	76
Granite hill: bare on SW side	1 $\frac{1}{4}$ miles	116
Bivouac 18 $\frac{1}{4}$ mile NNW (SSE?)		
Wooded small summit appearing over a ridge	15 or 16 miles	117 20
Wooded hill surrounded by open downs	15 miles	120 20
Patch of grass land $\frac{3}{4}$ mile distant		S x E

Ridge "c" is much scattered in several smooth granite summits, but lies generally about WNW-ESE direction, and is composed of stratified granite of coarse texture, veined N 12 W and S 12 E. There is much excellent grass around it, especially on its north side where the land undulates gradually and is covered over with small trees of the nut, jam, wattle, York gum, prickly hakea, and other small trees usually found in good grassy lands. Soil good light loam, the detritus of the coarse granite of which the hills are composed. Amongst the rocks, much whinstone. Marked a York gum tree (18).

In the course of the afternoon black cockatoos of the red-tail king visited the spring for water. Some of these were added to our larder, the firing at which probably alarmed the natives of the neighbourhood, as none of them came near us.

Parrots and small birds were also numerous, and there is every indication of our having commenced on a better country.

This is the greatest extent of good land we have seen since leaving the Avon, and may probably amount to two square miles, including hill "c".

Our resting place is on the side of an old native haunt; their branches of trees, flat stones for pounding roots on, and remains of fire places being visible all around. But the natives do not seem to be numerous in the country.

Oct. 23 -

7.50 - Proceeded N  $\frac{1}{4}$  mile over good grass: then NE for an open space \* - a narrow vein of poor forest land - then excellent grassy land and good red soil for 1 $\frac{1}{4}$  miles till 8.30. Forest land then succeeded and we resumed our N course.

Country dipping to a wide and extensive valley to Ed toward which land continued to appear grassy (\* observed the natives proceeding to our bivouac).

4 miles further north through forest of gnardruk, gneerleruk, &c.: sometimes good soil, at other times sandy: occasional patches of grass land tolerably level: came to rich red loam at commencement of a descent. Higher land 1 mile to right continued from high land N&W from "d". A high granite hill 1 mile SE. Through much scrub and burnt forests of gnardruk, Good red and yellow soil for 2 miles further to 10.45. Water lodging in numerous holes in rainy weather.

Crossed then, a small water drain with loose sandy bed dipping to SW in almost level country: land must be very soft in winter. Natives footmarks have been made in very soft ground which is now hard and dry.

11.30 -  $1\frac{1}{2}$  miles further brought us to edge of the forest land, where a belt of thick brushwood cost us a little forcing. The yellow soil was sprinkled with ironstone, and we entered upon an open plain covered with scrub.

Proceeded NE  $\frac{1}{2}$  N across it  $\frac{1}{2}$  mile for a view from a clear spot and halted at 11.55 for noon observations. Sandy light soil on an ascent, scrubby, and rather more elevated than the surrounding country.

12.30 - Proceeded N and in a few yards saw a level granite elevation "f" with grass about it, N 305 E ..  $3\frac{1}{2}$  miles. Steered for it. In  $\frac{1}{2}$  mile, soil improved to good - and in places rich red loam. Gnardruk, gneerleruk, wooruk, &c. were the timber, mixed with which was an undergrowth of large spearwattle. On a long ascent of a mile: the trees bowed to the NW. Country then nearly level. Holes again in the scrub as receptacles of the rain water, but at this time all dry.

1.55 - Came out on SE edge of a small plain of scrub and sandy soil covered with ironstone: 3 miles since 12.30. Soil improved soon afterward and at 2.15 in  $\frac{3}{4}$  mile from 1.55 came to grassy undulating land among wattles, jam, and nut trees,  $\frac{1}{2}$  a mile from summit of hill "f".

2.35 - Halted at two small wells near the S side of the rock, where, by deepening out, we soon obtained abundance of water for our purposes. Grass, good and land slightly wooded: soil consisting of the decomposition of the granite rock - light, but good.

While dinner was preparing, ascended the hill "f" and was exceedingly gratified with the prospect of an extensive grassy country to the eastward and north, amongst which, granite was a prominent feature, and became conspicuous in many detached masses of greater elevation than the lands around them. The most remarkable were, a considerable double elevation bearing N 304 25E.

distant  $6\frac{1}{2}$  miles, "g" : and "h"  $305^{\circ} 15' 6\frac{1}{2}$  or 7 miles (being on the same ridge with each other) and a granite hill "i" of equal elevation, N  $287^{\circ} 40'E$ , distant 3 or 4 miles. These were the most remarkable hills we had encountered since leaving the vicinity of York. Besides them, a range of tolerably high and level land 10 or 12 miles distant, and steep to the NE extremity, bore N  $311$  to  $318^{\circ} E$ . This range apparently covered with grass among the trees:-

Good grassy high land tolerably level	15-16 miles	N $330^{\circ} E$
Good grassy land	4 or 5 miles	$344$
Grassy land - low	4 or 5 miles	$3$
Bold projection to the S of a high granite range	16 miles	$37\ 10$
A low flat top'd hill	12 miles	$39$
Another bold projection, or shoulder of above range	17 or 18 miles	$42\ 30$

The range slopes then to the Ed, and is lost sight of behind a small dark wooded peak distant 12 miles and grassy among trees. N  $46^{\circ} E$ .

Ditto, arising out of very grassy low ridges apparently.		
Large granite sumt. on a ridge	12 or 14 miles	N $58\ 20^{\circ} E$
Massive part of same ridge	15 miles	$70\ 30$
High, round termination, at S end of granite ridge	18 miles	$91\ 30$
(Between NE x E and E (further Sd not visible) not so much grass as on NE)		
Bivouac 19 ... $1\frac{1}{6}$ mile SW		
Granite elevation on ridge E-W	2 miles	$128$
Long backed smooth hill (long range summit)	20 miles	$308\ 30$

Hill "f" lies about E-W  $\frac{1}{2}$  a mile: it is composed of masses of granite of coarse composition, amongst which is good grass and a few nut, jam and wattle.

The good grass extends about 1 mile N,  $\frac{1}{2}$  mile SE, and about the same in other directions except westward, where a ridge of land approaches it, and is covered with grass to the westward.

On the summit we found two old spears of the natives, without barbs 10 feet in length.

White cockatoos numerous, pigeons, parrots, and small birds. During the day an increased number of kangaroo rats,

bandicoots, and a burrowing animal which makes a large hole. Several of the large circular nests have also been met with but nothing further has transpired to throw light on their nature or use.

Marked a York gum

19

Oct. 24 -

7.30 - proceeded NW x W: got off grassy land in  $\frac{1}{4}$  mile and entered on scrubby forest land and open scrubby downs. Much good red soil, some sandy and covered with ironstone gravel.

9.45 - In 4 miles came on a circular nest on the ground, heaped up differently from the others - which had all been hollowed in the middle. On searching, the contents - 6 fine eggs about the size of the Black Swan's - were found about 30 inches below the surface leaving great reason for supposing it to be the nest of the bird called the "gnow" by the natives - resembling a wild turkey. Having secured them as our prize, and intending to profit by all similar occasions, we resumed at 9.55 our NW x W course gratified at having been beforehand with the natives on this occasion, and solved a problem. Traces of a birds foot were numerous all round - with 3 front toes and one long hind one.

10.20 & 10.25 - In  $\frac{3}{4}$  mile two dry water-courses to N: in 200 yards both unite: a grassy valley a mile on right.

10.45 - On top of a long ascent of gnardruk and mallart forest: much good red soil.  $1\frac{1}{4}$  mile from 10.25

Then gradual descent: patches of good grass, and another ascent to 11.10 when made  $1\frac{1}{4}$  miles. Then entered from thick forest to open plain:-

Hill "i" (J ?)	$1\frac{1}{2}$ miles	N 248 E
Hill "h"	5 or 6 miles	310

11.30 -  $\frac{3}{4}$  mile: a sandy watercourse to Ed.

11.50 - On summit of ridge. Entered upon level grassy land among gnardruk and wooruk on nearly level land.

12.2 - (by watch)  $\frac{1}{4}$  mile. Halted for noon observation.

12.30 - Proceeded NW  $\frac{1}{2}$  W and immediately afterward saw hill "i"  $1\frac{1}{4}$  miles S.

12.45 - Entered gnardruk forest : good red loam: level country. The plains are occasionally close thickets and vice versa : the burnt remains of low trees and bushes being scattered over the former. Immediately after, a watercourse to left. Ascending

1.50 -  $1\frac{3}{4}$  miles: watercourse to Ed. SW  $\frac{1}{4}$  mile to a bare granite rock on a ridge whose summit bore  $\frac{3}{4}$  mile SW: proceeded



towards it. Crossed and recrossed several watercourses coming from it, and at 1.45 reached the bare rocky summit "j" from which a great extent of bare sand became visible in the lowland between N 55½ E and N 59½ E.

A considerable open space N 57 E - 4 to 6 miles distant - nearest part of the largest part N 14 E - 3 miles, where it is 4 or 5 miles wide.

Extremity of a low bushy Point in ditto projecting to Sd.	4½ miles	N 13 E
A low hill on SW shore (NE part Eaglestone Hill?)	7 miles	355
Eagle Rock - at Sw end, a higher ridge	6 miles	352 25
Hill "g"	2½ miles	328 30
Hill "h"	3 miles	330 20
Hill "i" (Mt Moore)	2½ miles	131 30
High granite summit near S° end of a ridge ("f"?)	14-15 miles	110 40
Projecting S° shoulder of a granite ridge	25 miles	55
Good grass in large patches visible on the opposite rising ridge	7-8 miles	19 & 40
Bare grassy Hill (Long Range summit?)	7-8 miles (14)	317 30
Level rge of yesterday from Summit ("k"?) to	15-16 miles	310 307 30 298
Woody summit of some grassy hills lying NE and SW	2½ miles	287
Summit of hill "j"	1/8 of a mile	South

(The following note was made at the end of the day but referred to the above bearings - Lands Dept. Staff, 1976)

"While taking these bearings and examining the surrounding country, our attention was suddenly called to the appearance of a large fierce fire which arose all at once, high above the trees which skirted the SE side of the largest lake. Considering it was made by a party of natives who had just discovered us on the hill, spy glasses were directed to the spot, and the supposed fire was soon discovered to be a reeling pillar of red dusty soil which was raised in the air by a whirlwind sweeping over the lake, and carried with headlong fury to the SE. Its progress could be traced for a quarter of an hour afterwards as it suddenly rose and fell in its progrees before a NW breeze.

We were nearly caught by a similar gust afterwards as we ascended the rising ground to the foot of "g" hill, and took warning of the roaring noise it made among the trees 200 or 300 yards off, to abandon a wood we were in, and gain an open space - but it passed clear of us, and whirled with great violence and

impetuosity to the lower grounds."

2.18 - Proceeded towards hills "g" and "h" : patches of good grass among scrub.

3.10 - 2 $\frac{1}{4}$  miles: began to ascend the approach to "g" hill over various country - sometimes forest of guarderuk, at others scrubby land and thickets, among which, occasional patches of grass.

4.5 - In 2 $\frac{1}{4}$  miles reached SE side of "g" hill and halted close to a hole of excellent water in the foot of the rock, where excellent green grass, heavy in seed, was in abundance for our horses.

Ascended hill "g" and from its summit saw -

Hill "h" - $\frac{1}{4}$ of a mile	N	48	E
Eagle Rock - 5 miles		23	
S.E. foot of do. ridge		27	
Eagle Rock is detached on NW side of the ridge			
2 lower summits of "h" in a line $\frac{1}{3}$ rd & $\frac{5}{8}$ mile north			
Low point on opposite shore of lake projecting SEd $4\frac{1}{2}$ miles			
		49°	30'
Mount Past Lake - 2 $\frac{1}{2}$ miles		50°	0
Breadth of lake in NE direction about 4 miles			
Largest lake spans from 7 miles dist.			
		17	
to 7 miles			
		83	
Another part of lakes, trending to ENE			
9 to 12 dist.			
		92	
Sand can be traced in several detached pieces from SW corner of large lake to abt. 8 miles off			
		102	
Sand can be traced in small detached portions among the trees from N° visible end of large lake to abt. 5 miles distant			
		312	
Conical granite and grassy hill "m" - 6 or 7 miles	300	15	
Long range NE steep pitch 16 or 18 miles	307	45	
Summit do.	305	00	
Another summit higher 16 miles	294	30	
S° end about 16 or 18 miles	258	0	
Long round hill granite and good grass (1")			
	(264		
4 or 5 miles	(271	30	
round "l" off NW side do. 5 or 6 miles	273	0	
hill "i" 5 or 6 miles	144	45	
hill "f" 13 or 14 miles	122		
S° shoulder of high dist. range.			
	30 miles	107	40
Ridge "k" SW end undefined	322		
Ridge "k" summit 15 miles	330		
Ridge "k" NE end, steep 15 miles	334		

Peak, summit of distant range, wooded N. side.	15 miles	81
Bare grass, visible at high part long ridge.	12 miles	264
3 native fires smoking up, 7 miles off under Long Range.		
Bivouac 20 1/3 mile horizontal SE by E.		

The "Lakes" or reservoirs at our feet seem to form the bed or channel of the receptacle for all the water of this part of the country, but they are very shallow apparently, and composed of white sand.

The surface has the appearance of being extensively covered with water, among which are dry banks colored darker by weeds or small plants. But whether the water is fresh or salt, or part of a river, or otherwise, as also whether its dip is to the NW or SE must be decided tomorrow by a visit to the small ridge of which Eagle Rock forms the NWn part. It appears from these hills to come from the ENE 3 or 4 miles, then to open out to a width of 3 or 4 miles and to extend 8 or 9 miles north-westerly to the eastern base of Eagle Rock ridge, round which it winds westerly in a woody valley until lost sight of about 5 miles off on a bearing of N 312 E. Tomorrow's proceedings will, it is to be hoped, throw more light on the subject.

Previous to descending, a cairn of stones was erected on the bare rocky summit of the hill 4 feet high.

In the vicinity are white cockatoos, pigeons, crows, hawks, and a few small birds, besides more kangaroo rats than usual, and more of the burrowing animal's holes have been passed today - but no traces of kangaroo are yet discernible. Feet marks of emu have been met with in our route as well as numerous traces of natives and a few huts, some of the former very recent. They had evidently seen us on hill "g" and blazed up 3 fires to the Nd immediately after we had ascended the summit.

The moon was partially eclipsed this evening, but the heavens were much overcast and shadow not well defined.

It is but justice to the "gnow" - or whatever bird it was whose nest we robbed today of 6 eggs, to say that their contents when blown out of the shells (which were very thin indeed for their size) and fried, proved most excellent, although the hatching process had commenced in some, and was considerably advanced in others.

Oct 25 -

Sun rose at 5.34 : N 108 40 E.

Having no trees to mark the number of our bivouac on, the cairn



of stones on the top of hill "g" and the conspicuous character of the hills, answered the same purpose.

7.40 - Proceeded NNE towards Eagle Rock, passing round SE side of the hill "h": a good spring at NE foot of Hill "h" deepened out to a well by the natives. Crossed head of a deep watercourse dipping to SE at  $1/3$  mile NE of foot of hill "h": grassy undulating land.

8.20 - In 1 mile through scrub, on a granite rock :-

Low Point	5 miles	N 53 E
A low granite hill	$2\frac{1}{2}$ miles	48 $\frac{1}{2}$

9.20 - In  $2\frac{3}{4}$  miles arrived within  $\frac{1}{2}$  mile of summit of Eagle Rock, and turned off E for the lake shore. Samphire level flats for 200 yards brought us to the shore of the lake, which lay spread out before us in one vast white sheet. The occurrence of samphire had prepared us for salt water, but, instead of it, the level surface of the lake was covered with a crust of salt near the margin, which assumed a gravelly size further out, and at 60 yards was succeeded by a coating of mica or gypsum in pieces from an inch to a tenth of an inch in length, and clustered like sand. Amongst these at a still greater distance was very coarse white quartz sand, and underneath the whole was a soft smooth clay of various colors, red, like the appearance of the brick-dust colored soil uppermost, then brown, blue, red, yellow, and whitish and then more sandy whitish in succession to the depth of one foot, where very salt water oozed in - seemingly devoid of that nauseous taste which ever attaches to sea water..

The shore lay in the general direction of N by W and S by E and was fronted by low strips of samphire to the distance of  $\frac{1}{4}$  of a mile. The eastern foot of Eagle ridge is bounded by this lake. On the surface numerous traces of emu, dogs, and some natives.

Followed beach NWD  $\frac{1}{4}$  mile to E foot of E. hill, where a small watercourse from the rock contained pools of good water draining to the lake.

From summit Eaglestone Hill :-

Summit "f"	14 or 15 miles	N 140 $\frac{1}{2}$ E
hill "i"	10 or 11 miles	163 40
hill "h"	5 miles	202 20
hill "g" (cairn)	$5\frac{1}{4}$ miles	203 30
A small wooded granite hill	2 miles	227
EAGLE ROCK 90 yards		248



Summit "a 1"	3 miles	142	30
Summit "a 2"	2	154	30
Summit "a 3" (north part)	1	164	30
West Bright, lake shore	$\frac{1}{2}$	182	
E. ridge lying about E by N and W by S	$\frac{1}{4}$		
Long Range, summit	13 or 14 (?9 miles)	N290	E
Another summit	16 miles (?12)	283	30
Peak over N end	14 miles (?summit long range 9 miles)	291	
Hill extensively grassed	10 or 12 miles	294	30
Round pitch at NE end "k" range	14 or 15 miles	315	10
A large granite summit on long range	18	266	
Opposite shore of lake (a) to the NE	2 miles		
Opposite shore of lake (a) to the N.	3 miles		

From the latter position, lake trends to the Wd. Several smaller ones lie to the distance of a mile behind the opposite shore, and the connection is traced as far as N 297 E - 4 miles - another branch appearing to extend to N 313 E - 5 or 6 miles distant.

A long granite grassy ridge seems to lie WSW - ENE at 30 mile distance, its summit being N 340 E.

A low granite ridge, wooded, with grass at SW foot - 8 miles 323° 30.

Lowest dip in the distant land, and probably the direction of the Salt Lakes N 2 E

Low point in Lake (a) - 3 miles - N 92 E.

North-east face of E. ridge very much honeycombed and worn in small caverns - the whole a mass of coarse granite and Whinstone.

No appearance of water on lake surface.

11.20 - Proceeded for Long Range summit. Along the beach to NNE at foot of E. range, rocky and very much honeycombed.

11.35 - In  $\frac{3}{4}$  mile arrived at NE corner and steered to WNW. In  $\frac{1}{2}$  mile came to samphire plain bordering a white dry lake on right. Skirted it and another, passed through scrub and thicket, and at 12.25 came to a circular dry lake, 250 yards in diameter: too soft on a muddy bottom to cross. Skirted round to SW. Beyond it a narrow, raised, belt of soft marly soil, very much furrowed, and 5 feet above lake.

Crossed over two other belts of swampy lake, the whole in  $\frac{2}{3}$  of a mile. Then neck of higher firmer ground - another shoal lake - belt of higher land, then at

1.10 - A lake - nearly circular - containing water 150 yards in diameter, and a crust of salt : an inlet, or opening, in its SW corner and another in the NW. Since 12.25  $1\frac{1}{4}$  miles WNW.

Rounded N side of lake to opening in its SW side : opening trending to SW, W, 50 yards wide : dry.

At  $\frac{1}{2}$  mile from the salt lake came to a tributary whose waters had evidently run from the NW - now dry - crossed over. The principal branch SW : traced it  $\frac{1}{2}$  mile further: then a smaller lake nearly dry : a stream bed from it 20 yards wide trending S - but which way the dip of the country was, it was impossible to say.

1.55 - Steered WNW through thickets of spearwattles on low level land for  $\frac{3}{4}$  of a mile, then through forest of mallart, wooruk, &c on a gradual ascent. Some underwood,

3.15 - Came to brow of very long ascent in  $3\frac{1}{2}$  miles from 1.55. More open then, but scrubby. Hill at summit, Long Range N 305 E.

3.35 - In  $\frac{3}{4}$  mile, a watercourse winding to SE at commencement of grassy land. Found some water in holes of the granite rocks, and watered the horses.

4.15 - In  $1\frac{1}{2}$  mile more arrived within  $\frac{1}{2}$  mile of summit Long Range: no feed or water. Proceeded NE for  $\frac{1}{2}$  a mile and then steered NW for good grass on a hill side  $\frac{3}{4}$  mile distant. A water course at foot of it, dipping to SE through abundance of good grass. Following it down  $\frac{1}{4}$  mile an old native well close to a granite rock was found in the bed, and we gladly halted for bivouac 21.

On deepening out the well, good water flowed in at the depth of 20 inches.

The hottentot fig and a few samphire plants are found in the bed, but otherwise there is no appearance of the water being brackish at any time of the year, and the only bushes in shape of wood are a few nut trees and wattles. Granite is at the surface in many places, and the soil produced by its decomposition is light, but good.

Grass is here in the valley and over the hill tops, of good quality.

Marked a prickly thorn tree 21 being the largest tree.

Summit of Long Range bears from Bivouac (21) N 159 E -  $\frac{3}{4}$  mile Oct. 26 -

Sun rose at 5.30 a.m. N 107 25 E.

Several little causes having detained us, we did not break up the camp till 8.15 when we proceeded SSE for summit of Long Range from whence the following were taken:

Summit hill "g" N 155 40 E - Angles to left:- hill "h"

1.32, Eagle Rock, 9 or 10 miles 22.21, Eagle Rock summit 25.02, N end of lake "a" 12 miles 32.50, South arm salt inlet visible in patches in sand as far south as N 150.45E, angle "g" hill to bare granite patch - 3 miles - 66.26, do. grassy on its west side. Peaked hill - 17 or 18 miles - 85.44, long round hill - 16 miles - 87.12, a small peak - 18 or 20 miles - 94.41, summit near S end of a range - 25 miles - 95.55, a granite ridge SE end - 5 miles - 122.08, do. summit 122.40, summit "l" - 1 mile - 108.47, summit covered with grass standing from it half a mile N & NW, 2 miles SSE, Low point lake (a) 26.20. No other part can be recognised.

Angles to the right of "g" hill:-

Hill "i" 3.30, good grassy land - 9 or 10 miles - 14.10, low granite hill - 7 or 8 miles - 29.33, granite peak - 14 or 15 miles - 30.20, round granite - 14 miles - 31.09, A wooded granite hill - 11 or 12 miles - 36.23, a bare granite mass - 4 miles - 39.02, a round summit -  $\frac{3}{4}$  mile SE of do. 38.33, "l" summit 51.31, "i" round 54.48 large granite hill - 14 or 15 miles - SE end 56.40, do summit 57.21, do. NW end 59.00, Low granite hill - 16 miles - 65.30, grassy hill - 6 or 7 miles - 77.20, ridge "k" south grassy end - 93.00, Hill "m" - 7 or 8 miles - N 276.40 E.

Angles to the left of hill "m"

To "k" range E foot - 3 miles - 1.20, do. summit - 3 miles - 11.45, do. highest summit 32.00, hill "n" - 8 or 9 miles - 2.30.

Wide plain, open and sandy between Long Range and range "k": ridges of quartz rock upon it lie in NNE-SSW direction, which is also the direction of Long Range. Good grass visible to the distance of  $4\frac{1}{2}$  miles in a N direction - "l" - grassy land extends from "l" in S direction as far as S x E  $\frac{3}{4}$  E.

Quartz Hill N 294 30 E

Widest valley, and where it appears likely the best land will be found is on left of the round hill to the N 46 E.

9.45 - Proceeded WNW for quartz hill. Crossed several white quartz ridges and flat granite sheets. At 1 mile crossed a small drain to the S by W and in 3 miles at 11.0 arrived at a large block of quartz on Quartz Hill, from whence.

Hill "p" bore	3 or 4 miles	N 8.30 E
Hill "m"	4	267
Hill "n"		263.40
Red granite Hill	$2\frac{1}{2}$	336.30
Summit "k" range		216.30
Large hill summit		181.50
Hill "g"		129
Long Range Summit		114

Quartz Hill ridge lies NNE-SSW and is steep on its western side.

"q" granite summit 14 or 15 miles 298.50



A granite summit	16 or 18 miles	4.20
Granite and some grass on a ridge		2.30

Quartz Hill is a mass of quartz, including some large blocks.

11.20 - Steered for "p" hill (Hammersley Hill) N  $8\frac{1}{2}$  E

12.30 - Arrived on a granite patch  $\frac{3}{4}$  mile short of the hill "p". A watercourse at its foot dipping to the SW.

While approaching the rock some natives were seen on our right apparently a man, 2 women, and 2 children, walking leisurely towards the hill, without seeming aware of our presence. We called out to them to prevent alarm, but they all ran away, and were regardless of our repeated invitations to come to an interview. We had previously seen the smoke of their fire from Long Range.

Walked to summit "p" while the horses grazed on the only small patch of grass visible.

From the summit of "p" hill :-

A grassy hill	12 or 14 miles bore	N $1\frac{1}{2}$ E
Top of a level ridge apparently grass under bushes	3 miles	78
"m" hill	6 or 7	239 20
"n" hill		237 10
"k" summit	6 or 7 miles	212 30

Very little grass to be seen, and the most being that to the E by N we descended and proceeded for it at 1.50 following up the watercourse which comes from the NE by E along the S. eastern slope of "p" - but in  $\frac{1}{2}$  a mile scarcely any trace of a watercourse remained, and we steered E by N through very scrubby poor forests of gnardruk, gnecleruk, and a white-washed gum of small growth till 2.57, when, in  $2\frac{1}{2}$  miles we arrived on the ridge - granite - containing pools of water but no grass:-

Eaglestone N 132 E, hill "g" 147, Long Range summit apparently of quartz - 3 or 4 miles - 184, Hill "g" - 147, grass hill on the ridge - 14 or 15 miles - 104 40, Low point, lake (a) 124.30; Patch of good grass on east side of ridge -  $1\frac{1}{2}$  miles - 180.

On east side of ☉ a valley dips to S by W.

☉ hill is coarse granite and whinstone - a large sheet of it extends bare to the North.

3.15 - Proceeded Sd for grassy land 1 mile distant. In a hollow to the SE found a watercourse trending SSE, following which, water was soon found in several pools, grass increased in quantity and quality, and at 3.35 in  $\frac{3}{4}$  mile from 3.15 in S by E  $\frac{1}{2}$  E direction encamped for bivouac 22 among good grass and plenty of running water in the rocky stream bed.

hairy caracaras, hut, wattles; no timber. Rocky at the surface coarse granite and white tone.

While dinner was preparing, ascended a cluster of rocks 1 1/3 m W by S and saw:-

Long Range Summit - 3 1/2 miles - N 183 1/2 E., hill "g" 144.40, hill "h" 145.50, Eaglestone 127.40, do. ridge NE foot 124, Low Point Lake (a) 121.20, hill "i"? 128.45, wooded summit 1 1/2 miles on a ridge lying ESE - WNW 192, bare granite summit on a ridge 16 or 18 miles - 162.50, Rocky summit (? highest part of ridge "k" last left) - 3/4 mile - N 4.30, grassy hill on a ridge 12 or 14 miles - 101.00.

Pigeons, white cockatoos, and small birds: but so wild none were shot. Soil, light loam, the detritus of the granite rock

October 27.

Remained here the 27th to give horses and men a day's rest and to effect many necessary repairs, wash and mend clothes &c, during which the observations gave the Lat. 30° 56' S Long 3° 7' 8" E of Perth.

Variation of compass (by a rising amplitude) 2° 54' W

-----  
Much grass lower down the valley to the SE.  
Took stock of remaining provisions, by which it appeared there was sufficient to last us with care until Nov. 12.

Made corresponding arrangements for our return to the Swan River by a circuitous northerly route. 22

-----  
Distances traversed to date:-

Oct. 5	6 miles	Oct. 16	4 miles
6	14 1/2 miles	17	13 1/4
7	16 1/2	18	17 3/4
8	8 1/4	19	8 3/4
9	10 1/4	20	9 3/4
10	14 1/4	21	8 1/4
11	17	22	15
12	13 1/2	23	13 1/2
13	9 3/4	24	15 3/4
14	11 1/4	25	17
15	15	26	13

Rest on 27th. Total to date - 272 miles.

October 28, 1836. -

At 7.10 proceeded on our journey: steering NNE up the opposite side of our small valley - rising gradually on E. side of granite range.

Crossed two small valleys with small watercourses in them containing water among some good grass. At 7.50 in  $1\frac{1}{2}$  miles arrived on a high bare granite summit "b<sub>1</sub>"

Summit Long Range	7 miles	N 190.50E
Eaglestone Rock	14 - 15	137.20
Low Pt. lake (a)	16-17	130.20
Hill "g" (h?)	17 miles	151.30
Round hill on NW side of a wide valley of level land	25 miles	43.30
A large hill on SE side of same valley	20 miles	53 00
Low granite hill or rock	1 mile	70 00
Another do.	$1\frac{1}{2}$ miles	56 00

⊙ range lies generally SSE and NNW, high, granite, and same as which we last slept. On its E side many patches of good grass, and grass visible below at 1 to 2 miles distant in patches.

At 8.17 proceeded NW by N : ridge dipping to NW, and at foot of it a small watercourse dipping to NNW. A large flock of white cockatoos, and the first trace of a large kangaroo we have seen for many days.

9.15 - Emerged from a Gnardruk forest, upon scrubby plain: good grassy forest land  $\frac{3}{4}$  mile to NEd:  $2\frac{1}{2}$  miles:  $\frac{1}{2}$  mile further to 9.30 - hill last upon 3 miles N  $146\frac{1}{2}$  E. Entered forest of gnardruk and gnecleruk.

9.40 -  $\frac{1}{2}$  mile: a watercourse to East, rising up from which, on opposite side, was a low quartz ridge lying NNE and SSW.

10.0 - In  $\frac{3}{4}$  mile a watercourse to NEd. A long ascent to 10.45,  $2\frac{1}{4}$  miles: when on summit of a ridge of Ironstone: over light soil dipping Ed.

Granite hill - 6 or 7 miles - N 11 E.

Detained  $\frac{1}{4}$  hour repairing damage to a saddle.

11.0 - NW by N.

11.15 - Came to northern pitch of rising ground: clear view in advance for  $\frac{1}{2}$  mile:-

Granite hill "c"	- 8 or 9 miles	N 302 30E
" " "d"	6 or 7 miles	292
" " "e"	6	14 30



good grassy small hill -  $1\frac{1}{2}$  miles 24

Granite hill, bare 8 miles 281

11.20 - Proceeded towards hill "c" N  $57\frac{1}{2}$  W.

11.30 -  $\frac{1}{2}$  mile; watercourse to NE.

12.17 - 2 miles: scrubby plain or guarderuk forest land with patches grass: small watercourse to Wd. Some good red and brn loam, in which water lodges during rain in numerous holes. Native huts of old date scattered about.

12.30 - halted for noon observation of barometer. Half a mile since 12.17.

12.45 - Proceeded NW by W: a small watercourse to SWd.

1.0 -  $\frac{1}{2}$  mile further close on patch of excellent grass land at summit of an ascent: about 300 acres visible and extending further to southward than we could perceive. Beyond it good brown loam on level surface, open forest, occasional belts of cypress thickets, and, as we advanced, a great deal of a prickly bush with a leaf resembling that of the prickly pear, but  $\frac{1}{4}$  inch wide.

At 2.20 - Were in centre of a dry lagoon 250 yards in diameter covered with samphire and a very shallow bed. Land exceedingly low all round it, and an outlet, or inlet, on its NE side leading to a smaller lake close to N side of the first:  $3\frac{1}{2}$  miles since 1 p.m. and from "c<sub>1</sub>" summit  $\frac{1}{2}$  a mile.

Finding no grass on SE side "c<sub>1</sub>" hill, which is a bare steep ma of granite, we halted near its E foot, where by digging in the moist green ground, water was readily obtained for our purposes. The grass here was good, but not very extensive. Ascended summit "c<sub>1</sub>"

Broad granite hill of considerable elevation ("b <sub>1</sub> "?)	10 miles	N 137 E.
Summit of high granite range	17-18 miles	N 154 30 E
Peaked granite summit of a range	16 miles	160 30
Round granite hill: considerable at SW end of a range	9 or 10 miles	170 45
A broken quartz hill	2 miles	175 30
West end of a low woody range	15 or 16 miles	182 30
A long granite hill, not very high ("d"?)	6 miles	198
Low granite hill on East arm from a higher granite ridge	$4\frac{1}{2}$ miles	216 20
Summit of last named ridge	7 miles	220
Lake (b) centre	$\frac{1}{2}$ a mile	53
hill "c" grass on its SE and SW sides or feet	2 miles	349 40
Lake (c) Western visible end, (1st time seen)	4 miles	3 30
nearest part lake (c)	3 miles	7 30

Lake (c) can be traced by samphire bed as far Ed as  $2\frac{1}{2}$  miles N 14 E from which a valley seems to trend round SE, S and Sw to lake (b).

Wooded rise near the W end of a ridge	13 - 14 miles	356	15
---------------------------------------	---------------	-----	----

Clump of trees on a bare granite ridge	12 - 14 miles	77	10
--	---------------	----	----

hill "aa" (grassy at its west foot)	$2\frac{3}{4}$ miles	345	00
-------------------------------------	----------------------	-----	----

"C1" ridge extends to W by N and from W end of it is another, smaller,  $1\frac{1}{3}$  mile to the NW of it and lying N and S. "C1" is a mass of coarse granite.

5.35 p.m. - Having dined, proceeded N by W for hill "c", over rather tolerably level land, scrubby, but good red soil. In an hour halted near W foot of "C1", where ground was very moist and grass green from drainage from the hill.

About 100 yards off is a hole in the level flat rock below, in which was a depth of about  $2\frac{1}{2}$  feet of water, where the natives appear to have resorted for purpose of killing pigeons etc. while drinking.

From summit of "c" hill -

Sunset		N 267	45E
--------	--	-------	-----

Hill "c <sub>1</sub> "	2 miles	171	
------------------------	---------	-----	--

Long Range Sumt.		161	15
------------------	--	-----	----

Granite Hill	9 or 10 miles	90	
--------------	---------------	----	--

Lake (c) visible 3 miles and 1 mile		25	
		80	

Lake (d) visible $\frac{3}{4}$ mile N 87 E and 1 mile N 110 E			
---	--	--	--

Lake (d) NW-SE $2\frac{2}{3}$ mile long			
---	--	--	--

Lake (c) N and S	$1\frac{1}{2}$		
------------------	----------------	--	--

A Wooded Summit	7 miles	N 358	E
-----------------	---------	-------	---

Hill "ca"	$\frac{1}{2}$ mile	NW	
-----------	--------------------	----	--

Body of a White Lake beyond (c)	$2\frac{1}{2}$ miles	N 42	E
---------------------------------	----------------------	------	---

Body of a White Lake beyond (c)	$1\frac{3}{4}$ miles	57	
---------------------------------	----------------------	----	--

a round hill	7 to 10 miles	184	30
--------------	---------------	-----	----

Sun having set, objects very obscure.

There is good grass all around "c" hill to the distance of  $\frac{1}{2}$  to  $\frac{1}{4}$  of a mile, as also between "c" and "ca" - some of it the best we have seen since leaving the Avon. The Hill is a huge mass of coarse granite with a rounded summit, and is steep on the SW side. The opposite or SE side is high and steep at the middle, which presents a concave outline.

steep

There are few bushes or trees around it, the former nut and wattles, the latter a rough barked gum growing like the York gum, and scaling off the upper part of its bark first. Soil the usual light loam of these granite vicinities.

Summit of C hill from bivouac 25 1/3 mile N 54 W  
Marked a tree 25

Oct. 29

8. a.m. - Proceeded round NE foot "c" and ascended "ca" from whence the lakes appeared to take a general direction of NW and SE.

High hill : sumt. Long Range? ("k"? highest SW summit)	17 or 18 miles	N 170	20E
Low hill ("d"?)	7 or 8 miles	171	30
W end "Cl" hill (is under long range summit?)			
A high summit ("k"?)	20 miles	161	
Top of a long ridge - level (? "Bi") (? quartz hill)	17 or 18 miles	157	40
Low hill	1½	180	
Round topped hill? (quartz?- in line with a granite summit, on same ridge as 180° hill.)	7 or 8 miles	183	30

8.45 - Steered NW and NW by N through much thick scrub 3½ miles.

10.05 - Granite top, over ridge	5 miles	N 154	OOE
Granite Hill	4½	150	
Hill "ca"	3½	136	30
high granite hill	15 or 16	166	30

10.25 - In 1 mile more, scrubby land. Crossed a broad grass but shallow, waterdrain, dry, from a granite rock ¾ mile to the NE with grass around it.

10.55 - 1 mile NW, through much thick scrub: a watercourse from NW by N, then forest land.

11.55 - 1½ miles. through mostly very thick scrub and brush. A watercourse, small and dry, to Ed : through forest land: light brown loam. Quartz vein lying NNE and SSW, 100 yards broad, mixed with granite.

12.15 - ½ a mile further : close thicket. Came on an open hollow with a dry watercourse in it dipping NE. ¾ mile to SE on a lower level, quartz rocks visible, with granite near them. Halting to observe alt. of mercury in barometer, in a clump of gneeleruk

trees near the watercourse. 50 feet below level of ridge to NWd.

Mr Smythe, whom I had despatched lower down to look for water in the meantime having reported a dry native well  $\frac{1}{4}$  mile distant among some grass for our horses, we removed there to dine, and spend the warmest part of a hot day.

This watercourse assumes a more decided character than any we have fallen in with today before.

Our well not having performed its promise, and yielding us only a quart of muddy water in a couple of hours, we saddled, and at 3 p.m. proceeded to trace the watercourse down a little way to the NEd and Ed  $\frac{1}{2}$  a mile, when it dissipated in broad swampy ground, very dry, and we gave up further search.

3.15 - Proceeded NW through much thick scrubby country scarcely penetrable to

3.52 - when, in 1 mile emerged upon a more open country in as much as scrub only 6 feet high. Appearance being very thick indeed to NW we steered West.

4.12 -  $\frac{1}{2}$  a mile: a small dry watercourse to Nd, with a sandy bed: close forest, wooruk, gnardruk, gneqleruk.

4.21 -  $\frac{1}{2}$  a mile further: a watercourse in a thicket dipping to SE. After passing through a very thick scrub to 5.55 p.m. in  $2\frac{1}{4}$  miles, crossed 2 small watercourses dipping to NW, and in 200 yards, a larger one: the whole appearing to unite a mile to the Sd. Followed the last down SSE,SSW,  $\frac{1}{2}$ S, for  $\frac{1}{4}$  mile: dissipated. Steered SW at 6.15 to 6.30,  $\frac{1}{2}$  mile: then WSW  $\frac{1}{2}$  a mile: symptoms of grass observed among the bushes and small trees. Searched round the neighbourhood, but found all so scrubby and thick, we were likely to fare worse by proceeding. Therefore, as the sun now disappeared, we halted for the night, with unavailing regrets at being unable to find any water for our thirsty horses. To the bipeds of the party a pint a piece was spared out of a very small supply we had been enabled to carry with us.

It may now be concluded we have left the granite country to the eastward, only a few small flat sheets having been seen during the early part of the day, as if lingering to maintain its place.

The country instead has been closely wooded with timber of small growth. in some places open with a light sandy soil, and in others very thickly beset with close thickets or brush, among which the prostrate dead timber lies in all directions, and much impedes the traveller's progress. Greatest part of this fallen timber has been prostrated by SE winds, giving an additional



proof of their occasional force.

This state of things has prevented our seeing generally more than a mile - and sometimes not 20 yards - on either side of our route but the country seems now to be dipping to the Westward.


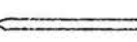
Marked a low woork tree  and while doing so indulged in the hope that we should not have another bivouac so bad.

Oct. 30

At 6.52 proceeded on our journey, steering W by N. Crossed over an open scrubby plain, and at 7.25 in  $1\frac{1}{4}$  miles passed a small sheet of granite with a few tufts of grass about it.


Passing on through a scrubby thicket, in  $\frac{1}{2}$  mile, at the summit of a rise, we came to another granite sheet of larger dimensions, lying SW and NE, and in it a deep hole of good water, which was gladly welcomed - by our horses especially.

Here we watered, filled all empty vessels, and at 8.15 proceed W by N.

This well seems to be a great resort of natives for the double purpose of procuring water, and killing pigeons and parrots as they come to drink. In the well a kylee  and a dow-art  were found, which had been used for the above purpose, and close to it an old broken spear. Old fire-places were also observed.

8.58 - 1 mile, much thicket. Steered W  $\frac{1}{2}$  N for more open land in advance. Descending gradually over open plain of low scrub for  $2\frac{3}{4}$  miles to 9.45 when we changed suddenly from a light sandy soil sprinkled with ironstone gravel, to good red loam and excellent grass in a forest of living and dead gnardruks of small growth. T vein runs NE and SW.

Proceeding  $\frac{1}{2}$  of a mile W  $\frac{1}{2}$  N across it, a dry watercourse came from the NE. Followed it down SW, average direction, and at 10.10 1 mile, the stream bed having spread out and the grass terminated at a thicket, we halted for the benefit of the horses.

Dined, and marked a white barked gum tree 

2.25 - Proceeded SW to ascertain a little more respecting the stream bed. In  $\frac{1}{2}$  a mile, no appearance of any, proceeded W  $\frac{1}{2}$  N and in  $\frac{1}{2}$  mile more emerged upon a very extensive open plain, sandy soil covered with low scrub and coarse rushy grass.

Three emus and several young ones, but although one of them offered a good opportunity of making our acquaintance by walking up to us, she decamped at speed before properly within shot.

Two native fires also smoked up to SW for a few minutes as signals, probably to each other, of our having been perceived by them.

4.15 - In  $4\frac{1}{2}$  miles over these plains - which are 5 or 6 at least in width, came to W end of a long narrow vein of forest land in which was a chance of finding water. But quite dry.

SW  $\frac{1}{4}$  mile to clear ground, then W  $\frac{1}{2}$  N. Thick scrub descending to swampy hollow on right: through thick scrub: then, at 5.35 on an open extensive down - light soil and low scrub. Steered NW by W for clear way. 3 miles W  $\frac{1}{2}$  N:  $\frac{3}{4}$  mile NW by W: then at 5.52 W  $\frac{1}{2}$  N  $\frac{1}{4}$  mile NW  $\frac{1}{4}$  mile then SW  $\frac{3}{4}$  mile to round a thicket on right.

6.20 - W  $\frac{1}{2}$  N,  $\frac{1}{2}$  mile to 6.30 to top of rise through very thick scrub: then forest land somewhat more open. Scrubby downs and close thickets 1 mile to 6.55

Found then a gnow's nest, which we took the liberty to open and relieve of 6 fine eggs, and proceeded Nd for the bottom of a hollow as one last hope of finding either feed or water for our horses.

In  $\frac{1}{2}$  mile arrived among the small trees and brushwood below, where there was a little very coarse dry grass, but no water. Here we were compelled to halt at  $\frac{1}{4}$  past seven.

During the night an attempt was made to find water by digging in a shallow stream bed  $\frac{1}{4}$  mile to the NE, but at the depth of 5 feet further progress was stopped by rock, and the effort was abandoned. The soil at that depth was somewhat moist. Soil in vicinity of our bivouac, tolerable red loam. Timber, wooruk, mallart, spearwattle and other brush.

Marked a wooruk



Oct. 31

At daylight we welcomed the appearance of rain from dark clouds brought up by a fresh northerly wind. But, with the exception of a few drops, it did not perform its promise.

We had  $\frac{1}{2}$  a pint of water a-piece from our keg.

At 7.25 proceeded W $\frac{1}{2}$ N for purpose of pushing through so bad a region before the horses should knock up.

8.45 -  $2\frac{1}{2}$  miles. Through very thick scrubby forest land. Came to open scrubby plain: sandy light soil:  $\frac{1}{2}$  mile across. Then thick forest land and scrubby plains mostly on lightly undulating land.

10.15 - 3 miles. Day warming and sultry: men very faint, for want of water: issued 1 gill of mixed grog each.



10.55 - In 1 mile more, large salt lakes - dry - N 6 or 7 miles.  $\frac{1}{4}$  mile farther steered WNW in hope of crossing a watercourse to the lakes. Scrubby:  $\frac{1}{2}$  mile to 11.15. Observed a patch of granite on hill side on opposite side of valley (N 281 E 4 or 5 miles) through a valley on this side of which, white sand from the large lake can be traced to WNW. Steered W by N.

11.45 -  $1\frac{1}{2}$  miles through scrub came to an arm of the salt lake abovementioned, lying N and S. A large native hut, constructed of boughs and capable of holding 5 or 6 had recently been constructed on the E shore.

Searched up and down - all dry - samphire and sand.

Proceeded W by N across several small lakes, dry - partially covered with samphire encrusted with salt and generally communicating with each other by narrow channels. Breadth of the whole, about a mile. Some of the beds were damp - and the whole moist, but on scraping away the upper surface of soft loamy clay, hard stiff stony soil succeeded at 7 or 8 inches which it would have required a pickaxe to penetrate.

The opposite rise of  $1\frac{1}{2}$  miles was over very scrubby land with soil consisting occasionally of good red loam, or of yellow sand sprinkled with ironstone. We then arrived at the granite rock we had seen from the opposite side of the valley, and were much gratified at finding not only some good grass at its foot, but a native well of excellent water close to the south corner.

Our camp was immediately pitched for the day, and gladness once more overspread the sunburnt features of the men who had become exceedingly despondent and spiritless at the nature of the country we had launched into. Neither were they cheered by the reflection that a quart of water was all that remained in one keg.

Close to the well was a small shelter which had been constructed with boughs by the natives for the purpose of concealing them in ambush while they laid wait for birds &c going to drink.

But with the exception of a very few small birds, two gnaws, some parrots and paroquets and one white cockatoo (or chokel-yok-el) which was seen in the valley of the salt lakes, the feathered race seem nearly to have deserted the country.

No traces of kangaroo yet, but those of emu have been abundant especially on the salt plains and lakes, and their bones are scattered about the bushes at our bivouac from the remains of the repasts of the natives.

We have fallen in with several nests of the gnaw, in close scrubby thickets, but none containing eggs. We are now sufficiently acquainted with these nests to know that those containing eggs are

Now that we have once more get amongst the granite, it is to be hoped there will be some improvement in the country.

In the morning a small run of water was observed to trickle out from a crack in the granite rock, which the heat of yesterday afternoon's sun had prevented being visible at the time as halted.

Marked a white gum tree 26

Nov. 1, 1836.

Our horses derived the greatest benefit from the improvement in the nature of their quarters, and came to the saddle in the morning full of life and spirit.

Having filled all our empty vessels, amounting to about 5 gallons, we resumed our journey at 7.35 steering W  $\frac{1}{2}$  N.

In  $\frac{1}{2}$  mile came to a gnaw's nest which furnished us with 7 eggs, and immediately afterward emerged from the close thicket in which it was stationed, to open plains or downs clear of trees but covered with low scrub in a light sandy soil.

9.20 - In  $2\frac{1}{2}$  miles entered forest land again, small gnardruk trees &c. Some appearance of grass in small patches. 1 mile forest and thicket, then scrubby open land and thicket alternately. Traces appeared of kangaroo.

10.10 - In  $2\frac{1}{4}$  miles entered upon open scrubby downs of considerable extent. Wooded higher land  $1\frac{1}{2}$  miles to S. Visible summit of the land beyond plain, W $\frac{1}{2}$ S 3 miles. Traces of Kangaroo more numerous and 5 white birds flying low; apparently chokel-yok-els, flew past to the SW. In middle of this plain we started 5 large kangaroos, being the first seen since the - of October.

At 11.20 - In 3 miles entered wood a few hundred yards wide, then scrub and a wide open plain.

11.55 -  $1\frac{1}{2}$  miles. Then W by S 1 mile to appearance of grass at bottom of a hollow dipping to SSW. On reaching it at 12.15, no grass, the deception having been caused by the fire having laid more bare the yellow sandy soil sprinkled with ironstone. Halted to observe barometer.

12.30 - Proceeded W $\frac{1}{2}$ N

1.25 - In 2 miles emerged from close scrubby thicket upon open sandy down covered with low scrub.

1.52 - In  $1\frac{1}{2}$  miles over open plain, reached trees on top of a ridge of ironstone gravel, which then rapidly descended: gnardruk forest.

2.10 - In  $\frac{3}{4}$  mile came out on open plain. A wide valley



3.15 -  $2\frac{1}{2}$  miles  $W\frac{1}{2}N$ , and W by N. Steered WNW for a clear view from next ridge.

3.30 -  $\frac{3}{4}$  mile. Came to verge of scrubby thicket up to next range of rice, and perceiving no sign of grass except on opposite side of valley to the Nd and the afternoon wearing away, we steered N  $352^{\circ}$  E for an elevation on the range where grass seemed to exist among some trees to the westward of the patch before seen, and distant 5 or 6 miles. Proceeded at

3.45 - passed through much scrub and close thicket: at the end of a mile passed through some good grass in a small clump of trees, but not exceeding 3 acres, and after scrambling through 2 miles of the closest and most prickly scrub we have yet encountered we came out on the open plain at summit of which the grass had been seen. Up a gentle ascent of 2 miles the summit was at length reached just as the sun was dipping behind the hills, and we halted at an old dry native well, about 5 feet deep, where there was some very fair grass. The well was deepened to about 8 feet, when further progress was arrested by 3 large rocks, among the crevices of which it was tantalising to feel there was water which could not be got at.

Timber, which crowns these heights, is a species of gum trees with a green inner bark and rough outer coat which peels off first upwards. They fork out very low, like the York gum or tworta, and have often been met with before by us. One, under which we slept, and which had been a long time ago marked in two places by the natives, now received from us the additional mark 27

Much granite of coarse texture appears all round our camp. The smaller wood consists of various wattles, many of them of a prickly nature, a few trees of the York nut, which we have not seen for many days, and the prickly poor scrub which we have always found in great abundance near salt lakes, and which punished us not a little today in forcing our way the last 3 or 4 miles.

Nov. 2 -

Early this morning foragers were about, searching for water, and Heffron proved the successful man by discovering a small hole in a granite rock, containing enough to replenish our kegs and to give the horses a gallon apiece. It need not be added that we did not leave a drop in the hole that could be bailed out. Pigeons were numerous about it, and daylight had been ushered in by more of the

Watering the horse. Having detained us a little, we did not break up the camp until 8.45 when we steered our journey W  $\frac{1}{2}$  N in the hope of finding more water on the range upon which we had halted.

Immediately after starting :-

A wooded summit beyond a plain "p" 8 or 9 miles N 191 E

9.0 - In  $\frac{1}{2}$  mile from bivouac a high round hill wooded summit 25 miles "q" - N 231 45E.

9.25 - In  $1\frac{1}{4}$  miles - from a granite patch on S slope of a ridge - saw high land to the westward across slightly waving open plains and intermediate ridges:-

Hill "q"	24 miles (? 15 or 16)	N 231 E
Peak "r"	35 miles	248
Northern bluff "s"	32 miles (? 23 or 24)	254 07
Southern bluff "s"	32 miles	257
Peak "sl"	33 miles	259
S. end of "s" range -		250 30
N. end of " "		261
Summit "s"	35 (? 25)	253 30
Other elevated land visible its summit about 40 miles	Sd of "r" peak	245 30
High land visible Nd of "s" range: its summit 30 miles		283
Bottom of valley to the Sd: $2\frac{1}{2}$ mile dist. extending W by N and E by S: "p" hill on the opposite side - 7 or 8 miles		N 183 45 E

9.48 - Proceeded S 77 W towards "s" southern bluff: 2 miles over clear scrubby plains: then thickets, very close and difficult of passage.

11.05 -  $3\frac{1}{2}$  miles. A granite rock and grass on opposite side of valley - N 175 E - 2 miles.

11.40 - In  $\frac{3}{4}$  mile more through scrub:  
Southern bluff of "s" N 256 $\frac{1}{2}$  E

12.40 - by watch - Halted in a close thicket for noon observation of barometer: 2 miles since 11.40

12.50 - Proceeded W by S  $\frac{1}{2}$  mile. Descended S by W, and in 200 yards came to edge of extensive samphire flats about  $\frac{1}{2}$  a mile wide. Proceeded  $\frac{1}{4}$  mile, then steered W by S, W, W by N, and W by S.

$1\frac{1}{4}$  miles obliquely across the flats: arrived then at a little coarse grass among the low scrub, and halted at 1.55 to pass the heat of



Having dined, we recommenced our journey at 5.40 W by S. At end of a mile - at 6.10 NW by W<sup>1</sup>/<sub>2</sub>W for white appearance like grassy plains 5 or 6 miles distant on a lower level. Down a gradual descent threaded a very extensive maze of spearwattle and other brushwood for a 4½ miles when the day had closed in and we were in the midst of a sea of scrub and brush, among which at times much water lodges, and which it was not desirable we should get out of.

Coming to much fallen timber of small size, crossing and recrossing itself, we made for some gum trees to the Ed, and at 7.45 in ¼ mile we halted for the night among them where a little grass of coarse quality was found, but no water.

Country here, and throughout the afternoon, low and nearly level, and during some wet seasons retaining water at the surface in numerous small lakes a few inches deep, the clay bottoms of which are now dry and cracked. The intermediate spaces have many large ant hills upon them, communicating with each other by numerous clear lines resembling pathways.

During our descent, pigeons were very abundant: bespeaking the near presence of water: and wattle birds and other small kinds of the feathered race ushered in daybreak in tolerable numbers.

Nov. 3 -

At 6.45 resumed our journey steering W by N.

7.5 - In ¾ mile emerged from the close scrub to the open plain for which we had steered W by S. Found them covered with low scrub and light sand, and were much disappointed at finding the "grassy appearances" with which we had ventured to flatter ourselves were nothing more than extensive open spaces covered with a white flowering shrub, such as grows on the sandy uplands on the townsite of Perth.

At 7.27 in one mile saw hill "q" - 14 or 15 miles - N 180¼ E.

8.15 - 2½ miles W ½ S had entered scrubby wood. steered N 236¼ E for "s" South Bluff.

8.30 - In ½ mile more S 56 W :-.

"s" South Bluff	5 miles (? 9 or 10)	N 236 0 E
"sl" peak	5½	238 15
Small peak at N shoulder	5½	241 30
"s" North Bluff	5½	229 50
"s" summit	6	228
"s" south pitchof range	6	224
"r" peak: round in this view	6 miles	219 20
Sumt, on lower land	9	209 50

9.7 - In  $1\frac{1}{2}$  miles entered close thicket.  
While on last plain two kangaroos were seen: and two of the birds called chok-el-yok-el, one of which was shot by one the men: numerous kangaroo tracks.

9.48 - In  $\frac{3}{4}$  mile through very thick brush and fallen timber, country more open and some grass among small rough-barked gum trees.

10.5 - From an open plain: sandy: scrubby:  $\frac{1}{2}$  mile:

"q" hill	16-18 miles	N 149	50 E
"s" S. Bluff	$3\frac{1}{2}$ miles	236	45


In lower part of the plain, many places were water stands during rains.

10.45 -  $1\frac{3}{4}$  miles further. Observed altitude of barometer in about lowest part of the plain, from which we ascended to the base of the range.

Here, very thick scrub among young gnardruk trees commenced, and, together with a great quantity of fallen timber and young gnardruk saplings growing very close together, almost defied our passage. Ironstone increased as we advanced, and at E foot of "s1" peak there was a steep valley - the surface covered with ironstone, which had also coloured the soil deep red.

Slate occurred higher up, mixed with granite, quartz, whinstone and ironstone, steep and broken, the slate dipping to the N at an angle of about 75 degrees with the horizon. Ironstone occupied the summit, which was very steep to the south.

From "s" Southern Bluff:

Chain of small sandy dry lakes to distance of	5 miles	N. 17	E
Large dry lake: sandy bed	$3\frac{1}{2}$ miles	258 $\frac{1}{2}$	
	4 miles	280	
Opening in do. nearest shore		279	
Sumt. of thickly wooded land			
"u" $\frac{3}{4}$ mile beyond lake	6	272	
Hill "t" 	14 or 15	270 $\frac{1}{4}$	
Sandy line, as if water channel trending to WNW	$3\frac{1}{2}$ miles	229	
Another part of do.	$4\frac{1}{2}$	218	
"s" North Bluff	$\frac{3}{4}$	197	
" Summit	1	196	
" South pitch	$1\frac{1}{2}$	183	
" Lower summit near S end of the range	3	130 $\frac{1}{2}$	
"r" summit	$3\frac{1}{2}$	168 $\frac{1}{2}$	
Large, but not very high summit	15 or 16	161	
"q" hill	8 or 9	114 $\frac{1}{4}$	



A small valley commences at SW foot of South Bluff 100 yards and extends grassy to SW, W, and NW, to the plain: narrow (site of our dinner halt this day.)

Round wooded summit of a considerable ridge - 30 - 225 45

Another wooded summit, larger 227 40

General direction of ridge seems to be about NE by N and SW by S. Grassy land of small extent among small trees at  $2\frac{1}{2}$  miles N 320 E

A line of sand like a watercourse is traceable from do. in a SW direction towards large lake.

A small grassy patch -  $1\frac{1}{2}$  miles at E margin of a wood - N 267 E. A belt of thick scrub surrounds "s" range for  $\frac{3}{4}$  to 1 mile. Numerous native fires smoking up in the NE and NW horizons.

peak "sl" not scrubby -  $\frac{1}{8}$  mile about NW

Descended and dined  $\frac{1}{6}$  mile SW from "s" South Bluff, where grass was thick and good, but the horses were too much in want of water to eat, and our valley was almost entirely shut out from the breeze.

Search having been made for water, some was fortunately found low down, and at 4.50 we proceeded for it SWd down the valley, which was steep, abrupt, and rocky, but contained on its slopes very good grass. The rocky bed of a water-course which wound through it was quite dry until we arrived - in  $\frac{3}{4}$  mile - at two or three small holes among the rocks where water had been held up in small quantities by not finding vent by which to drain.

Conceiving that enough for our purpose might be obtained in the neighbourhood we halted here at 5.30 and before dark had filled all empty vessels, and given our horses a gallon apiece - that being the extent to which it could be procured.

Further search below for a couple of miles proved unsuccessful, nor was any found in the valleys on either side.

During the night one of our empty cavities filled up to the brim and another become considerably replenished.

inability to proceed further. I determined on remaining here on the 4th to give them and the men a day's rest, and to enable the latter to repair their clothes and shoes, which had been nearly torn off them.

The waterholes produced us enough to give the animals about 3 gallons each per day, and one was evidently a spring.

Pigeons, white, and black cockatoos, chokel-yokels, small parrots etc. resorted here in considerable numbers to benefit by it, and from the difficulty we had in frightening them from the neighbourhood notwithstanding a continued running fire all day, at times it would appear as if this was the only water procurable by them on this hill.

A native dog also came to drink, but on seeing us he gave a howl and decamped. Their traces are very numerous, as also that of kangaroo, and of natives. The fires of the latter have been blazing up and smoking very extensively in the SW and NW.

Nov. 4

Observation for latitude by double altitudes gave

Lat. 30° 43' S

Long. 2 03 57" East of Perth

Variation of the compass by a setting amplitude being .....

Having examined and re-stowed provisions, an issue was made for four days, which enabled me to lighten the loads of the horses by leaving behind a pair of worn out saddle bags, as well as 2 of oiled canvas squares which had been very much torn and chafed in the scrubs we have passed through.

Marked a York gum tree 29

Nov. 5

The horses showed gratifying signs of having benefited by the day's rest, although considerable regret was felt at our inability to give them as much water during the 24 hours as they would willingly have taken at one pull. We must, however, continue to do as before, from necessity, and hope soon to fall in with more.

Carrying with us a stock of pigeons for the day, and draining all waterholes to their last drop, we resumed our journey at 7.40 steering NW with watercourse for 1/3 mile, then 1 mile NW by W (watercourse taking off to N.) and at 8.13 came to NE side of a dry sandy lake 300 yards in diameter: samphire in bed, which is shallow: coarse rushy grass on bank.

NW by W 1 mile: saw lake (t) to westward. Steered W  $\frac{1}{4}$  mile: scrubby, occasionally open: yellow and white sandy soil.

9.0 - Entered on margin of lake (t): 2 miles in diameter. Proceeded W  $1\frac{1}{2}$  miles to 9.36 across shortest chord of lake on its northern side:-

"s" South Bluff	4 miles	N 101 E
"sl" peak		95 10
"s" North Bluff	$4\frac{1}{2}$ miles	116 13
Summit		120 30
"r"	6 or 7	133 20
Distant Summit	8 or 9	144 15
High point on N side of Lake (t)	1 mile	85 30

Lake (t) surrounded by a belt of casuarina growing on low bank upon which was a little grass. Lake long since dry. Centre part  $1\frac{1}{2}$  miles in diameter, glistening with salt on firm clay bed: remainder, samphire round the margin, in NW edge of which, above bearings were taken and barometer observed.

9.50 - Proceeded W up a hollow: low and grassy, by which the surplus waters of the lake in very rainy weather seem to drain westward,

In  $\frac{1}{4}$  of a mile an old native well was found, and a few yards from it, another 5 feet deep, by deepening which, we got water a foot lower and halted to water the horses.

Some fragments of red earth(wilgy) remained by side of the well in a piece of bark, being part of a quantity the natives had used for ornamenting themselves with. Near the spot Mr Smythe reported having seen 10 huts together. Several trees in the vicinity had been marked by the natives, and one had been cut much about the bark within 2 or 3 days for the purpose of extracting grubs.

Timber in the valley, which is a very gentle one, consists of white and York gum, jam, and several kinds of wattle not so prickly as usual. Marked a white gum in the valley  $\diamond$  about 40 yards E of the well, several pieces having already been cut out of it by the natives.

Around Lake (t) it is worthy of remark that we have seen no gnardruk trees, and it is to be hoped that we have got westward of their limit.

Having to water the horses out of a tin saucepan we were detained until 11.30 when the W course was resumed up the valley until, in  $\frac{1}{2}$  a mile, it opened out upon low level round east foot of hill "u", covered with scrub and clumps of spear wattle.

Hill "u" is wooded along its sides and ridges. At noon we passed



apparently to SW. Extensive open plains close to us ahead, and some wooded rising ground 1 mile to the Nd.

Halted to observe barometer. Some large kangaroo.

12.50 - Resumed W Course. Cockatoos.

1.20 - In  $1\frac{1}{2}$  miles came to a tope of small casuarina trees in a slight hollow in the plain, the receptacle of water in wet weather. A tope of trees on a rising ground S 42 W at 2 miles: another N 32 E, 1 mile: all else open scrubby plain bare of trees.

At 2.0 p.m. in  $1\frac{3}{4}$  miles over scrubby open plain, had a view in advance and rear, and took following angles:-

"s" South Bluff	7 or 8 miles	N 95 25 E
Angles to right:-		
To "s" North Bluff		7 30'
"u" hill ...	$3\frac{1}{2}$ miles	3 15
"s" summit		9 50
"r" hill		18 25
South summit "s"	10 miles	25 20
"s" S. ft of range		27 43
"q" hill ...	15 - 16 miles	37 03
Small "q" one mile beyond		37 54
"q" range S. foot		39 15
hill tope	$\frac{3}{4}$ mile	82 00
Angles "s" south Bluff to Left:-		
To "sl" peak		3 00
"s" range N. foot		5 24
casuarina tope	$1\frac{1}{2}$ miles	7 42
Cabbage tree tope	1 mile	13 45
Wooded height on plain -	2 miles	28 00
"v" range, N. foot	15 or 16 miles	N281 50E
Angles to the left:		
"v" summit		3 30
v South foot		4 14
"w" hill 18-20 miles		7 01
"t" hill	6 or 7 miles	11 32
"t" summit	6 miles	13 38
"t" South foot		17 25

13 fires of the natives smoking up around us at various distance from 5 to 12 miles off, and a large one on this side hill "r" about a mile from our bivouac 29, toward which a party is probably proceeding.

At 2.15 proceeded W for hill "t": open scrubby downs but not so thick as farther east. In course of our progress we renewed acquaintance for the first time on our westerly course, with the white



with the cabbage tree, and finally the grass tree: the nature of the country having altogether changed since we left range "s".

3.20 - In  $2\frac{3}{4}$  miles changed course to SSW for grass, and in  $\frac{1}{4}$  mile reached a small rushy lagoon 80 or 90 yards in diameter, moist in the lower level on hard clay soil. On the eastern side some grass presented itself, and we halted at 3.30 to dine and rest the horses, intending to bivouac at hill "t", 4 or 5 miles in advance.

The well was deepened out to 6 feet and produced a little water but so scanty a supply our horses got but very little, and at 6.15 we proceeded West.

Timber in vicinity of the lake chiefly York gum and wondo, and the first tea-tree we have met steering westwards.

Large kangaroos very numerous. White cockatoos about, and 2 of them killed.

The lake seems much resorted to by the natives who have marked several of the trees and burnt the dead leaves of one within the last 2 days, probably as signal fire: 2 of their old huts still remain.

Over open scrubby plains of light sandy soil, upon which a good quantity of coarse rushy grass was mixed together with some of a finer but wiry nature, we traversed 3 miles when the sun disappeared, and no appearance of grass or water was visible.

The ridges were wooded and thick, but the ironstone gravel with which the lower surface was covered, led to the belief they were composed of the same material.

In another  $1\frac{1}{2}$  miles the day had entirely closed in, and we had descended a scrubby ridge into the valley beyond, about  $1\frac{1}{2}$  miles from the summit of "t" hill, where a watercourse of considerable size was found trending to the WSW, and apparently dipping in that direction. Much samphire and a salt pool 6 yards by 4 gave little hope of our finding fresh water, but as we had no alternative, and there was some little grass in the vicinity, we halted at 7.55 and pitched our camp.

As soon as the horses had been tethered, attempts were made in various promising places to procure water by digging, but whenever any oozed in it was very brackish, and we were obliged to be content with a small issue from the keg. In the morning the water that had oozed into the wells was salt.

Marked a York gum tree

30

Timber in vicinity, chiefly wondo or white gum, with a mixture near the river of casuarina, York gums, jam tree and wattle. Soil light yellow brown colour.

6.55 - Proceeded in general direction S by W tracing down the stream bed, which occupied an average width of 9 or 10 feet where it could be defined, but generally spread itself out on a wider space covered with much samphire, and lined with dwarf casuarina trees and tea-tree brush. Some grass on the banks, but that on the eastern side very narrow.

In the bed, decomposing ironstone showed itself in rock. As we proceeded, several salt pools were met with, and at 7.20 in a mile from the bivouac, we had the satisfaction to meet with a shallow fresh one about 12 yards long and 3 wide - the remains of one which had been twice the size and 3 feet deep. The banks were 5 feet high, broken by ironstone rock of red and light yellow intermixed and were lined with tea-tree brush. The noses of our thirsty horses were quickly immersed in this the first open pool of fresh water we had fallen in with since ..... while all our empty vessels were replenished, and at 7.48 our journey was resumed down the stream bed which had now assumed the character and form of what in Australia is usually dignified by the name of river. Several small grassy hollows were here tributary to it, and the country was improving.

In the river bed, which was soft soil, the prints of old and young emus, and of kangaroos of all sizes were very abundant.

Hill "t" - 2 miles - N 292 E.

Soon afterwards a native hut of very recent construction, thatched with grass tree tops, and near it, trees lately barked. Many native huts.

8.10 - In  $\frac{1}{4}$  mile S by W, and  $\frac{1}{2}$  mile SSE junction of a tributary with the main stream, in which are many pools of good water, 200 yards on left.  $\frac{1}{4}$  mile, then S by W 200 yards, SW 100 yards South. To the east, close to river, extensive open downs. To the west, wondo forest. Plenty of water in frequent pools.

1 mile to the west, a broken yellow cliff on the hill side. Ducks increasing in number. River tortuous, in small windings.

8.50 - In  $1\frac{3}{4}$  miles since 8.10 crossed to left bank steering S  $\frac{1}{2}$  mile to 9.8. Came to a bend of river to north. Small knoll on the plain NE by E  $1\frac{1}{2}$  miles distant.

9.38 - On an open plain 2 miles from rising ground, SSW wooded. at summit.  $1\frac{1}{4}$  miles from rising ground S by E, and  $\frac{3}{4}$  mile from tributary to a watercourse. Steered ESE for apparent valley of river.  $1\frac{1}{4}$  miles since 9.8.

9.53 -  $\frac{1}{2}$  mile ESE, crossed to rivers left bank, a valley coming from SE. Traced W, W by N, and NW  $1\frac{1}{2}$  miles until 10.40 when came to water very slightly brackish in river bed. Halted to dine and pass the heat of the day.



Having dined and passed a most oppressive sultry midday, we resumed our journey at 4.20 steering WSW, being average course of river. In 200 yards large tributary joined from eastward: soon afterwards grass improved and extended.

4.45 - In  $1\frac{1}{4}$  miles: river  $\frac{1}{2}$  mile on right. Hills on left, grassy, 1 mile dist. Steered W by S  $\frac{1}{2}$  mile, then crossed to river's right bank - a pool of fresh water. WSW  $\frac{3}{4}$  mile, then, at 5.10 crossed to left bank and steered W by S  $1\frac{1}{4}$  miles. Then at 5.40 SSW at a bend, hills to SE, forest and scrub. In 300 yards came to junction of a large tributary from NW, main bed then to SSW and 100 yards below, watered the horses at a small pool of good fresh water - several in the neighbourhood which increased in size and depth as we proceeded, and were perfectly free from all brackish taste.

6.10 - At 2 pools,  $1\frac{1}{4}$  miles, 9 yards by 3 yards and 2 feet deep. White and red indurated clay formed the left bank, 8 feet high

Here the high land approaches near the river, and grass is not so abundant. Soil, good brown loam.

100 yards lower down crossed to right bank, steered S by E.

In  $\frac{1}{4}$  mile tributary from right and in  $\frac{1}{4}$  mile more we came upon a part of the river which Mr Moore recognised as his sleeping place at the extremity of a journey not long since undertaken by him to NNE from his farm on the Swan and on which occasion he discovered a river which was on the occasion christened the MOORE.

The identity of that river and the one we had been following all day being thus established, and the sun having disappeared, we halted  $\frac{1}{4}$  mile lower down to the SW where water was perfectly fresh in small pools, grass was good, green and tolerably abundant, and the grassy land had extended on both sides of the river among York gums, jam, broom, wattle &c. The forests contained wondo with some scrub and underwood.

Several kangaroo have been seen today, together with parrots, black and white cockatoos, numerous small birds, and, late in the afternoon, 2 emu which took to the forest land before they were with gunshot.

The Moore River having already been traced downwards from this spot to within 10 or 15 miles of the coast in a general WSW direction I prepared to quit it in the morning, and to proceed southward for the purpose of connecting the district with that part of the Avon River the vicinity of Toodyay, below Northam township.

Marked a small gum tree 31

Nov. 7, 1836

Our horses having enjoyed themselves fully in the midst of this


the water was in good spirits this morning

Pigeons numerous feeding on the grassy ground, good grass visible to tops of the hills 1 mile on either side.

8.45 - In  $1\frac{1}{4}$  miles, good green grass, good brown loam, and York gums and wattles. Came to winding tributary to right: some scrub appearing on left. Level country, on which water lodges in numerous cavities in wet weather.

A high hill covered with good grass -  $2\frac{1}{2}$  miles to Eastward and high land wooded,  $1\frac{1}{2}$  miles to SSW. Good grassy flats until 9.20 in  $1\frac{1}{2}$  miles: then a large tributary or watercourse winding from SEd. towards the Moore. Round "p", western hill of high land covered with wondo grass tree, and scrub. On flats York gums, wattles, hakea, broom, jam, nut &c.  $\frac{1}{2}$  mile further, and ascended a bare hill  $\frac{1}{4}$  mile to W: from summit of which, covered with ironstone and grass trees, saw:-

A high wooded hill, grassy on sides	6 or 7 miles	N 1 15 E
Low grassy hill	$3\frac{1}{2}$ miles	2 30
Distant hill, supposed "t" ("v"?)	14 or 15 miles	4 30
Small hill (w?)	15 or 16 miles	356 20



Between N 5 E .. 2 miles: N 60 E ..  $1\frac{1}{4}$  miles: and S 70 E..  $3\frac{1}{2}$  miles: are wooded grassy hills of excellent appearance. Highest part of  hill is to the west.

Descended SSE  $\frac{1}{2}$  mile and rejoined the party and proceeded S by W.

This is the commencement of a hilly country, the hills stony, covered with ironstone and fragments of quartz and ironstone, timbered with wondo and "barro" (grass trees).

10.50 - In  $3\frac{1}{2}$  miles crossed a valley extending ENE and WSW, and joined by one which has followed to left of us. On opposite ascent, rather high hills, some coarse wiry grass among broom plants, in which were some large kangaroo.

11.15 -  $\frac{3}{4}$  mile further: on ridge (Its summit to the E) saw a high hill, flat topped, rather N 288 E dist. 15 miles. A valley trending Wd towards it with good grassy hills 4 or 5 miles off on both sides of it. A grassy hollow  $1/6$  mile on our right. Descended 100 yards into it over fragments of granite and whinstone, and halted at 11.30 to ensure the feed for our horses and to dine.

In the valley, which is small, are chiefly wondo and barrow. Two of the former under which we rested were on this occasion made to bear the marks  and  and at 2.30 we resumed our journey S by W. Attractive ironstone at our halting place.

2.50 - In  $\frac{3}{4}$  of a mile reached the summit of a very rocky ironstone ridge of considerable elevation, and on its ridge met with the first



confined by high land 2 miles distant to the west, and opened out into another valley  $1\frac{1}{2}$  miles to the south: one to the eastward and another to in the NW corner of the main valley. Smokes were rising in several parts of the southern view at 2 and 3 miles distance, which induced us to hope for the best.

Tracing down  $\frac{1}{4}$  mile further, we followed a slight and beautifully grassy hollow  $\frac{1}{2}$  a mile to the west, but no water. Instead of it, the small channel in it joined a larger one coming from the S. and dipping to the NW. We followed to the S by E and S into the southern valley, which we found narrow but containing good grass amongst which a watercourse was winding very tortuously to the Nd. White cockatoos abundant.

S by E, S by W, S and S by E - in all, since 2.50, 3 miles to 4.10 Valley narrow: wondo and barrow on both sides. Native fires 100 yards on left, deserted: we called repeatedly, but received no reply.

4.30 - At end of  $\frac{3}{4}$  miles more S by E to S. valley gradually dissipating, divided, one arm coming from SW, another from SE: a wondo hill between them - no watercourse - green grass scattered over among York gums, wattles, hakea, and tree resembling wooruk. Steered S by W red gum mixed with wondo.

Then, for the first time, Zamia, Banksia and several western kinds of hakea. Ironstone ridge to WSW and ENE. at 5.5 in  $1\frac{1}{2}$  miles S by W.

5.30 -  $1\frac{1}{4}$  mile: over nearly level forest land of red gum and wondo grass trees, zamia, hakea, & c. with scrub undergrowth, came to first mahogany met with in steering westward. Land covered with ironstone. White cockatoos about, but no sign of water.

6.15 - In 2 miles came to a hollow dipping SW, grassy in course form. Steered SW  $\frac{1}{2}$  a mile.

Then a large valley lying nearly E-W with plenty of grass in it. Traced it W by N  $\frac{1}{2}$  a mile, when finding we were on an ascent, and grass decreasing in quantity, we returned E and E by S to a mile below the junction, where the grass was excellent: green and thick in a close moist turf. A small native well in the valley contained some water, and at 6.55 we halted at it for the night.

On enlarging the well, water rushed in abundantly at  $2\frac{1}{2}$  feet below the surface.

On the uplands, wondo of vigorous growth, were mixed with other gum trees with rough bark, grass trees of large size, hakea & c. Surface, ironstone. Red gum.

Marked a wondo

32

In the valley, broom, wattle, york, nut. Rich brown loam.

Nov. 8 -

At 7.10 proceeded E by S  $\frac{3}{4}$  mile, then SE  $\frac{1}{2}$ , and SSE  $\frac{1}{2}$  to 7.45,

Steered then S by W through forest of wondo and red gum, with an undergrowth of grass trees and other lower vegetation.

Very high wooded land  $1\frac{1}{4}$  miles to Ed stretching to SEd.

8.5 - In  $\frac{3}{4}$  mile S by W crossed a small grassy valley beyond which much broom among grass tree, red gum and banksia and some mahogany.

Crossed over E brow of high piece of land with deep valley at foot at  $1\frac{3}{4}$  miles.

A long rounded hill of considerable elevation 14 or 15 miles

N  $149\frac{1}{2}$  E

9.20 - Over ironstone scrubby land  $3\frac{1}{4}$  miles. Crossed obliquely a good grassy valley dipping westward 50 yards broad. Rich brown soil and green grass which extends also 200 or 300 yards from the banks.

Followed down W by N,  $\frac{1}{4}$  mile: W by S  $\frac{1}{4}$  : W, 1 : W  $\frac{1}{2}$  S, 1: SW by W  $\frac{1}{2}$  : to 10.40. Valley now less in width than a mile back and drier. WSW  $\frac{1}{2}$  mile : SW: W: WNW: 200 yards, then at 10.55 it trended N  $\frac{1}{4}$  mile and took a turn round to left. Steered S by W: valley 30 yards wide covered with ironstone among which whin cropt out, and many small holes made by water lodging.

11.20 - In  $\frac{1}{4}$  mile came to very steep ironstone descent lying SW and NE. Steered S 300 yards to clear high hills on right. Passed over their eastern brow and descended into valley dipping S by W full of grass trees, with a few white and York gums. A watercourse in bottom of it soon increased in size, and some very good green grass was in the neighbourhood of its banks.  $1\frac{3}{4}$  miles S by W up to 11.50 when we benefited by the presence of some rich tethers for our horses, and halted to dine No water.

2.45 - Resumed our journey south down the valley and in 100 yards came to good water in a pool 2 yards square in the watercourse, which at that spot had steep banks 9 feet high composed of good brown loam over yellow clay, and studded with fragments of granite, whinstone, and quartz.

In the interval the stream bed had received 2 tributaries from the hills  $\frac{1}{4}$  a mile on our right, and a considerable valley, with perhaps a watercourse, dipped towards it from the NE.

Watered the horses and at 3.10 proceeded S  $\frac{1}{2}$  a mile. Valley then joined a larger one coming from Ed. Proceeded WSW towards direction in which it seemed to dip. High land W of it at 3 miles distance. Valley covered with green grass, wattles &c. In  $\frac{1}{4}$  mile, valley full of green grass from NW. Numerous grass trees: good soil.

3.50 - In  $1\frac{1}{2}$  miles WSW, a double tributary from left.

4.0 - Small pools good fresh water in bed

4.5 - Tributary from a considerable valley on left.

Valley  $\frac{1}{2}$  a mile wide:  $\frac{1}{2}$  mile since 3.50.

4.20 -  $\frac{3}{4}$  mile more. At foot of high steep hill on W side where river runs, and contains some good water in several pools 3 yards diam. Valley 150 yards wide: opposite side high and steep. Grass, wattles.



4.40 -  $\frac{3}{4}$  mile WNW to bend of river close to foot of rocky hill on right. River winding about very much, and containing abundance of water in large deep pools 20 yards by 4 wide. Then low land on right, high on left.

$\frac{1}{2}$  mile further, having crossed and recrossed the stream several times, we lost it altogether, and on our WNW course fell in with a tributary coming from the Wd; the main stream having apparently taken off to the Nd. Steered W $\frac{1}{2}$ S at 5 o'clock with the view of intercepting it again should the valley double round to the Sd.

Ascended and crossed over a rocky ironstone ridge. Observed a grassy valley trending round from the NW and in  $\frac{1}{2}$  a mile from 5.0 we were in it, narrow, good grass 200 or 300 yards wide in the bottom which was watered by a stream trending westward.

In a few minutes a smoke was seen bordering the southern edge of this valley, and several natives scampering off as fast as they could, up the hill. After calling repeatedly to them, and giving them assurances of our being friends, a little boy ventured down, and was soon followed by another, both calling out in their language "little boy, very good" while a man who had observed all from an opposite hill continued shouting across to the women to get out of our way. He was, however, induced to come down, and a friendly interview soon took place with 4 or 5 of them.

Confidence being established, he stood his spears against a tree disencumbered himself of his throwing stick and semi-circular Kylie and appeared much delighted, although, at the same time, much agitated. I endeavoured to persuade the women to descend and look at the stranger but they were too much alarmed and kept aloof peeping from behind trees, with the exception of one old woman and the wife of the man, from whom he took his child, a little boy about  $2\frac{1}{2}$  years old and freely allowed him to be handled and caressed.

After gratifying his request by acquainting him with our respective names - which he then repeated to the others - we endeavoured to learn his. But he had some reason for declining to tell it, nor could we learn from him the name of the place - circumstances which led us to conclude he had cause to conceal both for fear of pursuit by so hostile natives.

We learnt that the other men were all out hunting kangaroo, and had left him in charge of the families who were busy digging out root when we made our unexpected appearance.

We learnt that Toodyay on the Avon was exactly in the south direction we had expected to find it, and that Boolgart Springs bore to the E. these being the nearest objects with which we were acquainted.

As the sun was fast approaching the horizon we took leave at 5.4 regretting that our very scanty supply of provisions prevented our



A mile and a half lower down it seemed to be turned off more southerly by a ridge of elevated land having 2 or 3 distinct and conspicuous summits, apparently ironstone, and wooded.

Timber in the hollows: York gum and some white gum, among which were wattle, nut, jam and grass tree in good red soil, while the uplands were covered with wondo, grass trees, red gum, &c and the surface was sprinkled with ironstone.

From our fire, a summit "a" partially wooded - 1 mile distant upon a ridge lying SW-NW, bore S 11 E, and another summit "b" on same ridge  $1\frac{1}{2}$  miles distant bore S 42 E.

Marked a white gum tree 33

Nov. 9

A grand eclipse of the sun threatening to be total, having taken place this morning, I delayed to observe its commencement with a common telescope - being the best instrument in my possession - by which, and a corresponding observation of the sun's alt. for error of the chronometer, the longitude appeared to be .....

At 8.35 - Proceeded across to the eastern side of the swampy ground near which we had halted: then SE. In  $\frac{1}{2}$  a mile crossed the swampy hollow again trending E at foot of summit "b"

At 8.50 - Hills and hollows covered with green grass among wattle and grass trees in a good red soil.

9.15 - In  $1\frac{1}{4}$  SE  $\frac{1}{2}$  E crossed hollow grassy land in which water stood in good clear rushy pools. Ascended then towards left brow of "b" summit: grassy, with broom, a few grass trees and York gums half way up, then grass among grass trees. Valley dipping NE. Crossed over NE part of "b" ridge at  $\frac{1}{3}$ rd mile from summit at 9.40 in  $1\frac{1}{4}$  mile from 9.15. Good red loam, quartz, whinstone &c.

10.12 - On summit of next ridge in  $\frac{1}{2}$  mile. Slate, quartz, and stratified granite. Immediately over the ridge 3 neat native huts thatched with tops of grass trees. Numerous holes around where roots had been extracted.  $\frac{1}{2}$  mile beyond to 10.30 - upon gradual but steep ascent of ironstone hills on left, much grooved.

10.38 - At head of valley between ironstone ridges:  $\frac{1}{4}$  mile since 10.30. Continuing SE passed over nearly level ironstone forest land covered with mahogany, red gum, and grass trees - totally different country from that just left. Finding, in 2 miles, no alteration, steered south to make the Avon River.

$1\frac{1}{4}$  miles to noon: over ironstone forest land, mahogany, red, white, and black-barked gums. A deep valley then close to left, all hollows dipping eastwards towards it.

12.30 - In  $1\frac{1}{4}$  miles crossed bottom of same hollow winding to SW and containing abundance of excellent clear water in pools almost continuous. grass trees, broom, York gum, and some little grass.

Watered horses and at 12.37 proceeded S up very steep rocky ironstone ascent in which several watercourses all grooved deep in their passage SWd.

1.0 - In 1 mile more arrived at bottom of rocky high hill. Another watercourse with several tributaries to WSW. A steep ascent, a level, a long ascent, on which we arrived at summit at 1.55 in 2 mile ironstone, mahogany, red gum, black barked gum, grass trees: then descended.

2.5 -  $\frac{1}{2}$  mile beyond. Crossed valley and watercourse through broom plants dipping WSW.

2.25 -  $\frac{3}{4}$  miles. Crossed bottom of an open valley with watercourses in it dipping Westward.

3.15 - In  $1\frac{1}{4}$  miles gradually descending over ironstone forest land, descended rapidly to a steep broken valley, with several watercourses in it all trending to one leading to S by W: Tributaries from right and left.

3.45 -  $1\frac{1}{4}$  miles S by W: Tributary on left, 50 yards, coming from S to join the main one going to S. On top of ascent: country dipping to southward.

Passed over hilly steep broken country south  $1\frac{1}{2}$  miles to 4.25 leaving last watercourse trending to S by W.

Came then to a very deep valley, and in bottom of it a considerable watercourse with rocky blue whinstone bed dipping to SW, and NW its valley marked by a succession of rocky high hills above and below. Abundance of excellent water.

Proceeded NW by W  $\frac{1}{2}$  a mile: river 100 yards on right: then W for  $\frac{1}{2}$  mile over a steep tongue of mountain, and across a very steep pretty tributary to right.

SW 200 yards, then SW by S  $1\frac{1}{4}$  mile along sides and bottom of valley, which proved exceedingly rocky and broken, with steep rocky hills on both sides.

The green grassy-looking scrub on the slopes having then improved to some actual grass, and that of very good quality - among the grass trees near the streambed we halted for the day at 5.40 both men and horses much fatigued with a long and laborious march of more than 19 miles.

Red gum and wondo were mixed with numerous grass trees on the hill slopes.


During the day, especially in the afternoon - native huts have occurred frequently, but not which appeared to have been very recently occupied.

This part of the country well watered at the present time, and from the appearance of the vegetation it would appear to enjoy the benefit of more rain than the interior country from which we are returning.

The distance between the tops of the ridges on either side of the valley, may be about  $\frac{1}{2}$  a mile. Many deep gullies are worn in them which render travelling exceedingly laborious and irksome.

The bed of the mountain brook is 9 or 10 yards wide, composed of coarse sand and shingle, portions of crumbling granite, whinstone, and ironstone, of which the hills are composed.

The country immediately above and below our bivouac is much broken, and very hilly. At 2 miles below, a range of high land crosses the valley, and in the intermediate space a thick blue haze had settled in the morning after a dewy night, as if over a body of water.

Marked a wondo on left bank 

Nov. 10, 1836 -

At 8.0 proceeded on our journey down the valley SW  $\frac{1}{2}$  mile: West  $2\frac{1}{4}$  to 9.15 when river was running to Wd. and took a sharp turn round to Nd. Wd. and Sd. Steered W  $\frac{3}{4}$  mile and by crossing a tongue of high land intercepted river again running to SW. Valley now had opened, and contained better grass.

S  $\frac{1}{2}$  E,  $4\frac{1}{2}$  miles to 11.5 : then SSE and in  $\frac{1}{2}$  mile crossed a considerable tributary from the W. with pools of water in a shingly bed 6 feet wide, apparently that of Gabbia Yandirt.

11 native huts close together just below the junction, and many others seen in course of the morning.  $\frac{3}{4}$  mile to 11.40 then more to the S. Steered S by E.

Much luxuriant green feed in the bed. Good soil on hill sides. Some places rocky and steep:  $\frac{1}{4}$  mile, then SSW, SW by S, to 12.30 making 2 miles.

Then S  $\frac{1}{2}$  E  $1\frac{1}{3}$  mile to a tributary from wide valley on right, containing water.




$2\frac{2}{3}$  mile S  $\frac{1}{2}$  E, then halted at 12.55 to observe height of barometer.

1.7 - Resumed S by W. Crossed to left bank, and in  $\frac{1}{2}$  a mile recrossed to right bank at a very rocky rapid. River generally 18 to 20 feet wide, and running.

1.40 - in a mile came to junction of a very considerable valley from E by N the united stream then flowing to SW.

Mr Moore, who had been at the junction of a stream hereabouts with the Swan River crossed over and ascertained it was the same.

We followed, with a little scrambling among the smooth rocks, in 2 ft. of water, both streams when united then flowing SW.

Near some washed-up river-sand on the left bank, close to the junction, we marked a white gum tree  and  and 

At 1.50 proceeded onwards SW.

The hills in the vicinity had gradually increased to about 250 ft. in height above the river bed, and soon became so steep and rocky that with the greatest difficulty we could scramble along. At 2.55 we



3.10 - Proceeded again, having halted to repair s to saddle. In  $\frac{1}{4}$  mile WSW hill side cleared a little, and soon became more open scrub dipping to SSW.

4.15 -  $1\frac{1}{2}$  mile SW by S, very rocky, steep and difficult, crossed a ravine in which a waterfall 20 ft high at this time dry. Many other tributaries occurring right and left. Found best travelling about half way up hill side, keeping left bank.

4.40 - 1 mile further S by W came abreast at 100 yards distance, of a fine long reach of water of the Swan, deep and about 40 yards wide, and extending to the S by W and SW  $\frac{1}{2}$  a mile.

On the right bank the grass was very good, and we longed to get across to it, but finding the grass equally good on our side of the river towards the lower end of the reach, we halted there at 5.p. after a severe days march for man and horse.

Close to our bivouac a running stream joins the Swan from the SSE, which we suppose is that generally called the Gatta. It has two beds within a few yards of each other each 8 feet wide and running over shingle in a depth of 3 inches and breadth of 3 feet. Over the coarse sand which has accumulated at the mouth we observed the print of a horse's foot and of a shoe with large nails, in it, supposed to have belonged to some person in search of stray cattle.

The grass round our encampment is most luxuriant and green at this time to the distance of 100 yards from the river, mixed with large thistles, pennyroyal, wild vetches, Kangaroo grass and much succulent vegetation eagerly devoured by our horses. Near the river are York and wondo gums, grass trees, broom wattles &c., in a rich brown loam.

The hills covered partially with wondo and grass trees and between 200 and 300 feet high.

Marked a white gum close to upper end of Gatta's junction with the Swan, G 35.

Nov. 11, 1836 -

At 8.10 proceeded on our journey. Crossed the Swan at the Gatta's mouth and on ascending the opposite side to Wd saw another mouth to the Gatta  $\frac{1}{3}$  mile lower down, and a very high isolated hill in line with centre of the island shore formed with the Swan bearing ESE  $1\frac{1}{2}$  mile distant. A large pool of open water in the Gatta appearing at the fork of the delta in it.

Steered WSW to get out on the plain westward of Darling Range by an easy valley having a high hill at S side of its mouth.

General valley of Swan trending to SW by S as far as visible - 4 miles.

By a gradual ascent of  $1\frac{1}{2}$  miles WSW up the N side of an easy valley, arrived on summit of a sandy rocky ridge in a hollow 70 or 80

Set up barometer then at 9 a.m. - 217 ft above Perth, and at 9.7 proceeded WSW. Mahogany, grass trees, black-barked gums, granite at surface.

In 200 yards were obliged by rocks to steer NWd 300 yards for bottom of hollow trending Wd, where we found better travelling for  $\frac{1}{2}$  a mile.

A native named Yoona - Marra was then fallen in with, who was soon persuaded to come to an interview. He belongs to the district and on acquainting us the land to the southward was then clear of rocks, we proceeded S by W at 9.25, the general line of the hills having taken a SSW direction and our route lying along their western slopes.

9.40 - In  $\frac{3}{4}$  mile S by W a hill 3 miles behind (eastward of Mr Brockman's house on Swan River) bore N 169 E - 4 or 5 miles.

The brook at Col. Latour's land coming out from the hills a little north of it.

Open sandy plains: several watercourses winding to westward. Wood mahogany, red gum, grass trees:

Soon afterwards fell in with some cattle tended by a boy from the Swan.

10.0 -  $\frac{3}{4}$  mile further S came to open shoal reedy lagoon with good water - 10 or 12 acres. Rounded its E side and proceeded S by W and SSW, and at 10.30 in  $1\frac{1}{2}$  miles arrived at Mr Jones' house, a tenant of Mr Balis'.

Crossed over  $\frac{1}{4}$  mile to Sd to Mr Shaw's land at 10.40. Wheat looking remarkably well.

$\frac{1}{2}$  a mile WSW at 150 yards from Mr Shaw's home, steered SSW from the road, and at 11.20 in  $1\frac{1}{2}$  miles arrived at Mr Moore's farm on left bank of the Swan River.