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[CROSS, Joseph], Ed

Journals of several expeditions Made in Western Australia.

JOURNALS

OF

SEVERAL EXPEDITIONS

MADE IN

WESTERN AUSTRALIA,

DURING THE YEARS

1829, 1830, 1831, AND 1832;

UNDER THE SANCTION OF THE GOVERNOR,

SIR JAMES STIRLING,

CONTAINING THE LATEST AUTHENTIC INFORMATION RELATIVE TO THAT COUNTRY,

ACCOMPANIED BY A MAP.

LONDON:

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AND SOLD ALSO BY ALL BOOKSELLERS.

1833.

TO

HIS EXCELLENCY

SIR JAMES STIRLING,

Captain Royal Navy,

THE FOLLOWING JOURNALS

OF

EXPEDITIONS PERFORMED IN HIS SUPERINTENDENCY AND

BY HIS DIRECTION,

ARE RESPECTFULLY INSCRIBED,

BY HIS VERY OBEDIENT

HUMBLE SERVANT,

JOSEPH CROSS.

CONTENTS.

INTRODUCTION.

SOME of the wisest and most benevolent of modern Legislators, after careful and elaborate investigation, have recommended EMIGRATION, as a happy mode of relieving the country from the burthen of an unemployed population. The relative position of the British Islands, "*inter se*,"—the peculiar consequences that have resulted from the application of different laws, to different parts of these countries—countries united by legal enactments, and, since the invention of steam navigation, connected, as it were, by flying bridges, have occasioned an undue, partial, and perilous pressure; one that must continue to increase, unless a safety pipe be provided for the reservoir, to carry off the surplus water introduced by the continual stream of the feeder. The wealth and industry of England cannot sustain her against an inundation of the

hungry and the destitute, which, like the wave of the great ocean, in obedience to the laws of nature, will continue to roll until it obtains its level. This miserable mass of unoccupied and destitute poor presents a calamitous picture, and, feeling as if they had been called into life for no useful end, will at length become reckless and desperate.

Would not Emigration go far in preserving the level of wholesome water in the reservoir? Would it not prove a double blessing, in relieving those who go and those that remain behind? The present moment is a crisis in the doctrine of Emigration; there is a manifest and a daily deterioration in the condition of our labouring poor; and while all other avenues to relief are darkened, a light has just burst upon the cause of Colonial Legislation, which gives new strength, and revives the sleeping energies of many who had early fostered the growing spirit of migration, yet despaired of obtaining sufficient encouragement for those who were willing to run the serious hazard of its trial.

The allusion is obvious,—he who has made this important question the subject of reflection, during its latest agitation, will readily comprehend it. The auspicious moment, then, at which the publisher is enabled, through the kindness and influence of Governor Stirling, to lay the following valuable and

authentic journals before the public, seemed also favorable to the introduction of a few remarks, suggested by the documents themselves; which, at another period, might appear less legitimately incorporated with matter of a mere prefatory nature.

The history of Swan River Settlement, and of its rapid but steady progress to importance, has been, year after year, submitted to the enquiring world, by the same publisher, committed to him through the same benevolent and public spirit, and by the individual to whom he is alike indebted for the possession of this valuable collection of documentary information.

In 1829, a short account appeared of the birth, infancy, and increasing growth of this settlement, in which the manly deportment of its enterprizing Governor, with his handful of hardy followers, was fully detailed, in a manner simple and interesting. In the following pages will be found a continuation of that history,—the increasing ambition of the first settlers of the Colony,—the latest information of the state of commerce and of society,—the prospects that may reasonably be indulged in, both by those who are now warmed by the brightening rays of its prosperity, as well as by those whose native

homes being less happy now meditate a participation in those blessings, at no very distant period.

The authentic narratives here collected into a volume, contain a simple and unaffected, clear and intelligible account of many extensive and fertile districts explored, under the sanction and protection of the local government, during the four last years. Without pretending to scientific accuracy, the reader will find that the most material objects of enquiry have been anticipated and satisfactorily answered; and, duly considering the difficulties and privations under which such journeys of discovery are necessarily performed, will acknowledge, that information more extensive and exact, has been thus supplied, than even under circumstances of less inconvenience could have been expected. Every exploring party, each individual, seems to have imbibed that right feeling and anxious spirit of investigation, possessed by their very popular Governor, and to have undertaken their meritorious tasks from a two-fold object—the public service and the personal approbation of the head of the settlement.

The Journals extend their information over a vast field of discovery, reaching from King George's Sound in the S.E., to the district of Northam, near the Avon, to the N.E. of Perth; including minute

circumstantial details of much of the central country, and faithful delineations of a considerable extent of coast between Swan River and Albany.

The matter is given to the reader in the simple and original language of the hardy adventurers, who themselves enacted the bold scenes they there describe, in a style that bears internal evidence of their truth. This mode appeared preferable for two reasons: alteration in style might possibly endanger the travellers' own meaning, besides, it is a respect due to the meritorious exertions of the intelligent Journalists themselves, to collect their sibylline leaves as they were wafted across the ocean, and throwing them into our portfolio, leave it to mankind to interpret their contents.

Amongst the number and variety of new facts relative to Western Australia, developed in the present Journals, some are of so remarkable a character, as to demand an especial, although brief, notice in this place.

The general appearance and character of the country in the vicinity and district usually understood by "Swan River Settlement," are here fully, finally, and satisfactorily unfolded. The nature of the coast, its approachable as well as inaccessible harbours enumerated and described, and the natural productions of the whole territory amply set forth.

Neither are the apparent disadvantages of position, climate, soil, and other drawbacks, urged against the settlement by its avowed enemies, or, by the artful cruelty of pretended friends, concealed from view. The origin of our information is above suspicion.

It seems uniformly conceded by all exploring parties, that the great tract between Swan River and King George's Sound, bounded by the Darling Mountains on the west, and by unknown regions on the east, presents an undulating surface, averaging about 800 feet above sea level. The soil varies much in quality; in some places sandy, in others a rich loam, with rocky pasture, amidst regions of granite and limestone. Occasionally extensive forests of noble timber encumber the surface, and sometimes single trees, in all the luxuriance and pride of natural beauty, so decorate the scene, that the landscape resembles the spacious park of some wealthy proprietor, rather than a sylvan solitude in a newly-discovered world.

Rivers and rivulets are extremely numerous, and water is found in abundant supplies, notwithstanding the general prevalence hitherto of a contrary belief: 'tis true that few rivers of any magnitude have yet been traced. The courses of those that are yet known are short and rapid, and if they should ulti-

mately prove unsuited to the purposes of navigation, they will still afford ample sites for mills, and place an immense water power at the disposal of the settlers. It is said that some of the mountain torrents dry up in summer, while others, on the contrary, in rainy seasons, expand and swamp great districts of level land. The first objection may be advanced with equal truth, against the rapid mountain rivulets in our own island; and the second, in all probability, we shall be able to show, is a curable complaint. In very many instances, the channels, water courses, or beds of the rivers, are obstructed by huge trunks of trees, that at their first decadency form substantial and convenient bridges, but after awhile, their own weight bringing them deeper, they become a perfect dam, and throw back the obstructed waters upon the level district. This injury would not continue to be sustained by improving settlers; it is too serious to be borne while the remedy is so easy.

Such advances towards civilization certainly presuppose a tolerable supply of labour, more than can, with truth, be stated as now existing in those retired districts. It is possible, also, that these swamps may arise from another cause, such as the gushing up of a subterraneous river—an event of frequent occurrence in countries of limestone for-

mation; in which case, a proper direction must be given to the water-course. The chief and real source of regret, as to the rivers of Western Australia, is, that no great volume of water—no St. Lawrence —has yet been discovered, along whose surface the Australian barks might glide with swiftness and security, and where the light pendants of all nations of the world might freely wave.

That the navigable qualities of the West Australian rivers may be made much more available than hitherto, is not improbable. A species of boat has recently been constructed, adapted to still-water navigation, which lies on, rather than sinks into, the water, is capable of being moved at the rate of ten miles an hour with little difficulty, and attended with a very trifling agitation of the sustaining surface.

Lagoons and salt lakes are scattered every where amidst the valleys and the forests; the former constitute the necessary drains of some encircling region; and the latter may be looked upon as depositaries from whence wealth and commercial eminence may hereafter be derived to the settlement.

From the unaffected style in which each little adventure is narrated in the accompanying Journals, it is possible that a conclusion might be drawn contrary to the real intentions of the nar-

rators, and at variance with truth. Each explorer speaks occasionally of having passed so many hours on his journey without meeting with fresh water, and of himself and fellow-travellers carrying a supply along with them. It is proper to observe upon these passages, that whenever the party adopted a well-chosen route, they never suffered from the want of a refreshing draught of water; but as they sometimes crossed the highest points in search of extensive prospects, or forced their way through the thickest parts of a forest, it is not at all extraordinary that a day's journey might have been made, and no cool fountain met with. And, let it be remembered, that, in every instance where they chanced to meet a native, he infallibly conducted them to a spring at no great distance from their position.

This point is insisted on in this place, not only from the importance of the subject, and desire to correct a too prevalent error, but for this further reason, that attention may be invited to the procuring of wholesome water in those districts where a scarcity may be really felt. Now, our Journalists assure us, that they have *always* found water by digging; sometimes *with their bare hands,* only to the depth of about one foot: if this be true, as there is every reason to suppose it is, the common

mode of well sinking would be tolerably certain of obtaining a supply; and the method of boring, so successfully attempted in France and England, called the "The Artesian Well," might finally be called in to the settlers' aid, with an entire dependence upon its efficacy.

The harbours, and character of the coast generally, form a subject of anxious inquiry. Information upon this head is still less full than could be wished, but, as far as our discoveries do extend, they are satisfactory. Colonel Hanson asserts, "that Princess Royal Harbour is equal to any port in the world." Our latest survey establishes Cockburn Sound to be a safe and excellent asylum. Gage's Road is a safe anchorage, but the seasons as well as the soundings, should be well understood by the mariner who approaches these shores. The recently explored littorale of Geographe Bay presents a front of seventy miles in extent, along which there is safe lying, with good anchorage, but only during the summer season; and where possibly future ages shall witness many a cargo shipped and landed at quays and wharfs along this hospitable shore.

It would be foreign to the object of this prefatory sketch, to touch upon the species of information useful to emigrants; this service has already been

well and satisfactorily performed ;* but it may be observed, generally, that since the publication of the work here alluded to, new districts have been explored,—additional depôts and settlements formed,—the number of settlers augmented, and the hardships and terrors of early emigration to a newly-discovered land removed or mitigated.

Apprehension of violence from the natives was one of the grievances of the "Terrorists," but this phantom has been dissipated, as will appear from the simple story of individual settlers having passed whole nights under the shelter of the native's wig-wam, unarmed, and unaccompanied by any of their own countrymen. The conduct of the natives has, from the commencement, evinced a desire to cultivate friendly relations with the whites. At Albany, they have actually submitted to the imposition of some few articles of dress, whereby their presence has been rendered less uncomfortable to members of a civilized community.

Recent investigation has also added largely to the number and value of the natural productions of Western Australia, from which there are reasonable grounds for hoping that the commerce of the

* In a Pamphlet entitled "Hints on Emigration," &c. London, J. Cross, 1830.

settlement will speedily be extended to a profitable length, and the comforts and happiness of the settler considerably augmented. In addition to the varieties of mahogany, gumtrees, &c., a valuable species of oak, and of large dimensions, has been found in the country north of Augusta, a new and very promising settlement, at the embouchure of the Blackwood river. One district has been found peculiarly adapted to the culture of the vine, which may here be conducted, as at the pyramidal rocks of Goodesburg, up the almost naked front of the limestone cliffs. The waters of the salt-pools, when an intercourse shall be opened between the sea and the interior, may be compelled to evaporate and yield their briny depositions to the children of industry and enterprise; and the cotton plant may yet be seen putting forth its beautiful flowers on the Australian saline marshes as vigourously as in the transatlantic world. A good brick clay supplies convenient and manageable material for building; but there can be no doubt it will shortly be superseded by the more permanent natural material of granite or limestone, when passable roads and navigable rivers shall render the removal of heavy masses practicable.

In estimating the probable chances of success, the ingenuity of the settler ought to be directed to

the discovery of the best modes of abridging labour, and much will depend upon timely and wise determination on this point. This is an important question, and surrounded with difficulties. Labourers could, of course, be imported from the parent country, but the expense of transport, and of after maintenance startle the young adventurer. The presence of convicts is irksome in a settlement of freemen, and where crime is, happily, as yet, less known than in the countries from which they have emigrated. Yet, without a large supply of labour, or some obedient power, improvement and civilization must stand still.

A few suggestions for the abridgment of labour and general amelioration of the settler, by the assistance of modern scientific inventions, have been already introduced; it remains now to address some words of advice, or rather matter for reflection. Let it be borne in mind that this country is principally adapted to pastoral pursuits, and offers very great advantages for the investment of capital in that way. The first and greatest want in the settlement is "communication by lines of road." This cannot be supplied without a command of labour. Would it not be worth the consideration of all parties, whether convict labour might not be applied, without compromising the dignity and moral

feeling of the settlement? If the intrusion of criminals into the presence of the settlers be too irksome to be borne, let their labour be expended on those portions of each line of road most remote from the established settlement, while the termination adjacent to each town shall be formed by free-labourers, remunerated, as may be arranged, amongst the inhabitants. It is probable, too, that, after some of the principal and most necessary lines shall have been completed, the natives will bring their labour into market, at rates more reasonable than the free whites, and under circumstances more comfortable than would attend the employment of convicts.

Whenever the interior shall be rendered accessible by lines of road, the settlers may call to mind, with gratitude, the vast natural resources that have lain for so many ages concealed within. Then may their opening prospects be compared to the natural formation of the great region of Australia, surrounded by low-lying sand-banks and forbidding coasts, that alarm the emigrant at his first approach, but when once the breakers are cleared, and a safe asylum reached within, all is beautiful, and bright, and happy-looking.

The peculiar manner in which the surface is timbered presents features both beautiful and ad-

vantageous on the southern coast. Detached trees of mature growth are scattered over the greater part of the low land, only sufficiently numerous to supply a grateful shelter to the flocks and crops, and form an ornamental screen to the dwelling of the settler.

The vast water power of which the Australians are possessed should be immediately and profitably directed. Besides the establishment of mills for various objects, advantage should be taken of the same sites for the expeditious division of timber, by means of the "Portable Saw Mill," a modern invention, and likely to prove of inconceivable benefit in remote wooded districts.

The manufacture of glass, pottery, and iron, are resources that will hereafter be found available, though now, from necessity, kept in abeyance.

So much of introductory matter appeared to the publisher to be demanded, by the valuable quality of the collected Journals, which succeed it, at the advanced age of this rapidly increasing settlement.

The first establishment of a few persons at Swan River afforded an exercise for the ingenuity of the base and wicked, in holding up false lights, and drawing the adventurer upon shoals, where his fortunes were wrecked and his heart was broken;

but the period has now happily arrived when such infamous practices must prove abortive.

It is not expected that converts to the cause of emigration will be made by the publication of the accompanying authentic documents; they constitute only a small, but certainly a very valuable portion of the history of the settlement. The ends hoped for are, by giving publicity to their contents, to disabuse the public mind of erroneous statements, circulated by interested foreigners, relative to Australia generally, and to assist those who already meditate the adoption of a new country, in forming a true estimate of the chances of happiness likely to attend their migration thither.

18, Holborn,
June, 1833.

JOURNALS

OF

SEVERAL EXPEDITIONS

MADE IN

WESTERN AUSTRALIA,

During the Years 1829, 1830, 1831, and 1832.

A JOURNAL *of the proceedings of a party of Officers and men, (21 in number,) landed from His Majesty's Ship Challenger, at Browne Mount, Cockburn Sound, June* 26, 1829, *for the purpose of exploring the Canning River and the intervening country, as respects the Soil, &c.*

June 26*th.*—Landed at 10, a.m. and proceeded in an E. by S. direction; the first mile was a perfect sandy surface; we then came on to a dark red soil, which extended about the same distance, and then had the sand again mixed with dark earth, which continued without any perceptible change to the end of this day's journey, about nine miles from the place of debarkation; but to accomplish this dis-

tance, we travelled over about twelve miles of country, with generally an undulating grassy surface, thinly covered with trees of various dimensions, and of the same kind as those on the coast. About six miles from the place we landed, we passed to the southward of a lagoon of fresh water; and where we bivouaced for the night there was another extensive lake, and we pitched our tents on the rising ground near its S.E. extremity.

June 27th.—At 8, a.m. resumed our journey, and after we had advanced about two miles, we passed to the southward of a deep and rather extensive swamp; and about the same distance further on, we passed through another, which was neither so deep nor extensive as the first. Continued on again three miles, and then we crossed a stream about six or seven feet wide; and a mile further another, about the same width, both running to the southward in a parallel direction. Nine miles from the lake we left in the morning, an agreeable and sudden change took place in the scenery; we had almost imperceptibly ascended an eminence commanding an extensive view of a vast plain, bounded to the eastward by a range of majestic mountains, an opening in which being observed, we crossed the plain a little to the eastward of our destined course, and in a distance of about ten miles we entered between two ranges, and discovered the Canning River, rushing over its rocky bed with considerable impetuosity and running to the northward. We bivouaced on a small island formed by a stream from the river curving to the eastward and re-uniting a little lower down. Respecting the nature and quality of the soil, &c. passed through to day, the first particular change was observed soon after we entered the plain, when we found a yellow

marl, of a nature I think well calculated for making bricks; this extended about a mile; it then continued sandy with gravelly patches, till approaching the base of the mountains, where the surface is entirely covered with coarse gravel and loose stones.

June 28th.—At 7, a.m. ascended the summit of a mountain 1000 feet in height, for the purpose of obtaining a more extensive view of the surrounding country, but the density of the atmosphere was so great, that objects were only visible a few miles to the westward, where little of interest presented itself; and to the eastward nothing was discernible but a succession of lofty mountains, covered with trees. At nine, descended to the river, and passed to the left bank, and in our progress along its course to the northward, we were soon gratified by finding good red soil, which continued (with an occasional mixture of sand) for about five miles. The river then divided into two branches, and the ground became swampy; crossed the western and lesser stream, and endeavoured to follow the course of the principal one, which tended more to the northward, but we were shortly interrupted by a deep, reedy swamp, which forced us to pursue our course more to the westward, and in doing which we lost sight of the river altogether; but after a few miles' walk over good soil and through several small swamps, we found it again, but so much reduced by passing through and inundating an extent of low marshy ground, that we were induced to cross to the northward, and proceed direct to the mountains, two miles distant, to be fully satisfied that it had not branched off in that direction. But observing, from the top of a hill, water N. by W. advanced in that bearing about 4 miles, over a sandy surface, and bivouaced on rising ground in the vicinity of a

small sheet of water, after a journey of eighteen miles, but not more than twelve distant from the ravines left in the morning.

June 29th.—At 8 a.m. proceeded in a W.N.W. direction, and in half an hour fell in with the river about sixteen feet broad; we crossed over by a fallen tree, and pursued our journey down the left bank, the river gradually widening as we descended, and presenting on each side, for a space of ten miles, the richest verdure and most luxurious vegetation. The ground then became marshy, and the river more irregular in its course; we passed through a large swamp, and bivouaced on an elevated sandy spot convenient to the river, where it was nearly a mile broad, and the water brackish.

June 30th.—At 8 a.m. continued our journey, following the course of the river through a number of small swamps, and several streams of good water, and after a walk of about eight miles over a sandy soil, we reached its junction with the Swan, at Melville Water: proceeded through the same description of country to the military post at the mouth of the latter river, where we met with the kindest reception, and most hospitable entertainment from Captain Irwin and the Officers of the detachment of the 63d regiment. Having traversed the country from Cockburn Sound to the Darling Mountains, and followed, with little interruption, the course of the Canning River from near the source to the mouth, the general impression resulting from a minute observation as a hurried journey would permit, is, that with trifling exceptions, the soil above the salt water is of a quality suited for all the purposes of agriculture. I cannot conclude these remarks without observing, that during this journey of 100 miles or upwards, not a native was seen,

which is pretty conclusive that they are not very numerous. But there can be little doubt we passed close to some of them, as we saw several of their wigwams, and many traces of themselves; and it is more than probable they did not like our appearance, and avoided us; and from the nature of the country, and their superior power of vision, they have easy means of concealment.

A JOURNAL *of the proceedings of a party of Officers and men, belonging to His Majesty's Ship Sulphur, landed on the 8th of September, 1829, for the purpose of crossing the Darling Range of Mountains, under the orders of Lieutenant Preston, R. N.*

Left the ship at 10 a m.; after beating for an hour and a half, found too much sea to attempt to cross the bar; bore up for Woodman's Point, and landed at noon; all the party excessively drenched; got all the provisions on shore, buried the casks, and proceeded with the rest of the baggage to Fremantle, where we arrived safe at 6 o'clock, men very tired; found Mr. Dawson there, sent him to Perth immediately, so as to be ready to meet the boats according to his orders; next morning took possession of the two tents allotted us.

September 9th.—At 5 o'clock sent Mr. Disney with the men to Woodman's Point to bring up the remainder of provisions, but knowing them to be too heavy for one trip, and it being particularly desirable to leave Fremantle that day, in consequence of spirits being easily obtained, and several of the men ill in consequence, hired Mr. Wells's cart and two horses to meet our men half way, which they did, and arrived at Fremantle at 10 o'clock; found Mr. Collie had struck the tents and got all the light baggage into the boats, so that we were able to leave by 2 o'clock, accompanied by Mr. Knight, a settler, who was desirous of accompanying us, and Mr. Dawson on our passage up, who was returning to Fremantle for the purpose of taking up provisions so as to enable the soldiers to join us up the

Canning; at 5, rounded Point Heathcot, and landed on the second low Point, on the left bank of the Canning, of course on our right, where we rested for the night. Soil—siliceous sand, with a small portion of black mould; prevailing trees—banksias, casuarinas, and grass tree; the low vegetation—small shrubs, chiefly in beautiful flower; birds—cockatoos and paroquets; wind N.W. with occasional showers.

September 10*th*.—At 6, struck the tents and breakfasted; appearance of the jolly boat; hearing Mr. Dale wished to join the party, I sent Mr. Gilbert in the Dingy to Perth for him, as I was fearful the party of soldiers would not be able to join before starting for the mountains; commenced our route up the Canning, which we found run in a much more westerly direction than laid down in the chart; the appearance of the soil on both sides of the river was sandy. At 10 a.m. arrived at the island, when we waited for the Dingy; landed on the left bank, and found it the same as where we rested for the night; at 10 o'clock, Dingy joined us, and proceeded up the river at a slow rate, in consequence of the stream running down very strong; landed the some of our party on the left bank, and Mr. Dale on the right to walk, as the boats were too deep; about half an hour afterwards, Mr. Disney called out, Mr. Dale is amongst the natives; landed immediately and joined him; found five natives had come upon him suddenly, but were very friendly; gave a swan, some rings, knives, beads, &c., and received in exchange, spears and a stone hatchet, and parted very good friends; it being late and a strong rapid to pass, dropped down a few hundred yards, and pitched our tents on an elevated part of the right bank, of brownish loam, fit for any com-

mon agricultural purpose. During our passage up the river after getting above the islands, we landed twice on the right bank, and found good soil each time, but not any distance from the river. The birds, &c. &c., the same as yesterday; heard several shots fired down the river, supposing it to be the jolly boat with the soldiers; answered them until 11 o'clock, when they ceased; wind N.W. with showers.

September 11*th.*—Struck tents at 6; fired several shots, which were answered from the jolly boat; fearing they would not be able to join us, from the rapid stream that was running down; sent Mr. Gilbert down in the Dingy with orders to Mr. Dawson to land the soldiers and return to Fremantle, and for him to bring up the provisions and baggage; sent a party with Mr. Dale to walk, and proceeded up the river with great difficulty in the whale boat; at 1 o'clock, landed about a quarter of a mile above the place where Captain Fremantle bivouaced, and made that our rendezvous. Pitched tents, and were soon joined by nine natives, five of whom we had seen the day before. At 2, Mr. Gilbert returned, having executed the orders I had given him; at 3, the party of soldiers arrived, which did not appear to surprise the natives, who were still with us; wind N.W. with very heavy rain; afternoon, occasional showers.

September 12*th.*—Weather very unsettled; having completed provisions for eight days for twelve men, at half past 8 left the encampment, accompanied by Messrs. Dale, Gilbert, Knight, and eight seamen, for the purpose of proceeding in an east course over the mountains; in an hour, arrived at the foot of them, the distance not being more than three miles; after walking a quarter of a mile over

very good soil, we came upon a plain of sandy soil, mixed with a small portion of red and black mould, covered with the grass tree, which extended to the foot of the mountains. Crossed a small stream running to the southward, which we afterwards traced to the Canning; seeing a lateral valley, made for it and began ascending, leaving two conspicuous patches of whitish rock on the brow of the ridge to our right; kept along the run of water in this valley, both sides of which are covered with loose fragments of quartz and granite rock, having a little light soil between them, supporting small shrubs and the grass tree. At half past 11, rested in front of a beautiful small water fall, where the cedar and stringy bark, banksias, and blue gum-trees abound. Noon, resumed our journey; three quarters of an hour, arrived at the summit of the first range (which I estimate at 1000 feet high,) where the surface presents the same appearance as just mentioned, with a mixture of iron stone; the trees similar to those at the water fall. In proceeding, found the mountains to be continued ridges, with small intervening dales filled with marshes. At 3, halted for the night on the side of a swamp, where we found good water from a small stream running to the southward, which most likely is dry in summer; heard the shout of a native, who was seen by one of the party, and for the first time heard the yell of a native dog. The few birds seen this day were the cockatoos and paroquets; course E. $\frac{1}{2}$ S. fifteen miles; wind N.W. with heavy showers.

September 13th.—Resumed our journey, passing over precisely the description of country and productions as yesterday, after arriving at the summit of the first range; noon, halted for a quarter of an hour on the side of a small stream running to the

N.N.W. and then pursued our route over continued ridges until half past 2, when we crossed a marsh with a small stream running to the southward, and rested for the night in a close wooded country, without any appearance of an opening. Men very tired; the surface was a mixture of siliceous sand and clay in the dales, having large fragments of granite rock and iron stone thickly scattered upon the ridges, in many places almost entirely bare of low vegetation; the same trees, generally of immense size, the largest hollowed out at the root by fires. Course E. ½ S. distance eighteen miles; wind N.N.W. with squalls.

September 14th.—Started at 8; occupied till a quarter past 9 in crossing a marsh; saw a kangaroo rat, which Mr. Gilbert having fired at, we heard the cry of several native women and children, occasioned most likely by the report; saw them flying in every direction from us, but did not attempt to follow them; saw the smoke from a fire they had just lighted; left some feathers, handkerchiefs, &c.; after proceeding about a quarter of a mile, saw a native boy about seven years of age running before us, whom we might have taken, but did not interfere with him; he, however, from fright dropped a spear, which I picked up and stuck in the ground; noon, ascended a very high ridge, and for the first time got a view of higher ridges, bearing from N. by E. to S.E. by E. distant about thirty miles; rested a quarter of an hour and then proceeded down a very deep dale, with a beautiful rivulet running over broken pieces of granite rock to the N.N.W.; continued our course up a very great ascent. Half past 1, passed a swamp with a small stream running southward; at half past 2, halted and climbed a high tree for the purpose of obtaining a view; saw an opening to the eastward, walked on to it with the

gentlemen, leaving the men at the place for bivouacing, and came to a small opening destitute of large trees, where we had an extensive view of successive ridges from N. by E. to S.E. by S., the furthest distant about thirty or thirty-five miles, and appeared to be considerably higher than the part we had passed over; the place where I then was I considered to be 800 feet higher than the first ridge. Considering that such an extent of mountainous country as this view afforded, in addition to what we had actually traversed, without the least indication of soil that could be turned to any agricultural purpose, destroyed the hopes of finding any thing in this direction that could be turned to any useful purpose in the present state of the colony, I deemed it wholly unnecessary to advance any further; and I was confirmed in this resolution, by knowing that our provisions would not have lasted to allow us to go to the boundary of our present view and return. I was now the more anxious to retrace my route, as I expected his Excellency the Lieutenant Governor might wish us to proceed in a more promising direction. The country passed over this day was much the same as yesterday, with the exception of more herbage and trees more numerous, the less iron stone and more quartz. Course, E. 14 miles; wind N.W. with rain at intervals. Not having any water near us, commenced our march back to the stream we had crossed running to the northward; at forty-five minutes past 3, advanced to and crossed it; having returned west four miles and a half, found three native huts in which the officers slept, and built a bark hut for the men. Sunset, wind N.W. with heavy rain, which continued all night, completely drenching the men and spoiling a great quantity of bread and all the sugar; the officers'

provisions were dry, but not themselves; heard several native dogs during the night.

September 15*th.*—Raining hard and the baggage wet, as I commenced our march homewards, keeping a little to the southward of our outward track, walking very quick until noon, when we rested for a quarter of an hour; crossed two small streams running to the southward; passed on the left side of a high ridge we had gone over the day before, and found a marsh about a mile and a half long running E. & W. with a small stream to the E.S.E. which appeared to turn more to the southward. Fifteen minutes past 3 bivouaced, the men in a bark hut and the officers in one similar to the natives, but built by themselves; course W. twenty-three miles; wind N.W. with heavy rain. The men were very much fatigued, almost all their shoes worn out and their clothes much torn.

September 16*th.*—At half past 8 resumed our journey, walked quick, saw several kangaroo rats, passed a small stream running to the W.N.W., which we afterwards found took its course through the Darling range; half past 11 saw an opening to the westward; noon, found it to be the western range; rested for half an hour for the purpose of obtaining bearings, but owing to the density of the atmosphere and heavy rain, it was impossible, although Mr. Gilbert thought he saw Garden Island, and in the direction pointed out bore W.S.W.; descended the mountain in a valley with a stream running down it, about a mile to the southward of where we ascended at 2; three of the natives we had met before joined us and took us a short route to the tents, where we arrived about 3 o'clock very wet, and the remainder of the provisions much damaged.

September 17*th.*—Rainy weather and blowing hard from the N.W.; men employed preparing to return on board, and washing their clothes; a party crossed the river and found the good land to extend further from the water than on the side we were, and the soil rather superior. Mr. Knight saw one emu, and Mr. Gilbert saw two large kangaroos.

September 18*th.*—At 6, launched the boats; Mr. Dale and a party of twelve set off to walk to the islands; found the river from the late rains had risen upwards of two feet; twenty minutes past 6 started, and arrived at the islands by 10 o'clock, where we waited for Mr. Dale until one, fearing they had lost their way by keeping too much to the northward; left Mr. Gilbert there in the Dingy and proceeded lower down in the whale boat; about an hour afterwards saw the Dingy coming, the party having arrived a quarter of an hour after I left, and continued to walk along the bank of the river; took them in at the mouth of the Canning, and proceeded to Perth, where we arrived at 6 o'clock and rested for the night.

September 19*th.*—Left Perth at forty-five minutes past 7, and arrived at Fremantle at 11 o'clock, where we found the Yawl; gave the men a quarter of an hour's rest and embarked; arrived on board at 3 o'clock.

Remarks.—On going up the river, found the water perfectly fresh: about half way between the distance we bivouaced and the islands, on coming down, passed over the flats without touching, and Mr. Dale informed me that many parts of the banks were much flooded in the course of his walk from the encampment to the mouth of the Canning. The iron stone, so abundant up the mountains, was found to possess distinct magnetic polarity.

(Signed) William Preston.

EXTRACT OF A LETTER *received from Dr. J. B. Wilson, R. N., dated King George's Sound, 15th December,* 1829.

HAVING understood that the N. Eastern and Eastern parts of the country had been explored to some distance by Major Lockyer, Captain Wakefield, Messrs. Tallemath and Butler, I decided to pursue a North-westerly course in the direction of Swan River for three or four days, then to proceed W, then South, and to return by the sea coast. All being prepared for our departure, Mr. Kent, myself, and our cortege, (two crown prisoners, and an intelligent native of the name of Mokare,) increased by a soldier of the 39th who had volunteered, left the settlement early on Wednesday morning, proceeding N. N. W. About seven miles, we crossed a considerable stream running easterly, supposed the principal branch of King's River; and about three miles further we passed another, of smaller size, running in the same direction. In the evening we bivouaced near a lagoon of some magnitude; the water, although of little depth, was excellent.

On Thursday at daylight, we resumed our journey N. N. W. About nine o'clock we arrived at a large lagoon, from three to six feet deep, where we halted a little. Passing to the westward of this, in a short time we observed another extensive sheet of water a few hundred yards on our right. Mokare informed us that the natives came to these lagoons in dry seasons, when the smaller lagoons failed.

Between the first and second the following bearings were taken. The most westerly peak of Porrongor-up N. E., distant about twelve miles, the Churin to the eastward of the peak N. E. by E. At eleven o'clock we crossed a mountain stream running to the south-westward, through a valley where the land began to improve, and the banksia and other plants common to a sterile soil, to disappear. At six o'clock, we halted for the night on the banks of a limpid mountain-stream, running south westerly through a valley, the land of which would not suffer much by comparison with the best on the banks of the celebrated Swan. It must be confessed, however, that the rich alluvial soil is of no great breadth, yet the fine sheep walks by the gently swelling, lightly wooded adjacent hills, might compensate in some degree for that deficiency.

On Friday morning, we directed our course N.W. by W.; passed through a country beautifully diversified by moderately elevated hills, and fertile verdant valleys, adorned and enriched by streams of the purest water. About nine o'clock we proceeded eastward to gain the summit of a hill seen in that direction, for the purpose of obtaining a panoramic view of the surrounding country. A connected cluster of small hills was noticed, turning from E. by N. to N.W.; the westward peak of Porrongor-up bore E. half S., and the westerly point of Morril-up range N.E by E. Having left this, we resumed our course, and passed over a tract (about eight miles) of very indifferent, or rather very barren country; we then arrived at a swampy flat, where, being abundance of good water, we halted for a short time. Departing from thence, and altering our course a little more to the northward, a rich and romantic country soon burst into

view, which we found abundantly supplied with good water. In the evening we bivouaced near a stream running N.W. through a tract of land bearing considerable resemblance, both in appearance and quality, to the cow pastures.

On Saturday, as the kangaroo had been skipping about us from the time we entered into this fine open forest land, I gave the men half a day to prevent interruption in our journey. Mr. Kent and myself walked to the westward, and the others to the eastward. About noon we re-assembled, unsuccessful, the kangaroo far too fleet for the dogs, and the sportsmen, from the nature of the country, could not approach sufficiently near them unperceived. The land walked over by both parties was observed to continue good. Here we received a visit from a native, (whose good condition and well-formed limbs indicated abundance of nutriment); he came up to us with much confidence, and partook of our repast. Mokare knew him: on understanding our intention of proceeding west, and returning to King George's Sound by the sea-coast, he advised us not to do so, as travelling was very bad in that direction. He invited us to accompany him to the eastward, where the best lands lie, and where we would shortly meet "Will" with a number of his tribe, who would be glad to see us. To this request Mokare added his earnest solicitation, and was exceedingly chagrined to find his eloquence of no avail.

We now altered our course directly north, and passed through a country of the same general character, good open forest land. About sunset we reached a valley, almost entirely destitute of trees. So much has been said of the scenery in New South Wales resembling noble English domains, that the comparison is rather trite. Imagine a rich valley

of considerable width, extending E. and W. as far as the eye can survey, bounded on the south and north by a succession of undulating and moderately elevated hills, thinly but sufficiently ornamented with trees of gigantic form, and you may have some conception of the beauty of the spot, where, near a pool of water, we bivouaced on Saturday evening. Mokare having shot a kangaroo of a large size, all the party were in high glee preparing the feast. We were now nearly seventy miles in a N.W. direction from the settlement, in a country well adapted either for pastural or agricultural purposes, and I regretted exceedingly that want of time compelled me to make it the "ne plus ultra" of my excursion northerly, where I am convinced the same kind of land exists to a great extent.

Sunday at daylight, we proceeded west. About nine o'clock we arrived at a shallow lagoon, the water of which tasted rather brackish to us who were become fastidious. Perceiving water a short distance directly north from this, we proceeded thither, and observed a circular basin of water about half a mile in diameter, literally covered with black swans, ducks, teel, and other aquatic birds. The lake is surrounded by a belt of about fifty yards wide of tall reeds; at the inner margin of this belt the water is upwards of six feet deep. The Hirundo Medicinalis was found in great plenty, an important object to some future Australian Broussars. The birds being disturbed flew to the lagoon to the south of the lake, and being again disturbed, flew directly south, thereby rendering it probable that other collections of water exist in that direction, which may receive, as I imagine, the various streams running N.W.

Leaving this lake, (named Loch Kathrine,) we

continued our course to the westward, and soon perceived that we had left the good land behind. After having travelled a few miles over a barren scrub, observing what we thought a rising ground to the northward, we bent our steps thither, and found it was good forest land, the altitude of the trees giving it the appearance of considerable elevation. We again proceeded westerly, and passed over a tract of country as miserable and useless as any to be found in New South Wales. In the evening we reached and suddenly re-entered on a fine open country, several hundred acres being without a tree; this was very pleasing to us, disheartened and tired by our fatiguing journey. We went to the southward two or three miles in search of water, the first time we had occasion to do so; by digging a hole we obtained an ample supply of good quality.

On Monday, at break of day, we continued our westerly course. About noon we arrived at and crossed a fine stream running south, which, in compliment to the gentleman who accompanied me, was named the Kent. Having halted here half an hour, we pursued our journey in a N.N.W. direction for the highest part of a range of hills trending from S. by E. to N.W. Early in the evening we bivouaced near a running stream, in the midst of a wide and picturesque glen; the temperature, had other indications been wanting, sufficiently proving us to be among the mountains. During this day's journey we passed over some good land, and more that might be made something of; but by far the greatest portion was very indifferent.

On Tuesday, we directed our course S.S.W., taking care to leave on our left all the streams we met with, one excepted, of no inconsiderable mag-

nitude, running directly west, which was named the "Macquoid," in compliment to the High Sheriff of New South Wales. In this manner we proceeded over hills and dales till our progress was arrested by a swamp about two miles wide, trending westward round the mountains. Mr. Rare and others of the party expressing some repugnance at passing directly across it, we took a detour easterly and passed through where it was much narrower, and not above two or three feet deep. As at this time the thunder was rolling heavily along, the peals rendered more terrific and sublime by the echoing hills; the rain pouring down in torrents, and some of the explorers (some of whom wished themselves elsewhere) up to the middle in water, we thought it might not inaptly be called the "dismal swamp." This being passed, we proceeded in a southerly direction through a barren iron-stone and quartz country, interrupted by stripes of good land, and in the evening arrived at another swamp about 150 yards wide and two or three feet deep, trending round the hills; having passed this, we bivouaced earlier than common, being somewhat fatigued with this day's march.

Wednesday at day light we proceeded in a southerly direction, through a country where the transitions from good to bad land, and vice versa, were frequent and sudden. About 9 we perceived a high insulated conical hill, bearing E. by S., whither we directed our course, passing through a valley of great extent, of which the soil was a rich red loam. About 1 p.m. halted in a deep hollow glen, through the bottom of which rushed with velocity, an impetuous mountain torrent. The trees (principally blue gum, box, and apple tree) were of enormous size. At 4 p.m. Mr. Kent, myself, and Mokare be-

gan to ascend the mountain, and reached its highest summit by half past 6, when we enjoyed a view that amply repaid all our fatigue. I have seen many far-famed views in the four ancient divisions of the globe, and have no hesitation in saying, that this of the fifth, if it did not surpass, fell but little short of any of them. The highest peak is about 30 yards square, perfectly level, paved with minute particles of quartz, and at each angle is an immense block of granite. In compliment to the officers of the 39th regiment, this was named Mount Lindesay; from it the following bearings were taken, but as I had only a small pocket compass, strict accuracy cannot be expected or obtained. From the S.E. angle, Mount Melville, E.S.E.; Peak-head S.E. by E. easterly; east point of Porrongor-up, northerly; south head of a large inlet, (close to the sea from N.E. by E. to S.W. by W.) south easterly; high hill to the west of the inlet, under which is apparently the communication with the sea, S. by W.

From the N. E. angle, the western point of Morril-up N.E. by E.; from this bearing to N.W., except some very distant high land bearing N. by E., the country is perfectly level as far as the eye can behold; from the N. W. the land rises and becomes gradually higher. From the point round to the southward it resembles the ocean convulsed in a storm; or a better idea may be formed of its appearance, by imagining segments of circles increasing in height as they increase in diameter; in the mountainous region these hills are conspicuous from their superior altitude, and as they will be grand points in a trigonometrical survey of the country, they were named after the Surveyors' General.

From N.W. angle of Mount Lindesay—

A high peaked hill (Mount Roe) N.W. by W.

A double peaked hill (Mount Mitchell) N.W. by W. $\frac{3}{4}$ W.

A high peaked hill (Mount Franklin) W. by N. westerly.

From the S.W. angle, group of islands, middle of the west and largest isle, S.W. by S. westerly; very high distant land W. southerly. Right extreme visible point of the sea W. by S. $\frac{1}{2}$ S. supposed Cape Nuyts, S.W. $\frac{1}{2}$ W; and greatly to my delight, just as the sun went down, assisted by refraction, a large expanse of interior water was observed close to the sea coast bearing S.W. $\frac{1}{2}$ S. I supposed it near to Cape Chatham, perhaps to the westward. These observations being made, and the sublimely magnificent scene admired, until daylight departed, we descended the mountain and reached our encampment between nine and ten in the evening,

On Thursday morning we walked round the southern base of Mount Lindesay, and soon met another stream; wound round its eastern side, which, joining to that where we halted last night, found a stream of some magnitude, being about thirty feet wide and five deep, running directly south. This reach, however, extends only a few hundred yards, when it expands and runs rapidly over a granite rocky bed. The banks of this river (which was named the Denmark, in compliment to the physician of the Fleet, of that name) are rich, but, as readily may be imagined, from the abrupt nature of the country, they are very narrow. The surrounding hills, however, are of very fine soil, and may easily be turned to good account; the timber (principally blue gum) is the finest I ever saw. Having left this delightful scenery, we pro-

ceeded S.E., crossing in our way several streams of pure water, running southerly, not much inferior in size to the Jordan, Clyde, Bargo, Emogallah,—*et hoc genus omne.* This day's march was, from the nature of the country, rather fatiguing. The land on the hills was sometimes good, sometimes indifferent, and sometimes very barren. That of the valleys was for the most part of a good quality; we bivouaced near a stream running through a valley, trending, as all the others did, to the southward.

Friday, very early in the morning, we started, and Mokare having now got on known ground, led the way; after having travelled at a pretty brisk pace for nearly four hours, principally over flat land, we came to a river about fifty yards wide, and apparently deep, flowing to the south; we walked along the right bank, and in a short time came to the inlet seen from Mount Lindesay, into which it flowed; unfortunately a bar of sand runs across its entrance, not having more than eighteen inches or two feet water, where we passed over; but immediately inside the bar there are from three to seven feet, the greatest depth being on the right bank, which increases as the river decreases in width; it is navigable for boats to a considerable distance; the water is slightly brackish—not more so than the Swan, at Perth. I consider this to be the termination of the mountain stream where we found the land so good, and where we bivouaced after the second day's march; it was named the Hay, in compliment to the Under Secretary of State. Having walked along the shore about a mile and a half, we arrived at another river flowing also into the inlet W.S.W.; there is also a bar across its mouth, inside of which the water is five feet deep and upwards of ten yards wide. I consider this the

termination of the stream we met on the afternoon of the second day's march, where the land began to improve; it was named the Heeman, in compliment to the late commandant of this settlement. I may in this place mention, that my method of ascertaining the depth of the various rivers was very simple; I either waded or jumped into all of them. The inlet into which these rivers flow may be called circular, six or seven miles in diameter. The water to the N.E. is very shallow, but deep along its southern boundary; the sand is not above six or eight inches deep; beneath it is fine red, and then blue clay, increasing in purity as it increased in depth. Having walked some distance in the shallow water, the following bearings were taken.

Mount Lindesay N.W. by N.; high conical hill seen from the mount, bearing S. by W., the base apparently washed by the water distant fifteen miles bore west. This hill, in compliment to the gallant admiral of that name, was called Mount Hallowell. High land to the seaward (between which and Mount Hallowell I think the communication with the sea exists) bore W. by S. ¾ S. From Mount Lindesay to Mount Hallowell there is a continuous chain of hills, one of which in the centre, and higher up than the others, (being also a conspicuous point,) was named Mount Shadforth, in compliment to the Lieutenant-Colonel of the 57th Regiment. I have already mentioned that the inlet is nearly circular; perhaps a better idea of it may be formed by supposing an arc 40° cut from the western part of the circle, through which opening Mount Hallowell may be seen in the distance washed by this inlet, and I have no doubt also by the sea, whose mighty voice was most plainly heard by all of us. It is my opinion, that the inlet ex-

pands again and receives other rivers. I was on my way to decide the matter, but reflecting that the utmost limit of my time was expired, that our provisions were expended, and that I had no instruments to make any useful observations, I was obliged, though reluctantly, to give up the attempt. The rise and fall of the tide is considerable; during our stay here it receded upwards of 6 inches. We resumed our journey about 2 p m., proceeding east through a country slightly undulating for two or three miles, when we reached a plain of great extent, bounded on the N. and S. by well wooded hills, occasionally watered by small streams, and intersected by narrow slips of finely timbered forest land. In the evening we bivouaced near a swampy flat. The land we passed over to-day was for the most part composed of charcoal, and other vegetable matter, varying in depth from four to twelve inches, under which was sand about six inches deep, and then a fine blue clay, and this is the general character of all the flat land we passed over to the eastward of Mount Lindesay. Saturday, at daylight, we left our bivouac, and proceeded on our way home. About 7 o'clock, arriving at an inlet of some extent, we bent our course a little to the south, came to the sea beach and walked across the sand, which was several feet above the level of the sea and inlet. Here the following bearings were taken: West Cape Howe S.S.W. and island south; Eclipse Island S.E. by S.; another island S. by E.; centre and direction of the inlet N.E. by N. $\frac{1}{2}$ N.

We now crossed over the range of sand hills (some parts of which showed the same stalactitic appearances as the hills about Swan River). The lagoon was perceived to be of crescentic form, com-

municating by a very tortuous channel with another lagoon, well known to the sportsmen of this settlement. In conclusion, I do not hesitate in saying, without fear of future contradiction, that the area passed over contained as much, perhaps more, land fit for all rural purposes than any portion of equal extent (at least as far as I know) in New South Wales. It may likewise be observed, that the range of mountains (granite) is not so continuous as was supposed, but that there is a plain of considerable extent between the western and Porringor-up and Morrel-up ranges, affording easy access between this settlement and Swan Port, for at least one hundred miles. That, crediting the report of the natives, which, from the correctness respecting the nature of the land to the westward, and from their general intelligence, I think may be done, there is excellent land to the N.E. It is also probable that a good sea-port may exist to the westward, and it is certain that the country thence, as far east as Cape Howe, is open and level, affording easy communication from port to port, and that the land is far from being bad. I may likewise state, that in travelling onwards it was made a rule for each individual to carry a day's water, lest we might not meet with any when we halted for the night: there never was occasion, however, to make use of it from necessity; indeed those who wished enjoyed the luxury of a cold bath at least once a day (once excepted) during our excursion. This may show sufficiently that the country is copiously supplied with water, neither is there any deficiency of several kinds of useful timber. In the barren land the banksia and stunted swamp oak, and grass tree, held undisputed sway. In the moist land, along the banks of streams and rivers, the tea

tree flourished; in forest land the blue gum, the apple, the turpentine, and the box (I use the colonial names) alternately predominate, obtaining in valleys, and particularly in glens, enormous girth and altitude. The green wattle was occasionally observed; it flourished luxuriantly on the hills in the neighbourhood of Mount Lindesay. I have not entered into any detail regarding the mineralogical or botanical features of the country, as, even were I capable of doing so, the knowledge gained during such a rapid journey must be very imperfect; moreover, a person travelling with his blanket, provisions, and water, on his back, can only be expected to show the way, where others may follow their different favourite pursuits with comparative ease and safety to themselves and advantage to the scientific world.

Mr. RICHARD DALE'S

First Excursion to trace the Helena River, in October, 1829.

Oct. 15th.—Left Perth at 8 o'clock, a.m. and forded the Swan at the islands at a quarter past 9 o'clock, proceeding E. by S. till 10, when we altered our course to the E.N.E. and N.E., and at 11 o'clock again changed it to E. by S. and crossed a large reedy swamp running E.S.E. with a small stream to the eastward, the soil on its banks being a loam much mixed with sand, but thickly covered with grass trees; at half-past 10 o'clock met with another stream running at N.W., and at 2 arrived at a broad brook running to the W.N.W.; we proceeded about a quarter of a mile along its banks, which had a most verdant appearance, resembling the richest parts of the Swan, and when we left it, took its course from the S.E.; at twenty minutes to 3 o'clock ascended the mountains, first passing over a hill about a hundred yards high, at the top of which, and up to within a few yards of the summit of another conical one, we found a rich soil and very good grass, which continued along the mountains for about a mile and a half to the end of this day's journey. The country we passed over, after passing the Swan River, till we came within a short distance of the mountains, was generally sandy, and thickly wooded with large trees. Bivouaced by the side of a small stream, at twenty minutes to 4 o'clock, running W.—Fifteen miles extent of the first day's journey.

Oct. 16*th.*—Recommenced our journey at 7 o'clock, a.m., and in half an hour came to a valley with a broad brook running through it to the W.N.W.; the soil on its banks being very rich and fertile, proceeded about two miles up it, when we crossed it over a fallen tree, and took a S.E. direction over a high hill on account of the banks becoming steep; at a quarter past 9 o'clock met two of the natives, with whom we were on friendly terms, near a small creek, running into the main stream from the W.S.W.; we shortly after crossed the brook, and lost sight of it for about three hours, our general course during that time being E.S.E. The soil for the first eight miles of this journey appeared good, particularly whenever the country opened and showed small valleys. The latter part of it, when we left the brook and proceeded along the summit of the hills, was generally rocky, and the surface covered with load-stones—Thirteen miles extent of the second day's journey.

Oct. 17*th.*—Proceeded at a quarter to 7 o'clock, a.m., and continued following the brook up in an E.S.E. direction, when we left it running S.E. and ascended a high hill, from which we had a view of the country for nine miles up the stream, and could perceive no change in it to induce us to continue our journey. Returned on our way home at half-past 11 o'clock over a hilly country, the surface of which was sandy and very thickly wooded with large trees; bivouaced at a quarter to 4 o'clock in a small valley, with a broad stream running through it to the N.W., and a good soil on the banks of it.—Seventeen miles extent of the third day's journey.

Oct. 18*th.*—Started at 7 o'clock, a.m. steering W.N.W., and in two hours and a half reached the

top of the mountains, being about two and a half miles to the southward of the part we ascended on our first day's journey; in descending them we found in some places good soil, but on leaving them to the time of our arriving at the islands on the Swan River (a distance of about eleven miles) the country was generally swampy and sandy.—Seventeen miles extent of the fourth day's journey.

(Signed) R. DALE.

Mr. DALE'S *Second Excursion to trace the Helena River, in December*, 1829.

At a quarter before 8 o'clock, a.m. left Perth, and forded the Swan River at the islands; at 9 proceeded in an E. direction over a sandy and thickly wooded country, and in five miles crossed a swamp lying E. and W., and soon afterwards a rather extensive one to the S.E., which we again crossed to the S.W.; two miles and a half further passed a small one lying S.E. and N.W.; we continued our walk about the same distance of two miles and a half when we came to the dry bed of a stream, and continued along its banks till we reached the mountains, where we bivouaced at 4 p.m. in a small valley with pretty good soil, and grass in it, but having a rocky surface. The country we walked over to-day was, till within four miles of the mountains, sandy, where we met with a light sandy loam.—First day's journey thirteen miles.

Dec. 8th.—At 6¼ a.m. proceeded in an E. direction, and commenced the ascent of the mountain up a narrow valley, in which we found a red soil, which continued to our arriving at the top, when the country became sandy and exceedingly rocky; soon afterwards ascended a steep hill into a deep valley, with a small brook running through it from E. by E. to N. by. W., and in about five miles from our bivouac came to a high hill, from the summit of which we had an extensive view of the plain in

the direction of Perth, and of the valley of the Helena River, the course of which was generally N.W.; one mile and a half further crossed the dry bed of a stream, its direction being N. and S., the soil here being pretty good, and the apparent course of the Helena from E.N.E.; one mile and three-quarters further passed a stream running N. and S., and directly afterwards crossed the Helena; it had little current, and its course was E. by S.; continued our march up the banks E. by S., and after passing a stream falling into it from the N., bivouaced in a small valley. Our walk to-day was over a hilly and rocky country, generally sandy, but occasionally meeting with good soil.—Fifteen miles extent of second day's journey.

Dec. 9th.—At 6½ a.m. resumed our journey and ascended a high hill, from whence we had a view of the valley for seven miles to the S.E., terminated by a steep hill; we now lost sight of the Helena, and after having walked about four miles we crossed the dry bed of a small brook, lying N.N.E. and S., when we altered our course to E., and commenced gradually ascending a hill, on the side of which, for the distance of nearly one mile and a quarter, we found a good soil, and grass mixed with wild vetch in great luxuriance. On the hill becoming more steep we again came to a sandy soil, and from the summit obtained a view of the hill we saw on my last expedition up the river, bearing S. by E., and distant about nine miles, it being conspicuous from its peak, and rising apparently 14 or 1500 feet above the level of the river. Having changed our course to S. by E. we proceeded in the direction of it, as it seemed to promise, from its height, an extensive view of the country round it. After a walk of about nine

miles, during which we frequently met with a good soil; we twice crossed what we supposed to be the Helena, but which here was only a chain of pools unconnected by any stream, the bed lying S. and S.E. through a valley of three quarters of a mile in length and half a mile in breadth, and having also passed several dry beds of streams, we ascended a hill shaped like the one for which we had been steering, and had a view to the E. for ten miles, bounded by high hills; bivouaced at a quarter past 4, p.m., near a small stream running E.S.E. Our walk to-day was frequently over a grassy country, with good soil; and although generally hilly and rocky, produced trees of great height and large dimensions.—Third day's journey sixteen miles.

Dec. 10*th.*—At 6¼ a.m. ascended a steep hill and came to a generally level and sandy country, appearing to decline to the S.E.; after proceeding about eleven miles came to a dry swamp, which we followed for a mile in an easterly direction, and changed our course to S.E. for half a mile further to endeavour to find water, but without our being able to procure any, when we again steered E. for the distance of four miles, to the top of a hill; from its summit the country appeared pretty level to the S.E., and a valley in that direction lying not far off, we directed our course to it to obtain water, which we found there in a swamp, being the first we met with after leaving a pool a mile from last night's bivouac; here we halted for the night. The most perceptible change to-day was from a hilly to a more level country, our course frequently lying over small plains, the soil on which was commonly of a sandy nature—Seventeen miles extent of fourth day's journey.

Dec. 11*th.*—At half-past 6 left our bivouac and

steered south a short distance, as we supposed we were in the vicinity of a lake, on account of hearing a noise resembling swans; after proceeding about a quarter of a mile in the direction, without arriving at the end of the swamp, we returned homewards, our course for two miles being W.N.W.; from this point we obtained a view of the high hill before mentioned, bearing W. by S., towards which we accordingly steered, in the interim crossing two swamps, the first one being dry, and the direction of it S. by E. and N.; and that of the second, which had the bed of a stream and several pools of water in it, lying W.S.W. and E.S.E. a short distance from the latter one; the country, which had generally been pretty flat, changed and became more hilly, and the walking more difficult. In about twelve miles from our bivouac we arrived at the bed of a stream without any apparent current, its direction lying about S.S.E.; shortly after we commenced the ascent of the hill for which we had been steering; we found it very steep, and rising apparently to the height of 1,400 feet from its base. On arriving at its summit we had a most extensive view of the country in every direction, especially to the eastward, where a range of mountains could be distinctly traced, the most distant of which appeared to be about twenty-five miles, and was barely discernible; we could also see the smoke of numerous fires made by the natives, generally extending close to their base. Towards the N.W. we thought we could discover the plain, but as evening was closing we were not able to distinguish it clearly; halted at a quarter to 8 near a stream running from E. by S., our course from the hill being W.N.W. The early part of our walk to day was mostly over a level country, but it after-

wards became hilly and the soil generally sandy.—Eighteen miles and a quarter extent of fifth day's journey.

Dec. 12*th.*—Proceeded at 6, a.m. W.N.W. and crossed a great number of small streams and swamps, generally running, with the exception of one, to the S.S.E., in the direction of the Helena River. The soil on the banks was good, although the breadth of it was inconsiderable; the hills were usually sandy and rocky, but the country was always well watered and thickly wooded.—Eighteen miles extent of the sixth day's journey.

Dec. 15*th.*—At 6, a.m. commenced the descent of the mountains, which were extremely rocky, down a valley, from which we steered N.W. across an open and level country, and for the first nine miles over a loamy country, when it changed to a sandy surface, and continued so till our arrival at the islands on the Swan River. After proceeding a mile from the last night's bivouac we entered a country generally low and level, which, from its appearance, seemed subject to being flooded; it extended for nine miles to within four miles of the Swan River.

(Signed) R. Dale.

OBSERVATIONS ON THE COAST, COUNTRY, &c. *from Cockburn Sound to Geographe Bay, between the 17th and 30th of November, 1829, by Mr. Collie and Lieut. Preston, R.N.*

November 17th.—We left the ship with two whale boats at thirty-five minutes past 5, a.m., and at fifty-nine minutes past 6, after passing through the southern entrance, between Garden Island and Cape Peron, brought the northern *tangent* of this Cape to bear due E. At five minutes past 7 we were close to what we have marked point A* in the accompanying eye sketch of the coast, from this the following rough bearings were taken:—Rock off Cape Peron N. 9° W. southern extreme of land in view; Point B, which appeared a bluff head of little elevation, S. 5° W.; south-westernmost rock (No.5) S. 65° W.; southern extreme of island (X.) off Point A, S. 85° W.; northern extreme of same island N. 50° W.; eastern tangent of island (Z) N. 20° W. A sandy and flat point runs for a considerable distance from the eastern part of the island X towards point A, leaving only depth of water sufficient for our boats to pass at low water between them. The distance from point A to this sandy flat point of the island is nearly half a mile; on proceeding, and having brought a rather high double-topped sandy hummock on with a patch of the highest trees inland, and bearing S. 73° E. from No. 4 Rock outside of us, there were no soundings with a line of seven fathoms; when abreast of No. 5

* The references are to a Map in the hands of the Government, but it was not considered necessary to enhance the price of the book by adding them to the publication.

Rock, there was only one fathom water. These rocks are all coral, with their faces generally undermined, rising from ten to fifteen feet above the water. A reef of coral, bare at low water, extends between them; and to the southward, for several miles, the water continued shallow, even for boats, from abreast No. 5 Rock to point B.; from this point, the southern extreme of coast in view, the head at the entrance of the Murray River bore S. 9° W., No. 5 Rock N. 28° W., western tangent of island (X) N. 5° W.; Point (A) N. 4° E. The shallow water continued for a considerable way past the Point, but beyond it there is water for large ships; and the extensive reef, where we saw the breakers, must shelter this port from the N.W. if not from the W. At half-past ten we were abreast of Murray River, but stood on to endeavour to ascertain the appearance of the coast between it and Cape Bouvard; and also to see if we could safely attempt rounding the Cape, before the breeze, which had been rapidly increasing and blowing on shore, should acquire such force as to endanger the boats. Observing no shelter on this side the Cape, and satisfied, from the appearance of the weather, that provided we could round it, we should not only be obliged to beach the boats through a considerable surf, and to remain for one or more days before the weather would settle to permit us to proceed, we bore up for Murray River, and giving, which is necessary, the rocks off the head with Two-bare Patches to the S.W. of the entrance a good berth, we stood across the bar, through small breakers in the deepest part, close to the starboard shore. The bar is like the beach, on both sides formed of sand, and most probably changeable. Afterwards, on the 20th, in going out, I found not less than three feet water, when the tide appeared to be very low; but

on the 30th, the fourth day after new moon, I found not more than $1\frac{3}{4}$ feet water at ten minutes past 5, a.m. the water being several inches lower than on the 20th. From two meridian altitudes we obtained 32° 33′ 15″ as the latitude of the entrance. The distance from it to the place where the estuary expands into an irregular square sheet of water, from five to seven miles each way, is about three miles, with a good channel, having on each side of it a low level plain, composed of a surface layer of three or four inches of blackish clay, resting on shells and other marine calcareous deposits. Casuarina trees are growing in some places, and a succulent plant, having some distant resemblance to samphire, occupies the most marshes; whilst on higher and sandy ground, the eycalipti are produced, along with a tolerably good herbaceous vegetation. In the expanded sheet of water there are many extensive flats, partly dry at low water, and not navigable for common boats even at high; they lie a long way from the south side, so far indeed as to preclude our examining the beach in that direction so closely as we wished, and on that account were obliged to leave it uncertain whether any river entered between the Murray at the N.E. angle, and another river I found at the S.W., although I saw no indication of any opening along the line of trees skirting that part. Several good channels traverse this part of the estuary, and one runs along the western bank to the South River. We passed the night on the western bank, amid trees and shrubs, and a thin production of grass, and other herbs, upon a sandy soil, mixed with a tolerable proportion of black mould. The wind blew strong in squalls, accompanied with rain.

November 18th.—Embarked at forty minutes

past 6, and proceeded to the Southern River, which we had only conjectured the preceding night to exist. An arm, from one mile and a half wide to two miles and a half, extends from the S.W. angle of the large sheet of water, nearly and with little turning in a S. by E. direction, for about eight miles and a half. It is of a good depth for boats except about seven miles up, where there is a small sandy island near its middle, producing shrubs and small trees of the casuarina and melaleuca, and from which flats, that our boats touched on, extend from both sides to the banks opposite. The rising ground on the bank is formed of sand and calcareous petrefactions of trees; the lower chiefly of siliceous sand, which, however, forms a smaller than usual proportion. The surface in these last places is inclined to swampy, and every where except on two elevated points. On the right bank, covered with wood, natives were seen in great numbers, and from twenty to thirty came down to the boats, and seemed very anxious that we should not go away from them. At the southern end of this arm, it became so very shallow that it was with great labour that the men got the boats over into a deep narrow channel that formed many abrupt turnings. As we ascended, first taking a direction so for one-eighth of a mile, then S.W. one-fifth of a mile, and after that about one-twelfth of a mile more, formed a short reach W.N.W.; we continued to ascend S.S.W., S.E., S. by E., S.E., E.N.E., E., S.S.E., and E.N.E., where we stopped for the night at half past 4, p.m. two miles and a half from the last flats, the men having been pulling almost the whole time, from our departure in the morning, against a good deal of sea and a strong wind from the S.S.W. We had scarcely entered the

narrow part of the river when the water became fresh. After disembarking for the night, we traced the river first N.E. about three hundred yards, then forming a sudden turning to the W.S.W., S., S.E. by S. and E., which it continued about three-eighths of a mile, two creeks leading to swamps are formed by it in the last mile. Its banks, although high, are sandy, often void of wood, nor covered with rich verdure ;—some lower levels looked well; and a considerable fertile plain lay beyond our stopping place. The wind blew fresh and squally from the S.W.; we filled our water casks, and on the 19th, at five minutes past 7, commenced descending the river ; we passed the upper and lower flats better than yesterday, and had a long and amicable interview with several natives, who waded out on the flats to admire us, the novelty of the boats, and every thing we had. We spent a good part of the day in ineffectually attempting to approach the south side of this large sheet of water ; and as the weather appeared to be settling, we bivouaced at the entrance, to be ready to proceed along the coast next morning. Several of the men were affected with pain of the eyes from the reflection along the shallows, and one suffered from diarrhœa. At five minutes past 7, a.m. of the 20th we passed the bar without seeing breakers, where the deepest water was about three feet; the wind was E.S.E. and moderate. After rounding the reef off Two-bare Patches Head, we stood along a sandy and nearly straight coast, S.W. for four miles and a half, and then, still keeping the direction of the beach S.W. by S. $\frac{1}{2}$ S., for two miles farther, having seven fathoms water, one-third of a mile from the shore. There was little surf on the beach with the land, but more with the sea breeze, that came in at 10,

and blew fresh the sand S. W. Beyond the beach, mounds, barren of trees, but covered with verdure, concealed the plain behind them, and it was only through breaks that we could occasionally see the trees inland. The meridian altitudes gave the latitude of Cape Bouvard 32° 38′ considerably to the south of what is laid down in the chart. The only marked distinction between the cape and the other parts of the coast, is its projecting the farthest into the sea, for the mounds which form it are not very perceptibly higher than on either side, nor does it form a pointed but rounded headland. At 3, p.m. the boats making but little way against a heavy sea and strong breeze, we ran them through the surf on the beach, in doing which one of the grapnels that was let go to haul out by on launching parted, and could not be recovered on account of the violence of the surf. No fresh water was to be procured at a considerable depth in the valleys some way from the beach, but we soon discovered, from one of the highest sand mounds, an extensive lake about one mile and a half wide, lying parallel to the beach, and about a mile from it. These sand mounds rise very irregularly and abruptly, having considerable herbaceous verdure in their hollows, and being covered higher up with the usual shrubs. A small plain, bearing grass trees, eycalipti, and tea trees, intervenes between them and the lake, but it was in a great measure submerged.

November 21*st*.—The wind continuing to blow fresh along the shore from the south prevented our going to sea; we therefore sent a party to the lake to procure water, which, although we found it brackish, we were obliged to use; others went to bake cakes from the flour we had taken with us instead of bread, and some were still labouring

under defective vision. We went to the northern end of the lake to determine its boundary, and found it shut in by swamp and ultimately dry land. Its extent to the southward was concealed at about eight miles distance by the sand mounds, round which it seemed to incline a little westerly towards the sea beach. Mount William bore from us S. 56° E.

November 22*d.*—Immediately the land breeze came in force to be of service, we launched our boats, without waiting for break of day; it was forty minutes past 4; and with a scanty land wind but smooth water we pulled along shore till noon, when the sea breeze having again set in strong, we beached the boats on a continuation of the same beach, about three-quarters of a mile to the south of two remarkable bald-looking sand mounds, and opposite to hammocks which stand insulated on both sides by a lower and uniform shore. From the heights above this landing place Mount Williams bore N. 79° E., and the head beyond Port Leschenault S. 16° W. There are three gradually sloping heights of unequal size, and at irregular distances, within the head; within the sand hills, which were here more fertile than we had observed before, we observed what we thought a continuation of the lake seen at our former landing place. It approached to about three-quarters of a mile of the sea-beach, and was found to be as salt as sea-water. The heights which we had time to ascend afforded us no view either of a southern or northern termination; but we could not see above a few miles. No fresh water was found in digging.

November 23*d.*—Embarked at forty minutes past 4, having previously breakfasted, as soon as the surf and daylight would permit us. We kept close in

shore, expecting to see some entrance to the lagoon we had left, but could discover no traces of one. Arrived at Port Leschenault at half-past 8. After giving the boat's crews some refreshment, we proceeded in one boat to examine the port, and left the other with Mr. Cudlip, to pitch the tents, dig for water, prepare dinner, &c. About two miles and a half up we discovered a river flowing over a shallow to the estuary, and immediately made for it. Every one was obliged to get out and track the boat over a short distance, when the water became deep and very little salt. Good land appeared on both banks; and we were soon among the natives, who testified the greatest and most friendly eagerness to be allowed to approach us. There are two mouths to the river, with a low sandy island between them and the one we entered; the westernmost was afterwards found the least shallow. A second island is formed in the river, not a mile up, and the water rather shallow, affording a good crossing place for the natives. About half a mile above this, the water being perfectly fresh, we filled our barricoes, and soon had our native friends around us. On returning, between thirty and forty had assembled on the banks, and ran to the shallows at the mouth, where they closely surrounded us, carrying green boughs, and without any weapons of offence or defence. The soil which we saw, and productions on both sides of the river as far as we saw—and there was a long and wide reach beyond where we stopped—seemed good and luxuriant, except on one or two heights, where the sand predominated so much as only to support a few shrubs, banksias, and a few eycalipti. The head, which runs out to the westward of the entrance, is bare of trees but covered with shrubs and a little grass, and

composed of sand mounds, except on one side, where, on a level with the sea, a black and hard rock is washed by the sea. This rock appeared to be continued more or less exposed for a considerable distance towards Geographe Bay. At night, one of our men who had lately joined the ship, and who had been noticed to have been inebriated, and reproved for being so, in the evening was missing, nor did a diligent search discover where he had gone, neither did he appear on the morning of the 24th, when we were to set out for Port Vasse. Every one was satisfied, from the character of the man, that he had voluntarily gone away with the intention of deserting, yet blame might have been attached, however undeservedly, had we not made every search that daylight could afford. It was therefore determined to remain, although a fair wind and fine day was a material loss, as we had to go upon a wholly unknown coast. Mr. Collie and Mr. Preston went up the river to get an additional supply of water, and to examine still farther beyond the river, to ascertain whether there existed others on that side, and how far the lagoon, if it might be so called, extended. Lieutenant Preston remained to make every search near the tents; as the boats returned down the river the man was found on the banks, and taken on board. He said he had intended to go back to the ship, but meeting suddenly a native woman, who had no more covering than the men, she set up a shriek and two men came out; he ran off and swam a river, and they threw their spears at him without striking. Before the boat returned it was too late to depart that day. The natives had not observed the boat till she had descended the river, but soon after this they came running with all speed; in order to go

out on the shallows she was obliged to go near. Nor were they satisfied with this partial view of our party, but almost immediately after the boat had returned seventeen of them had made a circuit, and came down to the tents, still carrying their green boughs. After a very amicable interview, during which we did not admit them close to the tents, they returned seemingly very much gratified with what they had seen, and with a few trifles which they had gotten. In the afternoon we took our boats to examine the western shore of the harbour, between the entrance and the river already discovered, as the mouth of another river was supposed to have been seen yesterday in passing; nor had we been mistaken, for we found a channel of not less than six feet deep, leading to a river of as great a depth, about a mile nearer the entrance than the former one. In ascending, the direction is very serpentine; the breadth at its mouth from ninety yards to one hundred feet at our farthest ascent, about one mile and a half from its mouth. The banks are from three to six feet deep. The surface was thickly covered with grass and other herbs, with stringy bark, and other trees, liguminous shrubs, ferns, and sow thistles, and exposed a soil of blackish brown earth, being a good mixture of loam and mould, about two feet deep. We walked thirty or forty yards from the bank, and as far as we could see the same soil and productions continued. A short way farther up, however, on a subsequent day, we found the channel much obstructed with trees, and near its banks low knolls and intervening vales, almost wholly sand, yet supporting a little herbaceous, but mostly shrubby vegetation, and the tallest and finest eycalipti (red and blue gum) trees, and banksia, we have any where discovered. Mr.

Cudlip had examined the entrance the previous night near high water, and discovered six feet over the bar. We examined it again, and found eight in one place. The deepest water is close to the starboard shore coming in. Some of the men discovered, a short way round the head, close to the beach, fresh water flowing from the sand hills.

November 25th.—Left Port Leschenault at forty-five minutes past 4 a.m., and having rounded the breakers which extend off the head, about half a mile N.E. by N., and stood along a sandy beach with frequent rocks at the water's edge, we entered Port Vasse at fifty minutes past 9, through a narrow entrance, with only one foot and three quarters of water at low water, but tide flowing, and so indistinct, that had it not been for the pelicans and gulls which were sitting on the beach close by it, we should have had difficulty in perceiving it at a few yards' distance. Both here, at Port Leschenault, and the Estuary of the Murray River, we always found these birds assembled at the entrance, whether of the harbour itself or of the rivers into it, and they were of considerable utility in directing us. A short way inside the beach we found the channel again very shallow; also narrow, and the main branch taking a northerly direction, parrellel to the beach, and only separated from it by a few sandy knolls; another branch continued past the opening for one or two hundred yards to the southward, and terminated without any communication. The land adjoining, and to the distance of some hundred yards, is an uneven plain, composed of raised and low places, the former being a tolerable mixture of sand and mould, producing some herbs, shrubs, chiefly liguminous, and trees, for the most part septospermi; the latter is covered with

rushes, and swampy. A few hundred yards farther on, along the beach, to the south, there is another similar opening, which, after a narrow channel of good depth, that is bounded on the left by a cliff of calcareous sandstone, and split by an island, becomes so shallow, that our boat could with difficulty be dragged over; it then expands into a considerable sheet of water, the circuit of which we did not complete; but it appeared to be generally very shallow, and on its banks, salt marshes, or a low black clayey, and, at present, dry soil, extended some distance, especially between it and the beach. Inland of this recent formation, a similar, but little more elevated surface, still showing that it had been lately flooded, producing grass and other herbs, without any trees or shrubs, for many acres. Port Leschenault having offered the best prospects of land in its vicinity, and the greatest extent of harbour, which we had every reason to suppose extended many miles in the form of a lagoon, to the northward, behind the sand hills; and Geographe Bay having been formerly surveyed, we had every inducement to return as soon as possible to Port Leschenault; we therefore left Port Vasse at 1 p.m. expecting to have a favourable sea breeze to carry us back before dark; in this we were disappointed, and had to pull the whole way. We got into Port Leschenault at forty minutes past 8 p.m., having passed between the point and the outermost breakers seen in the morning, but which were much less in the evening. We had seen smoke in many places a short way beyond, and even close to the beach, between Port Vasse and Port Leschenault, as well as beyond the former in Geographe Bay; and we saw and heard the natives shouting on the beach.

November 26th.—We set out with both boats at half past 7 a.m.; ascended the nearest and last discovered river still farther, as has been already mentioned. The morning threatening rain, we put up a tent, and whilst we walked inland, the men were occupied washing. In the afternoon we proceeded up the harbour and examined the second entrance of the second river, and the eastern shore beyond it, where we found our former friends, the natives, still apparently more eager, if possible, of getting to us; we first, however, landed on the opposite shore, and left Mr. Cudlip, with one of the boats, to prepare supper; we returned in the other, and approached the shore as near as the shallows would permit—within 200 yards: we had a long and friendly communication with the natives, about thirty-five of whom, men and boys, came out to us. We had killed and caught several young swans, and they seemed highly delighted to get one; they appeared unwilling to part with their spears and knives, and to use considerable duplicity in bartering. Examined the northern part of the harbour, and found what we imagined to extend for many miles, to be shut in at a short distance by low land, at first swampy, and then covered with trees, which were continued as far as the eye could see from the highest sand hills. Soon after the boats landed for us to ascend the sand mounds, seventeen of the natives, whom we had seen yesterday, after rounding the southern boundary of the harbour, surprised us by their sudden approach; they remained, testifying satisfaction at the men, till we put off again; the general appearance of all whom we saw, is the same as that of those in the vicinity of Perth, but use different words significant of approbation; the language is perhaps considerably different; all their

intentions seemed friendly, and their character unsuspecting and fearless. Having ascertained that no other rivers entered the harbour, which, from its northern termination to the river of twenty-third, is bounded on the east, that is, towards the plain, by moderately elevated ground covered with trees; we returned, to remain at the entrance for the night.

November 28th.—Left Port Leschenault at five minutes past 5, with a moderate breeze at S. by W. which soon freshened so as to make us reef our sails, and changed to S.S.W., and soon after to S.W. The harbour of Port Leschenault, not communicating with the salt water lake (most likely lagoon) seen on the 22d, made us think we must have passed, unobserved, its communication with the sea; and we had determined to examine still more narrowly, that part of the coast where we expected the communication to exist; but the force and direction of the wind, now rendered any further delay in getting to Murray River dangerous. We therefore steered for Cape Bouvard, and thence for the river, where we arrived after a boisterous passage, during which it required the utmost attention to prevent the sea, which ran very high, coming into the boats; the wind had freshened considerably, but Two-Bare-Patches Head, and the reef off it, sheltered the entrance, and we got in at five minutes past 3 p.m. without passing through any breakers.

November 29th.—Proceeded in one boat up the estuary, to examine five different but adjoining mouths of the Murray, where it flows at the S.E. part into the large sheet of water before mentioned, over a sandy beach and bar, with only sufficient depth of water for our boat. The channel, about a mile up, is capacious, and the water fresh; and

the land on its banks, to the distance of several yards, is partly sand, with a small proportion of mould or black argillaceous loam, and bearing the marks of being occasionally flooded. We again, but equally in vain as before, attempted to reach the southern side of the large sheet of water; we could find no channel between the flats in that direction. We had the distant view of several fires among the trees, a circumstance which assists in explaining the so frequent burnt appearance of the trees and shrubs in Western Australia; we have no doubt that they owed their production to the natives. On the previous night our fire rapidly caught the adjoining underwood and low vegetation, and we remarked a considerable space that had similarly suffered between our present and former touching here. The rocks off and at Two-Bare-Patches Head, are calcareous, and extend along the sandy beach a short way to the S.W. We had great difficulty in ascertaining the periods of the tides at the different places; near the time of new moon we had the lowest water, at about 5 a.m., and the highest at about 9 or 10 at night, whilst there was an influx in the middle of the day, but scarce any fall till about 9 or 10 at night. In the estuary of Murray River, and in the harbour of Port Leschenault, were great numbers of swans and water birds, and up the river, multitudes of ducks. Fish were observed in abundance, particularly in Port Vasse.

November 30*th*.—Returned to the ship, having touched at the reefs and islands in the northern part of the bay, formed between Cape Bouvard and Point (B),* and gone outside of the rocks and reefs off Cape Peron, as, with the smooth water of the 17th, we had only enough of water inside, and

* See Note, page 35.

there was now a considerable sea on; we kept nearer Cape Peron than Garden Island in coming in, and passed between several reefs which were all washed with the sea that was breaking over them; our truck gave us generally two and a half, and never less than two fathoms; this was a little before noon. Many of the men suffered at different times from slight attacks of Opthalmia, attended with considerable pain, but none were long incapacitated for work.

1830?

JOURNAL OF AN EXPEDITION *under the direction of Ensign Dale, to the Eastward of the Darling Mountains; in August,* 1831.

HAVING provided a sufficient supply of provisions for three weeks, and prepared whatever was necessary for my expedition, I left Perth in the morning of the 31st of July, and in the morning reached Messrs. Thompson and Trimmer's, on the Swan River, a distance of about seven miles. On the following morning, I proceeded to Mr. Brockman's, four miles higher up, who proposed accompanying me on my intended expedition. I was obliged to await there the arrival of the boat I had despatched from Perth with my provisions, and then succeeded in swimming our horses over the river, after experiencing some danger in the attempt, owing to the Swan, from late heavy rains, having overflowed its banks to a considerable height.

On the 2nd of August, having arranged our different packages, and reduced them as much as possible, I proceeded with my party, consisting of Mr. Brockman, one soldier, and a store-keeper, the two latter each leading a pack-horse to carry our baggage across the plain, which extends from the left bank of the Swan to the base of the Darling range, until we reached, in a course varying from north to east, the foot of those hills, the ascent of which we commenced up a narrow defile, through which a stream was running to the westward. Following this for one mile, we left it on its leading us too far to the southward, and proceeded due east till we

encamped in the evening on the banks of a mountain torrent flowing to the north, after an estimated day's journey of eleven miles.

August 3rd.—After quitting our bivouac, we ascended, and continued along the summit of a ridge, from which no higher land was visible for two and a half miles, when we arrived at its eastern side, from which we had a view of the country round for eight miles; we soon afterwards passed a broad stream flowing W.N.W. Continuing our course due E., we obtained a view of the valley of the Swan, and could discover beneath us through the trees, that river falling over a bed of rocks. On descending, I recognised it to be a waterfall which I passed when accompanying Capt. Irwin in an expedition into the interior, in April last. Quitting this, and proceeding to the southward of E., we in three miles again came to that river, and continued along the banks till we arrived at the termination of Capt. Irwin's journey, where we had left a depôt of provisions. We had the satisfaction of finding them uninjured. As we had had a journey of twelve miles this morning, I determined to rest here the remainder of the day to refresh the horses. The greater proportion of country seen to-day was sandy in the valleys, and on some of the hills we passed over a rich loamy soil, producing grass of a tolerable description, and also the wild vetch; the trees consisting principally of mahogany of a very vigorous growth, the blue and red gum, and a few banksias.

August 4th.—Thermometer this morning at sunrise 33°. An hour's walk from the depôt brought us to a second branch of the Swan, which we traced up for two miles, and crossed it at a spot where it was flowing to the southward. The country was

an open forest scene, the trees consisting almost entirely of blue gum. This peculiarity I have observed in another part of the mountains about the same distance in the interior. Continuing our course due east, we were afterwards obliged to make a short detour to the southward, and as the country was swampy, we had some difficulty in again crossing the last-mentioned stream, the banks of which were composed of a rich alluvial deposit. Leaving this second branch of the Swan behind us, at about two miles farther eastward, we halted for a short time during the middle of the day, on the banks of a small stream which Mr. Brockman and myself traced to its source, and were led to think it might have its origin in a lake. On our ascending it for a mile in a S.E. direction, it appeared to terminate and be formed by the draining of swampy land; we here observed numerous traces of emus. On returning to our party, we again proceeded eastward, and taking a more elevated course, passed over two and a half miles of a barren description of country, the trees being of a more stunted growth, and the soil sandy, having its surface covered with fragments of iron stone. Descending this ridge into a valley, we had the satisfaction of discovering the first stream running to the eastward, the timber on its banks consisting of blue gum, casuarina, and black wattle, and a tree similar in its growth to the apple, which bore a fruit resembling in form, although exceeding in size, an unripe hawthorn berry; its wood has a remarkably sweet scent, and the bark a delicate pink colour; a specimen, which we brought home with us, has been pronounced by some professed judges to be sandal wood.

August 5th.—Last night's rain having rendered the country insecure travelling for the horses, we

had a great difficulty in proceeding a mile E. from our bivouac, when our course was interrupted by the last mentioned stream flowing northerly; on penetrating a short distance down its course, with the expectation of crossing it, we were obliged to return to nearly where we had forded it last night, where, owing to the wet and hollow nature of the ground, we had to unload the horses before they could approach the margin: having carried the baggage across, we attempted to remove it to a hill opposite the ford, but our progress was again arrested by a broader stream flowing to the north, the channel of which was too deep to ford. Recrossing to our horses, we went a quarter of a mile below the junction of the two streams, and employed the remainder of the day in swimming our horses across, and getting the baggage over. To accomplish this, we adopted rather a hazardous plan, for, having selected a tree that was growing in the middle of the stream, we attached a long rope to it, by one of its branches, and Mr. Brockman and myself having previously crossed to the opposite side, drew the different packages over as they were secured at the opposite extremity of the rope. The valley through which this stream flows is of some breadth; the soil being occasionally of a loamy description, and affording pasture for sheep.

August 6th.—Leaving this latter stream flowing northerly, we advanced in a due E. course for eight miles, over a succession of barren, uninteresting ridges, separated from each other at various distances by small grassy valleys, and clothed principally with low stunted shrubs, and a gum tree, the bark of which was white. We then descended into a rich and picturesque valley, of inconsiderable breadth; the luxuriant verdure of the grass, and its

banks sloping down to a small rivulet, gave it exactly the appearance of a lawn. Three-quarters of a mile further brought us to a brook running easterly; the soil and grass continuing good here; on the bank of this we bivouaced.

August 7th.—Thermometer this morning at sunrise, 44°. Shortly after quitting our bivouac, still pursuing an easterly course, we ascended a hill, and at its base again fell in with the brook on the banks of which we rested last night, and which here intersected our course owing to its turning abruptly to the northward. It being too rapid, and also too deep to attempt to ford it, we constructed a bridge by cutting several long poles, and placing them across a tree that was growing in the stream. Over this we carried the baggage to the opposite shore: having with some danger crossed our horses, we picquetted them, and pitched our tent on a small rich alluvial flat that skirts the margin of the brook. Mr. Brockman and myself proceeded in the mean time to examine an elevated hill bearing E.S.E. about a mile distant. On arriving at the summit, we were gratified by obtaining an extensive prospect over a comparatively level country to the eastward, through which we observed, at the apparent distance of two miles, a considerable stream. On the summit of this hill were two remarkable peaks, the valleys between them forming at their union an irregular basin; the highest of these we estimated to be about 1,000. I named this hill Mount Mackie, in compliment to the Chairman of the Court of Quarter Session.

August 8th.—Thermometer this morning at sunrise, 31½°, with every indication of a severe hoar frost. In order to avoid passing over the hill we ascended yesterday, which we found too much sa-

turated with rain for the horses to attempt to travel, we continued our course down the right bank of the brook, in a north and north easterly direction for two and a half miles, when we had the gratification of arriving at the considerable stream we noticed yesterday, running towards the N.W. It had evidently overflowed its banks, the apparent channel or bed of the river being about sixty yards: the water was discoloured and muddy, with a rapid current, and enclosed between banks moderately clothed with trees and shrubs.

August 9th.—Thermometer this morning at sunrise, 41°. We advanced this morning two miles up the river, but with considerable difficulty, owing to the soft and yielding nature of the soil in the neighbourhood of the river, caused apparently by excessive rain, and not by inundation. Being obliged to halt here the remainder of the day to refresh our horses, in the afternoon Mr. Brockman and myself proceeded two miles further up the stream, when we arrived at its junction with a brook from the S.S.W., which latter we traced upwards for half a mile, and then returned to our halting place.

August 10th.—Finding it impossible to make any further progress with our horses, which were completely exhausted from their unusual exertions, and having secured them, we left our tent pitched, considering them as a sufficient protection against the natives, none of whom we had as yet met with, and proceeded with two days' provisions to explore the left bank of the river towards its source, not deeming it prudent to be longer from our encampment than that time. Recommencing our journey, the middle course of which was S.S.E., we in six miles arrived at a remarkable range of hills, (which I propose naming the Dyott range, in compliment

to General Dyott, the Colonel of the 63rd regiment,) rising abruptly and almost perpendicularly from their southern base, and presenting a wall-like barrier to the river. They had a rich and verdant appearance, and were clothed in grass to their summit, and moderately wooded with gum trees. At this spot we heard the natives, whose traces we had been following this morning, hailing each other at a great distance: we were fortunate enough this night in finding shelter from the rain, which was pouring down in torrents, under a shelving rock; it was of considerable size, having the shape and appearance of a thatched roof of a cottage. In the neighbourhood of our bivouac, and for some distance around, were large masses of granite; in one of these we discovered a cavern, the interior being arched, and resembling somewhat in appearance an ancient ruin. On one side was rudely carved what was evidently intended to represent an image of the sun, it being a circular figure about eighteen inches in diameter, emitting rays from its left side, and having without the circle, lines meeting each other nearly at right angles: close to this representation of the sun, were the impression of an arm and several hands. This spot appeared to us to be used by the natives as a place of worship. Our walk to-day for upwards of eighteen miles up the left bank of the river, led us over a country well clothed with grass, apparently of the same description as that on the banks of the Swan. It had little underwood, and was lightly timbered with a species of gum tree, leaving a rough stringy bark of a light brown colour, which appeared to us to be a different kind from any we had observed on the Swan. The flats bordering the river being mostly flooded, we were unable to judge of their general character.

The soil in the uplands and hills being chiefly composed of a light sandy loam, with a stratum of clay about a foot underneath the surface, rendered the travelling from the late excessive rains rather fatiguing, as we were obliged to tread on tufts of grass to avoid sinking in many places into this wet and hollow ground. On the banks of the river were numerous holes, the burrows of some animal which we were unable to see. We also found a litter of native dogs; the mother having left them at our approach, we succeeded in bringing two of them alive to Perth.

August 11*th.*—Having only brought two days' provisions with us, we regretted now being obliged to retrace our steps to where we had left our horses, and proceeded N. by W. We in seven miles arrived at the base of that part of the Dyott hills which rises so abruptly from the river. In twenty minutes we reached the summit, after a fatiguing ascent, and were amply rewarded by it in commanding from it a greater expanse of country than could be observed from Mount Mackie. To the eastward it presented a view of lightly timbered forest land, rising in alternate undulations, and expanding itself from nearly north to S.S.E., till it finally disappeared in the distance from twenty-five to thirty miles off, seemingly partaking, as far as we could discover, of the same character as the adjacent country.

This being the most conspicuous hill of the range, I propose to name Mount Bakewell, in compliment to a friend. I had also an imperfect view of an elevated peaked hill, which I had ascended while on an expedition into the interior in December last, being nearly S.W. Quitting these hills, we at the termination of seven miles reached our old encamp-

ment, which we found had not been visited by the natives during our absence.

August 12*th*.—Mr. Brockman and myself proceeded at an early hour again to explore the Dyott hills, while the men were employed in conveying the horses and baggage three miles lower down the river, to the spot at which we discovered it. After walking about seven miles, we arrived at the northern side of the range, but were much disappointed in not being able to obtain a view of the plain, as, directly we reached the summit, it was obscured completely by the dense state of the atmosphere, and by the heavy rains which then set in. Having collected a few specimens of rocks, and taken a few bearings of the country around us, we returned to our bivouac. On rejoining our men, we found they had encountered so much difficulty in urging on the horses whilst loaded, owing to the excessive wetness of the ground, that they had been obliged to unload them, and carry the baggage themselves.

August 13*th*.—Thermometer at sun-rise 39°. at eight o'clock a.m. Commenced our route homeward over the same country we had passed over a few days previously, but with far greater celerity; as we accomplished to-day nearly the same distance that it then took us four days to perform, owing to our better knowledge of the country, and its being more passable to the horses, which had now only a light load to carry. After proceeding ten miles from the river, we had an interview with three natives on the banks of a stream which we had passed on the 5th instant, and to which we descended for three-quarters of a mile down a grassy hill, when we saw numerous traces of emus, which I think they had been just hunting. We found

them very friendly, probably from the little intercourse they had evidently had with Europeans. After assisting us to load our horses, they accompanied us some distance, being at great pains to direct us on our journey. In the evening we bivouaced near the stream we had so much difficulty in crossing on the 5th instant, having effected to-day fifteen miles.

August 14*th*.—Before commencing our journey this morning, we were visited by three natives, whom we recognised as having seen at Perth. This intercourse with the settlers seemed to have the effect of rendering them more familiar and even daring in their manners, for, on leaving our bivouac, and ascending a hill, they attempted to prevent our pursuing our course, on account, as we conjectured, of their women being near, but on our making a detour to the left, they joined us with apparent satisfaction. We this day accomplished fourteen miles in a westerly direction.

August 15*th*.—Thermometer at sunrise 46°. We left our bivouac at an early hour this morning, wishing if possible to reach the western base of Darling's Range before evening. We traversed a thickly wooded forest country, with a sandy surface, to the foot of that range, and were enabled before night-fall to reach the termination of our journey at Mr. Brockman's house, from which place we had been absent exactly a fortnight; but not before one of our horses became so exhausted, that he sank to the ground, in which situation we were obliged to leave him till the following morning.

GENERAL REMARKS.

In the course of this expedition we collected several specimens of the mineralogy of the country

we traversed. Among these there are some varieties of granite, rock-crystal, and limestone. Some of them appear to be metalliferous, but as they have been placed in the hands of a competent gentleman for the purpose of being analyzed, whose report is shortly expected, it is unnecessary at present to hazard an opinion as to their specific qualities. We estimated the distance from Mr. Brockman's house to the river which washes the base of the Dyott Hills, and which formed the extreme point or termination of our journey, to be forty miles in due easterly course, and to which there is no obstacle of sufficient importance to prevent a good communication from being opened. The general characteristic of the soil of the country to the eastward of Mount Mackie, which we considered to be the eastern extremity of Darling's Range, was a light, sandy loam, the sub-soil of which was clay, which occasionally appeared on the surface. In some places there was a rich red loam, and the banks of the last-mentioned river were principally alluvial. (Signed) R. DALE.

JOURNAL OF ANOTHER EXPEDITION *to the Eastward of the Darling Range, under the direction of Ensign Dale; commenced on the 25th of October, and concluded on the 7th of November,* 1830.

HAVING accompanied the Lieutenant-Governor on an expedition into the interior as far as Mount Bakewell, (situated on the eastern side of Darling's Range, and described in my report of a former excursion) I took a temporary leave of his Excellency, who was thence bound homewards, after receiving a supply of provisions for ten days, to enable us to prosecute our journey further inland, with the intention of penetrating as far to the eastward as circumstances would admit of, and from thence, after proceeding to the southward for one day, to prevent our crossing on our return in the same tract, and also to intersect any river that might exist in that quarter, to return to Darling's Range in a westerly course.

Passing in the afternoon of the 28th of October with my party, consisting of six volunteers, with five horses to carry our baggage, along the northern base of the Dyott Hills for a mile and a half, where we found an excellent loamy soil, well clothed with grass, we arrived at the Avon river, which washes their base; which we crossed, and proceeded in our course S. $\frac{1}{2}$ E. over an undulating country, which had a most gratifying appearance, the soil being a rich red loam of good quality, and lightly timbered with gum, wattle, and a tree pronounced by some competent judges to resemble sandal wood; and

which was apparently a richer district than that on the western side of the Avon. This prevailed for nearly three miles back from the banks, when on ascending a ridge, we arrived at a remarkable change in the aspect of the country ; viz. large open downs or wolds, commencing about a mile and a half, and extending several miles to the north and south. They were of a sandy nature, and covered principally with short brushwood. Travelling over this it again became wooded, and continued so till we bivouaced on the banks of a stream running to the N.N.W., having effected eleven miles to the eastward of Mount Bakewell. The scenery on the eastern side, on the banks of the Avon, resembles the term so frequently used of a demesne or park. The country also seemed to exceed it in the fertility of the soil, which had, for three miles from the river, a most promising appearance ; and although it often afterwards became sandy, it was frequently diversified by portions of good soil.

October 29*th*.—Leaving the stream on which we bivouaced, we pursued our course for two miles over grassy, undulating plains, the soil on which was a light sandy loam. On our right was an apparently fertile valley, beyond which were low hills, the trees on which were dispersed like a plantation. Travelling four miles further, over an unusually sandy district, we penetrated a forest more thickly wooded than ordinary, with a tree answering in some respects the stringy bark of New South Wales ; when we arrived at a stream flowing northerly. Quitting this, we immediately afterwards came to open downs extending for many miles to the N. and S., and of a breadth, where we crossed, of two miles. Before reaching this, we had a beautiful chase on an open plain with a kangaroo, which

fairly beat one of our greyhounds. At the termination of three miles from the latter water-course, we halted for the night, having accomplished fifteen miles to the eastward. The commencement of our journey was over grassy, undulating plains, tolerably well adapted for pasture. The extensive sandy downs were compared by the two Yorkshire gentlemen (who accompanied us) to the wolds in that county. The latter part of our walk lay through a thick forest, of an apparently different species of eycaliptus from any we had yet observed, the young trees growing perfectly straight, and would form, if not too heavy, fine spars for ships. The stem of the tree was fluted, and from its peculiar appearance, some of our party named it the cable gum. We procured a supply of muddy water to-night, by digging wells.

October 30*th*.—We followed the water course on which we encamped last night, in an E. $\frac{1}{2}$ S. direction for one mile, until we arrived at its source, when we again found the same style of country as yesterday, viz. sandy undulating commons, stretching for a considerable distance to the north and south; upon crossing them the country evidently changed, the surface being occasionally broken, and a greater expanse of woodland scenery being visible; from the valleys it seemed to dip or incline to the northward, in which direction, at the distance of twenty miles, was a range of elevated land, at the base of which was a broad valley. A little beyond this we followed the bed of a stream lying S.E. for one mile, and as the herbage was good, we rested our party here during the middle of the day, to refresh the horses. On the bank of this stream were two native huts, of a different, but more substantial construction, than those on the

Swan. At the conclusion of fifteen miles, we entered a dense forest of gum trees and brushwood, which we penetrated with difficulty; after walking nearly five miles through it, we came to a tea tree and samphire swamp, the water of which was brackish; at the eastern extremity of it, we reached the base of two remarkable isolated hills, for which we had been steering; we found each of them to be composed of one mass of granite; they appeared to be detached from some high land stretching away to the southward; we gave the northern one the name of Mount Caroline, and the southern was called Mount Stirling, after my fellow traveller, Mr. W. Stirling. We encamped to night on a flat between a salt water marsh and the latter mount, and obtained a scanty supply of muddy water by digging wells; we estimated this day's journey at nearly twenty miles.

October 31*st*.—We all started this morning at sunrise, to take a bird's-eye view of the country from the rock; after climbing on our hands and knees, we reached an elevated part, from which nothing of consequence was seen. After breakfast, Mr. W. Stirling and myself proceeded to examine a sheet of water we had observed in the morning; we found it to be a salt marsh, on which were several ducks. Three miles N.E. of our bivouac, we ascended Mount Caroline, from which we made the following observations. In the distance, about thirty miles S.E. we observed a low range of hills lying nearly N. and S., on the western side of which was a broad valley, over which a bluish vapour was hanging. In the same direction as the valley, were several round hills, one of which had a tabular summit. We traced the course of the salt water marsh a few miles to the eastward, when it trended

round to the N. and we lost sight of it. On our return we examined our provisions, and were greatly disappointed on doing so, to find that our friends Messrs. Clarkson, Hardy, and Camfield had barely a supply left for two days, which entirely put an end to the hopes we had formed of penetrating a day's journey further into the interior; and as we estimated our distance from the sea coast to be 100 miles, we calculated that we should not be able to return in less than seven days to Perth, as we wished to take a southerly course for one day, in which direction his Excellency was desirous that the country should be explored. Having divided our provisions, we started at noon and steered a course varying from S. to S.E. for nearly three miles, over grassy elevations, the soil of which was a light sandy loam; at the termination of this distance, we found, on the summit of a hill, a red loamy soil, which seemed to extend to the southward and eastward; from this, we altered our course W.S.W. in the direction of a sheet of water we had remarked from Mount Stirling. Proceeding two miles through a thick wood, we ascended a rock, in the hope of gaining a sight of it, but not being able to discern it, we shortly afterwards encamped in a valley, in which we found an abundant supply of excellent water. We walked this afternoon six miles, and passed a native wigwam, which was much larger than those we had seen on the 30th instant.

November 1st.—Wishing to examine the valley for the purpose of ascertaining if any considerable body of water existed in the neighbourhood, we proceeded S.S.E. up it, when we ascended a hill, from which a high peaked hill, (of which several bearings had previously been taken) being observed, bearing S. 34° W., about thirteen miles distant,

we altered our course to it, as we considered it a good point to make on our return, as I thought it to be a distant hill I had seen from Mount Bakewell. Three miles from this valley, where there is tolerable soil, we arrived at extensive downs, of a breadth, at the part we crossed, of six miles; we here saw numerous herds of kangaroos, one of which we killed. In the middle of one of these downs, we found two pools of fresh water, around which were several traces of natives; we also observed in them some small fish, and a musk duck, which latter circumstance seemed to indicate the existence of water all the year round. On leaving these we penetrated the angle of a deep wood of gum and tea trees, and pursued our course up a long aclivity. At the distance of fourteen miles from our bivouac, I came to a superior description of country; it had a fertile appearance, the soil being a red loam, well clothed with grass, the trees consisting of the gum, wattle and sandal wood. Crossing a mile of this description of country, we ascended the peaked hill towards which our course had been directed, and which was not of any considerable altitude; from the summit we observed a sheet of water bearing N. 74° W., around which were seven native fires; eighteen miles N.N.E. we imagined that we perceived Mount Caroline. We calculated there might be from one to two thousand acres of very fair arable and pasture land in the vicinity of this hill; the extent of our journey to-day was fifteen miles, the general course of which was S.S.W.

November 2nd.—Having prepared every thing for our return, and some of our party their arms, in case of rencontres with the natives, whose fires we had seen yesterday, we proceeded, soon after sun-

rise, on our route homewards, and passing down the valley to the foot of the peak, we entered an open common, which led us to a thick and almost impenetrable forest of cable, gum, and tea trees; after struggling for nearly an hour, we succeeded in forcing our way through the most impassable part, when we came to a lagoon of salt water; we soon after fell in with another, which had a similar taste. Upon reaching the extremity of the forest, which may be four miles in breadth, we, in three miles, arrived at a hill, on which we found a rich red loam, of a yielding and pliable nature, but it did not appear to be of any great extent. We crossed before noon several grassy hills, on which we found better soil than in the valleys. We traversed, until we halted this evening, a well wooded country, which contained a considerable portion of very fine land. Not being able to find water, we were obliged, much to the annoyance of some of our party, to put ourselves upon an allowance for the night; we travelled to-day upwards of eighteen miles, in a W. $\frac{1}{2}$ N. course. In the morning, we suddenly met with a party of four natives, who, from the terror and surprise they manifested at first beholding us, evidently showed that they could never have seen Europeans before; after two of them had advanced in a hostile manner to allow the two women who accompanied them time to escape, they ran away as fast as their legs could carry them, and disappeared behind a hill.

November 3*d.*—We started at dawn this morning to procure water for breakfast, which we found, after passing several broad and fertile valleys, in one of which we met with excellent pasture, which appeared to be of some extent; after travelling six miles, we rested at a spot where we obtained good

herbage for our horses. Traversing after breakfast the same distance and a similar country, we reached a district where the surface became more broken and abrupt; our course led us down a ravine, and we entered a rich and extensive valley; continuing along this for two miles, we ascended a hill, from which we observed water in the lower part of it; on proceeding down to it, we found that we had reached the Avon, about eighteen miles, as we then conjectured, to the S.E. of Mount Bakewell; it had here expanded into a reach of an average breadth of thirty yards; but on tracing its course downwards, it became contracted, and the stream was partly concealed amongst the tea trees that lined the banks; one mile below this we bivouaced for the night, at a beautiful spot where the river had again become broad and deep, and which here ran to the westward, after flowing a short distance north; behind us were two low peaked hills; we here killed a brace of ducks, &c. &c. Considerably more than half the land we passed over to-day was of a good quality; we observed on this part of the river marks of excessive inundation.

November 4th.—We determined to spend this day in examining the valley of the river, in order that we might give the gentlemen who accompanied us an opportunity of seeing as much of the country as possible before selecting their grants. We started at day light this morning with the intention of crossing the Avon, and proceeding due W. until we intersected one of its minor branches, which had previously been fallen in with by Lieutenant Erskine, and from thence to take a N.E. course in the direction of Mount Bakewell. We crossed the river about one mile lower down than where we bivouaced, and walked the same distance over a lighter

and more sandy soil than we had lately met with, when we arrived at a rivulet running towards the main branch; leaving this, we ascended the hills on the eastern side, and again came to good soil and grass, which appeared to be abundant here; after making a few observations on the surrounding country, we descended to the Avon, and continued along its banks, which presented generally a N. by W. direction for five miles, when we pitched our tent, and as we had arrived at the part we wished to examine, Messrs. Clarkson, Hardy, and Camfield, proceeded to the opposite or eastern side, whilst Mr. W. Stirling and myself proceeded to ascend a hill behind our encampment, one side of which, towards the east, we found bare and sandy, whilst on the summit, and apparently to some extent beyond it, we met with fertile soil: in the afternoon the party returned completely drenched with rain: they went about three miles down the right bank, and at the distance of a mile and a half inland, the soil was of good quality, and the grass plentiful. The stream occasionally expanded itself in the course of this day's journey, as it had done yesterday, to a breadth of fifty yards. We started this morning due W. with the intention of making the western base of Darling's Range, behind Lieutenant Bull's house on the Canning River, and passed over an extent of nearly five miles of beautifully fertile country, the grass on which was growing most luxuriantly on a rich soil, and was well adapted for agricultural and grazing purposes; in fact, in the opinion of Mr. Hardy, two acres of the grass lands in this district were capable of supporting three sheep per annum. As soon as we came to Darling's range, an unfavourable change took place in the soil. The range, at this point, was easy of

access, and the travelling good; during our walk we passed a party of natives sitting round a fire; they did not appear to take any notice of us, and we did not disturb them. We walked to-day eighteen miles, over a country which, from the time we ascended the hills, after having proceeded five miles from the river, contained occasional patches of good soil.

November 6th.—We were unfortunately detained this morning by the two horses belonging to Mr. Clarkson straying during the night; leaving him what provisions we could spare, we proceeded on our journey at 7 o'clock, and travelled over a more hilly and mountainous country than we had lately done. Fourteen miles from our bivouac, we arrived at the valley of the Helena, to which we descended down a deep and precipitous hill; we crossed it at a place where it was running W.N.W.; we walked to-day seventeen miles.

November 7th.—We experienced more difficulties, and encountered more obstructions this morning than we had yet met with, owing to numbers of fallen trees. At the distance of eight miles from last night's bivouac, we arrived at the height immediately overlooking the plain; from this distance we were clearly able to distinguish, through a telescope, the jetty and houses at Perth, and had an extensive sea view, embracing Garden Island and its neighbouring isles; we also observed a large and open lagoon, bearing S.W. at the apparent distance of seven miles. After an estimated journey of fourteen miles from the foot of the hills, we reached Perth in the evening, and found then that the Lieutenant Governor had arrived there a week before us.

GENERAL REMARKS.

The surface of the country traversed in the expedition above detailed, would admit of the following descriptive division, viz:—open downs destitute of timber, and thickly covered with low brush, —open forest land, characterised by its growth of timber, with little brushwood below,—swampy forest land, (which we only twice met with) producing timber trees growing close together, and thickly matted with an undergrowth of shrubs,—and open grassy pasture thinly wooded. The greater part of the district between Mount Bakewell and the terminating point of the excursion eastward, consisted of the second description; the open downs or wolds, bore the next proportion. The greatest quantity of grass was observed in the open forest and grassy pasture country. Our limited time, and expeditious mode of travelling, did not admit of our paying much attention to the collection of minerals; traces of limestone were however observed on several occasions. We met with no birds or animals not previously known to us. Amongst a great profusion of flowers and shrubs, we observed several apparently new varieties, one of which bore a red round fruit, about the size of a cherry, and containing a stone within; two or three other varieties of shrubs were remarked, producing novel and singular seed vessels.

(Signed) R. DALE.

JOURNAL OF AN EXPEDITION *under the Command of Lieutenant Preston, to explore the Coast to the Northward of Swan River.*

Hired Cutter, Colonist,
Gage's Roads, Nov. 23d, 1830.

SIR,

In compliance with orders received from Captain Dance, dated November 3d, 1830, directing me, as soon as the preparations are complete, "to take charge of the expedition intended to explore the coast to the northward of this port, to ascertain the existence or non-existence of ports, anchorages, and inlets on the coast,—their value as to security, size, and depth of water,—and the nature of the country immediately around them. In the careful examination of the coast with these views, the expedition should proceed to the northward; and in the event of discovering a port of undoubted value, possessing the qualities most essential to excellence, as well as the probable success of settlers in its vicinity; the expedition, after having fully ascertained these matters, is to return to this port with the intelligence; and in the event of no such discovery being effected in time to secure the return of the vessel to Gage's Roads by the 24th instant, your examination of the coast must be relinquished, so as to make your arrival probable on or about that day. On your return, if the weather shall admit of it, you shall yourself leave the vessel while off the mouth of the river, and immediately report your proceedings to the Lieutenant Governor, sending the vessel

on to the ship with the rest of the party;"—I beg leave to deliver to your Excellency the following report:—

Strong westerly winds did not permit me to leave Cockburn Sound till the morning of the sixth instant, when I stood along shore, at first about a mile and a half off, and latterly, for the most part, within half or three quarters of a mile, having reefs and breakers nearly the whole way to leeward; whilst the vessel was in tolerably good and smooth water, and no soundings, with eight fathoms. The sea breeze set in early, and blew fresh, so that I reached an island in latitude 31° 5′, and anchored under it for the night in ten feet water. The passage in was between two reefs to the southward of the island, which were partly dry, the channel very narrow, and many rocks in it, with only three and five feet water on them. On the 7th, I continued along the coast, keeping sufficiently near to see any estuary or other opening of any magnitude, with reefs and breakers generally outside. Off a point, in latitude 30° 49′; there is a high rocky island, with a passage having eight feet between it and the main. And in a bay, in latitude 30° 42′, there are four islands not laid down in Capt. King's chart. In the bay I found from four to eight fathoms water, the soundings being rather uniform. The islands and reefs between them shelter the north and N.W. part of the bay, whilst the west and S.W. parts are protected by a continuous reef, extending from the islands to within about a mile and a quarter of the south shore, where there is a very good entrance; a small and more intricate entrance exists between two of the islands. I stopped examining this bay for the night, and on the 8th proceeded as before. I soon got into Jurieu Bay, and to my no small dis-

appointment, found, instead of discovering anything more serviceable to the colony, nothing but a mere bay; it was only with great care I found water sufficient to navigate my little vessel, which drew no more than five feet. In passing inside the islands off Isla Point, I had the like shallowness of water to contend against; but as I approached the point, and saw water extending a long way to the north eastward of it, and land again north of that, I now firmly thought that something of importance and utility was within my reach,—a capacious and secure harbour, and large river, emptying its waters into it from the mountains, which a little north of this came down to the coast, were my too sanguine expectations. It is a large bay, and in the northern part and middle having depth of water for anchorage; but unless sheltered by reefs, which are at a long distance, or immediately under a small island, it is exposed to the N.W. winds, and not even a streamlet flows into it. I stood to the northward amid broken water, and very irregular soundings, from two and a half to six fathoms, till I reached two small islands in latitude 30° 9′, where, finding some shelter from a strong S. by W. seabreeze, that now blew in squalls, I remained for the night. About nine miles along the coast to the northward of this, I saw, next morning, a large sheet of water over the sand hills of the beach, which I ascended, to trace its direction, and saw it extending nearly parallel with the coast, but could see no opening, either outwards or inwards, to it from the sea or the interior of the country. A continuation of this lagoon, in every probability, was visited, three or four miles further south, on my return, and found to be salt at the latter place, about a third

of a mile from the beach. I then continued along the coast, looking out most eagerly for harbour, inlet, or estuary; and always keeping as close as uneven soundings, breakers, and shallow water permitted, with any degree of prudence. I had built no small hopes on that part of the coast not seen by Captain King, but mentioned as laid down from Dutch charts; and it was with feelings not a little excited, that I saw along the whole of it this afternoon, and no little disappointment, that this search was as fruitless as the preceding. It blew very hard from the S.S.W., and I had prepared every thing to reduce the cutter's sails as much as possible, previous to hauling off for the night, when I remarked a little shelter for her under a small reef, in latitude 29° 18′, and off Sandy Patch of the chart; here the vessel rode, at first very heavy, for the night. The 10th was passed searching along the land, as before, but with expectations despairingly diminished. The most commodious harbour, with long river navigation inland, could, at this distance, be of comparatively little advantage to the colony. The uniform low sandy coast which I had passed, with a continuation of reefs and breakers off it, made me lose the hope of the probability of improving as I went northerly. I wished much to go as far as Gantheaunee Bay, but my disappointment with Jurieu Bay, gave faint hopes even from it; I did not, therefore, deem the attaining of it a sufficient reason for prolonging the expedition beyond the period of my orders; a prolongation which I calculated must be the consequence of my going so far north. The very strong southerly winds, which had blown with scarcely any intermission, since my departure from Cockburn Sound,

—too strong for the cutter to hold her own again, much less make progress in beating,—showed me clearly, that unless they either diminish in force, or change in direction—both which, however, I presumed would be the case in the space of another fortnight, I would be already behind the time specified for my return. For these reasons, I determined not to go further north, than the latitude of 28° 45′, where I passed the night, amid coral reefs, inside a chain of breakers, and where, in bringing up the vessel, grounded on one of these rocks, by the anchor coming home. She was soon got off, but not without losing part of her false keel. At this part of the coast, the nearest hills rise to a greater height than on the general line of coast to the south, but are of the same sandy nature, with the same sort of limestone, as in the vicinity of Swan River. The vegetation is also still shrubby; the country inland rises into mountains, the Wizard Hills and Mount Fairfax; but my time did not permit my getting more than a distant view of them.

The 11th and 12th were passed beating to the southward, and the night between them and the sea, where I found a heavy swell and strong breezes; nor was I favoured with their being well to the westward, as I expected, on standing in shore again on the latter day; so that, during two days and nights, I only made thirty miles of latitude. At sunset on the 12th, having observed shelter inside some reefs, I took advantage of it, and remained there for the night; nor did I stand out to sea any following night, always having found shelter, more or less good, and prefering being in smooth water, and working up inside the reefs, with the moderate breezes of the mornings and forenoons, for they

could scarcely be called land breezes, so much did they hold to the southward. In my return, therefore, I was generally very close to the shore, often not many fathoms from it, and must, in consequence, have observed any openings or inlets that might have escaped me before. This closer examination, however, only showed me a greater number of rocks, reefs, and breakers, with which, I may say, the coast is universally lined. There are numberless entrances, and constant shelter inside, but the openings and anchorages are dangerous, from the number of isolated and hidden rocks, which rise abruptly from a depth of some fathoms, to within a few feet of the surface. With the greatest precaution, being seldom without two persons on the look out, the vessel sometimes touched on some of them, but never to hurt. It required, too, the utmost diligence to keep out of the breakers, for it is a well known fact, and we had proof of it, that an interval of many minutes occur between the breakers ; and unless the place be observed for a long time, one is not always safe in standing on. I landed only on six different places of the main land, all of which were sandy and rocky limestone ; the beach I always found and observed to be good for boat landing, generally sandy, with only a few rocky heads at long distances from each other ; the surf was always very slight, not so high as to injure any boat. I remarked some places where water had stood on the surface, and, by digging, found it to be salt. At one place only, did I find fresh water by digging, and then not of the best quality. The islands which I saw are of the same appearance as Carnac, and produce similar vegetation. Several smokes were observed inland, about

latitude 29°, and no other trace of natives. At our farthest north anchorage, we observed part of the swinging boom of a large ship, which had been erected above high water mark.

(Signed) WILLIAM PRESTON,
Lieutenant,
Commanding Expedition.

GOVERNMENT NOTICE *relative to Port Leschenault.*

Surveyor General's Office, Perth, March 22d, 1830.

On the evening of the 3rd instant the Lieut.-Governor proceeded to sea, on board the Eagle schooner; and on the following day, having examined the coast of Geographe Bay throughout its whole extent, the vessel anchored about two miles inside of Cape Naturaliste. The afternoon of that and the succeeding day were spent in exploring the neighbouring country. Its surface was found to be very uneven in altitude, frequently rising into high granite hills, most of which were either rugged or sandy on the summits, but the valleys contained a considerable quantity of good land. Among the cliffs near the Cape, a great variety of mineral products was observed. Specimens of magnetic iron ore and copper pyrites were brought away, but it did not appear that the seams, containing these ores, were of great thickness. The Bay in which the schooner anchored affords very good shelter during the summer season, being secured from all winds to the westward of N.W. and N.

On the 5th, the Eagle took up an anchorage off Vasse River, and the vicinity of its entrance was examined to the distance of two or three miles from the shore. The result was not satisfactory, as it appeared to be a sandy district. The straight and vigorous growth of the trees gave a contradic-

tion, however, to the apparent meagreness of the soil.

Fresh water exists in great plenty both here and on the opposite side of Geographe Bay. On the morning of the 6th instant the expedition arrived off Port Leschenault. The appearance of the country being favourable, and a proper position for a military station being selected, the detachment of the 63rd regiment, brought from head-quarters by the Eagle, was landed, together with the stores and provisions necessary for their maintenance. They found, in the great abundance of building materials, great facilities in housing themselves, and the Lieutenant Governor had the satisfaction, before his departure, to see the party nearly complete in arrangements for their comfort during the approaching winter.

During the Eagle's stay at Port Leschenault, excursions were made in every direction which could lead to a knowledge of the surrounding country. The most important of these was an expedition of gentlemen volunteers, led by Mr. Roe. They penetrated to the hilly country, of which Mr. Roe reports in the following terms:

"Having proceeded up the Collie, about ten miles from the entrance, the river became obstructed by many fallen trees, and we quitted it, ten in number, with three days' provisions, to explore the country to the south eastward. At this place the water was perfectly fresh and good, and ran at a very slow pace to the north westward. Half a mile S.S.E. brought us to an inconsiderable dry creek, which we crossed, and walked to the E S.E. through a beautiful open forest country, swelling gradually in hill and valley, and abounding in excellent timber, growing in a good soil. At the distance of

another mile we crossed over a second creek, which was at this time dry, but evidently, during the rainy season, is well supplied with water. We soon afterwards stood to the eastward, for a part of the principal range of mountains, which appeared through the trees at the distance of two miles, and at their base came again upon the Collie, which occupied a width of from eight to fifteen yards; but from being obstructed below us, it was not a running stream.

Crossing over, we ascended the range in a N.E. by N. direction; and on the second ridge were gratified by an extensive view of the country behind us, and of the well-wooded heights to the northward and eastward. In the latter direction is some land, considerably more elevated than that upon which we stood, but apparently of equal value to the agriculturist and grazier, and is supplied with good timber. A considerable valley was observed about two miles to the north; and, judging from the excellent soil we passed over, both on the hills and flats, it will, doubtless, be found to possess good land, and probably a branch of the Collie. Having no water on the mountain, we descended a mile to the south, when the Collie was again crossed, extending to the N.W. by N., and we bivouaced on its left bank. Early on the 10th we resumed our journey to the S.E. by S., across a hilly forest country, for three miles, when we had crossed the dry beds of two small brooks, and had arrived upon a more elevated part of the range, leaving its summit about half a mile to the eastward.

His Excellency the Lieutenant Governor, was pleased to honour this with the name of Mount Lennard, after one of my fellow-travellers. It is

well clothed with grass and timber, and may be about eighteen hundred feet above the level of the sea. Here we found a sensible change in the temperature, which was much more cool than on the plains, and rendered climbing steep hills comparatively pleasing. Hence we descended S.S.W., and in less than half a mile came to the bed of a considerable winter stream, five or six yards wide, containing some pools of excellent water; small fish being found in these ponds at the very termination of the dry season, would appear to bespeak their being never totally dried up. Proceeding three miles farther to the S.S.W., over a steep but unbroken country, of the same description as before, we came to a broader valley than usual, in which were the dry beds of two winter torrents, winding through a soil much inferior to any we had as yet passed over; beyond it was some very good land, and to the eastward the country appeared rich and fertile among the mountains.

We now ascended the steep south-western hill of this range, and from its summit saw Point Casuarina, bearing N. 63° W. at the distance of sixteen or seventeen miles. The soil here is very sandy in places, and much intermixed with rocks and stones; there is, nevertheless, much good timber upon it, and a great quantity of banksia.

On its south side is situated the broad and rich valley of the Preston River, where we found several dry ponds and beds of water courses stretching to the westward. The Preston, at a mile from the deep southern shoulder of this hill, was found to have a width of seven or eight yards between banks of clay and rich loamy soil, where good water was met with in pools several yards in circumference, which, in the winter months, must form a stream of

six or eight feet in depth. The country here is tolerably level forest land, free from underwood, and undulates gently in easy rising hills, somewhat thickly wooded. Three miles S.W. from this part of the Preston, over rather a sandy country, brought us to the verge of some level open plains, covered with grass, and thinly scattered with trees; their extent was not ascertained, but we could trace them as far as five or six miles across, and in the middle came upon the dry bed of a considerable brook, winding through them to the N.W. by N. The day being now far advanced, and having met with no water since leaving the Preston, we traced this channel for about two miles, through a narrow slip of thickly wooded land, but without meeting the object of our search. Some heavy dense clouds, which had by that time been drifted over us by a N.W. gale, then burst out into pouring rain, and drove us for shelter into the bed of the water course. After two hours' rain the weather cleared a little, and the continued perseverance of some of our party, was finally crowned with success, by kindling us a good fire, which dried our clothes and blankets, and enabled us to pass a comfortable night. With day-light of the 11th we started on our return, and steered north to fall in with the Preston, and procure water for breakfast In this direction and N.W., we walked nearly six miles over a gently swelling forest country, with a loamy sandy surface, which, for the last three miles, was frequently interrupted by extensive swamps, at this time dry. The Preston was then fallen in with at the distance of about seven miles, in a direct line from its entrance, and we remained a couple of hours, on the bank of some delicious water, to breakfast and refresh. At this dry period of the

year the river had assumed the appearance of a chain of ponds, from twelve to twenty yards in length, and four or five deep, contained between banks of clay and rocks eight or ten yards apart. Here we found numerous traces of natives, and plenty of large muscles; but the latter not being quite good tasted, and our provisions not totally expended, they were not much eaten. At noon we set out again at westward, occasionally coming on the left bank of the river, as it wound through an open forest country. Finding, at the distance of a mile, it crossed our course, we passed over to the right bank, just above the spot where the river becomes full between its banks. Two miles further, over a fertile country, brought us to a navigable part of the Preston, fifteen or eighteen yards wide, where the water is brackish, and runs slowly to the northward. From this place we followed a native path, about four miles towards the entrance of the river, where we arrived about three o'clock, and finally rejoined our friends at the encampment, loaded with wild ducks, cockatoos, and other game, the produce of our sportsmen's exertions.

It is somewhat remarkable, that throughout this excursion we saw nothing of the natives, although the traces of them were evident and numerous in many places; and we passed several of their old habitations, which were of the usual temporary construction of boughs and grass. The country passed over, during our first day's journey from the Collie River, was decidedly superior to any which afterwards came under our observation, and appearances left no ground for supposing that it diminished at all in fertility of soil, as far as the eye could penetrate to the eastward of that journey's eastern limit. The country in the neighbourhood,

and to the eastward of Mount Lennard, is elevated and mountainous, but bears a promising appearance, having some considerable valleys at the base of the hills, which are probably well supplied with water. Towards the south end of the mountains, between the Collie and Preston, upon which his Excellency, the Lieutenant-Governor, has been pleased to bestow the name of " Roe's Range," the country becomes more sandy, and where the surface is not interrupted by the protusion of the granite formation of the range, it is partially covered with loose fragments of quartz and quartz rock. This description of country seems to prevail in those parts of the range which are exposed to the southerly winds.

The district of the Preston is not so fertile as that of the Collie, nor is it so considerable in point of size or inland navigation; but no soil can be finer than that on its banks, and the country through which it winds from the S.E. is more uniform and easy of access. The explorations which took place were not so extensive: regarding them it is only necessary to state the general result. There appear to be three rivers in the district, on the banks of which there is generally excellent alluvial soil. The southernmost river, which is named the ' Preston,' is navigable for the largest boats about five miles from its mouth, and is at that point a running stream of good water. Its banks are rich in soil and timber, but the former of these becomes sandy on receding from the river side.

The middle river, the ' Collie,' is navigable for ten or twelve miles, nearly up to the foot of the hills; the soil on its banks is not very good for three miles from its entrance, but it is there joined by a river flowing from the north, and the country,

in ascending from this junction, improves, and becomes of an excellent description. The north river was not explored.—Upon the whole, the district of Port Leschenault appears to possess a considerable quantity of good land. There are portions of it which are sandy; but it holds out, particularly in the goodness of the hilly country, as described above, great attractions to settlers. The anchorage off the bar of Port Leschenault, is open to winds between north and north-west. It seems to be a good summer resort for vessels of any size, but at present it cannot be recommended as a winter resort.

On the 16th, the Eagle proceeded to the Murray, and anchored off its entrance on the following morning. Her stay here did not admit of an extensive examination of the country. The inlet appears to be similar to those at Port Leschenault, Vasse River, and Melville Water. These inland waters will probably hereafter afford great facilities in catching and curing fish for exportation, as well as for the water carriage of commodities.

On the 18th, the Eagle returned to Gage's Roads.

Such are the details of an excursion which has added considerably to the knowledge of the territory previously possessed. Although there has been in the course of it, no very striking discovery, the general result has afforded the Lieutenant-Governor the greatest satisfaction, by shewing that the industry, enterprise, and intelligence of the settlement need not remain unemployed, for want of the materials on which to act.

The country inland from Port Leschenault, as far as it has been seen, offers fertile soil, and good stock stations. The climate is decidedly cooler than in this district; and, judging from the quantity of grass, and the verdure of the foliage, it appears to

sustain a dry season not so long in duration as that experienced in this quarter.

For these reasons, the Lieutenant-Governor recommends it to the notice of settlers; and with a view to give them facility in locating themselves there, he has established a military station on the northern point of the entrance, to serve as a place of security to those who may proceed there in the first instance. He has also directed all the district comprised within a line S.E. 100 miles from the entrance, and thence eastward, to be added to the district already open for location. All persons who may have claims under the present mode of distributing land, will do wisely to make an early selection in the territory thus laid open, as it is not intended to open other districts during the current year, at the end of which the present mode of distribution will expire.

GOVERNMENT NOTICE *relative to Port Augusta.*

Surveyor General's Office, Perth,
11th May, 1830.

On the 29th ultimo, the Lieutenant-Governor, accompanied by Capt. Currie, and several other gentlemen, embarked on board the Emily Taylor, and sailed from Gage's Roads. On the following Sunday, the vessel reached Cape Leewin, and anchored in the evening of that day, near the mouth of an inlet communicating with the sea in the N.W. course of the bay, eastward from the cape. The following day was given to the examination of the country near the anchorage.

On Tuesday, an expedition was undertaken to ascertain the nature of the shores of the inlet to the N.W.

On Wednesday and Thursday, after similar excursions were made, and the site of a town, to be called Augusta, being determined on, the settlers, who were passengers on board the brig, commenced their disembarkation.

On Friday, the Lieutenant-Governor, accompanied by several gentlemen and boats, proceeded to explore the principal river. They ascended the stream all that day, and great part of the next, and eventually returned to the vessel at a late hour on Sunday evening.

On Monday, the disembarkation was completed; the Downs to the N.W. of the inlet were visited, and the necessary water got on board.

On Wednesday morning, the brig quitted her anchorage, and proceeded to examine the coasts of the bay to the eastward. Having reached the "Black Point" of Flinders on the evening of that day, her course was directed, on her return, to Gage's Roads, wherein we arrived on the 16th instant.

The result issuing out of this expedition may be classed under two heads. First, the knowledge which has been acquired of the district visited: and, secondly, the establishment in it of a small but efficient body of settlers, with the fairest prospect of their success. The portion of the southern coast seen during this excursion, taken in connection with knowledge already possessed, leads to the belief, that there are three distinct ranges of primitive mountains traversing the territory of Western Australia, from north to south. The highest and easternmost of these has its southern termination near to King George's Sound The second terminates at Cape Chatham, and is that of which General Darling's Range, behind Cockburn Sound, is a portion. Cape Leeuwin is the termination of the third range. This seems to be inferior in extent, as well as in altitude, to the two other ranges, as it disappears at Cape Naturaliste, and is not again seen except in "Moresley's flat-topped Range," 300 miles to the north on the same meridian. On these ranges, and in their intervening valleys, the soil varies according to the position and altitude. On the higher hills and mountains, the surface is rugged and stony in the regions intermediate between their summits and their bases; the soil is excellent: but in the principal valleys and lower grounds, where the sand-stone formation prevails, it is of a very inferior description, except where the deposit

of rivers may have altered its character. These general rules are exemplified in the neighbourhood of the newly-formed town of Augusta, and may be taken as applicable generally to all other parts of the territory, except on the sea coast, where the regular formations have been invaded and modified by extraneous substances, generally of a calcareous nature.

The position chosen for the new town possesses the advantages of excellent soil, plenty of good water, a pleasant aspect, and easy access in moderate weather to the anchorage and to the interior country. The inlet is of considerable extent, and leads to a river named the Blackwood, which runs to the north about fifteen miles, and then ten miles to the east, before it comes to be navigable for boats. Its banks are covered with good timber of the stringy bark and red gum kinds, but the soil is a light sandy loam, which is seldom strong enough for cultivation. The best soil, the finest blue gum timber, and some good grass, are to be found on the hilly lands; but even on the rest of the land there is generally food for cattle, and on the downs skirting the coast, fine sheep pasturage. The anchorage is sheltered from the usual winter winds, but is open to those which blow between south and E.S.E. Its merits cannot be estimated without further experience: if it should not be found objectionable, the qualities of the surrounding country, and the position of Augusta, with reference to the navigation of these seas, will make it a convenient place for vessels to stop at, on their way to the eastern colonies from England, India, and the Cape; and on these terms, there is reason to hope for its considerable commercial prosperity.

JOURNAL *of Lieut. Ad. Erskine, 63rd Regiment, travelling from Perth to the eastward, over Darling's Range, in the month of September,* 1830.

Monday, September 6th.—Started from Perth at 10 o'clock a.m. Made the left bank of the Swan River at Capt. Byrne's, by 4 o'clock p.m. Much difficulty in crossing the river; obliged to halt in consequence.

September 7th.—Started at day light from Capt. Byrne's, starting a S.E. course. By 3 o'clock p.m. had crossed an undulating country, intercepted with swamps and lagoons. By 5 o'clock p.m., had crossed a fine clear mountain stream, running about S.S.W.; also had crossed the first tier of hills. Ascent and descent sudden, but easy of access. Surface rocky, with iron stone, and thinly wooded. From summit had a distinct view to the westward of Garden and Rottenest Islands, also of the Swan and Canning Rivers. Could not distinguish any houses. After marching about twenty-five miles, bivouaced on a fine clear mountain stream, having a north-easterly course.

September 8th.—Started at day light. Course east. Crossed several tiers of hills, some of which bore east and west. General appearance of the country, mountainous, some being detached. Surface, a continuation of iron stone. Fine open forest, chiefly of the blue gum and stringy bark. Crossed three mountain streams, running as before, to the north east: much difficulty in crossing one. Obliged to swim the horses twice. After a march of about eighteen miles, bivouaced on one of the streams alluded to, which evidently very recently

had overflowed its banks to a perpendicular height of thirty feet, making it of considerable width, it at present being about twenty-five yards. Bay horse very much jaded. N.B. The stream fell two feet and a half during the night.

Thursday, September 9th.—Started at day light. Course as before. Morning very windy, with occasional hard squalls of rain. Kangaroo and birds in abundance. Crossed one very steep and high hill. View from the summit of no very great extent, except to the southward, where a very high blue mountain, distance about twenty-five miles, was visible. Appearance of the country, the same as yesterday. Tracks of emu. Bay horse exceedingly weak. Both of them with sore backs. After a march of about fourteen miles, bivouaced near a swamp.

September 10th.—Started at day light. Course east. After travelling for two hours over an undulating country, came on an extensive flat of about four miles. Fine open forest. Native huts, eight in number, very substantially built. Surface, iron stone and sand. Country again as before, exceedingly mountainous. Bivouaced under high rock of granite stone. Travelled about fifteen miles.

September 11th.—Started at day light. After travelling for about four hours, over an exceedingly hilly country. Surface nothing but rock, heavy sand, iron stone, besides a thick brushwood. The bay horse was unable to proceed. Halted for two hours and a half, during which time I ascended the summit of a very high hill, in hopes of finding water. A fine clear rivulet to the N.E., with rich green banks, was visible about five miles distant. made it by sun-set. Excellent food for the horses; the only good spot since my departure. Intend

halting here all to-morrow, to rest the cattle. Bivouaced, after marching fifteen miles.

September 12th.—Walked on the banks of the stream mentioned. Traversed it for about six miles to the southward of the course of the stream. Found a continuation of very good soil, "chiefly a red loam." The very high blue mountain spoken of on Thursday, bearing to the southward, again visible in the same direction. Weather delightful, but "nights very cold" Bivouaced on the same ground as last night.

Monday, September 13th.—Started at daylight. Course east. Made the summit of a high hill by an almost imperceptible ascent. Had a fine clear view to the eastward for an extent of nearly thirty miles. Country appeared undulating and thickly wooded; towards the horizon mountainous. Traversed over a rich country for about six miles, when I made the summit of a very singular, and very high abrupt rock, bearing N.E. Had an extensive view to the eastward, as likewise to the southward, and N.W. The blue mountain spoken of was very visible, and appeared to run out into an extensive plain to the eastward. The mountains to the N.W. by no means so high as those towards the S. E. To the east had an extensive view of about fifty miles over a thickly wooded undulating country, inclining, as observed before, towards the horizon, to be mountainous. Could not see any water. Proceeded for about five miles over a rich hilly country, when we were met by natives, whom we found fishing, to our great and agreeable surprise, on the banks of the river described by Mr. Dale. Bivouaced, it being almost dark before we reached the river. March about twenty miles.

Tuesday, September 14th.—Started at day-light,

following the course of the river, varying from N.N.W. to N.W. To cross it was totally impossible, on account of the depth of the mud. It appeared to have its source in the direction of the blue mountain spoken of. However, to clear up any doubt about its being the same river Mr. Dale discovered, I intend proceeding to his depôt. After marching five miles, we found his track, which we followed that day for ten miles, over a fine rich pasture land. Crossed several small streams running east from the mountains into the river, which was thickly covered with shrubs and underwood, occasionally opening into a clear undisturbed stream. Bivouaced on its banks, after marching about fifteen miles.

Wednesday, September 15th.—Started at daylight. Continued our course on the banks of the river, following Mr. Dale's track. Still a continuation of rich soil, which seemed to prevail to some extent over the hills on the opposite banks. Horses again not able to procced. After a severe day's march of about ten miles, over a very heavy country, we arrived at Mr. Dale's depôt; but to the mortification of the party, with the exception of the natives who were in company with us, about twenty-five in number, we found every thing damaged. Bivouaced near the same spot.

Thursday, September 16th.—Obliged to halt on the banks of the river, the horses not being able to travel. Natives become very numerous and rather troublesome, in fact, too friendly. A much more athletic tribe than those seen at Perth. "The whole party under the effects of purgatives, which we attributed to drinking the river water, the same having a peculiar taste; as also being very soft." Swans and wild fowl in abundance, as likewise

kangaroo. Fearful the bay horse will not be able to return. Bivouaced on the same ground as yesterday.

RETURN HOME TO PERTH.

Friday. September 17th.—Started at day-light. Horses in much better heart. Traversed the course of the river for about five miles, where it had assumed a fine, clear, uninterrupted stream, running about three and a half knots, and about sixty yards wide, also very deep. We had crossed a wide mountain stream, running into the river. Changed my course to west, having the course of the river about west-north-west. After traversing an undulating country for about three miles, and crossing occasional mountain streams, running towards the river, we found a very sensible change in the soil, varying at short intervals from a red loam to a sandy substance, which continued over a very gradual ascent. We were obliged to travel (for twelve miles), on account of not meeting with water, an unusual circumstance. Bivouaced near a swamp, after marching about twenty miles. "Fine open forest." Same style of country around me.

Saturday, September 18th.—Started at day-light. Course west. After crossing the swamp, traversed over a very hilly country of fine open forest, with occasional fine timber, chiefly mahogany. Surface same as the preceding day. Kangaroos and birds in great abundance. Bay horse again very much jaded. Obliged to halt in consequence. Bivouaced on mountain stream. Course about S.E., after a journey of eight miles.

Sunday, September 19th.—Bay horse not able to proccced till mid-day, and then not carrying weight. After travelling for about six miles over a hilly, stony country, of thick brushwood, I made

the summit of a high mountain, (bearing N.W.), from whence was a distinct view of the sea in the horizon to the westward, as likewise some very large sheet of water. Appearance of the country, the same as described before. Bivouaced on a mountain stream running N.W. Marched about eight miles.

Monday, September 20th.—Started at day-light, following the mountain stream running N.W., which I conceived to be the source of the Swan River. Traversed it over precipitous rocks, occasioning waterfalls of no very great height. Found it to discharge itself immediately at the base of the mountains into a large swamp. Bay horse again not able to proceed. Obliged to halt, after marching about six miles. Bay horse seized with the staggers; took from him about four quarts of blood. Visited by the natives, whom we could easily perceive had been in Perth. Bivouaced near the swamp.

Tuesday, September 21st.—Started at day-light. Bay horse much better, though not able to carry weight. Traversed round the south side of the swamp, where was found a wide stream running south, which we crossed, and then made a south-westerly course. After marching nine miles, made the Swan River about two miles above Mr. Jack's residence. We then proceeded for Messrs. Thompson and Trimmer's residence, where we crossed, and bivouaced about one mile and a half further down.

Wednesday, September 22nd.—Started at day-light. Bay horse much better, able to carry weight. Arrived at Perth 4 o'clock p.m.

A REPORT *of Captain Bannister's Journey to King George's Sound, over Land.*

February 5th, 1831.

SIR,

I beg leave to state to you, for the information of his Excellency, the Lieutenant Governor, that agreeably to the instructions contained in a letter of the 5th of December last, which his Excellency did me the honour to address to me, I on the 14th of December, accompanied by Mr. Smythe, of the Surveyor General's Department, John Gringer, and John Galway, commenced our journey from Fremantle to King George's Sound. To Mr. Smythe was entrusted the direction of our route. I understood he had been furnished with all that was requisite from the office, to enable him to do so. I shall take as rapid a sketch as possible of our route, remarking merely what I consider main features on it, begging leave to refer his Excellency to my journal for details, and also to the plan which Mr. Smythe will furnish. I have not attempted to give any details of the mineralogical or botanical productions of the country, as, even if I were capable, it would be impossible, except by accident, to come to any sound opinion on the former, and the latter would have required more time than we had to bestow. I have confined myself simply to the nature of the land, the timber upon it, and the rivers, &c. flowing through it, together with the bearings of a few remarkable hills. As to the trees, I have used such terms as are generally known in the colony,

with a view that the details in the journal, if thought worth reading, might be clearly understood by all. In the first instance, we proceeded to St. Anne's Mountain, on the left bank of the Canning, above Helmscott about ten miles, when, for the convenience of water, making the Canning, as I knew we should do so in several places, and also that we might cross the Darling Range quickly, we took a S.E. course, and passed the range from the summit of St. Anne's Hill in two days, travelling only about twenty miles. These hills are exceedingly rugged, but on them the finest timber, known in the colony by the name of mahogany; in some of the valleys tolerably good soil, of a light hazel colour, with an abundance of herbage, fit for cattle on their way from a good interior country to the coast; on the uplands iron-stone, with a little gravel and scrub. Arriving on the eastern side of the range in the evening of the 18th, I was induced, seeing a hilly though lower country before us, to continue our route to the S.E., in the hope of entering on those extensive plains of which Mr. Dale and others had spoken so favourably, as being a few miles more to the northward; we therefore pursued the S.E. course until the 23d of December, when coming to a more level country, and by Mr. Smythe's observations, we were in lat. 33° 3′ long. 117° 15′. we changed our route to the S. by E. From the higher range of Darling's Mountains to the point where we changed our direction, we computed it to be about forty miles; and the Assistant Surveyor's observations agreeing with distance supposed to have been traversed at the time, I concluded our position as correctly laid down.

The character of the country through which we had passed, was generally not so good as I had

hoped to have seen, but there were not wanting tracts of excellent land—that for upwards of six miles broad, for instance, as mentioned in the Journal of the 19th December;—and as it is a country in which there is a great deal of food for stock, I would by no means condemn it; on the contrary, my impression was, on a closer examination, there will be found available land to a considerable extent to the west and east, in both of which directions the water courses tended generally, and in their courses the soil was generally a very fair brown loam. The timber is the mahogany, the blue and red gums, with (in the valleys of the last few miles) the white gum; in the swamps, and very low lands, the banksia and tea tree. From the 23d to the 5th of January we pursued a S. by E. course for eighty or ninety miles of actual distance, through, in many tracks, a country which surpassed our most sanguine expectations; a very great proportion of this tract was land of the first description, fit for the plough, sheep, or cattle. The beauty of the scenery near to, and distant from, the rivers which we crossed, is equal to any I have seen in the most cultivated timbered country, in those parts of Europe which I have happened to pass through. The character of the country generally is undulating, with here and there moderately high hills, some of them crowned with rocks of granite, pudding-stone rocks, and a blue stone; but there are broad flat lands and valleys, the former of which, as will be seen in the Journal, not unfrequently extended several miles, even in some places far beyond our power to ascertain. The hills were in general so gradual in their ascent, that where those of a rougher character were seen, they only gave a certain character to the country, that destroyed the dull feeling of the mind which

a mere flat country engenders in many. When I consider that the rivers, five of which we crossed, not to mention the numerous water courses, some of which still had water in pools in them, traversed the country from E. to W., and that our course being nearly N. and S. we cut them; I cannot but think that the colony must possess a body of fertile land, of no inconsiderable magnitude, in this part of its territory. I am the more sanguine in this view, from the fact of our having taken excursions from our bivouac of the 24th of December (when we were detained several days by the state of our horses) for several miles in every direction, and each night we returned exceedingly gratified. It may not, perhaps, be uninteresting to mention, that on the first of June we entered a country in which grows a tree, about as large as an English plum tree, not unlike it in its size, in its leaf and branches, but its stem resembles more that of the pear tree when old; it bears a nut almost round, having a strong shell, and as large as a pigeon's egg, with small holes in it similar to the almond, and an out covering, which it throws off apparently when ripe. The kernel we found nutritious, possessing a glutinous property, and very easy of digestion. I am afraid to say more, lest disappointment should be felt by any individual whose fortune may lead him to this remote part of the world; but unquestionably, from the quantity of good land, the excellence of the water, which I have no doubt, when the country becomes known, might be obtained, renders it not undeserving of the closest examination. The trees are the mahogany on the higher and rugged lands, but among them the white and red gum. I should remark, that in this district it most frequently happens that under them

we found herbage generally, which affords excellent food for stock at this unfavourable season of the year; many parts had recently been burnt, probably last year, and this year the herbage was quite green and fresh. On the sides of the hills, the lowlands, and crowning the more moderately high hills, grew the white and red gum generally, and the nut tree, near to the rivers and large water courses, a few of the blue gums, and the wattle, and on the immediate banks of the rivers the tea tree, and banksia, &c. In many places the country had a most fertile appearance, not possessing more timber than was necessary for ornament.

As by Mr. Smythe's observations we were to the east of King George's Sound, it was deemed necessary to proceed more westerly. (By his observations we were got quite near to our destination, but experience proved that his observations were erroneous, and that our travelling had been greatly overrated). Seeing, therefore, some elevated lands to the S.W., distant one mile and three-quarters, we turned towards them, and ascending the highest, but not observing any thing satisfactory, we pursued four days and a half a course to the S., making forty miles. We were then, owing to the difficulty, it being mountainous and the underwood extremely thick, obliged to bear away to the S. by W, which course we pursued for a day and a half, making sixteen miles and a half; thence coming to some granite rocks, and seeing from them some high mountains, three of which were conical and of considerable altitude, one of them had two bare heads, —and Mr. Smythe being of opinion that this two-headed mountain was to the north of King George's Sound—we directed our steps towards it, halting for the night on the banks of a considerable river flowing to the south.

The following morning, the 12th of January, on reaching it, left the men and ascended to the summit, from which nothing satisfactory could be seen; as far as the eye could reach, was one vast forest; to the S. and S.W. by W. high lands, twenty to thirty miles distant. The intermediate country presented occasional open valleys, winding between apparently moderately high hills to the eastward; in the distance, were high hills or mountains; behind the southern hills, we hoped to come to the sea, a matter now of great importance to us, as our provisions were nearly expended; we therefore, seeing, as we imagined, through the smoke and haze, sand hills bearing S.W. by W., directed our steps towards them, until the evening of the following day, making seventeen miles, when, not finding the hills we had hoped to have reached, we turned due south, determined to pursue it, until I came to the sea, as, from whatever cause, I was almost certain that we were a long distance from King George's Sound, and that, consequently, our provisions being all expended, with the exception of tea for twelve days, and a little tobacco, our very existence depended upon procuring shell-fish from the rocks. Shooting birds was very uncertain, and kangaroos more so.

On the 16th we made the coast, having for the last day, traversed as rough a country as can be imagined. We travelled two days and could only make seven or eight miles by toiling the whole day: by Mr. Smythe's observation, we were only forty-three miles west of King George's Sound, but it proved to be to the eastward of Cape Chatham,—west of Nornor-up, nine miles; we had made, therefore, but about twenty miles west since turning from our S. by E. line on the 5th of January.

Mr. Smythe attributes the mistakes in his observations to his not having a watch, and partly to the instruments with which he was furnished from his office, being out of order. He will, I trust, be able to give a satisfactory explanation to his Excellency. The country through which we passed to the double peaked mountain, which proved to be the Mount Mitchell of Dr. Wilson, and the Matchercrop of the natives. Dr. Wilson saw it when twenty miles off; to the eastward, is, in general, very hilly, and in tracts, may be called mountainous; the soil is of an excellent quality in many places. On the 6th and 9th for instance, before we came to the considerable rivers which I mention having crossed on those days, and after you have crossed them, you find a rich brown earth. On the 6th, it will be observed, the land was not much encumbered by timber, and neither was it on the 9th, immediately near to the river; but the latter was a much more hilly country; the grass and herbage, of an excellent description, was thick, and higher than the knee, nearly up to the summit of the hills; we thought that an immense number of stock might be kept there (near the banks of the rivers) in the driest months; but away from them I am not quite so clear, except the settler went to the expence of deepening some of the channels of the water course; but really, journeying as we did through the country, it is next to impossible to say what capabilities it has or has not. These were not the only days on which we passed over, for a considerable distance, what appeared to us to be fair land, but so thickly timbered, it would require great nerve in a settler, and great support from Government, to venture among them, with any hope (without great means) of success. The forest trees are,

the mahogany, the red and white gum. On the higher hills, and on the poor lands, the former predominated,—on the lower lands, and sides of the hills, where good land was, the latter; there were the usual trees, such as the banksia, tea tree, &c., in this tract; as for underwood, there was great quantity in some places. From the double peaked mountain to the coast, is only about thirty miles; we made first seventeen miles to the S.W. ½ W., then sixteen or eighteen miles to the south. To attempt to say anything of the soil for a considerable distance, except that which we actually trode upon, and the open valleys and swamps, would be absurd; the underwood was so thick, that it was, in many places, with the greatest difficulty that we could get on, and occasionally we were obliged to make a road with our hatchet. The trees were principally the blue gum; and if others had not seen them, I should be afraid to speak of their magnitude; I measured one, it was, breast-high, forty-two feet in circumference; in height, before a branch, 140 or 150 we thought at least, and as straight as the barrel of a gun: from the immense growth of these trees, I formed an opinion that the land upon which they grew could not be bad; what little we did see was a brown loam, capable of any cultivation, and where the underwood was not remarkably thick, grass and herbage grew luxuriantly,—such was the character of the country generally as far as we could see; at a distance, you would suppose that the country was very undulating, and broken in places; but the height of the woods give it a much higher appearance than it really has, and being intersected with swamps and valleys, with very few trees on them, and those of stunted banksia or tea tree, they have the full advantage of their height. In these

valleys there is a vast quantity of feed for stock, but not sheep: coarse grass herbage and brush—they are dry enough in summer to pass over—some of them are several miles in length, and one or two broad. Within five miles of the sea, you come to sand hills, which are as difficult to pass over as the woods, for the horses, being extremely broken; those over which we passed were well calculated for sheep, being covered with an abundance of grass, a pea, thorn, and the peppermint. We had now been absent from Fremantle thirty-three days; we had halted, on account of our horses, six days, and had made, on some days, very little head-way, on one occasion only three miles. We reached the coast, therefore, in twenty-seven days travelling; had we not turned off on the 5th of January, I have not a doubt but that we should have reached our destination in twenty-eight days, including our six days halt, since we should soon have entered upon the country described by Dr. Wilson, and we should have escaped a most difficult march to the coast, and also the disasters and sufferings to which we were exposed while on the coast for nineteen days without provisions, and for several days before we reached it. But then, if I may be permitted to remark it, if this colony prospers,—and from the body of good land in the interior, of the existence of which I have now no doubt,—a certain good will arise from our disasters, since I am tolerably certain it would not have been traversed for years to come; and, consequently, the fact of there being good land, even among these hills, would not bave been known to exist. I shall not trouble his Excellency with a long detail of our sufferings; I shall merely state, that we were on the coast for nineteen days, depending entirely upon shell-fish

for subsistence; sometimes, where we found them, and the surf was not too great, we fared pretty well. The delay this mode of procuring subsistence occasioned, together with the exceeding bad travelling for our horses, (two of which, on our arrival on the coast, were very nearly exhausted, though they had but little to carry,) was very great, and the fatigue excessive, so that by the time we arrived at King George's Sound, we were all nearly exhausted, though we were able the last day, through the friendly aid of the natives, (who showed us the native path,) to walk twelve miles, all, with the exception of John Gringer, carrying knapsacks. This man would have suffered as much as any of us, had he carried the same weight. It will be seen, that on the 21st and 27th of January, we lost two of the horses, they could go no farther; I beg you will assure his Excellency they were done every justice to by the men who led them,—privation, want of rest, and exceeding bad travelling, were the causes of their death. We passed round an estuary, "Nornorlip," nine miles from where we made the coast; had time permitted, or, in other words, had we had provisions, we should have examined the entrance to this sheet of water, which I have since heard, possesses a port for large vessels. We succeeded, at low water, in crossing at a depth of at most four feet, the outlets of two estuaries; they were apparently as large as the Murray Waters; besides these, the outlets of two other estuaries, which were choked up by sand thrown up by the S.E. wind. I beg to refer his Excellency to Mr. Smythe's plan for an outline of the coast and of these waters;—it will be sufficient for me to say here, that the land, near the coast, is generally high, having headlands of granite rocks, which

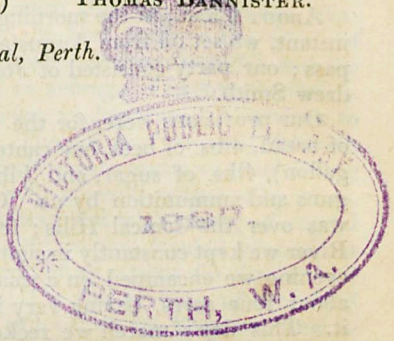
appear here and there in the bays; some of these bays have a tolerable beach, with high sand hills, at the back of these we principally travelled, and it is as fatiguing a country as ever man or horse walked over; for about three miles inland, there is but little wood,—in the hollows, a few of the banksia, a little cedar, swamp oak, tea tree, grass tree, scrub, and bushes, and, I should add, the peppermint tree, and always water.

On the 4th of February we arrived here. I have not words to convey to his Excellency the great kindness and friendship (of which we stood in the greatest need) with which we were received by Captain Barker, (the commandant,) and officers of the settlement, Dr. Davies, of the 39th, and Mr. Kent, of the Commissariat; and, under the care of Dr. Davies, the party, I trust, will soon recover its strength. From what I have written, it will be concluded, and justly so, that there is a body of available land, with certain extensive tracts of the richest description, fit for the plough, sheep, or cattle, or indeed any cultivation in the interior, commencing about twenty-five or thirty miles from King George's Sound, which, under a judicious system of colonization, the main roads being made in the first instance by forced labour, would, in the course of a few years, become inhabited by thousands of industrious men, sent out by the parishes of England, Scotland, or Ireland, or brought out by individuals bettering their condition, as well as relieving their country. I have been induced to make this remark, from the conviction that we can do nothing without the powerful aid of Government, in our infancy. Like every young community, we must be nursed at first, which, though perhaps

a little costly, will give rise to a good feeling towards our country, in those who follow us, which will last for ages.

I have the honor to be,
Sir,
Your obedient humble Servant,
(Signed) THOMAS BANNISTER.

To J. S. Roe, Esq.
Surveyor General, Perth.



ACCOUNT *of the Country intervening between Augusta and Swan River.*

About 6 a.m., in the morning of the 15th March instant, we set off from Augusta without any compass; our party consisted of John Dewar and Andrew Smith.

Our provisions were, for the whole party, 10lbs. of bread, 4lbs. of beef, one canteen of water (half a gallon), 4lbs. of sugar, and $\frac{1}{2}$ lb. of tea. We had guns and ammunition by us. Our course, at first, was over the Conical Hills; from these to Swan River we kept constantly in sight of the sea. On the evening we encamped on a small fresh water lake, about four acres, having very inferior land round it. This day's march we reckoned from twenty-five to twenty-seven miles. On the second morning, as also on every succeeding morning, we started before sun-rise, continuing our march sometimes by moonlight. This day we passed over better land, the country rather hilly, consisting of a good brown loam. This district had been lately burnt. We crossed several burns or brooks running towards the sea, containing excellent water; we occasionally killed some sea birds; for during the first and second days we walked mostly on the sea beach. We found the head and part of the body of a sea-horse. We did not see any seals, but saw one whale with the flesh still on, but the blubber cut off. On the third day we struck inland to cut off some projecting points, but never went further than five miles from the shore. In the even-

ing we struck towards the shore again, and came upon a deep bay, with a heavy surge on the shore, and many rocks and breakers, extending from the bay out to six or eight miles, to sea. We here found the jolly boat of the Cumberland, with the ship's name on her stern, and other parts of the Cumberland. Between this bay and Cape Naturaliste we found the best land in the whole of our route. We reckoned our march on this and the succeeding days at an average of twenty-five miles. The land passed over to-day was still superior to that of yesterday. The country generally between this and our first day's encampment was undulating with fine valleys, well covered with a silky grass, not the kangaroo grass; and with plenty of capital springs. The ground is not flooded ground—it contains many excellent situations for farms, well cleared of timber. On the evening of the third day, two or three miles from the boat, we came to a river about thirty or forty feet wide at the mouth, but much wider about one hundred yards upwards; there was a naked sand-bank all across the mouth, over which we passed; this bank or bar was forty yards from the sea. The black boys, growing in the country we had hitherto passed over, were the underground ones, the rushes of which are not brittle. On the fourth we traversed the same description of country as on the third; we kept at the distance of from three to five miles from the sea-shore. On the fifth day we encountered some very brushy country, and very rough and rocky; they were decidedly lime-stone rocks,—I know them to be so from having wrought at a lime-stone quarry—their quality was very good. We found plenty of good water, in the shape of springs, in the hollows of the rock sloping down to the sea; this day we did not

exceed ten miles. On the sixth day (Sunday) we went round Cape Naturaliste, keeping the sea-shore the whole of the sixth day. We met a single native, who led us to a spring in a swamp, close to the shore, the water very bad and brackish. This native was very troublesome, trying to push us off the rocks, and steal from us. On the first part of this day we could find no water among the rocks. From Cape Naturaliste to Port Leschenault we kept along the shore. From the Conical Hills near Augusta to Cape Naturaliste we kept at from three to four miles from the shore, on a ridge of low hills. Inland the country to our right consisted of a deep extensive valley, immediately on the right of the ridge we were walking upon; beyond this valley, further inland, the country rose gently, being moderately covered with lofty fresh looking trees, gum and mahogany. Beyond this gentle rise we could not see further inland. In the large valley we found fresh water of excellent quality, standing in little pools; it appeared to be the bed of a stream. The whole of the country, between the Conical Hills and Cape Naturaliste, has been burnt. On the ridge upon which we walked there was not a large tree in a whole day's walking; there was scarcely any thing else but the ground blackboys, with an occasional bush and creepers. On the evening of the fourteenth day we fell in with a bush growing on the rocks, overhanging the sea, having a fruit growing in clusters, consisting of berries about the size of a grape, of yellowish white colour, with a brownish tint on the top. We eat great quantities of this berry, and found it very pleasant; it was agreeably acid. On the evening of the sixth day (having been on short allowance two days before) the provisions we brought with

us from Augusta were finished. From the 6th to the evening of the 8th, we had nothing to eat but the Hottentot fig, and a sturgeon which we killed with a ramrod. We got to Port Leschenault on the eighth day, but lost a day and a half in trying to head the river, and in making a raft, on which we crossed, and then picked out some doll and Indian corn from the remains of the provisions left there. Between this and the Murray we shot some birds. We crossed the Vasse by fording, near the mouth, under the guidance of two natives. Between Augusta and Cape Naturaliste we only shot some sea birds. We found great quantities of periwinkles, of a large size, which we boiled, and found excellent eating; we did not find a single oyster; we did not see any kangaroos, but heard numbers in the night, and found numerous traces of them; we did not see any remarkable bird or beast. Parts of the wreck of the Cumberland were scattered along the whole coast. Shortly after we had rounded Cape Naturaliste, we were led, as above-described, by the single native, to a spring in a swamp, which had a very bad taste, and physiced all our party; it had a milky brownish colour, and tasted just like Thompson's mineral water at Cheltenham. From this spring to within three miles of Port Leschenault we could not get a drop of water. On reference to the chart, we have no doubt that this spring is the mineral spring marked down in the chart just inside of Cape Naturaliste.

REPORT *of an Excursion in a Whale Boat, from Six Miles to the Eastward of Ramé Point to Six Miles to the N.W. of Point d'Entrecasteaux, and from thence to the Murray River by Land.*

Monday, April 18th, 1831.—Moderate breezes and hazy; daylight saw the land on the lee bow, which proved to be Point Ramé. At 9, shortened sail and hoisted the whale boat out—distance from land about six miles. At half-past 9, having got every thing ready in the boat, left the ship and stood in-shore; saw an appearance of an opening on the western bow; kept close to the wind, but finding we could not fetch it, and the object of my search being the westward, bore up with a very heavy swell. At 11, rounded Ramé's Point and observed the black rocks; kept close to the shore, and at 12 saw an appearance of an opening about a mile to the westward of the inner point; stood for it, the wind increasing much, with a considerable cross swell, in two reefs. At half-past 12 rounded a point of land, and found a large estuary, with an entrance that had ten feet water on the bar in going in, with a sandy spit on the right hand and a rocky shore on the left. The entrance is narrow, but certainly good anchorage for small coasting vessels, not drawing more than seven feet. In going in there is a rock close to the left shore which always breaks, and which must be kept on the left hand. Employed all the afternoon pulling round the estuary, which has a small island in it; landed several times, and found the soil to be generally good, par-

ticularly on a flat, which appeared to be capable of producing any thing. Killed two swans, and met the natives, who brought us some broiled fish, and conducted us to their wells; parted very good friends; returned to the entrance, and bivouaced opposite Sandy Spit.

April 19*th.*—Light breezes from the eastward with every appearance of fine weather; being anxious to take advantage of it breakfasted at 5 o'clock; our friends, the natives, came down on Sandy Spit with lighted firebrands, making signs for us to go over, which we did, as we had to complete our water and wait for daylight to go through the passage. Sent Mr. Skottowe with two men to the native well; in the mean time Mitchel caught many small snappers, which highly delighted the natives, particularly when they found they got the greater share. At half-past 6 pulled out over the bar with a strong tide making in, having eight feet water (low tide). At 7 rounded the south point of the entrance, in passing between which and the black rocks, observed many breakers; indeed, had the boat not been a particularly lively one, I fear we should have felt the force of them often. The ground between the South Point and Point Nuytz appeared to be very uneven, from the constant small breakers we saw and passed through, and it is impossible for any boat to land there. At 8, fresh breezes and squally, in second reef, and rounded Point Nuytz; observed an island close in shore, which is not laid down in the charts. There is no safe landing between Cape Nuytz and Cape Chatham, which we passed close at noon; after which there are many little bays that a boat might find safe landing in with ease; at 2, I observed a break in the land with very heavy breakers; hauled

in and saw water inland over the breakers, which had the appearance of an estuary. The weather not looking very settled, and the shore holding out but a poor prospect for beaching the boat, bore up for the island off the Point d'Entrecasteaux, in hopes of finding shelter under it for the night; passed several patches of breakers seaward, and observed the white topped rocks; light breezes, inclinable to calm, with a heavy swell to the southward; lowered the sail and got out the oars; at 4 saw an opening in the land about four miles to the eastward of the island; stood for it; got close in shore, having left some small breakers outside, and observed a sheet of water over the sandy beach, which we afterwards found was perfectly fresh, covered with swans, ducks, &c., and running with a rocky shore, and filled up with sand and sea weed; there being too heavy a swell on the shore, rounded a small rocky point to the westward, and landed with little surf, and bivouaced on a low sand hill. Flat Island S.W three miles and a half, Point d'Entrecasteaux W. by S $\frac{1}{2}$ S. about seven or eight miles. Heard the natives, and saw their fires about a mile up the river.

April 20th.—At 4 breakfasted, loaded the boat, and waited for daylight to launch her; completed water, and started at half-past 6, with a steady breeze from the eastward, hoping to reach Augusta that evening. Passed many small reefs not laid down, and an island off Point d'Entrecasteaux, which we passed inside of, and a very good channel for small vessels, with a fair wind.

It is my opinion there is good anchorage for coasting vessels under Flat Island; indeed I should not have any hesitation in running a vessel there for shelter not drawing more than seven or eight

feet water: but when it is well known, I have no doubt it will be found safe for a vessel drawing twelve feet; at 8 rounded Point d'Entrecasteaux, in first reef: half-past 8 breeze increased, and hauled to the N.E. by N.; in second reef, 9, close reefed, and at half-past 9, it blowing nearly a gale, took in balance reef, the boat making as much water as we could bale. At 10, finding the boat complain very much forward, so as to make much more water than we could bale, and at the same time going off shore, lowered the sail down to pull in. Distance about two miles, which took us three hours to do, the wind having increased to a gale, with a very nasty short sea. At 1, finding we were close, as I thought, to the beach, with a very heavy surf, and no appearance of the weather moderating, pulled in, and to our utter astonishment, found the breakers to extend nearly half a mile from the shore, and certainly heavier than ever I saw a boat land in; as it was now impossible to turn back with safety, kept the boat directly before the breakers, which she went over very well, until we came to an outer beach, where it broke with great fury, and which the bow of the boat touched, and was all but turning over with us; fortunately she floated before the second surf came, and we got off with the boat being filled. I cannot help remarking, that had not the men kept their places, and given way when they were ordered, I fear there would not have been a chance for one of us, the drawback being too strong for the most expert swimmer. After the next breaker had passed and hove us considerably nearer the shore, we jumped out, and succeeded in holding the boat fast against the receding tide, and, in a short time, as she became lighter, the surf hove her dry, so that we

got every thing safe on shore, but all perishable articles of course ruined, amongst which was the present use bread, about eighteen pounds; the remainder of the afternoon was taken up in drying as many of our things as possible before night, and removing for shelter under one of the small sand-hills. 21st Calm; the surf if anything higher than when we landed; sent Mr. Skottow with a man to Giene Point, to see if he could find any place for a boat to land in, whilst I and Mitchel ascended the range of Sand Hills, to try and obtain a view of the interior; but the country immediately in the neighbourhood not having been recently burnt, I could not get beyond the second range so as to be back in time to launch the boat in the afternoon, should the surf go down, although we were walking upwards of three hours with a very hot sun and no water. At 1, returned to our bivouac; Mr. Skottow arrived about half an hour afterwards, without having found any place for a boat to land, but many fresh water springs. A light sea breeze set in about half-past 12, when, in the evening, the surf was certainly not so high; indeed we all lay down with a full conviction that we should be able to launch the boat in the morning, but our disappointment was very great when daylight broke and presented a heavier surf than ever; indeed, I am convinced it is impossible to launch a boat through the surf witnessed during our stay here. Our provisions becoming short, and it then blowing hard from the S.W., determined me on leaving the boat, and walking to Augusta, if the next morning brought no hopes of getting the boat off; ordered the men to make the best knapsacks they could, so as to be ready to march early if we failed in getting the boat afloat; when we had

nearly completed packing, Mitchel saw a man on the beach about a mile distant; with a glass made him out to be a native; took my gun and walked towards him; after I had gone about half way, and he saw no other person was following me, he advanced and seemed highly delighted when I made him understand I wished him to go to the boat with me, and he very readily gave me his three spears and throwing stick, (which were certainly better made than any I had seen before,) and carried my gun to the boat; he appeared astonished when we made him understand that we came from sea through the breakers. I have no doubt they had been watching us land, as there were several fires close to us. After dressing him, giving him a stocking full of sugar, a little bread, and as much cloth as he chose to carry away, of what we were about to leave behind, and giving him to understand that he was to go and bring the whole tribe, which he appeared perfectly to understand, he departed, and we did not see him again. At noon succeeded in launching the boat, and tracked her about a cable's length opposite a small sandy hillock, where I intended bringing the things; in so doing a heavy surf struck the boat, which knocked Pike down, and went over him without doing him the least injury; I never remember a man having a more narrow escape. We passed the evening in great doubt about launching the boat, as it came on to blow and to rain. 23rd. At 2, a.m. went on the shore, wind blowing off strong, found the surf quite as bad as the evening before; gave orders for breakfast, and to be ready to march in an hour, breakfasted and at 3 20′ started, all regretting the being obliged to leave the old whale boat behind, that had carried us so many miles safe at different times;

we took with us four bottles of rum; one of wine; eight of water; four pounds of pork; eighteen pounds of bread; two muskets; one gun, ammunition, an axe; three blankets, and a spare flannel; shoes and stockings each; the morning being very cold, and the beach good, we walked quick until sunrise, when we fell in with a river with the entrance nearly closed with sand; drank some water, as we did not know when we might have so good a chance again, and continued our march, but with very indifferent marching; loose sand; we were obliged to wait a few minutes every hour, not being accustomed to a load on our backs; after leaving the river about two hours and a half, we came to another with about two and a half feet at the entrance and heavy surf, and a remarkable sand-hill on the left. This river is certainly larger than the one we met with before, if we are to judge from its discharge. Fearing we might not be so fortunate as to meet with water again, rested for half an hour, and boiled some tea, after which we walked until half-past 10, when we rested for three hours; the sun being very oppressive on a white sandy beach; gave the men a gill of mixed grog, they being rather fatigued; at half-past 1 renewed our march, and served out another gill of grog; at 4, observed the beach moist above high water mark; dug with our hands about a foot deep, and got beautiful water, which we stood much in need of; filled our empty bottles and again started; walking until half-past 5, when we came to a stop for the night, after walking twenty miles; rather fatigued. Dug with our hands and got water, but very brackish, which was used only for grog; gave each man a pint; made a good fire, and all fell asleep, which remained un-

broken until 2 a.m., when we put on our knapsacks and recommenced our march; after an hour's walking, we were checked in our progress by a small rocky point jutting into the sea, which obliged us to take to the bush, and this was no easy task, as it was not daylight, and we had rather a difficult hill to climb; notwithstanding, we kept the hills until break of day, when we returned to the beach and came exactly opposite a river, which is considerably larger than either of the two seen yesterday; we had three feet and a half in crossing. Stopped for half an hour and partook of tea, and again advanced, having many difficult rocky points to pass, until 10 o'clock, when we rested for three hours. Black Point, W.N.W. six or seven miles; gave the men half a pint of mixed spirits, and at 1 p.m. the same, when we started and ascended the high hills (there being no walking on the beach) to Black Point. Steered from N.N.W. to N.W. by W. until 4, when we were all very much in want of water, which induced me to steer W., and at a quarter to 5, came to a native path, which took us to the beach, and what we so much needed—a spring of water, when I determined to stop, having walked two or three miles. We saw Cape Leeuwin, which gave us great hopes of Augusta to-morrow. Mr. Skottow and Seymour the carpenter, were very much fatigued, besides suffering from weak ancles and sore feet; we got some good cocoa for supper, (25th.) which refreshed us all much; slept sound, and at 2 o'clock breakfasted on cocoa; at half-past two, the coast being still rocky to pass, ascended the high hill, which we did with some difficulty, it being rather cloudy over the moon, and the walking very bad; at daylight made the beach, but was obliged to

take to the hills again, the sand being soft, and the surf washing up to the bank; continued to march until noon, when we again took to the beach, and rested a quarter of an hour to relieve Mr. Skottow's and Seymour's ancles; this man was quite beaten. The last drop of rum, about a table-spoonful, was served out, and the entrance of the river appearing not more than seven or eight miles off, they both said they were determined to reach Augusta that evening, which we succeeded in, having divided their baggage, &c. &c. amongst three of us. At 7, p.m., having walked since our rest full fifteen miles, making this day's journey, at a moderate calculation, thirty-three miles, we were some time on the banks of the Blackwood; as I believe we were taken for convicts that had made their escape, as soon as Capt. Molloy was informed of it, he came over, and I cannot help mentioning the kind and hospitable manner he received us; indeed, all the people were ready to supply our wants. Sent Mr. Skottow with the men to the barracks. Seymour was very unwell, but Mr. Green having seen him, was better towards the evening. Mr. Skottow and the other men were quite well, but still fatigued; walked with Capt. Molloy to visit the different settlers' habitations, and was astonished to find so much had been done by the labouring classes in building their cottages and clearing their grants, and they all appeared perfectly happy and contented. Drew provisions from Capt. Molloy for the men.

April 27th.—Capt. Dance having mentioned in my orders that he wished me to visit the harbour mentioned by Capt. Molloy, near Turner's river, made arrangements for starting the next morning in Mr. Earl's boat.

April 28th.—The wind being contrary for the har-

bour, proceeded up to the head of the North Creek in the boat, where we arrived at half-past 8; from this place, accompanied by Capt. Molloy, Messrs. M'Leod and Bussel, I walked along Mr. Turner's path until we arrived at the foot of the hills, a distance of three miles and a quarter over a country thickly wooded, and the soil particularly good; crossed the same hillocks, and, at half-past 10, arrived at Turner's river, which is a small deep stream running into the sea, and, I should imagine, takes a northerly direction, after passing the hills; saw part of the Cumberland's wreck. At 11, arrived at the bay, which appeared to be well sheltered from all winds for a coasting vessel; indeed, should the entrance be found good, I think the Sulphur might lay there with perfect safety; at noon we returned, having had an interview with two natives, who were friendly, but suspicious; and at 6 p.m. arrived at Augusta. In crossing the hills alluded to above, we passed over several patches of land of excellent quality.

April 29th.—Having determined to leave Augusta to-morrow, employed preparing. Mr. Skottow, who had been unwell for the last two days, and Seymour, having sufficiently recovered to undertake the journey.

April 30th.—Left our kind friends at Augusta and proceeded up the Blackwood in Mr. Earl's boat, who had shewn at all times a readiness to lend it, accompanied by Lieut. M'Leod, Mr. Bussel, soldiers, and my own party, now increased to eight by the addition of two labouring men, who had the permission of Capt. Molloy to proceed to Swan river on their private business. Lieut. M'Leod and Mr. Bussel intending to go with us as far as Port Leschenault. Saw plenty of swans and

ducks, but too wild to approach; landed several times, and always on good soil; indeed, the settlers at this place seemed perfectly satisfied with the grants they had chosen. The river at sunset getting narrow and rocky, landed for the night, had a merry party, and embarked at dawn of day.

May 1st.—Arrived at the head of the navigation at half-past 8 a.m.; breakfasted, and at half-past 9, having packed up and completed our water from the river, which was perfectly fresh, commenced our journey, steering N.N.E.; nothing to the eastward until 12, when we rested for an hour, having crossed two deep water courses and over very fair land of red loam, passing fine forest trees, and frequently good patches of grass; the country pretty level. Served out half a pint of grog and a piece of bread to each person; at 1, started again and walked till 6 p.m., having met with no water. Gave each person half a pint of tea and half a pint of mixed grog, the whole party suffering much from thirst during the night.

May 2nd.—The country being thickly wooded, besides a quantity of fallen trees, made it unsafe travelling until daylight, when we recommenced our march, having given all hands a gill of mixed grog. The soil in many places of a more sandy nature than passed over yesterday, with a few patches of small iron-stone here and there; in passing through the thick brushwood we were all glad to get the dew from the leaves to quench our thirst, from which many of us were suffering severely; passed several swamps, but could not get water before half-past 8, when I halted at a swamp that had recently had water in it, to endeavour to procure some, but I fear our exertions would have availed little, had not one of the dogs found an old

native well, which we cleared out and got nearly a gallon of water from: made a fire and boiled some tea, serving out half a pint a man, which refreshed us much. At half-past 9, recommenced our journey, and an hour's walking brought us to another native well, where, remaining a short time to refresh, after filling our canteens, we again started, walking through a country much more irregular; red sand and iron-stone; thickly covered with fine forest trees. Supposing from the distance we had walked and Capt. Molloy's chart of the Blackwood, that we must be near Port Vasse, climbed a tree and saw the land about Cape Naturaliste bearing N.W. and a very extensive plain below, with a large sheet of water, bearing N. about nine or ten miles; altered the course to N.; the land became very good, and continued so until we halted at 5 p.m. Distance walked eight miles. We saw many large kangaroos on the plain, and passed through three dry water-courses, one of which we bivouaced in; served out the same quantity of liquid as yesterday, and we were less thirsty in consequence of having met with water during the day. Young Mr. Bussel being so fatigued as not to be able to proceed, I recommended Mr. M'Leod not to accompany us any farther after we found fresh water, which he quite coincided in.

May 3rd.—Commenced our journey at daybreak without any breakfast; after walking about half an hour came to a small river running to the northward; stopped to breakfast. After crossing the river and wishing Mr. M'Leod and his party adieu, steered N.W. by N.; expecting shortly to see the estuary at Vasse, which we did after walking two miles and a half. The country passed over since starting this morning was beautiful, much

resembling a fine park in England, with excellent timber, five or six to an acre. It is my opinion that the plain crossed yesterday afternoon and this morning is a continuation of Henty's Plains. Making the estuary gave us all fresh spirits, and we commenced our journey along its banks at a good rate, walking until half-past three, having crossed two rivers since leaving the last, and passing over some superior land. Had an interview with seven natives, who appeared to remember me well; they seemed less friendly than when I saw them last; knowing them to be numerous, and the men wishing to walk for a day on the beach, their feet being lacerated, after rounding the estuary, steered for it, and halted at half-past 3; men very tired; found fresh water by scratching in the sand on the beach.

May 4th.—Breakfasted, and started at 4 a.m. in great hopes of reaching Port Leschenault in the evening; walked two hours on the beach, and were then obliged to turn inland, in consequence of the sand being so very soft. Steering about a point from the sea, for the purpose of ascertaining the nature of the country, which repaid us, as the country was good, and certainly, in my opinion, passed the *finest land* I had yet seen in the colony. Settlers near this country can never want hay and food for their stock; I should say, that, on a moderate calculation, this description of country extended for more than twenty miles round. The grass was thick, from three to four feet high. A farming-man from Augusta, named Jenkins, giving his opinion, said, "he had never seen better in his life, and indeed he passed very little bad land since he left the Blackwood." After crossing the plain the land was of a more sandy nature, with fine

forest trees; we walked about four miles, passing many fresh-water pools, and thinking we were not far from Casuarina Point, made for the beach, and then found it was six miles off; had we kept the native path after leaving the plain, from the direction it took, I feel convinced we must have been at the Preston long ere we reached Casuarina Point. It was a sad disappointment to all; at half-past 8, we arrived at the old place of bivouac much fatigued; being badly off for firewood, suffered a good deal from cold.

May 5th.—Caught some cat fish, of which we made a hearty meal; started for the crossing on the Preston, where I intended to have bivouaced, leaving Mr. Skottow to follow, after they had caught some fish, which they did, and joined us at 4; we killed four ducks, of which, with the fish, we made a hearty meal, before having lived principally on bread; the water was not quite fresh where we rested, therefore we had to send half a mile further up, for what we required for drinking. Washed clothes. About 10, p.m., when we were all fast asleep, it came on to rain very hard, so much so, that we were obliged to sit up, and cover ourselves with our four blankets, by putting a stick in the centre of each; it continued raining until nearly daylight, when we got our breakfast. At 9, filled our canteens and started for the Collie, keeping along the banks of the Preston, in hopes of increasing our stock of birds. Noon, arrived at the mouth of the Collie; commenced crossing the bar, but, to my great surprise, on both sides of the island, we had nearly four feet water. After crossing, gave the men half allowance of grog; walked along the banks of the estuary, in a native path, until $\frac{1}{4}$ to 2, when we halted, as there was every appearance of

heavy rain, and our remaining stock of bread being small, it made us anxious to keep it dry,—besides, the men were very much fatigued. We were fortunate enough to kindle a good fire before the rain came on, which was a great comfort, drenched as we all were, and we slept sound, although the ground was very wet under us.

Wishing to start early, breakfasted at half past 3, and at half past 4 started; the morning cold, and the brushwood very wet; kept the native path, and at day light saw the natives a-head, six of whom soon joined our party, and were quite delighted when they recognised two of the men and myself; they gave me to understand I came there in a boat pulling, which was the case the second time I saw them; they continued increasing in number, and constantly asked me for Mr. M'Leod and Dr. Simmons, by names they had been accustomed to call them; the latter appeared the favorite. After walking about half an hour, we passed a small point, where their fires were lighted, and I saw two women, of which I told the natives, which pleased them very much, particularly when they saw we did not go towards them. About ten minutes afterwards, one of them came to me, making signs for me to stop, which we did, after a great deal of pressing, and then gave me to understand they would take me to see the women, but to leave my men behind.

When they saw I understood them, and that our party had set down, they were perfectly satisfied, and took me about fifty yards, when I found I was amongst the women and children, amounting in number to fifty or sixty, and some fair looking, and others horrible to behold. The children were in general the finest I had seen, and

appeared to be well fed; I gave them necklaces and rings, which pleased them for the moment; after remaining about a quarter of an hour, we wished our *fair friends* good bye, and proceeded on our march, and to our surprise were soon joined by all the men and boys, with fishing spears, the women and small children being in the rear. After walking about two miles, and the men were satisfied the women were safe, they commenced fishing, and were particularly successful: we stopped for about ten minutes, when the natives were greatly alarmed by a greyhound I had, chasing their dogs into the midst of the women, knocking many of the children down; but on my calling her, she returned, which again put them in good humour. They continued with us, until we were obliged to leave the estuary, which they seemed to regret; giving us to understand, if we would remain, they would bring the women, and get us some fish, which I did not comply with, as I was short of provisions, with no prospect of getting more before reaching the Murray; eight of them, therefore, accompanied us upwards of an hour, when they departed: crossed a large swamp, and gradually ascended a well timbered country; soil, a sandy loam, with patches of ironstone.

After steering N. about six miles, we came to a large lagoon, when we found a fresh water spring, which induced me to halt for the night; saw many traces of emu and kangaroo. The next morning we started half an hour before day-light, and walked on the banks of the lagoon, crossing the points projecting now and then, when we came to some beautiful black mould. Noon, reached the head of the lagoon, having walked about fourteen

miles and a half; rested an hour, and continued our march, steering N. by E. one mile, over a rocky lime-stone country, with black sandy soil, when we came to two other small lagoons in succession. The walking being very bad, we steered towards the shore, and in an hour came to another lagoon, which I knew to be only twelve miles from the Murray, in a straight line: the men being greatly reduced from want of water and food, we bivouaced, and divided a very scanty allowance to each, the first we had this day; dug a well under a tree, and got water, but very brackish.

Started at day light, and having served out half an ounce of biscuit, and about a pint of tea, having about a quarter of a pound of bread remaining. The men complained much of their feet, and thinking they would walk much better on the beach, I steered for Cape Bouvard, and at 11, ascended the sand hill at the back, and found we were all right as to position; observed a bark standing in shore, made a fire as a signal to her, but, to our annoyance, she backed immediately. After resting for a few minutes, and serving out our last mouthful of bread, made the beach, where was tolerable walking, but which I am sure lengthened our march four miles; however, the prospect of reaching the Murray that night, gave the men fresh strength, and we marched without a check, until we arrived in sight of the entrance, where Mitchel was taken very ill, from drinking (as he said) the brackish water, but I think it was walking so very fast and long without food; I sent Mr. Skottow on to hail for a boat; after remaining half an hour, Mitchel was able to walk to the boat, and when we got him over, I had him put to bed, and before

night he was much better. Mr. Erskine was all kindness, and gave us all we wanted.

NOTE.

The hills passed over on the sea coast, afforded good pasture for sheep, particularly between the Murray and Port Leschenault.

ACCOUNT *of an Excursion to the North of King George's Sound, between the 26th of April, and the 4th of May,* 1831, *by Al. Collie, Surgeon.*

I departed, early on the 27th of April, from the settlement, by boat, with three attendants, Mokare, and two privates of the 63d regiment. On reaching the entrance of Oyster Harbour, the tide being very low, I spent some time in sounding the bar, which I found I could cross in not less than two fathoms; and I think I am quite safe in stating this to be the most water there is at the same height of tide. Inside the bar, in the narrowest part of the entrance, I could not help remarking the facilities presented by nature, for repairing vessels, and for loading and unloading, by the great depth of water, (three to five fathoms) within from five to seven fathoms of the sandy and rocky beach on the right hand going in. It is at this spot that wells have been dug, and vessels watered. These wells are close to the beach, and although partly filled up at present, and much overshadowed by vegetation, they contain good water; not, however, in such abundance as to overflow.

In directing my course to French River, for which the natives have two names, Ya-mung-up, and Hal-gan-up, and the mouth of which lies on the northward part of Oyster Harbour, in a line with Mount Clarence and Bayonet Head, I was obliged to keep well to the north, on account of the extensive and very shallow flats, which prevent

a boat approaching it in any thing like a direct course, from the middle of the harbour. By making a considerable detour, a channel can be followed of sufficient width for boats, and about eight feet deep, into the river, where the depth is also adequate to boat navigation.

In ascending the river, the channel lies in a northerly direction, with moderate windings to the east and west, for about two miles and a half, its breadth varying from two hundred to fifty yards, and altogether narrowing, as the distance from the mouth increases. In three or four places, it is contracted still more by the rocky islets, either destitute of or covered with trees. The banks are generally shelving, with a few flats occasionally intervening, but they did not appear to have much to recommend them, and two or three small creeks, which I observed to run back, were, by Mokare's account, salt.

The mahogany and red gum, of Perth, (the tyarreil and marré of the natives here) are predominant, and clothe, but in little stateliness, the low and the rising banks. At the distance I have mentioned, (two miles and a half) a streamlet of fresh water joins from the S.W., flowing, as I afterwards ascertained, between two heights of unequal elevation. The lowest one, which is on the N.W. side, is of very excellent soil, (about fifty acres) covered with thick, but at present, dried up grass, and very slightly wooded with red gum. The most elevated on the S.E. side, is of tolerable soil, (about 100 acres) a gravelly light brown loam, rather thinly wooded with the same species.

The direction of the river, ascending from this place, is, on the whole, N.E. easterly, making considerable and rapid windings for about two miles

and a quarter, although the direct distance cannot be more than one mile and a quarter, to the farthest part a boat can go. The breadth diminishes a little, and the channel is almost blocked up in several places, by small islands, and rocks under water.

The former aspect of the banks continues, except on the left, (the right hand going up) nearly half a mile beyond the fresh streamlet already mentioned, where there is a very pleasing and gentle declivity, thickly covered with dried kangaroo grass, some green wattle (the broomlike), and distant (by distant, I mean eight yards apart) trees of good size, of red gum. It is needless to tell those conversant with this colony, that the soil producing such vegetation, is of the best description. It extends 350 yards from the river, and about 700 along it.

Fresh streamlets become more frequent, but the river itself continues, at present, brackish, to the stopping place.

The stoppage is occasioned by the bed of the river being elevated by rocks, over which the water flows, in a small and rapid stream. A few yards farther on, the channel is again capacious,—the water deep,—and continues in this state, occasionally obstructed by fallen trees, for nearly a mile, when a like impediment to the former presents itself; and, although it is of short space, and the river widens and deepens above it, I consider all hope of rendering the navigation farther up available, to be finally destroyed, by a third and longer similar stoppage to the two first, about half a mile beyond the second.

Leaving the boat, and also the river, at the first of these obstacles, I took a direction N.E., which led me on the eastern side of the river, and almost immediately within sight of its bed. At the dis-

tance of three-quarters of a mile, I crossed a tolerable sized stream running to my left, consequently to join French River; it seemed well adapted for driving mills.

After proceeding N.E. six miles and three quarters, the course was changed to N. ½ W. for a mile, then to N.W. by W. for half a mile farther, down a hollow, to obtain water and stop for the night. This hollow appeared to descend to the bed of French River, the outline of which could be traced at a short distance to the N.W. From an adjoining elevation, the eastern of two conspicuous hummocks of Porrangur-up, bore N.W ½ W., and the eastern, apparently highest shoulder of the same mountain, N.W. ½ N. The surface walked over is slightly uneven; the elevated portions, which constitute five-sixths, are either sandy or stony, producing a tolerably close covering of low shrubs, and a rather thick wooding of mahogany and casuarina(she oak?) trees, the former of small size, and both much decayed and fallen; the depressed portions are a mixture of black sod and sand, in various proportions; swampy in the rainy season, producing no trees, a shrubby melalencat, a rushy vegatation, which will pasture cattle, but which is void of the soft succulency of good grass. The rock which protrudes, and, by its fragments, forms a general covering, in many places is of a clayey nature, of considerable hardness, produced by exposure, and increased, perhaps, by the fires, with which the natives seem to have repeatedly consumed the vegetable productions. It seemed to penetrate the ground to a very small depth, and it never forms large blocks

On the morning of the 28th, I followed a north course for a mile, then a N.N.E. one for one-fifth

of a mile, when, being on a declivity, inclining downwards to the west, I could trace the bed of French River at its foot, a very short way off, following apparently a S.W. by W. direction, for three miles, and afterwards a S. by W. one for a mile or farther. I continued N.E., E and N.E., skirting the river, for a mile and a half, in the gently inclining slope, at first varied with sandy elevations, and rushy hollows, which appear to have been partly covered with water in the rainy season, and in some of which there are the dry channels of winter streamlets; then uniformly on a soil diversified with brownish gravel and good dark coloured earth, that has produced a very fine crop of grass now withered and beaten down. Granite, which is the prevailing rock, where the soil is good, is sometimes exposed, either in solid or bare blocks, or in fragments, so as to render the surface stoney, but not to prevent a tolerable covering of grass. The extent of grassy land is about three quarters by half a mile wide, and the marré (red gum) trees being distant from each other, and also tall, open an agreeable prospect to the view.

After this, I went N.E. by N. half a mile, leaving the river, then N. by W. and N.W. by W. one mile over a sandy soil, with many stones of a hardened clayey nature already mentioned, producing some good sized mahogany trees, several stunted shrubs, to a stream, either a branch or the main body of the French River, small where a current existed, but wide where none was perceptible. The place is called Kâl-um-up by Mokare. According to him there is good ground to the N.E. three miles off, but without water in its vicinity, and his vague idea of distance decided my not going to look for it. My line of route now lay N. for one mile, and

N. by E. for two more, the ground being slightly varied with ascents and descents, and shewing very little good soil; afterwards a mile and three quarters N.N.E. and half a mile N. to a river which Mokare called French River, but which could only be a branch of it, unless he was mistaken in what we afterwards followed, and what he called the main channel. Half a mile before coming to this branch, I emerged for the first time from a wooded country, and enjoyed a view for several miles, W. N. and E. over slightly elevated plains, clear of trees; leaving this, and for the last quarter of a mile, I traversed a gentle acclivity, rising from the river on my right, unshaded by a tree, and bearing the remains of a most luxuriant crop of grass, and a few shrubs of green wattle. The soil is very good, and only interrupted in a few spots by the protruding granite. The native name of the ground is Noor-ru-bup. As the party stopped here for the night, the examination in detail of this spot occupied me till dark. (A rough sketch may assist in giving an idea of it: *see* Fig. 1 *on the Plate.*)

(A) is my tract of arrival at (B) our bivouac; (R) is the river, the bed of which was dry at the places where the tracts of examination (EE), and of departure (C) cross it. The magnetic North is indicated by the arrow point, and the distance between the lower and upper crossing places is about a mile and a quarter. The grassy and good soil, already mentioned as partly passed over, is contained between the faint line (*d*) and the river. The slope on the east side of it is sufficiently gentle for agricultural purposes, and it is a good brown gravelly soil, producing, however, but little grass. To the eastward of my tract the surface becomes stoney, being strewed in a great measure with

ragged fragments of an apparently recent siliceous formation, and ornamented with a whitish silvery-looking shrub (an endesmia?). The few trees which grow on this slope are similar in general appearance to the flooded gum of the Avon, although in reality different. The same species grows on the river banks, where is also found the same tree, which is by some called the flooded gum at Perth; the native name of the latter is moit, and of the former yeit.

On the 29*th April*, a north course for a mile and a quarter carried me over tolerably clear and very strong ground, to a ravine close on my left, and to a slightly excavated hollow in front, which I traversed for one-third of a mile, among dried kangaroo grass, on a good soil, unencumbered with trees or shrubs. It descends to the S.W., becoming slightly wooded, and looking very good, apparently, for a mile in that direction, maintaining a general appearance in breadth of about half a mile. I altered my course to the N. by W. for two miles and a half, during which the surface was nearly level, the soil a gravelly light loam, and the productions shrubby; when I had an unobstructed view almost on every point of the compass from a moderately raised eminence, and I availed myself of the opportunity to take the following bearings.

Mount Manypeak, (Hummock on the Western Shoulder) ..	S. by E. $\frac{1}{2}$ E.
Mount Gardener	S. $\frac{1}{2}$ E.
Eastern Height, or Shoulder of Porrong-u-rup	S.W. $\frac{3}{4}$ W.
Eastern of two conspicuous Hummocks, near the middle of Porrong-u-rup	S.W. by W. $\frac{1}{4}$ W.

Maggerip, a small Peak above the horizon, and western part of succeeding range, about 50 miles distant	N.W. $\frac{1}{2}$ W.
Mondyurup, distant about 17 miles	N.W. $\frac{3}{4}$ N.
Kowr-u-larrup, distant about 15 miles	N. by W. $\frac{1}{2}$ W.
Tood-ye-ver-up, distant about 8 miles	N. $\frac{1}{2}$ E.
Conical Hill (remarkable) distant 15 miles	N.N.E. $\frac{1}{2}$ E.
Western high Peak of Rugged Mountain, distant 22 miles	N.E. $\frac{1}{2}$ N.
Conspicuous Hummock on Eastern Shoulder of ditto	N.E. $\frac{3}{4}$ E.

These mountains, from Maggerip to Rugged Mountain (by the natives, Koi Kyeunu-ruff) inclusive, are very remarkable, by their rising far elevated above a continuous grouping of moderate hills which surround their bases. They all appeared destitute of trees, but were covered, especially the lower, in a mantling of green, and the country intervening between me and them presented no forest timber to my view. In a direction N.W. by W. $\frac{1}{2}$ W. a valley, or rather a plain, on a lower level than either side, stretched to the distant horizon, as if the smooth sphericity of that part of the globe had not been interrupted. This is the very slightly sloping valley of French River, partly bare and partly covered with trees; whereas to the south of it, the wavy surface that slowly rises to the northern foot of Porrong-u-rup is generally clothed in arboreous foliage. The clear country I had passed over this morning strongly

suggested a succession of similar soil, from its continuance in the same direction, and Mokare strengthened this idea by his declaration that it was well founded. His addition, too, that no water was to be found to the N.E. or N., and the hopeful prospect to the N.W., finished by determining me to direct my steps to the more inviting vale of Kâlgan (French River). I walked along this vale, or low plain, on a clayey loam, dry at that time, but bearing the marks of a winter marsh, that had produced a short and thin grass with a few shrubs. The white gums, for the first time, shewed themselves, affording a slight skirting on the gentle elevation of the northern side, and, as I advanced, demonstrated to a distance in front, by their thicker array, the situation and course of the river, on the banks of which I arrived, after a walk of two miles and three quarters from the station of the preceding bearings. At this spot, which Mokare calls Kamballup, I was a little astonished to see the water in the channel about sixty yards wide, but, on proceeding a few minutes upwards to its source, I was as much surprised to see neither water nor channel, for the latter had been filled with tall shrubs, now burnt, without any well defined banks. I went on for a mile and a half N.N.W., and then for a mile and three quarters nearly west, over a very indifferent soil, gravelly and sandy, with, however, a few interruptions of good, and came to the channel of the river, where the water stood in small and exceedingly brackish ponds. A little further on there was abundance of drinkable, although still brackish water in the channel.

I kept on the left (north) bank, and passed over, west, a fine gently swelling rise of gravelly but good soil, enhanced to the eye by tall and distant white

gums, for one-third of a mile, to another bend of the river, which still leaving to my left, I walked about W.N.W. for two miles and a half, over either a sandy or gravelly surface, bearing shrubs, in many parts burnt, and came again to the bed of the river where we first found a small and brackish pond, but immediately afterwards a large and tolerably fresh one. The party stopt here for the night, and whilst the evening meal was preparing I went to one of the highest eminences in the plain, three-quarters of a mile north; and as it was only covered with a few grass trees and low shrubs, my view was unconfined. The following bearings, with all the inaccuracies of a pocket compass, will assist in conveying a notion of the surrounding country:

Mount Manypeak (western hummock as before)	S.E. by S. $\frac{1}{4}$ S.
Ditto....Gardener	S. by E. $\frac{1}{2}$ E.
Eastern shoulder of Porrong-u-rup	S. $\frac{1}{2}$ E.
Eastern of two middle hummocks of Porrong-u-rup	S. $\frac{1}{2}$ W.
Top of western shoulder of ditto	S.S.W. $\frac{1}{2}$ W.
Western extremity of North Range (Maggerip)	N.W. $\frac{1}{2}$ W.
Mondgurip (distance nine miles and a half)	N.N.W. $\frac{1}{4}$ W.
Kowr-u-larrup (distance eight miles)	N.N.E. $\frac{1}{4}$ E.
Toodye-ver-up	N.E. $\frac{1}{2}$ E.
Western high peak of Rugged Mountain	E. by N. $\frac{3}{4}$ N.

Kowr-u-larrup seemed nearer than Porrong-u-rup, so that the width of the valley, or rather plain, between the smaller range of Porrong-u-rup on the south and the grand range on the north, may be something near sixteen miles. The N.W. part of

this plain resumes, in many parts, the arboreous covering, the general feature of this portion of Australia.

On the higher elevations the rock formation continues of the description already mentioned, the claystone partaking of a more or less ferruginous nature, and agglomerating with fragments of quartz, feldspar, and granite, which, although not particularly detailed hitherto, have been generally common. The lower eminences, however, often exposed a perpendicular, and still more frequently an excavated front of a fine and friable clayey sandstone, of a cream colour, fine, granular, and almost too little tenacious to be unreservedly recommended for building.

On the 30*th April* I ascended (if ascent it be entitled to) the right bank of the river W. ½ N. three quarters of a mile, then W. ½ S. and W. over one mile and three quarters of a good grassy inclined plain, ornamented with white gum; afterwards over a sandy and gravelly soil and height for one quarter; and then over, first, a plain of sandy soil, and white gum and yeit trees; secondly, a moderate elevation of sandy soil and shrub; and lastly, across a lower level of good soil, white gum, wattle and grass near the river, which, in its windings, opportunely crossed our path.

On the last-mentioned piece of good soil, Mokare detected and pointed out to me the footsteps of horned cattle and of a horse; they were not recent, but sufficiently evident to show that they bore the form attributed to them; and as a further confirmation, Mokare had previously told me that two bullocks and a horse had been near this some months ago, and seen by the natives, who informed him.

We crossed the channel and proceeded W. ½ N. one mile, and W.S.W. one mile and a half, through a generally open forest country, good towards the hollows, gravelly on the heights, but on both grassy, although on the latter the grass was thin, and on both much dried; to the river again, at a place called Moor-illup, much frequented by the natives of King George's Sound and Will tribe, and apparently quite as much by the natives of the two elements of earth and air. Here Mokare expected to find some of his neighbours, the Wills, whose place of resort this, he gave me to understand, is in a more especial manner, and from whom he expected further information respecting the cattle.

Not only at Moor-illup, but at every pond of the river where we stopped, the traces of man, beast, and bird, are strongly marked; and the great numbers of kangaroo, and several emu, not to mention a fair proportion of ducks, cockatoos, pigeons, &c. seen daily at this place, shew that both the hunter and sportsman would find abundant amusement, and the settler no slight acquisition to his larder. I ascended a very gentle elevation three-quarters of a mile W. from the ponds of Moor-illup, covered so thickly with white gums that I could not obtain any distant view (except a continued uniformity of country to the westward.) Its surface northward is gravelly and stoney, but on the south inclination, which is tolerably open, the soil at the bottom is good, and a hollow, not very wide beyond it, is filled with long grass and still green small rushes, affording even now tolerable feed. The river seems to run over this in the winter time, but I found no water above the ponds last mentioned, and Mokare maintained there was none.

May 1st.—I commenced S.E. by S. and soon

passed up a moderately inclined plane, that has nothing to recommend it; and after two miles and a half I walked along a broad belt of good soil for one mile. Fire had recently gone over its surface, and left only enough of wattle shrub to show that this had been the chief production; it has a gentle inclination, and is free from trees. The next two miles and a half was through mahogany trees, young and old; and over a very stony surface descending to the south, and a similar plain at its foot. I then altered our course to the W.S.W. for the hill of Yakkerlip, leaving a rich, low, grassy, and clear level space on my left, where the kangaroos shewed themselves in small herds. Walking about three miles in this direction, I passed over a brown and gravelly country, much encumbered with small mahogany trees and shrubs, with but little tolerable soil in the hollows, and came to a channel leading from Yakkerlip to the N. and N.E to join French River. Here was one large pond; it was otherwise dry for a very considerable distance.

Several eminences are comprised in the name of Yakkerlip, the highest of which I ascended S.E. by E. three-quarters of a mile, over a light brown and gravelly soil, as we advanced clear of trees, and producing some good grass, and took the following bearings:

Extreme of mountains seen to the N.W. ..... N.W. by N.
Tood-ye-ver-up ..... N.E. by E. $\frac{1}{2}$ E.
Extreme point of rugged mountain from E. by N. ..... $\frac{1}{2}$ N. to E. by N.
A conical peak near to the middle of Porrong-u-rup ..... S.E. $\frac{3}{4}$ E.
Top of western shoulder of Porrong-u-rup ..... S.E. $\frac{1}{2}$ E

Willyung-up ..... S. ¾ E.
Moor-illup (elevation ascended yesterday afternoon) ..... N. by W. ¼ W.
Pwakkenbak (a similar hill to Yakkerlip) distance five miles..... W. by S. ½ S.
Kai-mirn-dy-ip (a considerable lake, said to be salt) distance two miles and a half..... E. by N.

In descending the south side of the hill I found the slope rapid but the soil good, and the verdure fresh and succulent, sheltered, in addition to its aspect, by tall and straight red gums. As we approached the bottom, and after crossing a romantic ravine, on the sides of which the red gum excels any thing in the neighbourhood of King George's Sound, stunted mahogany trees and thick mahogany shrub succeeded, on a very stony surface, composed of small fragments of agglomerated lumps of clay, iron-stone, quartz, feldspar, &c., held together by a clayey ferruginous, friable sandstone, differing only by a greater proportion of ferruginous matter from what I described on the afternoon of the 29th.

Continuing about S. by E. we passed a deep channel, at which Mokare seemed astonished, being dry, and came upon a slightly hollowed surface, where water seems to stand part of the year, but we could find none, not even in a reedy swamp, except far down, in narrow deep holes dug by the natives. Mokare therefore conducted us S.W. for three-quarters of a mile, to a good sized and commodious well (native), one-sixth of a mile east of which I took the few following bearings, my view being very confined.

Yakkerlip (distance four miles and a half..... N. ¼ W.

Top of western shoulder of Porrong-u-rup ..... E. $\frac{1}{2}$ N.
Cone near the middle of ditto ..... E. $\frac{3}{4}$ S.
Eastward of two middle hummocks of ditto ..... E. by S.
Pwakkenbak ..... W. by N. $\frac{1}{2}$ N.

On the 2nd of May my course was about S.S.E. $\frac{1}{2}$ E. for four miles and a half, to a reedy swamp covered with water, then S.E. for five miles, when we came to the channel of a considerable stream, and followed its bank of tolerable soil for some distance, now only containing water in ponds Mokare said the name of the ground was Yarren-yung-rip. In continuing about S.E. by E., varying however occasionally, and having crossed from the left to the right bank of this channel, I passed two dry channels descending to the north, and after three miles farther march, came on the bed of the stream that I had left, and which I skirted on the right bank, first in the same direction and then inclining more to the eastward, for two miles more, during which the banks became high, rather steep, and the surface very stony (claystone). The eastern of the two middle hummocks of Porrong-u-rup bore N., and there was now an actual stream in the channel. I descended to a small meadow, of good soil, to bivouac, along with a party of natives that had accompanied us for the last few miles, and which were the first natives we met with.

May 3d.—My course was S.E. for four miles and a half to a small stream running to our right, and at a very short distance into French River; and then S.S.E a mile to the same river, immediately above where we had left the boat. The ground walked over is in general gravelly and sandy, with much mahogany shrub, mahogany and casuarina trees.

In returning down the French River from the boat stoppage, a few hundred yards W. by S. brought me upon a slope of good grassy land, about 100 acres, moderately wooded with red gum. From this to the fresh water streamlet (one mile and a quarter), the banks of which I described on the 27th, I found nothing eligible for the farmer; and I was scarcely more fortunate in proceeding about S. by W. to the bottom of Oyster Harbour, at some distance from the river, the greater part of the way a line of eminences intervening between us. Three-quarters of a mile before arriving at the harbour we came upon a stream of water flowing through a swampy and shrubby hollow, that affords a rough but green pasturage, even at present, and in which the stream is lost before it reaches the salt water.

Whilst dinner was preparing, and until the shutting in of the day, too short at this season of the year for exploring, I examined the height and banks on the right of French River nearest its mouth, and found them either a light gravelly loam, or very sandy, producing mahogany and casuarina trees, and an useless shrub.

The party stopped on the channel last mentioned, but so near its mouth that the water found in it was a continuance of the salt water of the harbour; but a native who happened to be with us procured fresh from some holes at a short distance.

May 4th.—I crossed the moderate elevation that lies to the westward of our bivouac, at a short distance from the beach to the mouth of King River, and observed it to be rocky, and wooded in a great proportion with red gum. A swampy and boggy hollow separates it from the highest ground in the vicinity, on the west and north of the embouchure

of the King. This hollow extends to some distance N.N.W., and contains fresh feed, even at this period of the year. After observing the considerable salt meadows on both sides of the lower part of the King, on which there is an abundant produce of rushy and now dried vegetation, that might have made tolerable fodder, I proceeded up its northern or left bank in a westerly direction, without following its windings, for three miles, to a crossing place, by means of accidental tree bridges over two nearly equal streams, which, by joining a few yards below, form the main river. The ground thus passed over is chiefly sandy, with several portions of a gravelly light brown loam, intersected with several streamlets of fresh water. The trees are mostly mahogany, of slender girth, with shrubs, and the surface is free of grass.

We breakfasted on the south side of the south branch, and Mokare informed us that the ground was named Tan-num-bang-i-war. A hundred yards further up there were numerous channels leading to this branch, but all at about that distance dry. The chief of them seems to come from Willyung-up through a slightly excavated valley, containing little shrub, and no trees larger than the Kingia Australis, similar to the grass tree, which very appropriately shades and adorns the head of its fraternal river.

In returning from the head of the King in a tolerably direct line to the settlement, I soon came to the same conspicuous granite rocks, in a watery hollow, leaving a grassy and open plain of about ten acres, and I should infer, good soil on our right I also passed a hollow of tolerable soil N. by E. two miles from Mount Melville, besides considerably rushy and green low grounds, adapted to pasturing

cattle, more advantageously perhaps in the summer than winter, where they may be too swampy.

On the 17*th May* I had an opportunity of ascending King River in a boat; towards its mouth it is shallow, and most so about three-quarters of a mile up, where the natives generally wade across. The least water we had was three feet at nearly high water, but the rise and fall seemed to be very little. Above this the depth is sufficient for boating; and the only obstructions are, scattered rocks in two or three places narrowing the channel, and making it intricate (but leaving sufficient water), and fallen trees, which can easily be avoided, or might be removed with facility, until the boat reaches the point of division into twin branches, which I have mentioned to be close to where the accidental tree bridges afford a passage across. From the boat I observed no decided indications of rich soil nor much pasture, except the salt meadows towards the mouth of the river. The first fresh water creek that I noticed is on the right bank, about two miles up (in a direct line), but fresh water abounds in the plain between this river and Mount Clarence, and a very short way farther up I found the river itself fresh.

The banks, a little way above the native's wading place, presents an inclination and height well suited to a horse-path for dragging boats; and for the purpose of landing and shipping goods, the head of King River, at the foot of Willyung-up, will afford the greatest convenience to the population of the interior.

On *June* 4*th*, I took advantage of a boat going to Coffin Island to look for seals, mutton birds (sooty petrel, procellaria fuliginosa), to obtain a conveyance thither. It is an elliptical and rather low

rocky island east of Mount Gardener; about a quarter of a mile in its longest diameter, and about five hundred yards from the main land. Its shores are everywhere rocky; in many places inaccessible from the steepness, and in almost all, from the continued lashing of the surge of the waves which roll in from the ocean. The landing is attended with the least difficulty a short way round the N.W. end, and on the north aspect, but even here the surf is, at the best, considerable, and often highly dangerous. The surface, a few yards removed from the cliffs, is composed of a thin covering of light loam and mould, producing the anthociras obovata, and another shrub, with a few herbaceous plants, and affording a warren for sooty petrel, penguin, lizards, &c., which have riddled the ground with their holes. That seals have come up and been killed in considerable numbers at one time, is confirmed, in addition to oral information, by the skeletons which still remain; but none of the party saw any alive at this time, and there was only one path traced by them in the shrubbery. The sealers were therefore so far disappointed, but the profusion of petrel amply compensated, as upwards of five hundred of these birds were caught by three persons in less than three days.

The rock, which a protracted stay afforded me abundance of time to survey, is granite of almost every variety of texture and appearance. Still it seems different from the genuine granite of the more anciently known world. An oxydulated iron ore and iron pyrites are distributed through its mass in grains, and found in the veins in even larger portions, not, however, in sufficient quantity to repay the miner.

Rock and other fish are plentiful, and several

whales (black) were observed at a short distance off.

June 5th.—I ascended Mount Gardener, although the weather was highly unfavourable for a distant view, unwilling to detain the boat another day. The lower hills on the foot of Mount Gardener are, like itself, destitute of large timber, exposing a not-unfrequently bare rock of granite, but for the most part, a clothing of short shrubbery, and occasionally, a dense thicket of taller brushwood. The soil is generally sandy, and only in a few patches interrupted by brown loam, into one of which, at the top of the mountain, I put some almond nuts. I had previously sown several, and castor oil, and other seeds; and one of the men had sown a variety of flower seeds on Coffin Island.

On the lower part of the mountain, looking to Coffin Island, and nearly in a line from the island to the Peak, the usual calcareous formation of the S.W. coast makes its appearance, rising seemingly in a vertical stratum of little thickness, to the surface on the south margin of a deep ravine. The same formation is also apparent a little N.E. of this, forming a superficial recumbent incrustation.

Mount Gardener, under which is to be included the lower hills, resting on the base of the most conspicuous, is joined to the mainland by a low and level neck containing several lakes, the nearest and apparently largest communicating by a winding channel with the bay to the N. and N.E. It is said to be brackish.

This bay I endeavoured to examine on the 6th, but the weather would not permit, and on the 7th, the whole party, tired of bivouacing, and a

little alarmed, perhaps, at the great risk our boat ran of being stove the previous night, decided on attempting to return to the settlement, which we accomplished after a very tedious pull. From what I could see, however, of the bay referred to, it is spacious, of sufficient depth of water, and sheltered, unless for about seven or eight points of the compass, to the eastward. A convenient boat harbour was described to be in its S.W. side; and very material shelter would be afforded between Coffin Island and Mount Gardener, if the dangers be not too great under water. Mount Many-Peak, from Coffin Island, presents the same appearance as Mount Gardener. Water, I am informed, runs down its side in streams to the sea, and there is more than one boat harbour at its bottom, but neither bay nor harbour for shipping near it on the N.E.

On *June 15th*, I went to the south side of Princess Royal Harbour, and was much satisfied to find limestone in two, if not more, places, projecting in low cliffs on its shores, either close to, or near, groves of trees, which will afford fuel for some years. Lime has hitherto been almost entirely procured from shells. The two large groves of trees adjoining the beach, one a little S.E. of the remarkable sandy patch, and the other about a mile and a half S.E. of this again (both denoted in the common chart), stand in good soil resting on granite, and are composed of large trees of red and blue gum, of reit, and a few mahogany. A copious spring, formed into a convenient well, at the first affords a constant current of excellent fresh water; and a moderate sized and rather rapid stream, at the second, not only presents the same

advantage, but would turn several mills. They are both to be approached by light boats, and even a deep one can go within some fathoms of the first.

The plain of considerable extent, but varying in breadth between the south side of the harbour and the sea-coast range of hills, is, with little exception, destitute of large timber, but thickly covered with small shrubs, rushes, or rather scirpi, which make no despicable food for cattle, and possess the advantage of being verdant and good, throughout the protracted droughts of summer. The soil is very sandy, black loam and mould, similar to that in the hollows at the settlement; very retentive of water, and therefore, in the advanced months of winter, marshy, although at present still dry. The hills are shrubby with hollows of pasture.

The whole of this irregular tongue of land appears fitted by nature for pasturing flocks and herds of cattle, on their first importation, and one or two persons, at its western part or root, could readily prevent straying. A fresh-water lake, about four hundred yards from the S.E. extremity of the long sandy beach, that runs from the point where Mistaken Island nearly joins the mainland, round the western part of the sound, may, at some future period, become highly advantageous as a watering place for large ships and numerous fleets. Wood for fuel is, however, here very thinly scattered.

The upper and northern part of the range of hills, looking to the plain before mentioned, often exposes, particularly on the slope, the peculiar calcareous formation of the S.W. coast, and seemed, from a superficial examination, to afford a lime-

stone as well as the lower cliffs on the beach, freer from siliceous sand than those in the vicinity of Swan River.

In the winter season, a marshy declivity, W.S.W. of Seal Island, sends streamlets of fresh water to the beach, where an American vessel once took in her water.

LETTERS FROM MR. DALE, *giving a summary description of the Country passed over in going to Mount Bakewell, and, also, in an Expedition to examine the Country to the North and South of that Place.*

Mount Bakewell, September 19th, 1831.

SIR,

I BEG leave to report to you, for the information of his Excellency, the arrival at Mount Bakewell of the expedition which he was pleased to honor me with the conducting of across the Darling Mountains.

In crossing the range, our progress at first was more slow than was anticipated, in consequence of the heavy rains which for the first three or four days retarded our movements; but the weather having since become favourable, we were able to travel more expeditiously, and the party arrived here on the morning of the 16th, (the 11th day after our departure from Guildford) in good health and spirits.

From the nature of the country, I was induced to alter in a slight degree the line of direction which it was first proposed to follow, and it was satisfactory to find that the course pursued brought us directly to Mount Bakewell, the distance of which was found by the measurement to be forty-two miles from Green Mount, which nearly agrees with what I had previously estimated it at. It is considered that the line which I have now marked out, is favourable for a road, it having passed through several fertile valleys where there was an abundant supply of water, and over considerable tracts of level ground; the only serious obstacle

being a broad branch of the Helena, across which we were obliged to throw a bridge.

Since my arrival here I have, in conjunction with Mr. Bland, fixed upon a spot, which was considered most eligible for the purpose required by his Excellency. The place chosen is nearly at the distance of two miles south from the summit of Mount Bakewell, while the high land approaches within a few hundred yards of a broad and deep reach of the river. This spot was selected after a careful examination of the ground adjacent to the mount, as it appeared doubtful whether a constant supply of water could be procured except in the river.

Having now refreshed our horses, I purpose tomorrow, in compliance with the wishes of his Excellency, to proceed, accompanied by Mr. Moore, to the southward, towards the source of the Avon, which, when I shall have accomplished, I hope, on my return to Mount Bakewell, to be able to trace that river the desired distance to the northward.

I am, Sir, &c. &c. &c.

To J. S. Roe, Esq.,
Surveyor General, Perth.

Perth, October 14, 1831.

Sir,

I have the honor to transmit to you, for the information of his Excellency, the result of an expedition, which was undertaken by his direction, on the 20th ultimo, for the purpose of examining the country, to the extent of fifty miles to the north and south of Mount Bakewell. As nothing of importance has been discovered, that would render a journal sufficiently interesting, I shall confine my-

self to a brief outline of our excursion, referring you (should a more detailed account be required) to the notes which I have kept on the occasion.

Having already communicated to you my observations on our route as far as Mount Bakewell, I proceeded from thence on the 20th ultimo, accompanied by Messrs. Moore and Thompson, and one soldier, to explore the country, according to my instructions, for fifty miles to the S.S.E. towards the source of the Avon River; in five miles, after having visited a singular cavern, (alluded to on a former occasion,) we crossed to the opposite or eastern side of that river, at a ford where it was about three feet deep, and running in two channels to the north. The country here was of an open forest character, being lightly timbered with different varieties of the eycaliptus or nut tree, (which I have previously described, and which abounds to the eastward of the range,) resembling, in its growth, the apple, and in its scent, the sandal wood; the casuarina, and several species of the wattle. The soil on the low lands was a red loam and clay; on the uplands and more elevated grounds, there was a sandy loam of a hazel colour, in some places of an extremely friable nature, and covered, generally, with a luxuriant vegetation. The same description of country prevailed to the distance of twenty miles, to the south of Mount Bakewell, when we crossed a vein of eight or nine miles of hard and barren looking clay; the water, in the course of the river, being brackish, and in some places salt. The appearance of the soil, however, gradually improved, as we approached the intended site of Ashbourne, and continued to present the same character, till we had penetrated as far as sixty miles to the S.S.E. of Mount Bakewell, when we turned to the westward

for twelve miles, over an undulating grassy country; and after crossing a large tributary stream, from the S.E., we again fell in with the river, flowing to the north; it was at this place, about twenty feet broad, and seemed to have its source at a considerable distance to the southward.

During our progress down the left bank of the river, on our return to Mount Bakewell, the aspect of the country was similar to that which we had observed to the southward of Beverly; where, as we had before noticed a singular interruption to the stream of the river, we stopped to ascertain the cause, and found, upon examination, that it was absorbed in a sandy bed, and had ceased to flow, just above where the apparent channel was occupied by a long pool of salt water. On finding this termination, our attention was directed to what had previously been considered a tributary stream, which joined what was supposed to be the main branch, about eighteen miles from Mount Bakewell.

Having from this returned to the settlement at York, and procured a fresh supply of provisions, we again proceeded to the junction of the two branches of the Avon, and found the soil, for 15 miles up the right bank of the western one, in general of a better quality than that on the corresponding space of the eastern branch. The river here appeared to issue from springs in the low grounds, but on ascending a hill we observed a continuation of its valley among the Darling Range.

Its course having led us very much to the westward, our direct route in returning was far back from its bank, and passed over a sandy district to within eight or nine miles of Mount Bakewell, when the country assumed its grassy and undulating character. On the 3rd, after having allowed

our horses sufficient rest, we left the settlement to examine the country, according to my instructions, for 50 miles to the N.W. This line for 18 miles from Mount Bakewell, conducted us, at some distance from the Avon, over a good pasture country, and afterwards for twelve miles along its banks, when its valley became more contracted and the hills more precipitous, though the soil still retained the same character. The river here turning abruptly to the N.N.W., we crossed it, and continued our line over a rocky country, gradually rising into Table Land, and descended into a rich valley; on proceeding one mile further, we came to an extensive swamp, containing a large body of water, and having several marks of cattle on its margin. From this swamp we traversed a sandy and level plain, in which we observed numerous pools of fresh water; it was bounded on the E. by high hills, which appeared to us to be a continuation of the Darling Range; and on the W. by hills of more moderate elevation.

Estimating our distance now to be fifty miles from Mount Bakewell, we altered our course to due W., and passing over a sandy district of fourteen miles, we arrived within sight of the plain, which extends from the Darling Mountains to the sea coast, between fifty and sixty miles to the N. of Perth.

Proceeding from this, in a southerly direction, along the base of the range, we crossed several small streams issuing from fertile-looking valleys, and at the distance of nine miles arrived at a river, which, from its direction, and the body of water it contained, seemed likely to be where the Avon discharges itself upon the plain. Having ascended for four miles before we could ford it, we found

the soil on its banks rich, and the vegetation luxuriant.

The remaining part of our excursion to Mr. Bull's, at the head of the Swan, afforded nothing worthy of observation, with the exception of a district of two miles in extent, and ten distant from that place, where limestone shewed itself in many places on the surface.

GENERAL REMARKS.

Having, upon two former and distinct occasions, given a description of the soil and nature of the country to the eastward of the Darling Range, little now remains to be observed upon.

The only singular feature we met with, being an inland lake of fresh water, or perhaps a reservoir of the river, about 30 miles to the S.S.E. of Mount Bakewell, it varied in its breadth from sixty to seventy yards, and was five or six miles in length. Upon this we saw an immense number of ducks, swans, and other water fowl. We also found a small and beautiful animal, which appears not to have been before discovered: its size was about that of a squirrel, and its colour of a yellowish cast, with light and dark shaded stripes across the hinder part of the back; its tongue was very long in proportion to its body, for which reason we supposed it was an Anteater.

It may also be worthy of remark, that numerous parties of natives were seen, and in no instance was any molestation offered, and in general they evinced a very friendly feeling.

I am, Sir, &c. &c. &c.

(Signed) R. DALE,
Ensign 63d Regiment.

To J. S. Roe, Esq.,
Surveyor-General.

MR. DALE'S JOURNAL *of an Expedition from King George's Sound to the Koikyennuruff Range of Mountains.*

Albany, King George's Sound,
January 29th, 1832.

HAVING been requested by his Excellency to proceed to a high hill named Toodyeverup, near the middle of the Koikyennuruff range of mountains, to ascertain its nature, and that of the adjacent country, and also, if possible, to find out whether the Kuik* and Quannet, two kinds of grain described by the natives of King George's Sound, as used by those of that part of the country for food, grew in the vicinity of the range, I left the settlement on the morning of the 21st inst., accompanied by Mr. Clint, three soldiers, and Nakina, a native of King George's Sound, and followed for the first six miles a native path, which conducted us to a crossing place over a branch of King's

* Several of the natives of King George's Sound tribe describe these grains; the first, or Kuik, as growing on the north and eastern foot of Koikyennuruff, and the latter, or Quannet, to the N. east of Koikyennuruff, and also on the northern base of Toodyeverup. None of them have seen these grains, but they describe the stalks on which they grow as being from six to eight feet, the size of one's finger, with protruding long ears, which are pendant from a succession of joints. The Kuik they say resembles our rice, and the Quannet grain is compared to a large pea for size. Their account is that the White Cockatoo Tribe, who inhabit the district, eat the Kuik raw, but beat the Quannet tied up in their skins, bake it, and cook it in the ashes, like a damper.

river of considerable size, on the eastern side of Willy-ung-up. At half-past 11 o'clock, we reached, after meeting with numerous small streamlets, the principal branch of that river, which we forded at a spot where it was flowing to the north-east, between closely wooded and steep banks, covered with a scrubby vegetation. We halted here till half-past one, and on resuming our journey, arrived, after walking four miles, at an extensive swamp, which Nakina informed us was called "Trow." One mile and a half beyond this, we bivouaced at a fine stream of water running through deep pools to the eastward.

The district we traversed to-day was very indifferent, although some patches of good land and grass were observed. We estimated that we had advanced twelve miles in a direct line from the settlement; the actual distance we had walked being about seventeen.

On the 22nd, we proceeded five miles, preserving a N. by E. course, to a large lake with an island in the centre called Morandee. As Nakina informed us that we should not find any water till we reached the Kalgan or French river, distant about eleven miles, we stopped here for two hours. From Morandee we proceeded over hills of moderate elevation, ascending gradually the eastern side of the Porrongurup Mountains, from which the following bearings were taken:

Mount Clarence	N. 195° E.
Mount Manypeak	152
Mount Gardener	151

A quarter of a mile further on, we obtained a view of great extent, the after-mentioned objects being very conspicuous:

Toolbrunup	N. 19° E.
Koikyennuruff	45°
Yungeunner (Conical)	37°
Mondyurup, (a hill of the Koikyennuruff Range)	12°

From Porrongurup we descended into a plain of considerable extent, with a dry water channel passing through it, the soil of which was composed of a loam of a light sandy nature, with tolerable herbage. In our progress towards the river, we emerged from the dense forest through which our road had hitherto lain, into an open country, almost destitute of trees; a continuation of the plain mentioned yesterday being observed to extend to the north and south of Porrongurup to the Koikyennuruff Range, and to the east and west as far as the eye could reach. On arriving, in four miles, at some pools of brackish water, we stopped to breakfast, and filled our kegs with sufficient for one day. One mile N. by E. from this, led us to the Kalgan, which, at this season of the year, was composed of a chain of brackish ponds. The ground near it sometimes rises into flattened eminences of little elevation, and of inconsiderable extent, and a narrow border of flooded and white gums is the only indication of your approaching the river. The view, however, that presents itself, of the bold and varied outlines of the two ranges of mountains, which I before mentioned, gives a character to the scene, which is otherwise extremely monotonous.

23*rd*.—On the northern side of the river, the bed of which declines where we crossed it to the S.E., at a distance of four miles, and immediately after having killed a kangaroo, we fell in with a party of the White Cockatoo and Will Tribes, Nakina act-

ing as our interpreter. One of the former, on being told where we were going, and asked where there was water, consented to accompany us, and conducted us to an opening in the range on the western base of Toodyeverup, which these natives pronounced Toolbrunup, where we found a deep channel with ponds of brackish water, but even this was preferable to the Kalgan.

As the mountain seemed the most accessible on the side towards us, I decided upon remaining here for one day, for the purpose of ascending it and examining the adjacent country.

Soon after daylight, accompanied by Mr. Clint, Nakina, and the native, whose name he told us was Armie, I set out to ascend Toolbrunup, (distant about three miles). On arriving at the base, we found a small spring of excellent water. In two hours from this, after climbing from rock to rock, I reached the summit, which I should conceive to be elevated nearly 3000 feet above the level of the sea, the steepness of the ascent proving too difficult even for Nakina and Armie, who could not be persuaded to proceed more than half way up. The clouds in which it had been enveloped since our arrival—having cleared away just as we had gained it—the panoramic view which was thus obtained of the country, for many miles in every direction, did not present any object of importance; the principal feature being what appeared a dead level, no hills of any magnitude being visible from N. to E.S.E. The surface of this immense plain was diversified with open downs and extensive forests, and with a great number of bare spots, which were supposed to be salt lakes, from their resemblance to some we had passed near Toolbrunup. Towards the sea-coast, the country was mountainous, but the

native fires in that quarter materially obstructed our view. From this elevation, a considerable number of angles and bearings were taken; the most important being—

Mount Hallowell	N. 231° E.
Talyuberlup (a high hill three miles distant,)	265
Mount Manypeak	167

From latter—Angles to right.

East Hummock of Porrongurup	42° 35′
Bald Head (hazy)	18. 35
Mount Gardener	8. 25
Mount Barker	67. 27
Yakkerlip	70. 35
Mount Lindsay	72. 32

Angles to left.

Peak of Koikyennuruff	66.

25*th.*—On our return homewards, our course was more to the westward, and we reached a lagoon after a fatiguing day's journey at the northern base of Porrongurup, which was called, by a party of the Will tribe who paid us a visit, Nicnarup.

On the 26*th.*—Two miles brought us to the gorge in the latter range, and we were exceedingly gratified, on descending the southern side, in discovering a rich tract of land covered with grass, which, even at this season, was quite green, and with gum trees of a gigantic growth; this valley, which resembles those at "Mount Bakewell," was supplied by a spring of delicious water. The richest part of this tract was about three-quarters of a mile in breadth, and extended to our right and left

along the side of the range. The ascent and descent of the gorge is by no means abrupt, the slope on the southern side not being too great for the purposes of agriculture.

On the 27th, we came upon the road which has been commenced towards Swan River, about ten miles from the settlement, where we arrived at one o'clock p.m.

GENERAL REMARKS.

In taking a retrospective view of our proceedings, and in describing the general appearance of the country, the nature of its soil, as well as of the different specimens collected, it will be sufficient to mention, with respect to the first—viz. the appearance of the country, that from King George's Sound and from thence to the Koikyennuruff Mountains, and the very distant land seen to the northward and eastward of them, is one vast plain, covered for twenty miles from the settlement by a dense forest of mahoganies, banksias, &c.; from this to as far as we penetrated, the country is open, and almost destitute of trees of any magnitude. These districts are watered by the Kalgan and King-rivers, the numerous tributaries of the latter supplying an abundance of fresh water, but the former, where it was seen by us, was a series of brackish ponds. Several salt marshes were also observed in the neighbourhood of Toolbrunup. The relative positions in which the best land was seen, I shall describe as follows:

The first that was met with was in descending the north-eastern side, and along the base of Porrongurup; the next was on the banks of the Kalgan; and the third, which was exceedingly rich, commenced on the southern side of the chasm of

the last-mentioned range. We were unsuccessful in our endeavours to discover the Kuik or the Quannet. The answers of the natives, from whom I had hoped to gain some information to our numerous interrogations on the subject, were generally so very vague, that it was impossible to place any reliance upon them; but it does not appear that they grow in the neighbourhood of Toolbrunup.

The Porrongurup and Koikyennuruff ranges rise out of these plains; the base of the first extending about thirteen miles in a longitudinal direction from nearly E. to W., and the whole, as far as I could see, composed of granite, the blocks on the top being very conspicuous. The latter, which was thirty miles long, and of an average breadth of four, had its base strewn with small fragments of granular and milk quartz, whilst from half-way up the mountain to its summit, nearly horizontal strata of clay-slate and granular quartz, succeeded each other, the former being about eighteen inches, the latter four feet thick.

(Signed,) R. DALE,
Ensign, 63rd Regiment.

ACCOUNT *of a short* EXCURSION *from Albany up French River, by A. Collie.*

February 9th, 1832.—After crossing King's river at the usual wading-place of the natives, leading a small pony that sunk so deep in the mire as to render it very doubtful that a heavier horse would get over, the following bearings were taken from station A. on the east side of the lowest north bight of the river.—(*see Fig. 2 on accompanying Map.*)

Willyungup broke a summit	280°.	15′
A high sloping bank at the bottom of Oyster Harbour, formed by the southern extremity of a conspicuous hill (*a*)....	105.	45
A lower elbow west of the former (*b*) ..	97.	
Point Henty (*c*)	95.	
North part of bend of river, where there is a prominent large stone (*d*).....	27.	45
Middle of southern elbow (*e*).....	182.	45
Conspicuous bare rock near the middle of the higher part of the slope of Pakeillerup	118.	30
Western bend of river (*f*).....	266.	

On the western side of the hill before mentioned, at the bottom of Oyster Harbour, in a place about one-eighth of a mile from the beach, the bearings hereafter noted were taken:

Garden Island	185°.
Low extreme of eastern side of entrance of Oyster Harbour	188.
The northernmost high projection on the	

west side of Oyster Harbour, and first south from Point Henty..... 190°
Mount Clarence 216

Station B is about one-sixth of a mile south from the native path that leads from the crossing-place, already mentioned, of King's River, to the natives' crossing-place and huts, where boats are stopped at low water on the Kalgan. I afterwards followed this path, passed a native well containing clear water, and then a small stream, and in little more than half a mile from station A, crossed the channel now dry, which I noticed as running into the bottom of Oyster Harbour on 3rd of May last, during an excursion I then made up the Kalgan.

After walking about one mile and three-quarters from the path mentioned, at some distance from and out sight of the Kalgan, I came to Mr. Cheyne's grant, to the stream in it, and to the river itself. The valley, I observed, to extend at first in an irregular western direction for nearly three-quarters of a mile. and then N. 322° E′; and having proceeded in the latter direction for a mile, or thereabout, I saw Mount Gardener bearing N. 125° 50′ E.; and five-eighths of a mile further, in the last-named direction, 322°, I observed the bare rocky patch of Pakeillerup, the bearing of which I took from point A, N.154° 45′ E. The valley terminated here, having sent off a small branch to the west a little before. From Cheyne's streamlet to lower boat stoppage, along the native path, I calculated the distance to be three-quarters of a mile.

February 10th.—Our party set out, ascending the right bank of the Kalgan from our bivouac, which was on the elbow immediately above the upper boat stoppage, crossed the entrance of a small stream coming from our left, the same which was

first passed when I had the pleasure of accompanying Mr. Roe on a short exploring excursion a few weeks since; then traversed a small flat, encircled by an elevated terrace similar to the flat where we bivouaced, but distinguished from it at present by the remains of a native Hut in a good state of preservation; some time after, and at a mile's computed distance from our bivouac, we passed the gorge of a deep gully with a dry channel in its middle, and in a few yards more the Kalgan, at a place where its waters flow over the projecting rocks of its bed. These rocks are an ironstone or flinty slate, but the banks, which rise above the river, are clay ironstone, or a ferruginous and reddish freestone. The soil passed over from the lower boat stoppage is very sandy, but producing a good proportion of grasses and other herbage, and thickly wooded, for the most part with the marrée or red gum. We ascended the left bank of the river, and after half a mile came to a valley and plain of fine soil and feed, having a small channel, partly dry, in which the water had flowed to the Kalgan. We ascended a moderate elevation, and continued pursuing a N. by E. course for two miles, to a swampy valley then one mile and three-quarters N. by W., and one quarter of a mile N.E. to a valley of tolerable soil, and a good deal of pasturage, where there was a moderate stream, and on its banks, at a common crossing place, a cheveaux-de-frise of wooden spikes, finely pointed, covered thinly with the resin of the grass-tree, and directed to each other and to the bank opposite to that in which they were fixed. They formed an angle with the plane of the horizon of about 50° or 55°, and no doubt were intended for staking kangaroo, which, being pursued on on side of the stream, would select their accustomed

crossing-place to evade their pursuers by gaining the other.

Three-quarters of a mile from the last stream, in a north direction, I observed the eastern of the two middle hummocks of Porrongurup N. 334° 45′, and the summit of the eastern shoulder of the gorge 339° 30′. A quarter of a mile further, in the same direction, we came to the Kalgan, and having continued in its general direction N.N.E. two miles and a half, crossing some small streams, we arrived on a slope of dark gravelly soil. About two miles further, observing an occasionally deviating course N.N.E., I obtained a sufficiently clear view to ascertain that the eastern gorge of Porrongurup bore 315°, the eastern hummock 313°, and the northern summit, now seen standing out from the rest of the mountains, 310°. A sixth of a mile further I could see the Kalgan valley serpentining with gentle bends for about three miles N.219° 30′ E., and then apparently three points more easterly. I looked in vain for some hill in the vicinity of the Sound. The atmosphere not only being very hazy but thickened with the smoke of native fires, we now descended half a mile obliquely to lunch on the bank of the river at half-past 1, at a place where we saw the droppings of horned cattle, and where I found a granite rock having garnets embedded. Five minutes' walk from this we entered upon the fertile slope of three quarters of a mile, I described in my former excursion, on the 28th April, 1831, and found its extent still greater than I then observed. The river, at its northern boundary, makes a sudden bend to the eastward, which I ascertained more exactly to be N. 299° 15′, whilst from the same station C, the eastern summit of the gorge of Porrongurup bore 306°, and the western summit

of that mountain 302°, the hummocks being concealed by the eastern summit of the gorge.

Continuing nearly north from this station (C) about half a mile, the ground rising considerably, and being of tolerable soil, I had these bearings from station (D); eastern summit of Gorge of Porrongurup, the only point seen, 300°; a hill towards the Sound, obscure, 220°. Two miles N. $\frac{1}{2}$ E. from point (D) over the feruginous claystone, commonly called iron-stone of the country, I took the bearings of the mountains of the Koikyennuruff range that had presented themselves, not yet certain of their names, thus:—(*see Fig.* 3 *on accompanying Map.*)

Hill T	Mondurip	332°
Hill M	Panganoe	336
Hill Y	Ditto	346
Eastern Eminence of Porrongurup (not the summit of the Gorge)		296

Two miles further N.N.W. brought us to the river in front coming from the east, which direction we took for a quarter of a mile, and stopped for the night on its bank, opposite an isolated conical hill, partly covered with trees and partly bare rock.

February 11*th.*—We ascended the river in a S.E course for one-eighth of a mile, when I saw the following mountains of the Koikyennuruff Range and also Porrongurup (place uncertain) 288°; Toolbrunup 5°; and two hills, bearing, the one 7° 50′, the other 12°; Flattened conical hills (Yoong-giamere of Mr. Dale,) 17° 50′; and the hill of last night's bivouac (distant one-sixth of a mile,) 340°

These bearings were taken from station F, and one-sixth of a mile further, at station G, the east summit of Porrongurup, 285° 15′.

The Western Peak, now visible off the Koikyennuruff Range Mondurip	331°	15′
Hill T Panganoe	343	43
Hill Y (Talyuberlup)	348	20
Toolbrunup	3	5
Bivouac Hill	307	50
Station F	236	30

After going N. by E. ½ E. for three-quarters of a mile, the eastern part of the distant range came into view where a conspicuous hummock low down, near the eastern part of the base of Koikyennuruff, bore 39° 5′.

The Summit of Koikyennuruff	31°	30′
Toolbrunup	2	50
Western extreme Peak of the Range Mondurip	331	
Eastern Summit of Porrongurup Gorge	281	55

One-fourth of a mile from last station, that of H, on a N. 39° 5′ E. course, we encountered the river coming from E.S.E., which direction we took, and then S.E. by E. for half a mile, rounding to N., which we kept for one mile and a quarter, when, being joined by three natives, and attaining a considerable elevation, in a country with very few trees, I availed myself of the opportunity to take bearings of several places not seen before, in conjunction with others.

Western Peak, or Hummock of Mount Manypeak	154°	10′
Eastern Height Porrongurup Gorge	273	30
Toolbrunup	3	20
Bivouac Hill (Ma-tyee-tyip) of the natives	203	15

Ram-liei-up, a moderate hill in the plain, (distant twelve miles) 158
Mooleeup....ditto....(thirteen miles).. 166 30

The bend of the Kalgan, which has received the name of Moorrulup, was now within view before us; and in descending to the river we passed over the peculiar siliceous formation, for the extent of a few yards, which I formerly noticed. At the present time I found it on the S.W. side and left bank, whereas I discovered it last year on the opposite side only. The specimens I now collected presented the indubitable impressions of shells and other organic remains. Having crossed the channel at a rocky and dry place, we ascended the heights on the north side, whence I had the following bearings:

Warrecup, just seen above the horizon ..	99°	50′
East of two Hummocks on eastern side Mount Manypeak.....	147	50
Western and highest Hummock, Mount Manypeak	154	30
Mount Gardener	172	
Eastern Hummock of Porrongurup Gorge	263	30
Westernmost of two Peaks (Madyé-rip) my former Magerip (Madyerowe of these Morrulup natives) of the Koikyennuruff range	321	
Extreme western Peak of former observations, (Mondurip or Kaildarrup of Morrulup natives)	329	50
Next Mountain east (M of former observations).....	341	20
Tal-yoo-bal-up.....	348	30
Toolbrunup	5	45
East Hummock of Koikeynnuruff	45	
Crossing-place at Moorrulup	79	

Proceeding N. ½ W. three-eighths of a mile, and descending to a valley that curved from west to east and round to Moorulup, and which I now only ascertained to be the curvature and continuation of the Kalgan, we crossed its bed in so many places dry, and with so little mark of the channel or banks of such a river as the Kalgan, that had I not been able to trace the connexion of this, with the parts above and below, I should not have been satisfied of its identity. From having seen a number of emus at this place, it may be designated Emu's bend or beach.

A mile further on, in a northerly direction, we came to the ravine and valley of good soil, mentioned on the 29th April in my last year's excursion, but found the latter of smaller extent than I then thought; however, from last night's bivouac to this valley, the ground is, on the whole, better than on either side; the elevations are considerable, but little encumbered with trees; the rock mostly granite, and soil a gravelly loam. Keeping to the N.W. we arrived at the river, after walking about three-eighths of a mile further, and skirted it for a few hundred yards, where its channel was deep, wide, and filled with water, to a place where it became narrow and the water interrupted, affording a place for crossing, of which we availed ourselves, and changed our course outward for one in returning; and having advanced one mile one-eighth in a south-westerly direction, I obtained the following bearings from . K:

Western Peak of Mount Manypeak	152°	
Mount Gardner	168	50′
Eastern Height of Porrongurup Gorge..	253	30
Toolbrunup	9	20
Emus bend or reach.....	114	

Having deviated westerly during the last mile to gain an eminence, I observed the eastern height of the Gorge of Porrongurup to bear .... 270° 15′
Western Peak of Mount Manypeak 145 20
Toolbrunup 11 30

From station (L) to station (M), two and a quarter S.S.W.; whence east summit of Porrongurup bore 291°; and from station (M) three quarters of a mile to station (N), where the same eminence was observed, 304°, and the eastern shoulder of eastern part of
Porrongurup (*see Figures* 4 & 5) ..... 311° 25′
Summit of east. shoulder of Porrongurup, 306 20
and eastern slope 301
Toolbrunup 13 25
East Hummock of Koikyennuruff before taken 43 40

One mile and a half S. ¼ E. from point (P.) where I now had a view of the real eastern summit of the Gorge of Porrongurup, bearing 315° 10′, as well as of the eastern of the two hummocks, which was 311° 5′; and of the western summit, bearing 308°; and of the eastern summit of the three preceding stations 322°; I noted the following outline: (*see Fig.* 6 *on accompanying Map.*)

One mile in advance S. by E.; and one mile S.S.E. brought us into an extensive hollow, from which Mount Gardener bore N. 150°. E., and the eastern summit or height of the Gorge of Porrungurup, 327° 30′. One third of a mile S.S.E. and two-thirds S.E. down and across the hollow, and along a fertile grassy slope, brought us to the banks of the river where we stopped.

The ground passed over on this side of the river is generally sandy, covered with trees and shrubs on the heights and in the hollows, having a thin

surface of clayey sand, producing rushes, cypress grass, and similar tough and hard vegetation. We crossed no streams or channels, but the water evidently stands for a great part of the year in the hollows. The ferruginous claystone lay upon the heights nearest the river, but we saw little of it further west.

Continuing our return on the 12th, we went one mile and a quarter W., then S. by W. two miles and three-quarters, when we came to a tolerably fertile slope leading down to the river, and S.W three-quarters of a mile, arrived in a valley having patches of good soil and a dry channel, beyond which, one mile and one-eighth S.S.W., we crossed a considerable stream (the Napier) in one of the deepest valleys we had yet passed, supposed to be a continuation of the stream on which I bivouaced on a former excursion on the 2nd May, 1831.

One mile south from the above stream I observed Mount Gardener bearing 136° 45′, and in one-sixth of a mile more S. by W. came to a moderately-sized running-stream, supposed to be that lately passed by Mr. Roe when farthest north. One-eighth of a mile S. $\frac{1}{2}$ E. from this the eastern summit of Porrongurup Gorge bore 349° 30′; the western peak of Mount Manypeak 303° 30′; and one-sixth of a mile south Mount Gardener was seen bearing 134° 20′; one mile more S.E. brought us upon the banks of the river, where we found a native path, and in about one hundred yards crossed a ravine and dry channel; and in one-quarter of a mile south came to Hut flat, mentioned on the morning of the 10th.—(*see page* 170.)

REPORT *of an* EXCURSION *to the Northward from Augusta, by Mr. J. C. Bussell.*

We followed for about three quarters of a mile the creek, M'Leod, being obliged by its directions to pursue a route rather to the north of our proper course; the land was sandy, and abounded in a very coarse grit. After one attempt to cross, and a complete wetting, we obtained the opposite side, when the country presented much the same aspect; the timber was of minor growth, and as thick as usual, excepting, however, some few grass tree plains, in which water was standing, though not over the shoes; old red sand-stone rock was common. After advancing about four miles, the country improved; the trees were of taller proportions but very thick. We passed a large basin tolerably free from trees; it apparently had water in the lowest parts. On the rising ground from which I looked upon it were large masses of rock, (old red sand-stone.) From this place the face of nature became more and more pleasing; the soil a rich red loam; the bush of the same kind as that at Augusta; the trees were very large and tall; here we caught a ————— ; this order of things continued till we came to the banks of a small run of water, quite overgrown with reeds, where we halted. The prevailing timber, the white gum, previously blue, though on the bad land mahogany had been most general. We crossed the brook which held a southerly course; the soil again began to deteriorate; tracts of sand were few, but

rock (granite) abounded in extensive fields; the country was hilly, though it afforded no elevation of sufficient height to enable us to overlook the trees. After about a mile and a half of such a country, we came to a large flat, abounding in banksia, grass trees, and a swampy vegetation; this flat was a black sand, with, however, a considerable admixture of soil. Beyond this, bearing W., we now observed rising ground, but before we began to ascend we came upon a brook surrounded with most magnificent white gum-trees; the scenery here was very beautiful, and on the banks that sloped down to the water we dined, with the prospect of steep acclivities before us, and rivers branching out in every direction. The men supposed we had marched about eight miles, and taking into the consideration the difficulties of travelling, it perhaps was no more, though we had walked from seven till half-past one.

After dinner, half-past three, we again moved on, and ascended a steep hill for three quarters of an hour, without intermission. The whole of this tract was exceeding fertile, but greatly encumbered with timber of stupendous size, all white gums. I say the soil was fertile, judging of it from the bush, taking into consideration the species and luxuriance; the mimsta and red creeper abounded; though the trees were very large, and on that account, perhaps, appeared numerous, the ground was not shaded to the extent that might have been supposed, owing to the nature of the foilage of that sort of tree; rock was every where visible, when a fallen tree had turned up the soil, a lime-stone, without organic impression, as far as the short space I could devote to such inquiry permitted me to observe.

Ascending this hill, we had proceeded about two or three miles, when the blue gum became occasionally interspersed, and I perceived through the trees on the left hand what appeared an open space; concluding that I had nearly reached the summit of the hill, I made for this in order to obtain a prospect of the country I had passed. We now entered a large grass-tree plain, from which we had a more extensive view than I had before obtained from any height in this country; so blue and even did the horizon appear, that it was some time before I could persuade the men that it was not the sea. The range of hills we were on seemed to stretch north and south, and before I was on it, I never saw so large an assemblage of the white gum. Both the freshness of the wind and the leaning of the trees on the right of the plain from the west, convinced me that the sea was at hand, though we could hear nothing of it; nor did these indications deceive me, for, on passing another small thicket, having about the level of the top of the hills, we saw before us the vast expanse of ocean about a mile and a half distant; from a high hill on the shore we saw Cape Leeuwin, bearing S S.W., the cliff overhanging Turnerian stream S. We supposed we might have come over the land we had passed in a straight line, and without impediment of bush or swamps in a much shorter time, judging the distance to be about ten miles.

I have now conducted you to the sea; we reached this at a quarter to eight, on the morning after we left Augusta; having left our night berth rather upwards of half an hour; I might have done it easily overnight, but I did not think myself so safe.

The hills I had lately left stretched apparently to

a great distance in a line with the coast; they constituted a lime-stone range, the rock of solid texture, and of the same description as that on the White Patch, and that occasionally, but rarely, seen on the conical hills, and again on the hills above Cape Leeuwin; to avoid the troublesome walking that the beach always affords, we kept a little inland; the soil was generally sandy and barren, but where the least symptom of an admixture of mould shewed itself, the grass-tree, of stinted stature, as though just struggling for existence, was always seen, and sometimes in extensive tracts. Before we came upon the White Patch, we encountered a valley, the most difficult of passage of any thing I ever yet met with in the shape of bush; its vegetation consisted solely of shrubs, advanced to a larger standard than usual in this country; the ground (I suppose in consequence of perpetual shade and want of circulation) was covered with moss, and on this we were obliged to crawl under the thicket, while sliding down and climbing up the numerous and steep descents and acclivities in which the place abounded: half a mile from this brought us upon that remarkable feature, the White Patch, and as I believe an opinion obtains, that it is a sand-stone, and formed of hardened drift from the beach, I shall insert my own observations.

The first peculiarity that strikes the eye is a large surface of limestone, upon which, in the hollows and lower parts, is deposited a considerable portion of sand, accumulated both from the sea shore (which the presence of broken shells attests) and from the gradual decomposition of the rock itself; and that this process is going rapidly on, I conclude from the following evidence:—above the surface on every

side, may be seen strong excrescences, resembling the stems of shrubs, sometimes very slender, sometimes as large as the timber of a large tree; one might imagine with the poet that nature had first given birth to a thicket,

> Then framed a shell when the work was done,
> And changed the hazel wainds to stone.

They do not, however, on close examination, appear to have in them anything analagous to incrustation, but to be the harder parts of the rock that have resisted the action of the atmosphere, probably zoophytes, embedded in a more friable matrix, which had disappeared from around them, and blown away in the form of sand: there are nodules of a closer grained limestone, to be seen protruding above the surface, sometimes yellow, much resembling Grallo Anticho, and sometimes black or slate coloured. From the White Patch, we walked on the beach in the hope of finding water, for we had now been many hours without any, and it was very hot, and walking laborious. We now descried the wished for renovator, trickling out of the rock; and as the sun was now "pillowing his head upon the western wave," we halted—fortunately found wood enough for a fire, and gave up the idea of reaching the Turnerian stream that night. Limestone was still abundant on the beach, wearing a foliated appearance; the laminæ so thin, that it may possibly become a matter of *fiscal* consideration to Government, applied to the purpose of roofing; I had saved many specimens, but one of the men accidentally lost them, by removing my cap, in which I had placed them.

We started at 8 o'clock the next morning, preparing for an early march to Augusta. Instead of

following the beach, I walked over the sand hills; part of these I found forming into a stone of a slate colour, cemented by what I could not tell; possibly an example of the undulated sand downs, mentioned by Cuvier, as observed by Peron on the coast of New South Wales; the new-formed rock was soft, so as easily to be cut with an axe, and occasionally presented a superficial crust. Passing those curious caverns, which have procured the name of Turner's Chimney Pots, from the sombre-like manner in which the sea sends up its foam through them; first entering at an orifice on the beach, and then breaking out again through the chasm that the falling in of the earth and rock has made above in the bush; we searched the Turnerian stream at half past 9, where we shot a duck, upon which we dined; after we passed the conical hills, from the head of the creeks, I made a direct course for Augusta, and came out upon the river about a hundred yards above Mr. Turner's.

Rainy weather deluged me at Augusta, two or three days; but when all was fair, arriving at the head of the creek by water, I set out with the intention of following, as near as possible, the direction of the *future road.* I at first walked N.E., which course, however, seeming too much inclining easterly, and as the estuary was in sight, I changed first for N. by W., so as to clear creeks, swamps, &c.; afterwards for N., then again N. by E.; the land was at first sandy, and abounding in iron stone, where it all elevated itself above the general flat surface. We encountered here some native huts, one peculiarly large and well made, in the bottom of which was spread an oblong mat, of tea-tree bark, I should think nearly six feet long. The nature of the soil continued much the same, till we had passed

the head of the estuary a mile, or somewhere thereabouts; it then improved, was rather hilly, and the trees large. We crossed a small brook running E.S.E.; the white gum was frequent,—not thick, but large; the soil—a red loam; the bush where unburnt, luxuriant. I passed several small brooks, all flowing towards the river; the land was not now generally rocky, and we occasionally saw large blocks of granite. A stream, clear, rapid, and with banks free from underwood, now crossed our path; here we dined, about 2 o'clock. While the men were preparing to cook a cockatoo, I, as usual, was preparing to make memoranda, when, alas! I discovered I had lost my pencil case; this I regretted much, both because it was a very handsome article, and because it prevented me making any more notes on the spot. Steering, after dinner, N.E. by N., we came on very swampy flat ground, and afterwards passed some extensive sandy plains, nor did the country improve when we entered the woodlands. A shrub, having a leaf resembling the holly, prevailed, the true indication of meagre soil. At 5 o'clock, we came upon a deep broad stream, which surprised me, as I supposed we had dined upon the only one for which I remembered a corresponding creek, on the banks of the Blackwood: as I felt convinced that river was at hand, I traced this stream for about half a mile, to ascertain the point where they joined their waters; returning, we crossed by a tree and continued our journey N.E. by N., which, after about an hour, brought us out again on the banks of the river then flowing at right angles to our course. I now steered, first in a westerly direction, then directly north, till near sun-set, when I again made for the river, purposing to remain on its banks for the night, as I still fancied myself far from

home, judging from the creek I had just passed; we halted, made a fire, and a screen from the wind, of the branches of the beef-wood or the oak, for the country had, for some miles, abounded with that valuable timber, which I understand is a remarkable thing; neither the soldiers nor I had ever seen so much of it before: the trees were, many of them, large and fine, many much injured by fire; they afford the lightest wood, and the only bark that can be applied to the purposes of the tanner. These particulars concerning this tree, I learned through the medium of the sawyers, who, in my absence, had visited my grant, on their way to Swan River, and had expressed their satisfaction at seeing it so abundant on the banks, relating to my brothers, at the same time, its various uses.

In the morning, after a walk of three quarters of an hour, due north, having first made westing enough to clear the windings, we came again on the river, and saw on the opposite bank my house, most unexpectedly. The distance, I think, in a direct line, would be about ten or eleven miles from Augusta, N. $\frac{1}{2}$ E., or N. by E., the most direct course to that part of the river which extends most west, near about my brother's house. Nothing could be freer from obstructions, with regard to declivities, water courses, and swamps, than the path by which we came; a bridge, rather more artificial than those on the Augusta roads, would be required over the largest stream we crossed, though a more northerly direction would most probably render even that unnecessary.

MR. BUSSELL'S JOURNAL *of an Expedition to the River Vasse, from the Blackwood.*

We left the Blackwood at the rapids, and for some time traversed a country alternately rocky and sandy, with occasional patches of good soil, always however thickly wooded with mahogany. The first change that presented itself was a thicket of young trees of the eycaliptus kind; what these species might be, I could not tell, though I should conclude, the same as constitutes the timber of the neighbouring forests; they grew about four feet high, and had the appearance of a nursery; the soil was a white earth. We had already put up one kangaroo, and two rats, and to these our dogs had given chase, but without success. We had been for some time in want of water, when we came upon a small torrent, flowing east; this, on account of the arid aspect of the country, we had passed, and the appearance of the sky, which threatened rain, were inducements, sufficient to determine me on an early bivouac; we therefore halted for the night, at a quarter to six.

While the men were preparing shelter, I walked in an easterly direction, to ascertain the cause of a break that showed itself in the wood, and came on a stream, flowing at right angles to the one on which we were settled, and apparently the receptacle of its waters; south, inclining to east, was the course of this rivulet; it was therefore a tributary of the Blackwood.

The night proved as we had anticipated,—wet,

but, by folding provisions and blankets together into as small a compass as possible, nothing suffered much, and with the help of a good fire, we preserved tolerably well our animal warmth.

After no very early breakfast the next morning, we proceeded through a wet bush, and were shortly in no better condition than if we had been wading; our route brought us on the stream I had observed the night before, but previous to crossing it, I ascended a high hill on my left, which was covered with the same sort of nursery of young trees I have before mentioned; no prospect, however, except that of a hilly country, of varied and undulating outline, rewarded my pains. The land I next passed through, was much encumbered with trees, principally mahogany and the oak; rock was abundant; and in what few plains I encountered, a white clay, mixed with some little sand; streams of clear good water were plentiful; nine, this day, we passed, one of which was very considerable; we crossed it at the rapids, after walking by its side about a mile north; most of the others were large enough to lead to the opinion of their not being mere torrents; we were generally more fortunate in finding fallen trees to assist us in crossing. Near the largest, we met a native, (an old man) who directed us to the best spot for passing another, not more than 400 yards from the former, and most likely joining, at no great distance, for they both held the same course.

Here was the best land I had yet seen—a rich red loam; it had been recently burnt, and was then free from a woody bush, and covered with an herb much resembling clover; I should, in fact, have taken it for one of the trefoil tribe, had I not afterwards, at the Vasse, seen the flower which is papilionaceous; the pod contains about five seeds,

each occupying a separate cell formed by partitions of a spongy substance; in taste the leaf resembles grass, though it is rather more glutinous. Thus much notice (undue perhaps) I took of this small herb, from its resemblance to clover, and an idea inspired by that resemblance, that it might afford good pasturage. The native we had just left, recognised none of the words we had acquired from the natives of Augusta; he seemed, indeed, so much alarmed (for he evinced fear by hiding the child he had with him), that I should conclude him quite a stranger to the sight of an European. Edwards was much tired at 12 o'clock, and on that account we halted for about an hour, though we were only waiting the presence of water to commence our dinner; half a mile beyond this we came to a stream, on the banks of which we dined; four miles more ended our day's march, and a comfortable bivouac we had, free from wind and rain. The land we had now passed was nearly all heavily timbered; a whitish soil was common. We procured no game, though there was plenty of Kangaroo; our dogs wanted scent and swiftness. The fruit I have mentioned in a former Journal occurred often in the hills, generally near water; the whole party ate it freely, and found the acid refreshing.

The first part of the next day's march was over a country clean burnt, the land generally good but rocky, often and heavily timbered; white soil was frequent in the plains. We passed two small water courses tending to the southward and eastward; after this the country seemed to grow flat and swampy. We passed some large spaces on which the swamp oak prevailed without underwood; the soil was a rich red loam, rather stiff,

Kangaroos, from their marks, must have been abundant, though we only saw one. I consider the country we were now traversing to constitute part of an area of high table-land, and the swamps upon it the sources of the streams we had hitherto encountered; for after we had advanced some distance further, the flow of the waters was in another direction, to the north and west, supplying, I at first thought, the Vasse; though I have since had reason to believe, the Seaward and western branch of the Blackwood, or some other river, if such a thing exists between Cape Naturaliste and the White Patch.

On the third stream, holding a westerly course, we dined; the land was open but sandy; the geology of the country continued the same; in the channels slabs of old red sand-stone were generally conspicuous. After dinner the face of nature exhibited little change as we walked on; in one of the plains my dog was accidentally shot. At the spot I had fixed for a bivouac, a considerable stream, I left Edwards and one of the men, while I proceeded with the other to look about me. I walked rather at random in a northerly direction, found again a succession of hills, rocky and precipitous, then returned and joined the other party, after an absence of about an hour and a half. From the time I at first found the water courses tending to the north and west, I had altered my route from N.E. to N., concluding that I was at least eastward of the Vasse.

Since, according to my reckoning, I was now nearly as far north as the Vasse itself—and as I had seen that the country for some distance before us was very hilly, whereas in the vicinity of the point I was making very large plains—since too I had

all along kept to the eastward more than I thought was right, wishing to cross over the same tracts that the last travellers had crossed; and because of the westerly direction of the water courses, I determined to make a little westing, and with that intention, I began my march the next morning, N. by W. at first; for the numerous ravines I had seen the night before seemed to promise a large stream, or some assemblage of waters; nothing, however, appeared but small torrents, running generally N. and E. After advancing about a mile and a half from our bivouac, we descried some distant land through the trees, bearing N.N.E.; from this point I steered N.W.

As we advanced on our new course, we continued descending for some time, while the land appeared less and less rocky. We now entered an extensive plain, the soil of which was damp, and in some places was standing water. A ridge of hills was seen in our rear, extending east and west from the highest part of it, our course was now conducting us. The surface of this plain, composed of clay and sand, bore numerous impressions of the feet of the natives and kangaroos. At 12 o'clock we halted for dinner, on a remarkable water-course; the channel of which was generally dry, and seemed to wind very much, for we had already crossed it several times; though wide, was shallow, and its bottom consisted of bare flat rock; following it for some distance, we found water in pools, and in the pools, strange to say, small fish: here our dogs caught a kangaroo.

At about a mile from this bivouac we came the next day upon a small stream flowing N. by E.; this I followed about half a mile, in order to avoid a swamp that seemed to extend some distance on

the opposite side; the tress here were distant from each other and large. A white cockatoo, the first I had seen this year, attracted the attention of one of our party, but no success attended his efforts.

The country, as we advanced on the other side of the rivulet, improved rapidly; the ground on which we trod was a vivid green, unsullied with burnt sticks or blackened grass trees; not that it was covered with a decided turf, but the vegetation seemed more succulent than woody, and the plants growing to about the same height, presented to the eye a smooth surface,

> With daisies pied, and violets blue,
> And ladies' smocks all silver white.

Though the flowers were not perhaps precisely the same that characterised an English meadow, they were not the less beautiful in appearance, varied in form, or brilliant in colour; grass was plentiful, and the clover I have noted above, with its bright scarlet and yellow flower, the daisy, buttercup, and a purple marygold. The whole effect reminded me of that confusion of rich tints that are produced in the Indian loam, and as I looked upon it, I could not feel but inclined to believe that such a scene as this must have presented to the imagination of the Hindoo, the high colouring of his fabric, and the prototype of the gaudy chintz.

Half a mile brought us on a small river, and so slow that I could hardly ascertain the existence of a current. I concluded it to be, as it afterwards proved to be, the Vasse. The sound of rushing water proclaimed a rapid near; walking, therefore, a short distance up the stream, we found what we sought, a passage over.

Here was the spot that the creative fancy of a Greek would have peopled with dryad and naiad, and all the beautiful phantoms and wild imagery of his sylvan mythology: wide waving lawns were sloping down to the water's edge, trees thick and entangled were sloping over the banks. One in the centre of the rapids had taken root in the very rocks over which the waters tumbled; its bended trunks and tortuous roots seemed to indicate that it had struggled more than once to gain the perpendicular form, from which it had been thrust by the rude torrents, which at certain periods evidently pour down this obstruction to the free flow of the river.

About a hundred or two hundred yards on the other side, we obtained a sight of the sea bearing N.W. The country here was so clear that a farmer could hardly grudge the fine spreading trees of the red and white gum and peppermint the small portion of ground that they occupied only to ornament. The soil was always good, sometimes very light; a red sandy loam; at other times stiff, particularly where the white gum prevailed.

After walking about three miles in a N. by W. direction along the banks, we began to observe evident tokens of the proximity of the sea, such as hottentot figs, rock spinach; of the latter we prepared a mess when we arrived on the edge of a large flat, into which the river falls. It was then 12 o'clock; before, however, we began our repast we were hailed by three natives, who were wading over from the opposite side, fearful probably that we were likely to interfere with some snares for fish which they had constructed near the spot where we were; they carried spears, but approached withal with such friendly guise and

courtly seeming, that I did not hesitate to advance to meet them alone and unarmed. They were on the whole smaller of stature than the men I had been accustomed to see, and wore no skins. The countenances of two of them were certainly ugly and brutal enough, but the third had a sprightly air and good-humoured expression, accompanied with that revolting laugh which is so general with these savages; his hair matted with peculiar taste into strings, resembling spun-yarn, and bound up close, displayed a head of true Caucasian proportion, with a facial angle less acute than is often observable in the European.

They expressed considerable surprise at the facility with which we procured a spark from the firelock; and, upon our making signs to that effect, soon blew it into a blaze. I afterwards shot them two small birds, and gave them some of our kangaroo meat, which they ate, refusing biscuit and vegetables. I obtained some words of their language; it seemed much the same as that used at Augusta. As is the custom there, they designated one another, as well as ourselves, (in compliment I have always thought), with the appellation youngaree and mamiungo; this struck me as a considerable evidence of connection existing between them and the savages of Cape Leeuwin. The words:

Mendenah	Eyebrow.
Yelit	Eye.
Nolt.....	Tooth.
Donga.....	Ear.
Daan	Foot.
Koat	Hair.

I enter thus into these particulars, because I infer that a judicious treatment of the natives at

Augusta has procured in them, towards the settlers, a peaceful disposition. It will be satisfactory to learn, that the population about to flow towards the Vasse has grounds for expecting that friendly reception which a previous knowledge of the habits of Europeans, or a favourable report circulated amongst the tribes, and a consequent predisposition to amity, may seem to promise.

After dinner we walked two miles on the banks of the Lake, N.E.; fields of grass, in some places to the water-side, were waving like corn. In high tides, this lake, as we advanced, became brackish; seems to cover a large surface, which was then exposed, and exhibited a continuous flat of limestone, having its interstices filled with a coarse reddish sand; organic impressions of shells were numerous; its texture was a large oolitie; nor could I find one specimen of those close-grained nodules which are to be seen on the White Patch. From hence, bearing N.N.W., we saw high land at a great distance. This I knew to be Cape Naturaliste, as we had seen the day bearing in such a manner as to be necessarily between us and these distant hills. The bare rock and sheet of water seemed interminable; and, as some of our party were much tired, I returned to the spot where we had dined, and after a short rest there, resumed our march in quest of a place affording wood for our nightly accommodation. Native paths, which traversed these lawns in every direction, gave us easy walking for about a mile S.S.W. We then made the river and halted. Cockatoos were in greater multitudes than I have ever witnessed before, white and black; they were, however, shy, and defied the cunning of our sportsmen; though, I believe, the heavy baggage of their pursuers, and

a consequent unwillingness to move further than was necessary, did more than their own caution towards the safety of the winged tenants of the groves. Dearth of fuel and innumerable gnats procured us by no means a favourable bivouac.

Early the next morning I was awakened by a large flight of cockatoos, and was looking at my gun to insure its going off, when a cloud of ducks suddenly alighted on the water, close at hand. I killed two, and, becoming my own retriever, undressed to get them; the river in the middle is not deep, and the bottom muddy, and abounds in a weed that unpleasantly twines round the limbs of the swimmer; there is greater depth towards the sides.

On leaving our own, and advancing two miles up the Vasse, came on Mr. Preston's bivouac, which Kenny, one of the men, who had also been of that party, recognised. A quarter of a mile further up were the rapids, which we had first crossed.

From this point, I intended to make my march homewards as direct as possible, in order to draw a tolerable estimate of the actual distance, and to observe what facilities or difficulties that line might hold out to the intended road. To find then this course, I took the sketch I had lately traced of my former circuitous route, and measuring by the scale the distance between the two extreme points, found that what I had made between fifty and sixty miles, was not in reality thirty miles off from the point whence I started, and the course that would bring me about on the middle, between the elbow and the rapids of the Blackwood, was S.S.W.; that these conclusions of mine were not infallible, will be seen in the sequel, together with the probable cause of my error. Before, however, I leave

the Vasse, I must take some further notice of its productions.

The red gum, white gum, and peppermint, I have before observed, constituted the larger sort of timber; there was also a small tree, which Edwards informed me, was the black whattle. The nomenclature of the trees in this country, with the characteristics deduced from the colour of the bark or gum confusedly, is so exactly calculated to lead to mistake, when a person uninitiated in the mysteries of colonial language attempts to describe, that it becomes necessary for me to lay down my own observations on the growth, nature, and properties of, and, in that manner, to define as nearly as possible, the trees I have rashly endeavoured to designate. Of mahogany, peppermint, and banksia, I think I am tolerably certain. Red gum, as far I can learn, is the toughest and hardest of the whole race of eycalipti, resisting the wedge, and of little use to the joiner, from its abounding in veins of gum, which, like that of the mahogany, is red; the wood is yellow, and is useful for the heads of beetles, &c. That which I have hitherto termed the white gum, (a tree growing to a greater height and bulk than I have yet seen), which throws off its bark in large flakes, wearing immediately after its change of dress a light buff color, which too is found generally in land abounding in springs, having its wood tinged with a light pink; too hard, however, for the uses of carpentering, when the eycaliptus robusta can be obtained. I now term the white gum, that which is seen in moist stiff flats; of small stature; sending out branches from below; changing its bark frequently, so as soon to lose the marks of fire, but imperceptibly, and not in large sheets; its wood is white, its bark a light grey. The oak re-

sembles the fir in its foliage; it seems always to suffer much from fire. I wish to be accurate in these points, as it is a custom here to judge greatly of the quality of the soil from the timber it produces.

The grass tree is not uncommon, but of a different species from either the many-crested, or hastile; its trunk does not appear above ground, but the stalk that bears the flower and seed is much slenderer than ordinary; very light and straight. In the hand of an African it would no doubt have become an arrow; to the Australian savage it is of little use, except to stake round his fish-snares; it did not appear to yield the yellow gum, or rather resin. Wild celery grew very abundant on the side of the estuary. The natives make, however, a great point of our not eating it; signifying it would affect us with vomiting; some of these people had once before done the same thing, on my affecting to taste the nuts of the palm tree, which I knew to be emetic; as they, therefore, seemed to view unconcerned our dish of rock spinach, I was inclined to pay some regard to their exhortation.

Here, too, I recognised another plant which is found also growing on the rich stiff flats on the banks of the Blackwood; the flower much resembles groundsel, it has a strong taste of celery, and is often used in my house for flavouring pea-soup; pigs eat it readily. The clover I have mentioned before, is spread very generally over the ground. The purple marigold resembles the real marigold only in the radiated position of its petals, &c.; except for size, might as well be termed a sun-flower or daisy.

In this place, too, we met a sort of grass, which

to the traveller is a most troublesome foe; it bears a seed about the size of a millet, one end of which is pointed and barbed; to the other is attached a fine taper tail, about three inches long, having the appearance of two silken threads of different colours, twisted together; in the action of walking, these seeds are brushed off, and, fixing by these barbed points to the stockings, they continue working through it, keeping up a most perplexing irritation on the foot and ancle.

Thus much of notice I paid to the vegetation, as different from what had been previously familiar to my daily observation.

All the rock I saw in my whole march, except that on the estuary at the Vasse, consisted of old red sandstone. It sometimes had large crystals embedded in it; sometimes, particularly in the channels of rivers, it was in slabs, and apparently schistose; at other times it wore almost the form of a conglomerate.

From the rapid where we first made the river at half-past nine, I commenced my course homewards, S.S.W.; the land was generally good, though sometimes sandy; but the spot we had just quitted was a soil of mediocrity. Kangaroos and emus seemed abundant, for we observed their traces in all the places we passed, capable of receiving an impression. We had just arrived on the brink of a small stream, when I was told one of the dogs had been some time missing. We were obliged to wait his return; he detained us three hours, though we dined in the interim, and returned with the same proofs as before of a victory, as he seemed inclined to shew, the men followed him about half a mile, but returned from the fear of losing themselves.

We now walked over large extended plains,

having been impeded by the wanderings five or six times, on which we halted. We saw plenty of game, but one of our dogs was tired with his last chase, the other lame; at length, on our coming out of a large thicket, on the verge of a very wide open space, two kangaroos dashed away before us. "Sulphur," stimulated by the sight, and forgetting his fatigue, was at the heels of one of them in a moment. "Phillis" took the other, which made for some wooded land on the left, in the mazes of which it soon left its pursuer. "Sulphur," in the meanwhile, had driven his prey first far to the right, and now in a long sweep was turning it to the bush out of which "Phillis" was just emerging. All was decided; the poor thing, finding itself surrounded, was compelled to turn to bay. Kenny, always alive in the hunt, was soon on the spot, and finished the existence of his victim as it was hugging one of the dogs, who stood erect in his front, too much out of breath to hide, while the other hung on its haunch.

I never saw a chase so completely from beginning to end before; our booty proved a large buck, of about 130lbs. I need not mention that we had not kangaroo dogs; the mode of their hunt, and their want of scent, is sufficiently explanatory on that head,—the one was a fine Cape greyhound the other a small lurcher bitch; though the former had been used to the work, it was the first time the other had ever seen a kangaroo, and her want of experience proved her a deep rip in the belly.

We were now again overwhelmed with abundance, and as all the party seemed inclined to profit by our good fortune, we a second time halted for the purposes of cooking; for water, we all walked in different directions,—at the distance of about

half a mile, I came on the dry channel of some small stream, and following it, found a few muddy pools. On my return, however, I learnt that Edwards had discovered some close at hand, in a hole that had lately been occupied by the root of a grass tree—this amply supplied us; in fact, we afterwards found water in several places at the small depth of half a foot.

This night we were disturbed by a furious barking among our dogs, the cause, however, did not appear. The morning rose and seemed to threaten a regular wet day; at 11 o'clock, however, much to our satisfaction, it seemed likely to hold up, and we proceeded: the first three quarters of a mile was over the same level country we had experienced the day before; we had a range of hills in our front, and were able to recognise the part of them over which our former course lay, some miles to the left. When we arrived at the foot of these hills, we came on a small stream, which I considered the same we had left on the right the day before. We passed two other streams not long after, flowing W.S.W.; at five minutes to one we halted and dined.

We began walking again through a sandy loam, and land hilly, rocky, and thickly wooded, and passed several small streams, all inclining to the west. We came upon one very large, and in it a basin, into which rapids fell, about fifteen yards across, very deep; we forded it at the rapids, but not dry footed; this stream, which rolls along more water than the Vasse, can never fail; the basin, at all events, would prove a greater acquisition to a line of road, which, at the end of the summer, has been found so destitute of water. Until ten minutes past 5, we continued this march, and very miserable walking it was—frequent rain in heavy showers,

and clothes kept constantly wet by the bush, inclined us to halt for the night, that we might prepare a hut better than usual, against the inclemency of the weather. "The sun set, and up rose the yellow moon;" at her approach the sky wore a new and pleasant aspect, the clouds vanished, the winds were hushed, and by the time we had dressed for supper the ducks I had shot at the Vasse, we had every prospect of a dry night and bed. This evening, my feet, which had been blistered since the second day of our march, from a defect in my shoes, were very painful, having been irritated by perpetual friction on the affected part, for above a week.

Little variety gratified our curiosity the next day; the country was still the same, rocky, woody, abrupt and precipitous here, as in the places where rock and wood prevail together. I observed that the vegetative principle in the roots of large trees, seems, by a gradual but resistless process, to have had the power of thrusting or wedging up large masses, the fissures of which were sufficiently capacious for their first exigencies, and early growth; hence, each trunk has the appearance of being planted on a heap of huge stones, as if some gigantic gardener had been employed in hoeing up the nurselings of the forest.

I fell in with a large lagoon this morning, about thirty yards across, and perhaps four times that length; it seemed very deep, and from all circumstances, I should say it was never dry. A continual succession of hill and ravine after this crossed our path; the water in the bottom all tending to the west. About 12, we passed some high land, with a stunted growth of the oak, from which, towards the N.W., we could see the tops of trees on some high land, but nothing familiar presented itself.

Towards the decline of the day, the country was, if any thing, steeper than we had yet found it, and from the top of a hill, I saw through the trees a distant undulating horizon. I at first thought I could see the White Patch, as I looked through a small opera glass, but no one seconded my opinion, and, from recent occurrences, I concluded it to have been the high land behind Augusta; it bore S.S.W. about thirty miles.

We were now some time without water, the next we made, was a small rivulet flowing east.

Early in the day, I had not expected to have reached the Blackwood that night, as I had calculated it somewhat more distant than the usual extent of our marches; since, however, we had already gone further than usual, and were, according to my reckoning, within a mile of that river, I was unwilling to halt here; the course of this stream seemed to indicate its proximity; I accordingly walked about a mile farther, and finally bivouaced on another streamlet, flowing the same way; here we put up two large kangaroos; the land, for the last few miles, had been less hilly and rocky; we all suffered much from cold this night. The next morning, after a walk of three quarters of an hour, I came on the seaward branch of the Blackwood, about 200 yards from the point of its junction with the main stream; and this, which on a former occasion had proved such an obstacle, was now easily passed, near its mouth, by means of a large fallen tree.

My error in making the Blackwood about two miles west of the point I originally steered for, arose probably from this cause. The first part of our journeyto the Vasse, in which I made my easting, was rated at the same average with the rest, whereas,

both on account of our heavy loads, bad travelling, and the being not yet used to our packs, it was most probably performed more slowly than that part of our road which led through open plains, with easy walking, after two or three days had diminished our stores; and of this nature was the country, when I began to turn west; my extreme point then, or the Vasse, must have been situated rather more to the west than I concluded, from the result of my march there, and hence it was, that instead of making the Blackwood half way between the elbow of the river and the rapids, I made the elbow itself, being out in my reckoning about two miles; had it not been for this, I should have reached the river rather before than after I expected.

(Signed) J. Bussell.

Albany, King George's Sound,
Western Australia, July 31st, 1832.

Sir,

In the expectation that this may reach your Excellency in England, and thinking that any additional information respecting the colony may be of importance, I beg you will allow me the honor to state, that in the end of May and beginning of June, I made an excursion into the interior, sixty-five miles and a half in a direction of N. 328° E. (true) in four days and a half. I passed on the south and west side of Mount Barker, and soon came into a very level country, with few trees, growing in a gravelly loam, thinly covered with grass. This is the general feature of the country as far as I proceeded, presenting the greatest facilities to overland communication with Swan River. I ascended Warre-up or Road Hill, which is N. 328° E. (true) from Mount Clarence, distant forty-eight miles and a half; a few miles north of it is a channel, with, at my visit, large ponds of good water; a Java bullock, in high condition, fed upon its banks. Beyond this the ground gradually rises into moderate and very traversable hills and valleys, the soil improves, the grass, even at such a season, became abundant, and water stood in pools in the channels of the valleys. I returned by the west end of the Koikyennuruff Range, and ascended Madyerip, the western hill, which I suppose to be 1400 feet above the level of the sea; it is wholly composed, like part of Toolbrunup, of a quartzy sandstone: a plain, with numerous salt lakes, lies to the north of it, and neither from it nor from Warre-up did

any mountains appear toward the interior. I skirted the south side of Porrongurup, and Mr. Henty had previously seen the north. The blue gums and other trees are very fine, and there may be about 1000 acres of very superior grassy land, well watered, upon it.

In the middle of July, I traced a valley where there is a rapid mountain stream, (I think the Hay) from a mile west of Mount Barker, to N. 307° E. (true) from Mount Clarence, distant twenty-two miles and a half, and found on its sides, as well as on the sides of the valleys entering it, which also contained streams of water, a considerable extent of good soil,—of excellent young grass shooting up where that of the former year had been burnt, and in some places, a thick covering of old grass. A herd of fourteen horned cattle were pasturing on the verdant slopes, and appeared by their traces to have passed the summer there. Their high condition testified in favour of their feed.

This winter has been more rainy, and a little colder but less boisterous (a hoar frost on three mornings) than the last, and more favorable to vegetation; the potatoe and wheat crops doing very well.

The few adventurers here are timid at the present aspect. Numbers are wanted, to aid and assist each other, create a mutual demand and supply, and extend themselves into the interior, or capital, to bear the enormous expenses of first improvement. Security against want, and extravagant prices of the necessaries of life, would do much to attract the labourer, who is of paramount importance.

I have the honor to be,
Your Excellency's most devoted Servant,
A. Collie, Resident.

APPENDIX.

No. 1.

JOURNAL *of an Expedition over General Darling's Range,* 100 *miles east from Swan River.*

EVERYTHING relative to an expedition into the interior of a newly-discovered country, will be interesting to you, therefore you will readily excuse the insertion of small matters, and circumstantial details, which will be of little interest to others.

Previous to commencing my Journal, I will give you an account of our fit-out from the Peninsula:—Mr. C. and myself found three horses and a servant, the English mare carried the greater part of our baggage, and the other two we rode occasionally. We took the lining of a tent to keep off the heavy dews in the night, and to refresh ourselves under in the heat of the day. A small axe and spade answered the purposes of cutting down a pole for the tent, and of trying the land where we travelled; each person was furnished with a blanket, which was to serve as bed and covering; from ten to fourteen days' provisions were deemed necessary for the expedition, which consisted of flour, biscuit, pork, rice, sugar, tea, spirits, &c. &c. We had each a compass; this is a very useful article, and indispensably necessary in a foreign country, where there are neither roads nor marks to steer by, nor human beings to communicate information on the subject. Having given an account of our equipment, I shall now proceed with my Journal.

October 23*d.*—About noon, Mr. Camfield, a neighbour

of ours arrived, and we immediately crossed the Swan in a large flat-bottomed boat, which Captain Byrne was kind enough to send over for us; at that gentleman's we enjoyed drinking a glass of colonial-manufactured beer. A gentleman of the name of Bull, who lives up the Canning, brews this beer, and sells it three shillings per gallon. A little higher up the river lives Mr. Drummond the botanist, an intelligent man, and clever in his profession; after receiving their benediction, we passed on, and in a little time met with Lieut. Gregory, who very politely invited us in; we sat for a few minutes, held a short confabulation on the occurrences of the day, and then bent our course to the banks of the Helena. On our way, we saw several other houses to the left, situated on the banks of the Swan; the smoke ascending above the heights of the trees is a pleasing variety where shrubs and trees are evergreens, The Helena is a fine strong fresh-water stream; has its source in the mountains, and falls into the Swan below Guildford. On this truly rural spot we found a brick-yard, two or three houses, and a garden, belonging to Colonel La Tours; the house, the best of the kind I have seen in the colony. Every thing about the place bore evident marks of desertion; not a soul could we find; this large establishment is completely broken up. I have been told, which I believe to be the case, that it originally consisted of about a hundred souls, and the general impression here is, that if the concern had been properly and efficiently supported and managed, by this time it would have been in a flourishing condition. As it regards situation and choice of land, there appears to have been some proper judgment exerted, but, alas! for want of energy, funds, and general judgment in the conducting such a phalanx, every measure which might have been effective and successful, has become abortive. Night fast approaching and spreading her sable curtains around us, we thought it prudent to take possession of this deserted dwelling, and for once enliven the place by lighting up a large and brilliant fire in the garden. After some little preparation, we sat down on the ground, and regaled ourselves by drinking tea, and perfuming the air by the burning a celebrated

"Indian weed:" smoking is more needful here than in England; it assists in keeping off that torment of Australia, the musquito, which is always ready to thrust his proboscis into your flesh where it is unprotected; it is a fortunate circumstance, this insect only frequents low swampy places and lands in their vicinity. Upon examining the house floor, we found it very damp, and not fit to sleep upon, therefore, without more ceremony, we went into the garden, erected our tent, and turned in for the night. This afternoon we walked over a fair quantity of good land, and crossed several streams: this land, in my opinion, is well adapted to the climate, being rather light or sandy, yet well covered with vegetation, and suitable for grazing and agricultural operations. I have no correct idea of the quantity, but suppose it does not extend far from the river; however, this district is granted away. Heard of the arrival of a ship since we left home, and are anxious to know where she is from.

October 24th. — Arose about half-past five o'clock, breakfasted, and crossed the Helena immediately; had some little difficulty in so doing. On arriving at Mr. Boyde's, we were disappointed in not finding his Excellency the Lieut.-Governor there according to appointment, but supposed the arrival of a ship to be the cause, which afterwards proved to be the case. His Excellency arrived about noon, in company with Wm. Stirling, esq., Mr. Dale, ensign, Dr. Colley, the Rev. —— Wittenholme, Mr. Jones, three servants, and five horses; the party now consisted of sixteen men, ten horses, and six dogs. There are several very fine alluvial flats of excellent land about Guildford, well suited for fattening strong cattle, and equal in quality to most I have seen in England. This land, I am informed, is almost, if not altogether, taken up, except town allotments, which are granted away in small quantities, and then actual residence is required, in order to secure them. We left Mr. Boyde's about three o'clock, bent our course about E., and travelled to the mountains; we ascended a little up a rugged pass; found a fine stream, with forage for the horses; here we encamped for the night. Our tent was the only one in the party. His Excellency slept in a

hammock slung between two trees, the rest of the gentlemen folded themselves up in their blankets about nine o'clock, and slept before the fire.

October 25th.—The blast of the bugle saluted our ears about five o'clock; breakfasted, and set off about half-past six. Travelled E. by N. four hours over a mountainous country, very rugged in some parts, and halted by another stream; here we rested three hours. The hills abound with the finest mahogany I have seen; the trees are very lofty, and amazingly straight; it is very surprising how such fine timber can grow on such stony and apparently inferior land. We commenced our journey again about half-past one o'clock, and halted about three, indeed, we encamped for the night, the Governor being very much indisposed. We crossed several mountain streams to-day; saw but one kangaroo.

October 26th.—Arose at five o'clock, set off at seven; about ten o'clock we fell in with three large kangaroos, and had the good fortune to kill one; it would weigh from 100 to 120 lbs.; according to the practice here, we gutted him, fed the dogs, and immediately set to work and skinned him. A mountain-stream being hard by, we halted, and soon had some of the animal on the fire; it was cooked in three different ways, but for want of proper seasonings, suitable vessels, and good cooks, it was a miserable mess. The kangaroo, when properly prepared, is excellent food; the flesh of the large ones, when roasted, resembles beef, but destitute of fat; the young ones, when nicely managed, eat very much like ham; it also makes very nutritious soup. Begun to travel again about one o'clock, and continued until evening, when we found another stream; here we put up our tent, and bivouaced for the night. The general character of the country the same as yesterday; a little land here and there in the valleys may be found capable of cultivation, and, probably, at no distant period innkeepers may find it worth their notice, and plant themselves by the way. Found an emu's nest to-day, the shells of the eggs only remained, the young ones had been hatched some time.

October 27th.—Set off early again this morning. Killed

two kangaroos of the large kind, which are properly called forest kangaroos, and a small one of another kind, called the mountain kangaroo; some bad travelling about here, but suppose it might be avoided by keeping in or near the valleys. We saw many white cockatoos to-day; this bird is very wholesome food. A traveller may, in general, conclude he is not far from water when many of these birds are to be seen; we also observed they were most numerous on the best lands. The white cockatoo appears to live on what it takes from the ground, whether insects or roots, I am not able to say. The black kind live on the buds of large trees and shrubs. About 12 o'clock, we made the river, and were in some measure disappointed. At the time it was discovered by Messrs. Dale and Brockman, it would be from one hundred to two hundred yards across in some places, marks of inundation being discoverable to that extent; in other parts thirty, forty, or sixty yards wide, with rather high banks. When this circumstance is taken into consideration, it was in the midst of the rainy season, Messrs. Dale and Brockman are very excusable for taking it for a river. The rainy season being over, the floods have subsided, and the true course of the stream or streams may be distinctly seen; where the waters prevailed most, at the period mentioned before, may now be discovered alluvial flats, well covered with grass, and admirably suited for grazing cattle in the hot months. Where the course of the water was most contracted in the rainy season, at present there is as fine a river, to all appearance, for half a mile together, as any one can wish to see; the fact is, these appearances of a river, are large reservoirs or ponds, made by the tremendous rush of waters from the hills at that period. I am of opinion this strong mountain stream falls into a river northward. Though our hopes of inland navigation are cut off from this place, yet this stream will be of infinite advantage to the district, yielding an abundant supply of excellent water for man and beast all the year. I felt rather disappointed in the quality of the land, in descending from the hills to the stream, which would be between two and three miles; at the same time it is lan tha may be made to produce

most kinds of grain, except beans; it is thinly covered with grass, but of a good kind. In the afternoon, we travelled in a southerly direction up the stream, the land continues to improve, and some very nice farms may be found; it lies remarkably well for draining. The whole of this land is lightly wooded; a species of gum and green wattle are the kinds which prevail most; here and there is to be seen the sandal wood tree. We halted by a small stream for the night. Our evenings have been very agreeably spent.

Oct. 28*th.*—Up early as usual. After breakfast walked to the foot of Mount Bakewell—this mount is remarkable on account of its peak and height. The best soil I have seen since I left England is about the base of this hill; the grass, also, is truly good and thick set. The land walked over this morning is of excellent quality, generally speaking, very nicely situated, and well suited for grazing and agricultural purposes; it may be very easily drained, and will not require any very great draught to turn up the soil. I think this district cannot be properly called loamy, that term implying, unctuous, or marly ground; the soil here is rather light than otherwise, inclining to sand more than clay—some would call it a sandy loam, but how far correct I am not able to determine. I think the best way to describe it is to compare it with land you and my friends are acquainted with in Lincolnshire and Yorkshire. It is similar to good wold land, with this exception, it has got the granite pebble instead of the chalk or flint one; land impregnated with granite is generally good, whilst that with ironstone in it is the reverse, at least I think so, from the observations I have made. On arriving at the foot of this hill we began to ascend; it is very steep in some places, and required a good deal of energy and resolution to reach the top; however, when we got there we were not disappointed, but amply repaid for our labour. To the W. and N.W. we had a most beautiful and extensive view, hill above hill in almost endless succession till they are lost in the clouds—the smoke of a native fire at some distance—indeed there is a very romantic and delightful prospect all around except to the N.E. S. and

S.E. may be seen very plainly the course of this strong mountain stream; a very large flat of land lies between this mount and the stream, having a very encouraging appearance. It having been previously understood that some of the party were to proceed there on four days' journey due E. and the others to return home about 12 o'clock, we who were of the party going forward took leave of his Excellency the Lieutenant Governor, Captain Byrne, Dr. Colley, and the minister, at the foot of Mount Bakewell. We crossed the stream a little before one o'clock, and walked about three miles over good land, superior in quality to that seen in the morning. Taking the quantity together, this tract may be properly termed undulating, being composed of gentle rising hills and fruitful dales, and beautifully wooded. We then came to a limestone ridge, which may hereafter be of considerable service to this district both for building and manure. After crossing this we fell in with a portion of country quite different from any I had seen before in Australia; it is free from trees, and covered, where it is not burnt up, with a low shrub. This brought to my mind an English common, or unenclosed waste; there may be 2,000 or 3,000 acres of this description, very inferior in quality, and fit for nothing at present except kangaroos or rabbits to browse upon. After crossing a stony ridge, we met with another flat of land something lower, and clear of brush-wood, but similar in quality to that last-mentioned. In the early part of the day we passed two or three streams of good water; some of the party had a conversation with the natives, who were very civil, and wished to make them understand what they meant by a variety of singular gestures; these are the first we had seen since we left home. Walked eleven miles after dinner.

Oct. 29th.—Rose at 5 o'clock, as usual, and got breakfast immediately. We walked about half an hour over fair soil; a few useful farms might be got here, but I think they would be small. On the S.W. may be seen large hills, with considerable patches of land on them, completely clear of timber. After walking six miles we

found a stream running to the S. There is likely to be water here all the year; in some places it is rather deep. Two miles distant we found another stream. There are hundreds and thousands of acres of land about this part entirely clear of wood, mostly sand, but not of the worst kind; there is a slight portion of vegetable earth among it. It is my opinion, if this land were in England instead of New Holland, there would be a crop of turnips upon the whole of it the next year. After taking dinner we walked four miles, across an open undulating country, very sandy, and bad in quality, but good to travel over; a gig might drive here for miles together without any considerable obstruction. We next found a tract of better land, with a fair quantity of wood. We encamped in a valley for the night, and had to dig holes in order to get water. In the course of the day we had, perhaps, the finest and longest kangaroo chase that has been seen in the colony: the kangaroos on these commons are amazingly swift, and it requires a good grey-hound to come up with them. Passed two native huts, superior in size and architecture to those we are accustomed to see.

Oct. 30th.—Set off at half-past 6 o'clock, walked a mile, and saw Mount Bakewell W. 3° S. There is a nice farm in the valley we have just crossed, perhaps 1000 or 2000 acres. This valley is surrounded on three sides by sandy commons. We walked over the one that lay in our course, about one mile and a half in breadth, and got to the top of a hill; here we had a view of the country before us, which was of a different character from the one just passed over, being well clothed with wood. Upon exploring it we found it to be very ragged in some places, with some middling good land in the valleys. Towards evening we fell in with a forest of gum-trees, different from any known on the Swan and Canning Rivers; we named them cable or fluted gum, being considerably twisted, yet they are very tall and straight, and the bark of a green or olive colour. Our course lay through this forest; and after walking five miles we arrived at the foot of a mountain, very singular in appearance, and composed of solid granite. This huge rock we

afterwards called Mount Stirling, after W. Stirling, Esq. Here we had to dig for water; it was about 7 o'clock when we made this place.

Oct. 31*st.*—Upon examination it was found our quantity of provisions would not admit of our going further E., we therefore ascended several very high hills for the purpose of examining the country and making observations. Mr. Dale and Mr. Stirling went to a high hill three or four miles off, which they named Mount Caroline, after a lady in this part. Mr. Camfield, Mr. Clarkson, and myself, went to another, the highest of three, which we named Mount Elizabeth, after a lady of your acquaintance. We arrived at the top of this very high hill or rock about half-past 10 o'clock. In ascending the E. side, near the top, we found a small spring of excellent water, the day being very hot we found it of very great service. Due E. we observed the smoke of a native fire ten miles off; the country in that direction appears gradually to rise, water in two or three places may be seen. The valley from E. towards N. abounds with swamps or salt marshes, the water brackish, and a quantity of samphire grows there; a large extent of country is evidently under water in the rainy season. E.S.E. are to be seen four mounts S.W. There is a peaked hill of considerable height about fifteen miles distant. From W. and by S. may be distinctly seen a body of water, with a blue mist, indicating water for two miles in a southerly direction. W. about three miles is a small round hill, thinly covered with wood, and of a sandy complexion. From Mount Elizabeth, Stirling's Mount bears S.S.W., Mount Caroline N.N.E. about two miles and a half off. On the top of this massy rock there is an astonishing number of lizards, remarkably beautiful, and the velocity with which they move is truly surprising. After making the above observations we began to descend, and found a much stronger spring of water on the N.W. side; we likewise found an arched piece of rock, with several bird's nests adhering to the top. From their peculiar construction and composition, I judge they belong to the swallow tribe, but very different from those seen in England. There is much good land about the base of these moun-

tains, what there is beyond is not for us to determine, that work must be left to other explorers in after-days; however, it is some satisfaction, that we left good land at the eastern extremity of our route. After dinner we steered S., in order to change our course a little; in this direction we found land of excellent quality, capable of producing good corn, and very suitable for sheep. Having travelled six miles we encamped by a stream for the night.

Nov. 1st.—Set off at 6 o'clock, S.S.W., first mile or two tolerably good land; we then met with high sandy commons similar to what have been described before, rather better in quality if anything. About 10 o'clock, having walked nine miles, we cut upon two large lagoons; here we halted; there is strong presumptive evidence that these lagoons contain water all the summer; we shot at a brace of musk ducks here; these birds cannot fly. There are plenty of kangaroos here, without going out of our tract we saw at least twenty. The kangaroo appears to be the antient and almost sole proprietor of these extensive wolds. After dinner we travelled to a peaked hill, which we named Mount Deborah, after a celebrated lady in Yorkshire; from it we had a view of the native fires, with appearances of water bearing W. 16° N. There are 2,000 acres of good land, more or less, about this mount; a water-course on the north side, but little water in it at present; it would make a delightful farm; here we lodged for the night.

November 2nd.—Set off early, as usual, walked three miles through a forest, so thick in some parts, that we were obliged to alter our course. On the edge of this wood we found a large lagoon, and after walking another mile, through brushwood and swamps, we found another lagoon of considerable magnitude, the water in both brackish. These lagoons are evidently much larger in the rainy season; they must at that time cover many hundreds of acres of land; probably they are a continuation of those seen about Mount Elizabeth and Mount Caroline, and I am pursuaded they must fall into a river southward. After leaving these lagoons, we ascended a huge sand hill, and descended on the other side into a wood; here the land is better again. A little before we

halted, we passed over a small tract of the richest land I ever saw, to the best of my recollection. Travelled eleven miles this morning, and rested in a valley where there is plenty of grass. After taking a little refreshment, we commenced our journey again, and in a little time met with a small party of natives; these are the first I have seen on this excursion. We got a green branch, (which is the emblem of peace,) shouted, and made many signs, but all was unavailing; poor Mungo, I venture to say, was never in such a predicament in his life before; he shouted, and appeared to boil with rage, showed his spear and throwing stick, but when he found that all his bravado did not deter us, but that we still kept advancing, his courage forsook him, and the whole party took to their heels, and away they ran, hooting and muttering, yet apparently terrified beyond measure; and no wonder, for I suppose they had never seen an European before, much less a horse, with a man thereon. As they worship the sun, and probably other celestial bodies, they might think "the Gods had come down." Very little good land this afternoon. Saw thirty kangaroos to-day.

November 3d.—Not having any water last night, except what we had in some small canteens, we arose at half past four o'clock, and commenced a brisk march before breakfast; we got very wet, some heavy showers of rain fell, and after walking six miles, we felt something like Cowper's "Farmer at the tything time in Essex." It was no time to joke. Passed over two or three pieces of excellent land this morning, and beautifully situated; many charming farms may be got about here, from 100 to a 1000 acres, more or less. After breakfast we set off again, and were highly delighted, whilst walking about nine miles over the best land I have seen in the colony; we then fell in with a strong stream, which afterwards proved to be the same, or a branch of the same, discovered by Messrs. Dale and Brockman before: the land here is very good and covered with grasses of excellent quality, even to the tops of the hills; and, in a short time, this part will be found peculiarly applicable to breeding and grazing sheep and young cattle. In my opinion, I never saw a finer country for sheep.

November 4th.—After breakfast we crossed the stream, walked over a valley, found another rivulet, and ascended a high hill; from this eminence we had a view of Mount Bakewell, bearing N. twelve miles off; it is all hill and dale in the intermediate space, with every appearance of good land. The native grasses in this part are very good, and grow very strong; some of them are a yard in length; but where they are very long, it must be observed, they are thinly planted in general. About 11 o'clock we halted, and after dinner Mr. Clarkson, Mr. Crawfield, and myself, crossed the stream, with the intention of examining the land some miles distant, but in this we were disappointed by a heavy rain; however, what we did see amply repaid us for our labour.

November 5th.—Gunpowder-plot. Arose before 5 oclock, breakfasted, and bent our course home due W. Our stock of provisions being rather low, we could not spend more time in examining the country; the first five miles after leaving the stream was very hilly, but the land good, with huge pieces of granite rock here and there. The land in the vicinity of this place is well watered; even in the tops of some of the highest hills, water may be had all the year round. Plenty of stone may be procured for the purposes of building houses, out-houses, and fences. There are no large trees on the good land, but plenty of black or green wattle, which gives it a very pleasing and picturesque appearance; there is also a species of gum; these two kinds of wood will do very well for the farmer at first, and there is plenty of mahogany and some red gum, within a few miles. The limestone ridge opposite Mount Bakewell, will also be of very great service to this part if no other can be found nearer. The good native grasses of Western Australia, to the amount of half a dozen or more, I should not know from good English grasses, were it not for the knowledge I have of the distance that separates the two countries. I frankly confess that I am a novice in botany, and botanical phrases, or I would have given you the proper names of each of these grasses: however, I have vanity enough to suppose I know what kinds of grass are suitable for sheep and cattle; and I give it as my opinion, that the before-mentioned grasses

are of the right kind. The climate on this side the mountains I like much, not being so hot, by several degrees, as on the Swan; the air is fresh and bracing, the dews heavy in the night; indeed, if we may make vegetation speak a language, it is this—here the soil is good, the climate fine, and the rains sufficient. At the same time, I would have you take notice of the three following considerations:—First, every country is subject to vicissitudes, one season may be dry and another wet. Secondly, it is but two months since the rainy season. Thirdly, I am a fallible being, and therefore my judgment may be wrong. However, to make short of the matter, I say I am well satisfied with what I have seen on the Avon, and you are fully aware of what experience I have had in these things, and therefore will be able to give an opinion on the subject to your friends and neighbours. At the end of the five miles before mentioned, there is a very sudden change in the soil, and the appearance of the country; the ironstone rocks are to be seen, and very little or no good grass, except in the valleys. We have lost a fine greyhound, and the other dogs are very lame. Travelled eight miles this afternoon: this part of the country has lost all its interest, except as a medium to a better.

November 6th.—Arose betime and intended starting with all speed, but to our mortification, Mr. Clarkson found that his English mare and a Cape one had taken "French leave," as we sometimes say; but what a wonder they have been permitted to roam at large before, as was the case last night, so it cannot be counted a misfortune but an act of imprudence. After a long search they could not be found, so we left him and his man all the provisions we could spare, and they tarried behind, hoping to find them in the course of the day, but the sequel proved their hope was vain. So far, we have met with better roads on our way home than on our way out. We rested a little time, and then ascended a huge mountain; on the other side it was very rugged and steep, with the Helena running at its base; in the space of half a mile we crossed two other streams, which run into the one before mentioned. After passing these streams, we had

to climb another hill, of no ordinary ascent, which made perspiration flow freely; time and patience brought us to the top, and on the other side may be seen mahogany trees of extraordinary dimensions: I measured one which had been burnt down, which was thirty-eight yards, or 114 feet long; another that was standing measured fourteen yards round the base. I stood by another which lay flat on the ground, but could not see over it; this tree would be six feet in diameter, at least: you may think these dimensions almost incredible, but I assure you it is fact. Found a beautiful stream and rested for the night before the fire, the tent being left in the wilderness.

November 7th.—Set off again about 6 o'clock, and after a march of about five hours and a half, through forest, swamp, and stream, we arrived at the last hill, and had a view of the sea, Garden Island, Rotteness, Melville Waters, Mount Eliza, Perth, &c. With considerable difficulty we descended into the plain, and took a little refreshment by a delightful brook. After resting a little, we set off again, having eight or ten miles to walk, and about half past 5 we arrived at Captain Byrne's, and had the satisfaction of again seeing home.

"Be it ever so humble, there is no place like home," after a sixteen days' ramble into the interior of a country where no Europeans had been before us. Had you seen the party arrive you would certainly have either laughed or cried, I don't know which; some were in a pitiable plight, having worn out their shoes,—a good crop of toes to be seen before, and a famous round heel behind; others with their trowsers worn off half-way up the leg, and a knee peeping out; some had not been shaven all the time, others but once; in fact, it was high time all of us made the land of the living again, for all needed some repairs, and our stock of provisions was all but exhausted: it put me in mind of some words in Cowper's "Mutual forbearance,"

> "worn out graces,
> Long beards, long noses, and pale faces,
> Are each an antiquated scene."

Pale faces was not applicable in the present case, for

some were burnt red, and others not very light coloured. Now I have given you an account of this expedition, and I am happy to say, satisfaction is the result of reflecting upon it; not upon the writing or composition, but upon the subject matter of it: on the whole, it must be considered a successful one, and I have no doubt but time, "no distant date," will prove the truth of what I have ventured to prognosticate.

REMARKS.

Our not finding water must be attributed to our not knowing the country, for in general we found water near, the following morning.

I saw no birds, beasts, or reptiles but what were known before.

The kangaroo must be very numerous in the interior, if we may judge from the quantity seen in walking a straight line.

I am of opinion a large portion of the good land seen south of Mount Bakewell, will keep a sheep and a half per acre. They allow three acres for a sheep on the other side of the island.

Lastly, I receive no salary from Government for scribbling, therefore I hope to stand acquitted from a charge brought against some journalists who have written from other countries.

T. W. HARDY

SEE P. 70

To Robert Harvey, Esq.,
Barrow, Lincolnshire.

No. 2.

A REPORT *on the* DISEASES *of Perth, Western Australia, from* 1*st Jan. to* 31*st Dec.* 1831.

THE prevalent diseases this year were similar to those of the last, viz. Dysentery, Opthalmia, Fever, and Scurvy.

Dysentery.—There were fewer cases of this disease than in 1830. They were of the same mild character as described in my last report. As the causes, symptoms, and treatment, are there detailed, it is unnecessary to repeat them. All the cases have terminated favourably.

Opthalmia.—Neither was this disease so general as during the preceding year. Those who escaped it in 1830 were now generally attacked. It was of the sub-acute, purulent character, already described; no unfavourable termination has taken place. The Aborigines are liable to this disease, but I have not seen any amongst them, whose vision was permanently injured by it.

Fever—has been also on the decline, and the symptoms of a milder character. It appears to have been brought on by malaria, wet and cold, fatigue, or intemperance; or perhaps, in some instances, all these causes conjoined; there are no proofs of its being of a contagious nature; on the contrary, it has seldom occurrred to two persons residing in the same house. In that portion of the town of Perth, called the Bazaar, where some bad cases occurred the last year, there has not been one this, which may be accounted for by the improvements which have taken place in that neighbourhood—the clearing, the draining, and the erection of good houses. It was mentioned in my last report, that some ships arrived here at the commencement of the settlement, with typhus fever on board, and that it was possible the fever might have been introduced in that way. I am now inclined to doubt, whether any such disease can exist here under the ordinary circumstances of the atmosphere; no case of measles, small pox, scarlatina, or other contagious disease,

has hitherto been met with. Syphilis is unknown, and vaccination, after repeated trials, has failed.

Scurvy has not been either so common or so formidable as last year. The increasing comforts of the settlers are gradually undermining and will soon eradicate this disease.

The cases of disease have been, on the whole, fewer in number, and milder in character this year than the preceding. The favourable opinion I have already expressed of the influence of this climate on European constitutions, as well as a residence for invalids from India, is strengthened by a further experience of two years.

I have met with several individuals here, who, on leaving England, were great sufferers from dyspepsia, and disorders of the digestive organs generally, from the nervous affections which so often acccompany these—from hypochondria, from asthma, and from bronchial diseases—who have recovered their health in a remarkable degree since their arrival. Some of slight figures have become more robust and stronger. Parturition with the female sex is expeditious and safe, being accomplished by the efforts of nature alone within from three to six hours. No woman has died in child-birth in this colony since its commencement, nor am I aware of any who died within a month after.

Children thrive remarkably well; and I may add, every description of live stock, although collected from different climates,—England, India, South America, Africa, &c., and various plants and vegetables collected from as many different sources, find here a congenial temperature.

Indeed I am disposed to conclude, that when the settlers are well lodged and fed, and the country more cultivated and improved, but few diseases will be met with; I might perhaps say, only dysentery and opthalmia, and these of a mild character.

Wm. Milligan, M.D.

No. 3.

Peninsula Farm, Swan River,
July 14, 1832.

Dear Sir,

In compliance with your wish, I here send you a short statement of my proceedings and remarks since my arrival at Swan River. If you think them worthy of notice, or useful in any shape, they are at your service.

February 3d, 1830, arrived at Swan River, in the brig Tranby, from Hull, and found many of the emigrants in their tents, at Fremantle, generally dissatisfied, and full of complaints respecting the colony, (and some of them ready for going away). The flats up the Swan, the badness of the soil, the heat of the weather, with many other things of the same kind, appeared to be the subjects of general conversation, when worshipping at the shrine of Bacchus; and after being assailed on every hand by such miserable comforters, I found it necessary to leave them and go to look for myself, and after reaching the Peninsula, (where I now reside,) was convinced that the land was of an useful character, and might be made to suit the general purposes of agriculture, although inferior to much of the land higher up the Swan. The first three or four months was taken up by house and boat-building, getting up the goods from Fremantle to the Peninsula, &c. &c. In June we begun to clear the land and plough for wheat, barley, oats, rye, &c., all of which came up well, but the fences not being sufficiently good, the cattle broke in and destroyed a great part of the crop; that which escaped their ravages came to maturity, and was of a very good description. The last year, 1831, has convinced me that when the land can have tillage and proper management, it will grow wheat, barley, oats, rye, potatoes, and turnips, in great abundance: very good specimens of the aforesaid articles were produced the last year—the average weight of wheat from sixty-two to sixty-five pounds per bushel. As it respects the seed time, it is as long and favourable as we

can wish; it commences the latter part of May, and continues through June, July, and even August, where the land is in good condition. We have heavy rain in September, very fine showers in October and November, and in the beginning of December the corn is ready for reaping, so that it suffers nothing for the want of moisture. We have little or no more rain until March, (although very heavy dews) when the showers commence, and increase every month until July or August, after which they gradually subside until November. In December, January, and February, the weather in general is hot, and the grass much burnt up, but the cattle do well and keep their condition the year round; when the grass fails they feed on the grass tree and the tops of the brush-wood. Young stock thrive remarkably well, and are as large when nine months old, as the same description of stock would be in England at twelve months. I think this is owing to the very fine climate, which permits them to graze throughout the year, without being obliged to house them for six months out of twelve, and keep them on dry fodder, (as is the case in England,) which very materially hinders their growth. Sheep do well and increase very fast; in some instances, twice in the year. The great scarcity of working cattle, has very materially retarded the progress of the settlers in their agricultural pursuits, and has prevented the colony from arriving at that state of improvement and prosperity which it otherwise would have done. When a sufficient quantity of bullocks and sheep can be obtained to satisfy the wants of the settlers, and a portion of those settlers can be established on the Avon River, as graziers, the colony will be in a fair way for supplying itself with all the necessaries of life, produced on its own soil. What I have seen of Yorkshire, on the river Avon, I was much pleased with, and think it well adapted for either grazing or farming; but the distance from market, in the present state of the colony, will prevent much being done in the farming line above what is wanted on the spot for consumption. As it respects the colony at large, there is little doubt but it will succeed, *and well*, if it receive that

encouragement and support which all colonies need in their infancy. We have already seen the wilderness become a fruitful field, bending beneath the gentle breeze, and are looking forward to the time when every diligent man shall be surrounded with peace and plenty.

I remain, your's, &c. &c.

JOSEPH HARDY.

To Captain Irvin, Perth.

No. 4.

His Majesty's Sloop, Sulphur,
10th December, 1832.

SIR,

In compliance with your Excellency's request, as to my opinion of the climate of Swan River, I beg leave to state, as a climate with regard to health, I am not aware of any other that can be compared with it.

As a proof of its salubrity, during the three years His Majesty's Sloop, Sulphur, was employed upon that station, not a single death, and very few important cases of disease occurred, notwithstanding the very great exposure of her men, not only to wet, but also night air, in consequence of her boats having been a great deal employed at a distance from the anchorage. When exploring the country, for several days, and sometimes weeks, have these people been exposed to the sun, fatigued in the evening after a day's exertion, slept in the open air, and that repeatedly in wet weather, without suffering in the slightest.

Another point ought also to be taken into consideration: the debilitated state of these constitutions which were undergoing this exposure, in consequence of having been so long a period upon salt provisions, and without vegetable diet; out of three years and ten months the Sulphur was employed upon the Swan River service, her crew were only 256 days upon fresh diet. A life of this description in any other climate, I have no hesitation in asserting, would have been productive of the most serious disease.

I have the honour to be, Sir,
Your most obedient and humble servant,

JAMES WINGATE JOHNSTON, M.D.
Surgeon H.M.S. Sulphur.

To His Excellency Governor Stirling, &c. &c. &c.

No. 5.

COPY OF A LETTER *just received from Capt. Irvin, dated 26th January, and 4th February*, 1833.

Henly Park, January 26th, 1833,
Upper Swan.

MY DEAR GOVERNOR,

I have had the pleasure of receiving your Letter of October 7th, by the Cornwallis, and sit down to take advantage of her departure to write by her. My last was despatched to you by H.M.S. Imogene, early last month, Capt. Blackwood having touched here on his way from India to the eastern coast and isles in the Pacific. We continue to get on quietly here, as I mentioned in my last. The crops have turned out very abundant, but the Van Diemen's Land seed has proved generally indifferent, and has introduced a good deal of smut; the farmers, however, seem well satisfied on the whole. I have directed Morgan to call on them for promissory notes, for the advances of provisions, payable the 1st June; and I have thought it advisable to issue a notice, that the Government consents to take, any time before then, wheat, the growth of the colony, in payment, delivered at 15*s.* per bushel, which is allowed by the farmers to be a fair remunerating price. Wheat has been selling at 25*s.* and 30*s.*, but whenever Lennard and Brockman had thrashed, they offered it at their farms at 15*s.* Stephen Henty arrived a few days since with the Thistle, and a well-assorted cargo, including twenty tons of flour, which he sold for 4½*d.*; and wheat, I am told, at 8*s.* per bushel, to M'Dermott both; she goes back immediately for another cargo. The wheat crop is generally rated as under six months' consumption. I have some idea that it will be necessary to order from the company at the Cape fifty tons of flour, by Henderson, but our expenditure in stores has been so heavy that I shall not do so, if I can avoid it. As the expense of the Ellen is

£1000 per annum, I think it will be advisable to lay her up after a trip to Augusta, keeping Tolez on as pilot.

I intend not to lose a moment in completing the buoying off of the passage into Cockburn Sound, whenever we can get the chains and anchors. Blackwood expressed great anxiety to effect this for us. We have beacons at present, however, on the Challenger and other rocks, so that it is perfectly safe.

February 4th.—I am now about sending off my despatches by the Cornwallis, which is to sail to-day. I find that Brown has written so voluminously as to render it unnecessary for me to revert to the arrival of the Cygnet, on our late proceedings in the Executive and Legislative Councils, which I trust will meet with your approbation, on seeing them at the Colonial Office. I need not repeat the general anxiety that prevails as to the result of the mission you have undertaken, and the desire for your return after the accomplishment of the object, and I am sure none more so than myself. I hope you will be able to get the sale of lands here deferred for some years, as it is generally supposed to operate strongly against our getting an increase of settlers of late, when such a spirit of emigration has manifested itself at home. With the hope of soon hearing from you from England,

I remain, my dear Governor, yours very faithfully,

H. C. Irvin.

P.S.—I have just had the produce of wheat of this crop at Henly Park tried, and find that upwards of 60 bushels per acre have been yielded by land that last year gave 52. This, I think, you will consider very encouraging.

H. C. I.

No. 6.

EXTRACT OF A LETTER *from Swan River, dated 27th January*, 1833.

LAND increases in value daily on the Swan; a grant that the owner would have readily sold for 25*l.* ready money, a twelvemonth ago, will now fetch 100*l.*; indeed, I do not know a better way of investing a small sum of money, than in land on the Swan: a grant I gave 200*l.* for, I could let, for grazing sheep, at 20*l.* per annum, and your land is improving all the time. People who had grants on the Swan, in the earlier period of the colony, thinking them worthless, literally gave them up, conceiving, that as land was given away, and no one appeared to derive any benefit from the culture, or rather never attempted such culture, that it was useless to retain them; now, however, that they see the soil producing wheat, barley, oats, potatoes, turnips, carrots, Indian corn, &c. &c. in the greatest profusion, they are ready to purchase the very grants they previously gave away. There are only two sorts of people who can get on here, the one with a capital, the other the labouring man, who gets a three acre grant, cultivates it two days in the week, and works out the other four days, supporting himself, and bringing his grant into cultivation. You have, I suppose, heard dreadful accounts of the nature of the soil, and with some show of reason, probably, as Fremantle, the great emporium of our trade, is the vilest place on earth—nothing, in fact, but a huge mass of white sand; and the country, within two or three miles, partakes of the same valuable qualities; and there are many who pretend to give a description of the colony, who have never been more than an hour's walk into the interior. The land on the banks of the Swan, commencing at Perth, is decidedly good, up to the hills; the Canning, I believe, is the same. This good land, I must tell you, though, only extends half a mile to a mile back, from the banks of the rivers, when you come to light sandy soil, covered with brushwood and worthless trees;

though in the neighbourhood of the numberless lagoons which are scattered very thickly over the face of the country, you may find excellent soil. Over the hills, however, the scene changes; there is, as may be seen in the chart of the colony, a chain of hills running north and south, parallel with the coast; they are not worthy of the name of mountains, as I should think none in this neighbourhood exceeds 4 or 500 feet in height. From the foot of the hills, about twenty miles from the coast, you commence an up and down journey, which extends to the distance of forty-eight miles, when you reach York, our ultra mountain settlement: there are, I believe, three ranges of hills before you reach the level country, but these offer but few obstacles to the traveller; indeed, though they have never levelled a road, but merely cut down the trees and brushwood in the line a cart can go over very well: the land when you reach it is really good, and moreover uniformly so thinly wooded, and well adapted for either grazing or tillage. Messrs. Trimmers have now a flock of 500 sheep there, all thriving uncommonly well. At present there are only two or three settlers over there, as the transportation of provisions makes settling there very expensive at present. On the whole, I think there is not a doubt of the ultimate success of this colony, provided we have a government who obey the dictates of reason,—the country will produce anything; the only drawback, perhaps, in the eyes of an inhabitant of our cold, foggy, yet dear little island, would be the heat of the climate. The following calculation will show the amount that will be sufficient to commence as an agriculturist:

First Year's Outlay as a Stock Farmer.

150 Ewes, at 30*s.*	£225	0	0
Hut and Sheep Pens	50	0	0
My own Keep	100	0	0
Keep of Man	45	12	6
Wages, 50*s.* per Month	32	10	0
Tools, Implements, Kitchen Utensils, &c.	10	0	0
Grant of Land	150	0	0
	£613	2	6

Second Year.

Man's Keep and Wages	£78	2	6
My own Ditto	78	2	6
Medicines, &c.	10	0	0
	£166	5	0
125 Lambs, weighing 25lb. each, sold at 1*s.* 3*d.* per lb.	195	0	0
Clear	£28	15	0

You will perceive I have not reckoned my second year's keep so high as the first, as I should have raised vegetables by that time. The item of keep is certainly too high, but as I have not reckoned for casualties I let it stand.

The following is a Calculation for a Tillage Farmer:

Instead of sheep I commence with two bullocks and one cow, in place of the sheep; the other items are the same, except the addition of a plough and harrow—this will require less capital than the former by 100*l.*

T. P. Jun.

No. 7.

Woodbridge, near Guildford,
May 18th, 1833.

SIR,

With reference to your Note of the 9th instant, in which you express a wish to be informed as to the measures which it is proposed to adopt in regard to the settlement in Western Australia, I beg leave to say, that any information which it is in my power to afford you, or any other person, interested in the subject, is very much at your service; but it is necessary to observe, that as I am not in the exercise of any official authority in this country, any statement I may make on such matters must be considered as emanating from a private source.

The view which the colonial department takes of the colony in question, I believe to be this:—that, although it was originally entered upon with the intention of meeting the wishes of several individuals desirous of establishing themselves in that country, His Majesty's Government is not indisposed to afford the settlement every reasonable and proper degree of protection and countenance. It is therefore proposed to provide for it certain civil and military establishments, upon a scale inexpensive, but, in my opinion, sufficient for the administration of government and law, and for the protection of the settlers. The civil establishment will be more efficient, but not more costly than that which has existed hitherto; the military force will be doubled, or, at least, extended to two companies. The expense of supporting these institutions will be, for the present, supported by the Crown, but the continuance of this practice cannot be expected to extend beyond the period when the growing means of the settlement shall enable it to bear the charge of its own establishments.

Every description of expenditure unprovided for by vote of Parliament, or unconnected with the two branches of service aforesaid, will have to be borne by a colonial fund. To this, as a commencement, the Secretary o

State has recommended the appropriation of a considerable sum, now in course of payment, as due to the Crown for provisions, &c. supplied to individuals; and it will be for the colonial legislature to keep it up by the imposition of such duties as it is customary to collect in other British colonies. The first charge on this fund will be the equipment of a mounted corps for protecting, and, at the same time, controlling the aborigines. The subsequent charges will be for the construction of roads and public works; the erection and support of schools; relief to destitute persons; and such other appropriations as may seem most conducive to the general welfare. The Legislative Council, at present existing, will be extended, so as to comprise a portion of settlers unconnected with the government. The land regulations under which assignments were made to the earlier settlers, will be modified for their benefit, and the same assistance which has been given as to passage-money by the emigration committee, to labourers proceeding to Van Diemen's and Sydney, will be extended to Western Australia, so soon as she can offer the same security which has been required from the other colonies. The appropriation of a ship of war to services exclusively connected with the new colony cannot be afforded; but it will be visited at proper intervals by ships belonging to the station, and for the purpose of enforcing the port regulations, the colonial vessel will probably be armed.

The foregoing sketch includes an outline of the arrangements which I have reason to think will be adopted in the future management of the colony. In making these several concessions, the Government considers it will have accomplished all that the settlers ought to expect. In the advancement of their particular pursuits, in the cultivation of the soil, and in the conversion of its natural resources into a productive state, the colonists could not derive any solid or permanent benefit from the assistance of government, and in all such matters they must therefore rely upon their own means and industry. They will be protected by a local government; they will enjoy the benefit of English laws; their interests will be superintended by a Legislature composed in part

of persons taken from their own body; and, with these advantages, if private capital and enterprise cannot accomplish all that remains to be done to render the settlement prosperous, it will not owe its failure to any want of attention to its interests on the part of government.

I am, Sir, your very obedient servant,

JAMES STIRLING.

To Mr. J. Cross.

No. 8.

THE FOLLOWING IS AN EARLY SPECIMEN OF AUSTRALIAN POETRY.

Tune—"BALLENAMONA ORA."
"*A good Penny Wedding for me.*"

From the old western world we have come to explore,
The wilds of this Western Australian shore;
In search of a country we ventured to roam,
And now that we've found it, let's make it our home.
And what though the Colony's new, Sirs,
And inhabitants yet may be few, Sirs,
They'll soon be increasing here too, Sirs,
So the Western Australia for me.

By care and attention I'm sure 'twill be found,
Two crops in the year we may get off the ground;
Good wood and good water, good flesh and good fish,
Good soil and good clime, and what more could you wish.
Let every one earnestly strive, Sir,
Do his best, be alert and alive, Sir,
We'll soon see our Colony thrive, Sir,
So Western Australia for me.

No furious south-easters—no burning simoon—
Our harvests to blight, and our fruits to consume:
No terrible plague, nor no pestilent air
Our "livers" to waste, though our lives they may spare·

Our skies are all cloudless and bright, Sir,
And sweet is our lovely moonlight, Sir,
Oh this is the clime of delight, Sir,
So Western Australia for me.

No lions nor tigers we here dread to meet,
Our innocent quadrupeds hop on two feet;
No rent, tithes, nor taxes, we here have to pay,
And our "geese are all swans," as some witty folks say.
Then we live without trouble or stealth, Sirs,
Our *currency's* all *Sterling* wealth, Sirs,
So here's to our Governor's health, Sirs,
And the Western Australia for me.

G. F. M.

No. 9.—A TABLE *shewing the Variations of the Thermometer and Barometer at Perth, Western Australia, from 1st January to 31st December*, 1831.

Dates.	Thermometer.			Barometer.			Prevailing Winds.	Weather.
	max.	med.	min.	max.	med.	min.		
Jan. ..	106	87	68	30.10	29.91⅘	29.72½	NE. by N.&SW.	Generally fine, and very sultry.
Feb. ..	102	82	62	30.20	30.02½	29.85	N.E. & S.W.	Thunder on 7th, 13th, & 14th, with rain on these days. Remainder of month fine.
March.	96	78	60	30.20	30.05	29.92	N.E. & S.W.	Rain on 27th & 28th at full moon; remainder fine.
April .	98	73	48	30.25	30.10	29.95	E.N.E.&S.W.	Fine, with the exception of 3 rainy days.
May ..	78	61	44	30.40	30.15	29.90	NE. N. W.&SW.	Much rain, and heavy dews.
June..	70	52	38	30.30	29.90	29.50	NW.S.W. &NE.	Light. & thund. on 8th, 12th, & 13th; frequent showers, but neither long continued nor heavy.
July ..	67	50	33	30.40	30.05	29.70	N.E.N.W& SW.	The greater part fine, severe thunder storm on 8th; ice on 9th; thunder on 16th.
August	76	59	42	30.40	30.10	29.80	N.E. & S.W.	A good deal of rain; a strong gale on 5th.
Sept. .	78	51½	45	30.30	30.10	29.70	NW.SW.&NE.	Mostly cloudy, & occasional showers; thunder on 2d, 10th, and 19th.
Oct...	79	63½	48	30.40	30.07½	29.75	N.E. & S.W.	Variable, cloudy, and rainy for the greater part.
Nov...	95	74½	54	30.15	29.90½	29.66	W. & S.W.	Squally, cloudy, and rainy, at beginning; latter part fine.
Dec...	96	78	60	30.25	30.07½	29.90	N.E. & S.W.	Generally fine. A regular land and sea breeze, with a little rain.

N.B. The Thermometer stood in a thatched hut, not well situated to receive the sea breeze. In comparison with one, kept in a brick-house, situated near the river, a difference of 15 degrees was observable, being so much lower during the hot months in the latter, especially during the prevalence of the sea breeze.—The observations were taken at 7 in the morning; 2 in the afternoon; and 7 in the evening.

Apr 1831	Temperature of Shade. 8 a. m.		Sun set	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Clouds. a.m.	p.m.	Weather.	Pluvia Meter.
11														
12														
13							SE		fresh				cloudy	
14		59	63	30.50	30.50	30.50	E		ditto					
15		65	58	.47	.43	.43	N	E	ditto				clear	
16	s.r. 56	76.5	68	.43		.38	N	NE	light					
17		65.5	68.5	.36		.40	N	NNE	very do.	fresh	cirri			
18			67.5			.49	ENE	E	fresh					
19		63	55	.49		.49	NE		light	strong	cum.	str. nimbi		
20		59.5	62			.37	NE		fresh	moder.	cir.& ciro.	strati	fine	
21		61	62	.24	.14	.14	N	NE	light	very lt.	cirri str.	cirro cum.	fine	
22		62	66	.08	.08	.05	NW	SW	ditto	mod.	cumuli	nimbi	ditto	dews
23		65	63	.20		.20	var.	SE	calm	light	cumuli	cirri	dry	0.308
24	49	67	68	.22	.22	.23	NNE	SSW	light	ditto	cirri cum.			
25		63	69	.30	.32	.32	SE		ditto		nimbi	cir. strati		
26		63	63	.35	.35	.35					nimbi &	cirri strati	showers	0.443
27		63	62	.30	.24		SSE	E					fine	
28	49	59	60	.35	.27		Eastly	var.					ditto	
29		62	69	.15	.10		NNW	SW to NW					ditto	
30		63.04	64.15	.05	.045		S by W	S	light	light	heavy in	East		0.926

May 1831	Temperature of Shade. 8 a.m.		Sun set.	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Clouds. a.m.	p.m.	Weather.	Pluvia Meter.
1		63		65	30.10	30.10	SE	Variab	fresh					dry
2		69		69	.12	.09	E		light	fresh	heavy			ditto
3		72		64	.10	.10	SSE	E	var.				th. show	0.138
4		68			.22		E		fresh		heavy			0.009
5		63		67	23.5	23.5	NE				cirro	strati		
6		61			.09		N		mod.		ditto		cloudy	dry
7		66	max	58.5	.095	.14	.23	WSW	SE	strong		nimbi			0.025
8	s.r. 40	51	at 2.	63	.25	.25	.25	NEly	ditto	very lt.		cirri	strati	cloudy	0.025
9	53	61	73	67	.25	.25	.25	Nthly		ditto		cirro st.	& strati	clear	dry
10		60		67	.33	.37	.40	NW	E	light	fresh	cirro	cumuli	ditto	ditto
11	63	66		66	.48	.48	.48	ESE				ditto	ditto	cloudy	ditto
12		60		64	.43	.40	.43	E	S	light	mod.			clear	ditto
13	49	52		64	.29	.16	.14	N	Sby W	ditto	ditto			ditto	ditto
14			76 m.	71		.07		NW	SW	mod.	light	cirri &	cirro st.		ditto
15		63		65	.17	.20	.26	NW	SW	light	ditto	cirro st.	nimbi		
16				69		.25		E by N	Var.	very	light	cirro	strati		0.185
17		73?		65	.13	.08	.15	*Wly*	*Var.*	*ditto*		*ditto*	*ditto*		
18		66.5		70	.16	.16	.16	*variab.*		*ditto*		*ditto*	*ditto*		*0.015*

			0	.09	.00	.03	NE	NW	ditto	fresh	ditto	cumuli	cumuli & ltg. fine	
20		65		65	.01	29.88	29.94	N	NW	light	mod.	ditto &	nimbi	rainy	
21		61		55	29.92	.92	.95	N	WNW	mod.	fresh	ditto	ditto		
22	50	59		56	30.10	30.10	30.17	NW		fresh	ditto	ditto	ditto	showers	0.8145
23		59		57	.27	27.5	.28	NW		mod.	light				0.629
24		55		57	.30	.32	.30	WNW		light	mod.	cumuli	dry		0.067
25		56		60	.35	.35	.34	W		ditto	ditto	cumuli		clear	0.010
26		56		60	.37	.36	.36	W		ditto	ditto	ditto			0.108
27		59		59	.38	.40	.40	S	SSE va.	var.	light	cirro st.	& cum.		
28		56		59	.40	.40	.40	SE	NE	ditto	mod.	cirro st.			0.175
29		54		60	.43	.43	.43	NW	SWS		light	ditto &	cir. cum		
30		55		59.5	.45		.37	NE	E		ditto	cirro st.			0.026
31		52		57	.37	.35	.35	Nly			ditto	clear	fine	ditto	
Tot.& Mean		61		63.07											2.2015

On completely unscrewing the bottom screw of the barometer it fell from 30.01 to 29.88, having been hitherto maintained at a higher than proper point, by the bag resting on the screws.

June 1831	Temperature of Shade.				Barometer.			Wind, direction of.		Wind, force of.		Clouds.		Weather.	Pluviameter.
		8 a.m.		Sun set.	10 a.m.	4 p.m.	10 p.m.	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.		
1		57		56	30.32	30.28	30.26	S	SE	light	modera.	nimbi	clear	0.089	0.089
2	s.r. 45	52	m. 2	58.5	.24	.24	.20	Sthrly		ditto		clear		dry	0.020
*3		56	64	58	.21	19.5	.20	NE	NW	ditto	very lt.	cirro cum.	cumulo	dry	
4		53		64.5	.18	.09		N		very lt.		cirro	strati	dry, lunar	ring in morning
5		60.5		60	.01	.00		W	WbyS	strong		nimbi		rainy	
6		60		60	.04	.09		SW	WSW	ditto		cumuli &	nimbi	shwery	0.242
7		59		59	.11	.11	.12	NW	SE	very lt.		cirro cum.	nimbi	showers	
8		49		61	.02	29.90	.90	Nthly		light	moder.	cirro cum.	& strati	dry	0.098
9		60		59	29.74	.64	.63	N	NW	moder.		cirro str.	& nimbi	rain	
10		53		56	.49	.40	.41	NW		ditto	strong	nimbi &	cirro cum.	showers	0.959
11	53	58		57	.56	.63	.74	SW		strong	squally		nimbi	ditto	0.3094
12	51	53		58	.77	.75	.76	WNW		ditto	ditto	cirri &	cumuli	do light.	0.1803
13		53		56	.78	.88	30.00	NW	SW	gale		nimbi		showers	0.6910
14		51		58	30.17	30.17	.18	NW		moder.	fresh	cirro cum	& cirri	dry	0.0110
15		59		61	.17	.16	.10	WNW		ditto	ditto	cirri &	cir. strati	clear	
16		58		61	.06	.00	.12	WNW	NW	ditto	ditto	nimbi &	cumuli	showers	
17		57		60	.15	.10		NW	SWNW	ditto	fr. gust	cirro	cumuli	peculiar redness of cl. at sunset.	0.1631

18		58			.20			NNW		light		strati.		fog	0.3635
19		53		60	.29	.26	.20	NNW	NW	mo.frsh	light	cirro str.		clear	
20	s.r. 50	57		63	.16	.13	.10	WNW	NW	moder.	fresh	cirro str.			
21	gn. 47	57		58	.08	.00	29.90	NW	very E	ditto	very lt.	cirro str.	low	calm	0.2577
22		56		58	29.45	29.49	.58	NW	SW	moder.	hd. gale	nimbi &	cumuli		0.6702
23		57.5		57	30.05	30.04	30.10	SW	Sthly	strong	very stg	cirro str.	nimbi	showers	0.9796
24		55		55	.11	.11	.11	SSE		very stg	southly	nimbi &	cirro str.	ditto	0.3146
25		57		56	.18	.21	.24	SE		fresh		cirro &	strati	cloudy	0.1250
26	gn. 52	54		57	.26	.30	33.5	Var.		light		cumuli	nimbi	showers	0.0410
27	s.r. 49	53		57	.31	.33	.31	NE		very lt.		strati		dry	
28	dlt. 47	59		56	.16	.16	.16	N		light		cirri & cir.	cumuli	ditto	
29	s.r. 52	56		56	.16	.14	.09	NW		moder.	very stg	cirro str.	& nimbi	dry rn.	
30		58		56	.06	.11	.13	SW	WbyS	very stg	strong	cumuli &	nimbi	showers	08870
Mean.....		55.7		58.4											6.4014

* Between 2 and 3 h. p. m. thermometer (naked) resting on a potatoe leaf, which rested upon a dark grey sandy soil, exposed to the sun, and sheltered from a light breeze that was blowing at the time, stood at 82° under the leaf on the soil, and shaded by the leaf, at 73° 5'.

July 1831	Temperature of Shade.				Barometer.			Wind, direction of.		Wind, force of.		Clouds.		Weather.	Pluvia-Meter.
		8 a.m.		Sun set.	10 a.m.	4 p.m.	10 p.m.	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.		
1		56.5	2 h. 45'	55	30.14	30.17	30.18	WSW		strong		cumuli &	nimbi	cloudy	0.1031
2		57	59	57	.16	.14	.12	NW	SW	light	fresh	cir. str. &	nimbi	ditto	
3		54		53	.08	29.98	29.93	w w s w	NbyW	fresh	light	nimbi		cloudy	0.1390
4	s. r. 44	48		58	29.88	.88	.92	Var.	SW	light	verystg.	cirri cirro	str. nimbi	cl. rainy	
5	gn. 42	53		55	.98	.97	.96	WNW		mod.	very stg gale	cirro str.		dry, rainy, thu. &c.	0.5774
			2 h.												
6		56	60	56.5	30.06	30.09	30.10	SW	WNW	strong	fresh	nimbi		sh. clear	0.1760
7	d.lt 56	56.5		55	29.93	.83	.82.	NW		fresh	strong		nimbi	cl. rain, thun.&c	
8		50		52	.91	30.08	30.22	SWSy		halfgale in sqlls.	very stg.	nimbi	cl.	sh. dry	1.3502
9		53			30.35		.38	WSW	W	light	light	cumuli	nimbi	dry, sh.	
10		56	max.	56	.42	.42	.42	S	WSW	light		cum. nim.	cumuli		0.2539
11	s. r. 44	48	58	54	.43	.42	.41	NEva.		very	light	cirro cum.		clear	
12		54		57	.46	.36	.36	w w s w		light	mod.	cirri str.		lt. show	
13		47	63	55	.31	.27	.23	var.	NW	very lt.	mod.			clear	0.1391
14	s. r. 42	45	65	55	.11	29.85	29.70	Nly	NbyW	very	light		strati	cl. rain	

15	gn. 39	54			29.50	.745		WSW		half-ga.		nimbi	cumuli	showers		
16		45		52	.76	.83	.895	W		very str.	squally	nimbi		hl. & th. showers	0.7133	
17		49		53	.96	.95	.95	WNW	NW	squally	fresh	nimbi		cl. show thunder		
18	s. r. 49	51		53	.90	.745	.765	NNW	NW	mod.	very stg.	ditto &	cumuli	cl. show.	0.5342	
19	45	50	max.	53	.66	.66	.84	NNW	W	strong	very sq.	ditto	ditto	ditto	0.4897	
20		52	59	58.5	.925	.90	.90	NW		fresh		nimbi &	clear	sho. dry	0.5414	
21	d. lt 55	56			.845					mod. &	sq. mod.	clear &	nimbi	dry & sh.		
22				60		30.05	.12	W	SW	fresh	light	cumuli		fine, sh.	0.1546	
23		58		61	30.145	.14	.15	NNW	WSW	do. stng	squally	cirro str.	cloudy	dry, rn.		
24		58		63	.23	.20	.13	NNW		fresh		cirro str.	ditto	dry	0.0772	
*25	d. lt 61			56	29.95	29.95		NW	SWW	Lit. frsh	heavy g. for ½ hr.	cirro str.		cl. dry, show.		
			max.													
26		55	61	57	30.01	30.07	30.08	WNW		fresh		cumuli		d. & clr.	0.6908	
27		59		63	29.92	.83		NW		light	fresh	cirro str.		cly. dry		
28		52		51.5	.90	30.20	30.37	WSW	NW	very stg.	sq. light	cumuli	clear	sho. dry	0.3454	
29	d. lt 39	48		52	30.47	.47	.50	NNW		light		nimbi	clear	showers	0.1600	
30	39	49		59	.50	.50	.50	E&S'ly		ditto			cirri	cl. & dry		
31		47		61	.52	.54	.54	Eastly	Var.	light			cirri	ditto		
Tot. & Mean	.....	52.17		56.07										22 rain	6.4453	

* The heavy squall for half an hour, attended with heavy rain, equalled that of the 22d of June, and, like it, injured vegetation; more particularly the potatoes, the largest stems of which it completely stripped. In the beginning of the squall, the wind suddenly shifted from N.W. to S.W.

Aug. 1831	Temperature of Shade. 8 a.m.	Sun set.	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Clouds. a.m.	p.m.	Weather	Pluviameter.
1	48	57	30.54	30.52	30.49	NEly	Nthly	light	gusts	few cirro	cumuli	dry clear	
2	50	58	.41	.30	.23	NE	ditto	lt.fresh	light				
3	55		.14	.09	.03	NyW	NNW	moder	squal'y	cumuli &	nimbi	dry rn. showers	0.2783
4			29.62	29.60	29.60	NW		squally	ditto	ditto	ditto	ditto	0.7461
5	53		.60	.64	.73	ditto	WNW	ditto	ditto	ditto	ditto	ditto	0.3279
6	47		.73	.79	.92	ditto	ditto	ditto	ditto	ditto	ditto	ditto	0.4640
7	49	57	30.04	30.08	30.12	WNW		ditto	moder	ditto	ditto	ditto	
8	51	59	.15	.15	.13	W		frh. vble		cumuli &	cirri	dry	
9	59	58	29.93	.06	.13	NNW	NW	sqlly	very sqy	ditto	nimbi	hl.&thr. showers	0.5979
10	50	57	30.20	.21	.25	ditto	w wsw	ditto		show	ers		
11	54	56	.18	.11	.23	W		ditto		cirro strati		cloudy	0.7011
12	54	55	.35	.36	.34	SW	Sy.	light		ditto		do. dry	0.0205
13	53	55	.30	.20	.16	Wtly	ditto	very lt.		ditto		do. do.	
14	52	57	.13		.08	NW		lt. vble		clear		do.do.rn	
15	53	57	.03	.16	.16	ditto	NNW	frh. lt.		ditto	cl. ciro.stri	dry	0.6627
16	55		30.20	.20	.20	Wtly		moder	fresh	cirro strati		cloudy	
17	57	59	.13		29.87	W	W	ditto		cirri		clear	
18	56	58	29.84	.84	.85	N	NW	light	fresh	cirro	cumuli	do. shrs.	

19		57		56.5	.97	.77	.77	NE. E	NE. N	mod.frh	v.strong	cirro	strati	rn. ltng.	0.0037
20		54		57	.89	.89	.89	NWly		sqlly	moder	cumuli &	nimbi	showers	0.7785
21	s.r. 49				.89	.95	30.03	NNW	W	fresh	very sqy			dry do.	
22		52		55	30.13	30.14	.14	NWly		do. sqlly	light	cirro	cumuli	shy. dry	0.5723
23		57		58	.13	.14	.14	NW		moder		cirro	strati	dry, cly. clear	
24		58		56	29.87	29.80		ditto		strong				showers	
25		56		55	.98	29.98	30.01	W by S	Wtly	moder	very lt.	cumuli &	cirri	dry	0.0875
26		52		56	.87	.77	29.77	NE	ditto	fresh	ditto	nimbi	clear	rn. thdr.	0.3771
27		56		59	.87	30.00	30.00	NNE	NW	moder	strong	cumuli &	nimbi	dry shrs	0.6223
28		52		54	30.00	29.93		N by E	ditto	light	fresh	clear	cirri strati	thr. shrs	0.0097
29		53		58.5	.03	30.11	30.14	NW	WbyN	fresh	light	cumuli	clear		0.2474
30		55		59	.24	.26	.30	Nthly	WSW	light			nimbi	showers	
31		54			.33		.32	Ey		frh. lt.	moder	clear		dry, hy. dew	0.1803
Mean		53.5		55.7										20 rain	6.6268

Sept. 1831	Temperature of Shade.			Barometer.			Wind, direction of.		Wind, force of.		Clouds.		Weather.	Pluvia Meter.
		8 a.m.	Sun set.	10 a.m.	4 p.m.	10 p.m.	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.		
1	s.r. 46			30.27		30.20	NNE	E	light		ciro. cumi.	& cirro	fine day hvy dew	
2	46	48	59	.20	30.16	.15	NlyE	SE	ditto		few ciri.&	ciro. cumi	clear	
3		49	63	.05	29.90	29.90	NlyW.	WbyS	ditto		ciri.&ciro.	strati	dry ltng	
4		56	58	29.80	.75	.73	N y var	E	vy.light	fresh	nimi. ciro. cumuli	cumulo strati	rain	
5		56	62	.73	.90	.93	NE E	NE.E	light	light	clear &	nimbi	sy. day	0.3300
6		56	61	.94	.87	.87	NW		ditto	ditto	cumi.nim.		shrs.dry	0.3506
7		57	56	.71	.65	.53	ditto		strg.frh.	calm	cirro strati	cumo. stri. nimbi	rn. dry	
8		48	55	.38	.48	.63	ditto		strong	vy. strg.	cumi. & ciro. str.	nimbi	showers	0.2989
9		52	60	.70	.80	.82	ditto	Nthly	fresh	vy.light	cumuli		shrs.clr.	0.0764
10		60		.68		.75	ditto	WbyS	strg.hea	vy gale	cumo. stri. & nimbi		rn. thdr. & ltng.	0.1813
11		50	57	30.01	30.03	30.12	WbyN		hy.sqlls.	mod.	cumuli &	nimbi	showers	0.5980
12	7 a.m.	57	57	.13	.09	.19	W by S		strong	fresh, lt.	ditto		do. dry	0.3352
13	50	52	62	.13	.04	.04	N by E	N	calm, fre	sh, calm	few cu	muli	dry	
14	50 s.r.	60		29.99	30.02	.06	NW		fresh		cirro	strati	shs. dry	

15		57	60	30.03	.03	.01	NW		light		cirro	cumuli	dry	0.0421
16	at 7	58	59	29.85	29.90	.05	N Wly		fresh	squally	cumuli &	nimbi	showers	
17	51.5		60		30.20	.24	NbyW	ESE. EY	mode	rate	cumuli	clear	dry	0.1755
18	51	56	62	30.16	.08	.00	NE. E.	SSW	light &	moder.	ditto	ditto	ditto	
19		57		.00			WNW		fresh	strong	cumo str.	& nimbi	showers	0.2008
20		57	57	.13	.17	.20	SSW		strong		cumuli &	ciro. cumi.	dry	0.1751
21		56	57	.20	.15	.10	NW	W by S	fresh	strong	cirro	str. nimbi	shrs. clr.	
22		26	58	.00	29.84	29.83	NW. W.	WbyN	strong	gale	cumuli &	nimbi	showers	0.1031
23		53	53	.03	30.04		SWly	WNW	squally		nim	bi	ditto	
24		55	57	.04	.18	.25	SW	W	ditto		cumuli	clear	dry, shrs	0.3116
25		56	57	.35	.35	.35	Ey. ES	E. SSE	moder.		cirro	cumuli	clr. dry	0.0617
26	46 at 6	53	58	.24	.13	.11	NE. E.	SE	fresh	strong	cirri		dry	
27		59	59	.05	.13		WNW	W	strong	vy. strg.	cumulo	stri & nimi	ditto	
28		58	57	.25	.23	.22	W by S		moder.	fresh	ciro. cumi.	ciro. strati	cloudy	
29		57	57	.18	.18	.17.5	NWbyN	W by S	fresh		ciro. strati		ditto	
30		58	59	.11	.11	.11	WNW		mode	rate	do. do.		ditto	
Mean		55.25	58.5											3.2403

Oct. 1831	Temperature of Shade.			Barometer.			Wind, direction of.		Wind, force of.		Clouds.		Weather.	Pluviameter.
		8 a.m.	Sun set,	10 a.m.	4 p.m.	10 p.m.	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.		
1		59	62	30.03	29.95	29.95	WW	SW	mod.		cirro str.	& cumuli	cloudy	
2		58	53	29.94	.94	30.01	NW	SW	fresh	strong	cirro str.	& nimbi	showery	0.2577
3		57	62	30.11	30.15	.21	SW		ditto		nimbi &	cumuli	dry	
4		58.5		30.28	.28	.29	NW	Wy	mod.		cirro	cum. clear	dry	
5				.31	.31	.31	Ey	Var.	light		cirri	clear	shs. dry	0.0026
6		55	61	.31	.27	.23	Sy		mod.		cumuli	clear	dry	
7		61		.12		.03	NW		fresh		cumuli	strati		
8		62	58	29.90	29.83	29.97	NW	swnw	strong		strati	nimbi	dry,rain	
9		58	59	30.03	30.03	30.03	E Sy		mod.		cirro str.		cloudy	0.3712
10		57.5	58	.03	.20	.22	Sy		fresh		ditto		shs. do.	0.0061
													dry	
11		58.5	59	.27	.29	.29	Sy	Var.	mod.fsh	frsh. lt.	cirro	strati	shs. dry	00 462
12		57	59	.29		.16	EyN	SbyW	Var.fsh.	& mod.	cumuli &	nimbi	dry	
13		60		29.96	29.80		nwwly	WSW	strong	squally	nimbi		dry,sho.	
14		54		30.03	30.12	30.12	WSW	WbyS	very stg	squally	ditto	cumul	showers	0.4331
15		53	58	.17	.14	.14	NW		strong		cirri &	cirro strati	dry	
16		62	62	30.00	29.95	29.25	NWy		ditto	light	nimbi		rain	
17	dlt. 52	56	59	29.95	30.03	30.95	NW		light	fresh	strati	nimbi	rain	0.3711
18			58	.95		.07	NW va	SE	ditto	very lt.	cum. str.	clear	shs. dry	0.0431

19		59			30.21		.21	SSE	S	fresh	light	cumuli		dry	
20		59			.16		.16	NE	SWW	very lt.	mod.	nimbi	cumulo st.	cloudy	
21		57			.16		.26	NW	SW	squ	ally	nimbi		showers	0.0823
22	54 7h.				.40		.40	NW	WSW	mod.	fresh	cirro str.	& cumuli	cloudy	
23		58			.38	.30	.26	NW		light		cumuli,	&c.		
24		59		62	.04	29.93	29.93	EyESE	SW	light		cirri	clear		
25		56			29.98			WSW		strong		cirri	clear	showers	0.0547
													cum. str.		
26		52			30.21			Wy.va	SW	very lt.	light	cirro	strati	cloudy	
27								E ly		very	light	cirro	strati	cloudy	
28							30.04	SE		fresh		clear	cirri	clear	
29		60		58	.04		.10	ESE	Var.	ditto		cirri		lt. show.	0.0040
30				59	.16	.16	.16	SE		ditto		cirri		clear	
31		62		58.5	.18	.16	.16	SE		ditto		ditto		ditto	
Mean	.....	58													1.6721

Nov. 1831	Temperature of Shade.				Barometer.			Wind, direction of.		Wind, force of.		Clouds.		Weather.	Pluviameter.
		8 a.m.		Sun set.	10 a.m.	4 p.m.	10 p.m.	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.		
1	50 5h			58	30.13	30.13	30.13	SE		fresh		cirri		clear	
2		62		62	.07	29.94		NE	E	ditto	strong	cumulo	& strati		
3		62		61	29.83	.62		E	N	ditto	squally	cirri	cum.strati	close, & hazy, th. & light.	dry, rain & hail
4		63		65	29.70	.72	29.70	Nly	SE	Var.	light	very lt. mod.	cirri	cum.strati	dry	dry, rain
5		58		53	.55	.55	.65	NNW	SW	squally	& rainy	cumuli &	nimbi	cloudy	showers
6	s.r. 43		53	53	29.63	.55	.69	WW	SW	squally		ditto	ditto	do.show	0.3094
7		57		58	.69	.71	.77	NW.WN	W	ditto		cumuli	nimbi	cldy. do	0.5260
8		56		57	.72	.68	.68	NW	W	ditto		nimbi		do. do.	0.2783
9		45.5		53	.68	.68	.77	Wly		fresh		cumuli & cirro strati		do. dry	0.2751
10		53		56	30.00	30.00	30.00	WSW		mod.				do. do	
11		60			29.99	29.99	29.99	NNW		ditto				do. do	0.0035
12		65												often cloudy.	
13							29.94	NW & W	winds prevail.	very fresh and strong during the day.	Lighter towards night and morning.				
14							.88								
15					29.90		.93								

16				.93	.93	.95	N.Wly. & Wly. Winds prevail.		Very fresh and strong during the day.	Lighter towards night and morning.	cumuli and cirro strati.	often cloudy.	
17				.90	.86	.79							
18				.69	.67								
19				.95	30.00								
20				30.01	29.98	29.98							
21				.10	30.12	30.09							
22				.09	.00	.09							
23				.12	.19	.19							
24				.19	.19	.19							
25				.11	.05	29.96							
26				29.96	29.81	.67							
27				.67	.67	.59	WW	SW	mod.	squally	cirro & cumulo	cumuli & strati nim	cloudy showers
28				.80	.88	.95	WNW	WSW	strong	mod.	nimbi	cumuli	do. & thunder
29				.89	.77	.76	ditto	ditto	mod.	strong	cumuli	clear	hail sh.
30				.86	.86	30.02							fine, dry
													dry, rain

0.6497

Dec. 1831	Temperature of Shade. 8 a.m.		Sun set.	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Clouds. a.m.	p.m.	Weather.	Pluviameter.
1				30.10	30.09	30.07							dry	
2		62		29.97	29.97	29.98								
3				.96	.96	.95							showers	
4				.84	.77	.83	NW	W by S	light	squally	nimbi		do. dry	0.0926
5				.94		30.00	NW	WSW	moder.	ditto	cumuli		cldy. do.	
6		60	60	30.06			Sqlly.	SEly	light	moder.	cirro strati		clear do.	
7		62		.18		.10	SE		ditto,fresh, light		cirri		cldy. do.	
8	s.r. 52	61		.03	30.03	.04	NE. S	W	ditto,ditto, strg.		cumuli	nimbi	cldy. do.	
9		58		.33	.33	.34	SSW		mod. fresh, light		cirro	cumuli	do. do.	
10		63		.34	.34	.34	Sly. Sb	yE. Ely	calm ditto, ditto		cirri	few	clr.,dry, hazy	
11		61.5		.23	.23	.23	SE		mod. fresh, light		clear		hzy. dry	
12		62.5		.24	.24	.24	Sthly		fresh	light	cumulo	strati	cldy. do.	
13		65					Sthly		ltght fresh, light		cirro	strati	dry	
14	s.r. 57	60												
15														
16							Wly. &	SW	*strong*		*cirro, strati & nimbi*		cldy. do.	
17			max.				*dit to*		*dit to*		*ditto, ditto, ditto*		*do.lt.sh.*	*0.0206*
18			*64*				*dit to*		*fresh*		*ditto*	*ditto*	*do. dry*	

19			62.5				Varble.	SEly	light	moder.	cirri & cir	ro cumuli	clear do.	
20		64					Sly. Nl	y. SW	ditto	vy. strg.	cirro, strat	i & nimbi	do. cldy. dry	
21		60					Sthly		mode	rate	cirro	cumuli	dry	0.0031
22		67	66.5	30.00	30.00	30.04	NE. N	NW.W	moder.	vy. strg.	cirri &	clear	ditto	
23		62		.06	.10	.20	NNW	W	strong		cirro	strat	clr.shrs. dry	0.0043
24		62		.18		.09	ditto	ditto	ditto	vy. strg.	cirro, strat	i & nimbi	cldy. dr. showers	
25		61		.13	.14	.14	Sthly		moder.	fresh	cirro	strati	clr. dry.	0.0057
26		62		.16	.16	.19	Nly. S	E	ditto	ditto	ditto	ditto	do. do.	
27		63		.19	.19	.17	NE. N	W. SW	ditto	ditto	ditto	ditto	cly. mist dry	0.0012
28		61		.01	29.94	29.89	NE	NW	ditto	ditto	cumuli	strati	do. do. do	0.0020
29		62		29.84	.84	.80	Wtly.	SW	fresh		cirro	cumuli	do.	
30				.94	.99	30.04								
31				30.12	30.12	30.12								

Jan. 1832	Temperature of Shade. 8 a.m.		Sun set.	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Weather.	Pluvia-Meter.
1	65			29.97	29.92	29.95	Ely,va.	SE	light	mod.	clear, hazy	
2	64			.93	.93	.92	Sly		mod.	fresh	dry, thunder and lightning.	
3	63			.88			WSW	Sly	lt. mod.	fresh, lt.	cloudy, light rain.	
4	61.5			30.02	30.01	30.02	South	Ely	mod.		dry, mist, thunder.	0.0009
5	62	62		.07	.09	.10	Sly	SSE	fresh	strong	cloudy, thunder.	
6	61.5	61.5	62.5	.18	.17	.17	SSE		ditto	ditto	ditto, showers.	
7	61	62	69	.13	.10	.11	ESE		fresh		showers, cloudy.	0.2063
8	62	62	59	.10	.08	.08	SE	NE	ditto	light	showers, dry.	0.0052
9	66	63	66	.07	.04	.03	ESE	NE	mod.	light	dry and cloudy.	
10	71		67	.01	29.94	29.94	va. SEy	Nly	very lt.	light	rather clear.	
11	70	64	63	29.83	.78	.78	NW. SW	SSW	mod.	very	clear showers.	
12	66	66.5	61	.78	.89	30.06	w wbs		fresh	strong		
13	66.5	66	65	.99	30.00	30.06	NW	WSW	very	strong	moist showers, dry.	0.0514
14	67	69		30.10	.06	.06	ditto	ditto	light	fresh, lt.	dry.	
15	70	67	60.5	29.98	29.98	29.99	ditto		ditto	do. light	ditto, clear.	
16	61	62.5	63				SSW S	SSE	ditto	do. do.	clear, cloudy.	
17	62	73	69	29.88	29.88	.88	NbyNW	SE	fresh mod. light	fresh	clear. ditto.	

18	65		64	.81	.87	.94	NW	W	lght. fsh	strng,lt.	cloudy.	
19	65	65	60	30.09	30.11	30.15	Var.	SWly	light		clear, cloudy.	
20	62	65	63	.20	.23	.25	NW.	WbyS	lght. fsh	light	rather cloudy	
21	65	67	66	.29	.30	.33	Wly	SE	mod. fresh	strong	clear.	
22	64			.33	.33	.32	SE ESE	ENE	very	strong	cloudy.	
23	63.5	67	63	.31	.29	.28	E ESE		str	ong	ditto.	
24	67	71		.27	.25	.20	EbyS		very strong	mod.	clear.	0.0014
25	74	78		.19	.13	.11	E NE E	EbyS	strong		ditto.	
26	73	77		30.08	29.99	29.96	NE ENE	EbyN	strong	mod.	ditto, hazy.	
27	81			29.93	.90	.90	Var.	Ely	light	fresh	clear.	
28	78	78	70	.91	.94	.96	ENE	SENW	light, very lt.	calm	fog, dew, clear.	
29	72	72	67	.99	30.05		W		fresh	strong	cloudy.	
30	68	68	63	30.10	.10	.10	SW Sly		light	mod.	clear.	
31	68	72	68	30.06	29.99	29.95	SE	ESE	mod. fresh	mod.	ditto.	
Mean	66.6		64.7								Total	0.2652

Feb. 1832	Temperature of Shade. 8 a.m.	2 p.m.	Sun set.	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Weather.	Pluvia Meter.
1	78	90	72	29.87	29.79	29.78	SEE N	E NW	lt. mod.	fresh	clear.	
2	69	76		.86	.92	.96	WSW	NW	mod.	fresh	ditto, thunder & lightning.	
3	67	69	66	.89	.83	.78	WSW	WbyN	mod.	light	thunder & light. in East, at night rain.	
4	66	68	67	.80	.81	.90	WSW E	SE wly	mod.	strong	ditto.	0.6742
5	67	69		30.02	30.06		NW	WSW	lt. mod.	fresh	clear.	0.0476
6	56	65		.10	.19	.20	S SEb	yS Wy	light	mod.	cloudy.	
7	63.5	67		.23	.25	.25	ESE	SEly	mod	erate	ditto.	
8	72	74		.23	.15	.14	NE	SE	mod.	strong	clear.	
9	73	75	67	.15	.02	.00	Va. NE	SENW	lt. fresh	light	clear, cloudy.	
10	64	71		29.99	30.01	30.04	S W		very	strong	cloudy, showers.	0.0410
11	58.5	65		30.15	.17	.19	SSW		fresh		ditto, showers.	0.1213
12	63	70		.17	.16	.17	WSW		ditto		clear.	
13	67.5			.19		.13	S ly		mod.		cloudy.	
14	68	67		.11	.12	.12	dit to		light	fresh	ditto.	
15	61	67	60.5	.15	.15	'14	SSE	Wly	mod.	light	ditto.	
16	66.5			.07	.08	.09					ditto.	
17	67	67	63	.16	.19	.23	WbyS	SbyW	mod	erate	ditto.	

18	63	67	61.5	.26	.26	.23	S	SSE	light	mod.	clear.
19	64	69		.21	.20	.15	SSE	ESE	mod.	fresh	ditto.
20				.05	.00	.00	E SE	Sly	fresh		cloudy.
21				.10	.14	.17	SE Sby	E Ely	do. mod.	light	ditto, drops of rain.
22	65			.15	.12	.06	NW	SW Sly	lt. mod	erate	ditto.
23	64	69		.01	.02	.14	w ssw	Sly	fresh		hazy and cloudy.
24	63		62.5	.24	.25	.25	E E SE		mod.	fresh	cloudy.
25	67	74	67	.22	.11	.10	E Eby	S NE	strong	very stg	clear.
		48 m.									
26	70	79.5	75	.02	.00	29.98	WyNE	ESE	calm, lt.	mod.	ditto.
27	85	99	75. 5	29.97	29.96	.96	NNW	SW	lt. mod.		ditto.
28	67	67	65	.99	.99	30.06	WNW	SSW	mod	erate	cloudy.
29	62	64	61	30.10	.10	.09	SE E	ENE	fresh		ditto.

On the 26th there was much serpentine and some sheet lightning immediately after sunset, in the S.W.,W. and S., accompanied with thunder.

On the 27th, from 8 to 11, a.m., the thermometer, properly shaded, varied from 87 to 98 deg.; and between 12 and 1 p.m. rose to 99 deg., when the breeze changing to SW, the temperature gradually lowered.

Mar. 1832	Temperature of Shade. 8 a.m.	max.	Sun set.	Barometer. 10 a.m.	4 p.m.	10 p.m.	Wind, direction of. a.m.	p.m.	Wind, force of. a.m.	p.m.	Weather.	Pluvia Meter.
1	66	67	67	30.03	29.99	29.96	NE S	E E	mod.	fresh	cloudy.	0.0270
2	66.5	69		30.01	30.01	30.01	S ly		ditto	fresh		
3	67	75	67	29.99	29.87	29.85	NE E ly		mod. fre	sh,strng	clear, hazy.	
						9 p.m .29						
4	68	81	68	29.84	.88	.90	NW W S	W SE NE	mod. fre	sh, light	clouds low, showers.	
5	68	76	71	.88	.83	.82	ENE E	E bN NE	do. do.	do.	clear, hazy, showers, thunder and lightning.	0.0250
6	75	88	75.5	.83	.86	96	NNW N	W W N	do. str	ong, do.	clear & cloudy, thun. & light.	0.0170
7	68.5			30.09	.05	.04	WNW	W WSW	fresh		showers, cloudy, dry.	0.0327
8	59	68.5	65	30 03	.03	.07	Va. E	SSW	lt. mod.	fresh	cloudy.	
9	59	68.5	65	30.03	.03	.07	NW W b y	N SW	mod.	strong	showers, ditto, showers.	0.0274
10	59	68	67	06	.02	.03	NW W	SW	light	fresh	cloudy, showers.	0.0162
11	61	69	65	.01	.01	.06	NNW W	SW W	light	fresh	cloudy.	0.0190
12	64	70	64	.11	.11	.11	NNW S	E SSE	lt. mod.	fresh,lt.	clear.	
13	67	71	63	.13	.07	.06	NE E	ESE NE	lt. fresh	strng,lt.	ditto.	
14	69	75	66	.00	29.75	29.81	NE E by N	E NE	lt. fresh	strong	clear, cloudy.	
15	68	68	63	29.80	.80	.86	WNW	SSW	fresh	strong	cloudy, *light rain.*	
16	63	69	64	.92	.93	.97	SEly		ditto	fresh	cloudy.	0.0437

17		67	76	64	.98	.95	.95	ENE	E NE	fresh	strng.lt.	clear.	0.0032
18		71	97.5	75	.85	.76	.79	NbNNE	WSW	very lt.	mod.	clear.	
										fresh	light		
19		65	68	63	30.00	30.11	30.13	Wly	SWly	mod.	fresh	cloudy.	
20		64	68	63	.22	.15	.15	NbE E	bSNly	very lt.	mod.fsh	clear.	
21		63	69	64	.13	.04	.04	Nly E	SE Nly	lt. mod.	light	clear, morning fog.	
22		64	71	66	29.99	29.99	30.02	Va. W	swbyw	lt. mod.	fresh	ditto, morning fog.	
23		59	65	62.5	30.04	30.08	30.08	WSW	SE	light	very lt.	cloudy, ditto.	0.0321
24		65	76	63	30.10	29.96	29.96	ENE	ESE	light	mod.	cloudy, clear, ditto.	
25		65	75	64	29.93	29.93	.97	NlyNW	WSW	lt. fresh	strng,lt.	clear, cloudy, clear.	
26		63	79.5	65	.95	.95	.96	Wly	SWly	very lt.	mod.	cloudy,	
27		65	70	65	30.05	30.05	30.12	Nly W	ly SW	very lt.	mod.	rain, cloudy.	0.0300
28		67	76		.13	.10	.03	NE E E	SE NE	light	fresh	clear.	
29		65			.02	.03	.05	Nly S	E Nly	light, fr	esh, lt.	ditto, showers.	
30	7 a.m.	63	68	62	.15	.17	.19	Nly N	W SW	mod.	fresh	cloudy.	0.0720
31	54	60			.17	.15	.13						0.0103
Mean		65.3		65.7								Total	0.3556

On the 4th, there was considerable thunder and lightning in the N.W. from dark till 10 h. 30. At 9 p. m. the barometer rose to 29.99 ; the wind shifted from East to N.W. for a few minutes, then blew strong at first with rain from S.W. At 10, Barometer fell to 29.90. On the 6th, the atmosphere was very clear, permitting a more extensive view than for many weeks past, during which time a thin haze had obscured distant objects. On the18th, the wind, whilst blowing fresh, suddenly shifted from N.N.E. to W.S.W.

April 1832	Temperature of Shade.			Barometer.			Wind, direction of.		Wind, force of.		Weather.	Pluvia-Meter.
		8 a.m.	max.	Sun set.	10 a.m.	4 p.m.	10 p.m.	a.m.	p.m.	a.m.	p.m.	
1	s.r. 49	60	72	63	30.14	30.11	30.07	NWW	SW	light	fresh	clear, cloudy.	
2		63	69	62	.23	.24	.24	SSW		light	fresh	cloudy.	
3		66	79	67		30.00	30.01	NE E	NE N	light, m	od.fresh	ditto	
4		76	78	63	30.02	.05	.14	NW W	bN SW	lt. mod.	fresh	ditto	
											mod.		
5		64		65	.28	.32	.38	SSE	SE	mod.		ditto	
6		62.5		62	.44	.46	.49	E E	SE	strong	very stg	ditto, lightning.	
7		62		62.5	.50	.47	.44	E E	SE	very	strong	showers, ditto.	0.0005
8		63	69	64	.37	.29	.26	ENE	Ely	mod.	fresh	cloudy.	
9		65	70	66	.19	.13	.12	NWE	Var.	lt. mod.	fresh lt.	clear.	
10		81.5	95	71.5	.07	.05	.04	Va.N	byW	light	mod.	ditto.	
			2 p.m.										
11		68	62		29.95	30.03	30.12	NbyW	WWbS	mod.	very	cloudy, showers.	
										strong	strong		
12		54.5	61.5	54	30.22	.22	.23	NbyW	WbyS	mod.		cloudy.	0.1112
13		54	62	59	.24	.25	.25	NbyW	WbyS	mod.	mod.	showers, cloudy.	0.3279
										fresh			
14		59	62	59	.25	.20	.15	Wly S	Wly	very lt.	mod.	clear.	
15		59	69		.09	.09	.07	Wly	SWly	very lt.	mod.	ditto.	

16	59		60	.09		29.97	Ely S	ElyEly	light, m	od.light	ditto.	
17	64			29.88	29.90	.96	NW				ditto, showers.	
18	62			.90	.80	.79	NE S	W Nly	lt. mod.	very lt.	showers, ditto, showers, thunder and lightning.	0.0125
19	62.5		52	.79	.90	.95	NWby	W Wy	fresh	very stg. mod.	ditto.	0.0521
20	53	53	52	.80	.82	.91	WNW	wbN w	mod. ve	ry strng, squally	cloudy.	0.0617
21	55		55	.99	30.00	30.00	SW	WbN	strong	squally, mod.	ditto.	0.7631
22	59		55	.84	29.77	29.81	NW	swbyw	light, ve	ry strng halfgale	ditto.	0.4845
23	50	55	52	.95	30.07	30.17	SW		very stg	squally	showers.	0.3923
24	54	61	55	30.24	30.28	.29	WSW		fresh	squally	ditto, dry.	0.1574
25	58	66	60	.29	.23	.20	NNW	NbyW	lt. mod.	light	cloudy, clear.	
26	59	68	58	.09	.01	.00	NWW	N	lt. mod.	light	clear.	
27	59		57.5	29.97	30.00	.18	NWW		lt. mod.	fresh	light showers, cloudy.	
28	56.5	64		30.21	.12	.00	NE	NW	lig	ht	cloudy.	0.1751
29	60		60	.04	29.99	29.97	NNW	W Va.	dit	to	clear.	
30	64			29.95			NNW		lig	ht	cloudy, showers.	

The cold of the 12th and 13th checked pumpkins and melons.

A. COLLIE, *Resident, Albany.*

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