Brief View of the Progress of Interior Discovery in New South Wales. By Allan Cunningham, Esq. Communicated by Viscount Goderich—Read 27th February and 12th March, 1832.

AMIDST the ardour with which geographical research has been patronized and prosecuted in almost every other portion of the globe, it is a subject of surprise and regret that so little anxiety should have been shown by geographers, and even by men of science in general, to increase our knowledge of the interior of the Australian continent. But so it is,—that land of anomalies may still be said to be almost a *terra incognita;* and, limited as may be the information which we possess of its internal features, yet, with the conviction that some concise notice of the way in which that knowledge has been progressively acquired will not prove altogether uninteresting to the Geographical Society, I beg to lay before it, in a brief view, the results of the several expeditions, which have been employed in inland discovery since the first settlement was formed at Port Jackson; to which I have added, a few occasional remarks on the different routes which have been pursued, and which will be further illustrated by the accompanying map.

To that fine settlement, in whose internal prosperity and advancement I have, during my long residence among its inhabitants, ever felt a lively interest, I shall consider myself as having rendered no small service, if what may appear in the following pages should induce this society to promote, by such means as it may have at command, the more extensive examination of the interior of New South Wales. We possess colonies, on its eastern and western shores, which are daily exciting more and more interest in this country; and, should the tide of emigration continue to flow, as it has done for some years past, new land must be thrown open to meet the wants of the settlers.

It would appear that, from the earliest periods of the settlement at Port Jackson, there were not wanting individuals of skill and enterprise to undertake the task of inland discovery,—of whom it may suffice to mention the names of Bass, Caley, and Barrallier. But their utmost endeavours to penetrate beyond the Blue Mountains were entirely defeated by the difficulties with which they had to contend, and which, ultimately, obliged each party, after suffering great fatigue and privation, to return with the full conviction of the utter impossibility of passing to the westward of so formidable a barrier,—an opinion, which appeared, at that period, not a little supported by the fact, that such of the aborigines as had become known to the colonists, were totally ignorant of any pass to the interior, through that elevated chain of mountains.

A period of twenty-five years thus passed away without any information being gained as to the breadth of the Blue Mountain-ranges westerly, or the aspect of the country beyond them. At length, in 1813, the colonists were visited by a most distressing season of drought, in which the country, from the sea-coast to the base of the hills, was burnt up—the secondary water-courses entirely failed, and the cattle of the colonists, hemmed in on all sides, died in great numbers for want of pasturage. Out of evil how often does good arise!—for these most distressing circumstances were the means of opening the country, and saving the colonists. Three enterprising individuals, Messrs. Blaxland, Wentworth, and Lawson, were induced, at this period, to unite and employ their best exertions and experience, in making one other attempt to penetrate through that chain of mountains, which had been considered, for so many years, an impregnable barrier. With this determination they ascended the mountains near the Grose River (a tributary to the Hawkesbury), and by keeping steadily in view, that, which no preceding explorer had ever once thought of, namely, the fall of the waters into the Warragumba on the one side, and into the Grose on the other, they maintained their position on a main range, which although, from its intricate windings, it oftentimes obliged them to follow a course opposite to that which they had intended to pursue, nevertheless enabled them, by adhering to it closely, eventually to penetrate to a distance of twenty-five geographical miles, *due west*, from the Nepean River, to a terminating *point* in those mountains. After having traversed a bleak and dreary waste, by a route exceeding fifty miles in length, it may be readily conceived with what joy these laborious travellers beheld, from the rugged brow of this precipice, a grassy, well-watered vale, which appeared to extend some miles to the westward,—a failure of provisions, however, obliged the party to retrace their steps back to the colony. On this occasion, their example being followed up by Mr. W. Evans, Assistant Surveyor, by order of the Government, that fine pastoral country, the Downs of Bathurst, and the rivers Macquarie and Lachlan, were shortly afterwards discovered. During the following year (1814) a practicable line of road was constructed, by convict labour, over mountain-ridges, which in some parts have been since ascertained to be three thousand four hundred feet above the level of the sea; and thus was thrown open that extensive range of sheep and cattle pasturage, which has since been of such immense value to the colony.

The encouraging results which attended this enterprise, naturally suggested the propriety of sending an expedition to explore the newly-discovered streams, which, although they were nearly eighty miles asunder at the points where they were first met, it was nevertheless expected would be found to unite in the interior, and

become a river of considerable magnitude, running to the sea. The late Surveyor-General, Mr. Oxley, was accordingly dispatched, in the winter of 1817, to trace, in the first place, the course of the Lachlan; and, having myself just arrived in the colony, I most gladly accepted an invitation to join, under so able and intelligent an officer, the first expedition which was undertaken for the purpose of exploring the interior of the Australian continent.

The River Lachlan, as will be remembered, was followed by the party through a flat inhospitable country, and so far from its forming a junction with the Macquarie, it was found not to receive even a single tributary stream in any part of its long and tortuous course, which, with great patience and perseverance, Mr. Oxley explored beyond the westernmost range of hills to an interior, a dead level, forming a chain of plains, which appeared alone bounded by the horizon—their ample surface bearing the very evident proofs of being, in seasons of continued rains, extensively inundated. Over these Australian *steppes*, which were not more than two hundred and fifty feet above the level of the sea, Mr. Oxley pushed his way westerly, in his further examination of this river; and, notwithstanding the slimy nature of their surface, and the distressed condition of his horses, he was, nevertheless, enabled to continue his journey upwards of one hundred miles to the westward of the last rise or hill-like undulation of that part of the interior, before his progress was arrested by extensive and impassable morasses, the river (if worthy of the name at that extremity of his journey) having divided itself into several small channels, and its water having become perfectly stagnant, and unfit for use. This termination of the labours of the expedition, westerly, occurred in longitude 144½° E.; and during the stay of the party at that remote station, besides the many astronomical observations which were taken to determine its position, the rising amplitude was observed, as at sea, which gave 7° 25′ easterly variation. Of the extent of those vast levels the party could form no just idea. In the direction in which the expedition had proceeded down the river, namely, from N.E. to S.W., a chain of plains, destitute of trees, extended for upwards of one hundred and thirty miles; and, at right angles with that line of bearing, namely, from N.W. to S.E., the flat country appeared alone terminated by the horizon. Still, however, it must be observed, that where the mind and the sight are alike fatigued by the monotonous character of the view around, the traveller naturally becomes impressed with the idea that the extent of the open country he is traversing, is far greater than it is in reality.

With a reduced stock of provisions, and at a distance of more than four hundred miles inland from the colony, Mr. Oxley com-

menced his journey homeward, little thinking, that could he have penetrated but twenty miles farther to the S.W., he would have arrived at the Morrumbidgee River, at that time not known in any part of its course, and only recently ascertained (although long supposed) to receive the drainings of the Lachlan Marshes. It may here be worthy of remark, that, in retracing their steps over those wet unhealthy levels to the hills which skirted them on their eastern side, Mr. Oxley and his party repeatedly witnessed, in the morning before the sun had risen many degrees above the horizon, the singular appearance of the *mirage*, or the extraordinary effect of refraction upon those apparently unbounded plains. In one direction they beheld, with surprise, the few straggling trees, the line of which separated one expanse of plain from another, with their rounded heads suspended in the air, being apparently separated from their trunks by a watery medium; whilst in another were distinctly traced, on the verge of the distant horizon, an outline of hills, with pointed or conical summits, and bluff precipitous terminations. These, however, had no actual existence; for, no sooner had the day advanced, than the cones became truncated—the aërial ridge began to break and dissolve, and the whole soon afterwards disappeared. After a severe march of six days, the travellers regained the rising grounds, and crossing the Lachlan with some difficulty, by means of a raft, they quitted that turbid stream altogether, which had become suddenly swollen by floods from the eastward. The party now shaped a more northern course homewards, than they otherwise would have done, in hopes of meeting with the long-lost Macquarie River, which they had not seen since they quitted Bathurst, the downs of which it waters. All travellers, in exploring new tracts of country, are subjected more or less to sudden vicissitudes: in this expedition to trace the source of the Lachlan, these were numerous, and oftentimes of a distressing character. The simple mention of one of these changes, arising out of the circumstances of the country, may here suffice. Five weeks were employed in traversing those steppes over which the waters of the Lachlan are dispersed, and on no one occasion, during that period, did the party meet with a dry spot, on which to encamp at the close of the day. On the contrary, comfortless as it really was, still, having been for sometime accustomed to accommodate themselves to circumstances, they cheerfully sought repose from the fatigues of the day, upon any part of those wet plains, where exhaustion, and the approaching night, had obliged them to halt.

On leaving the right bank of the Lachlan, however, Mr. Oxley entered on a country, in point of character, the very reverse of that which he had recently quitted. For nearly a hundred miles the expedition had to encounter those privations, which are inevi-

table in a tract of country, where, from extreme sterility, neither water nor pasturage for the horses could occasionally be found; and where the surface, although somewhat elevated above the low plains, which the travellers had just left, being, for a considerable extent, of a light, red, sandy soil, was only capable of producing a scrubby vegetation, alone interesting to the botanist. At length, however, upon passing to the eastward of those arid regions, they reached a better country, and one that improved daily as they advanced. Hills lightly wooded, and grassy to their very summits, appeared before them: these were found to furnish springs, which formed small rivulets in the adjoining valleys, in one of which, of considerable extent and romantic appearance, to which the name of Wellington was given, they found, with no small satisfaction, a river, flowing silently to the N.W. This was the Macquarie, so long the object of their search. The discovery of this river, at a distance of one hundred miles to the north-west of Bathurst, in a measure recompensed the travellers for all their toils on the Lachlan; and Mr. Oxley's report of it to the local government, inducing the hope that it would, when increased by other tributary streams, find its way to the sea, a new expedition was directed, in the winter of the following year, to explore it downwards from Wellington Valley.

Great expectations were entertained from this second expedition, and the disappointment, therefore, was severe, when the Macquarie was traced to a low marshy interior, in a north-westerly direction; where the hills again disappeared, and the country becoming 'perfectly level,' the flooded river eluded further pursuit, by spreading its waters far and wide, between the compass-points of N.W. and N.E. This expanse of shoal water our indefatigable Surveyor-General explored in a boat, amidst reeds of such height, that having at last 'totally lost sight of land and trees,' he was obliged to return to the party which he had left encamped on Mount Harris —a detached hill on the river's bank, elevated about two hundred feet above the plane of the neighbouring flats. Having thus followed the Macquarie also to a reedy morass, of apparently unbounded extent, beyond which (in a westerly direction) it was, at that period, perfectly impossible to penetrate, Mr. Oxley determined (with such means as he had at command) to prosecute his discoveries easterly, in the parallel 31° 15′, in which latitude his examination of the river had terminated. In that most arduous portion of his journey, he encountered numerous difficulties before he was fully enabled to emerge from the marshes, to firmer and more elevated grounds. In his progress easterly, Liverpool Plains, and a hilly, picturesque, and well-watered country were discovered, and he reached the coast at Port Macquarie, in 31½° S. latitude;

from which the expedition returned southerly along 'shore to Port Jackson. Highly important to the colony as were these acquisitions to its geographical knowledge, still the result of the last researches, respecting the termination of the Macquarie, seem, for a time, to have damped the ardour of the Colonial Government for further discoveries in the interior.

Up to that period, (1819) the colonists knew nothing of the southern country, beyond the cow-pastures, where that extensive patch of thicket, called the 'Bargo-brush,' formed a boundary, which had not been penetrated. At length, about this time, both that and the Wombat-brush, in Argyle, were passed, and a third river flowing inland, and called by the aborigines 'Morrumbidgee,' was discovered. Minor excursions were immediately afterwards made by individuals into that interesting country, where many fine tracts of land were found, which have since proved of great value to the grazier. It was not, however, until the winter of 1823, that an extensive tract of undulated country, clear of timber, and watered by the Morrumbidgee, was discovered by a party, conducted by an officer of the navy, at a point nearer to its source than had before been seen. This open country, which was named, upon its discovery, 'Brisbane Downs,' the travellers learnt from a tribe of natives was called in aboriginal language, 'Monaroo;' and its extent was described by the Indians as very considerable. These fine sheep-walks were ascertained, by accurate observations, to lie immediately to the eastward of the meridian of 149°, and were found to extend upwards of forty miles to the southward of the parallel of 36° 15′, which appears to be the latitude of their northern skirts. They are further described as being bounded on the east by the coast range of hills, which give an interior direction to the course of the streams, by which they are permanently watered; and on their western side, by those lofty mountains, now known by the native name Warragong.

The elevation of Brisbane Downs, above the sea-shore (distant from them to the eastward about seventy miles), although it has never been measured, cannot be less than two thousand feet; and as they are in higher latitude than other portions of land, within the present boundaries of the colony, the climate may probably be found more congenial to the growth of wool and the constitution of sheep, than that of those extensive tracts of pastoral country, from which the colonists are annually obtaining so many thousand fleeces for the English market. The mean height of any one point of the great Warragong Chain, which appears to extend without interruption to Wilson's Promontory (the southernmost extremity of the Australian continent), has not yet been determined. That portion, however, of what may be called the backbone of

the country, is, probably, of greater elevation above the level of the ocean than any other * range of mountains along the eastern coast, either within or beyond the tropic, since its summit is not simply covered with snow during the winter months, but has been seen perfectly white at other seasons of the year.

At the same time that these important geographical researches were carrying on in the southern parts of the colony, I was occupied with a party in the elevated country on the north of Bathurst, in which direction, at a distance of fifty miles from that settlement, the Cudgeegong, a tributary to the Macquarie, had been previously discovered, and stock stations erected on its banks.

In my excursion through that mountainous country, I succeeded not only in effecting a clear, well-defined route for the grazier to Liverpool Plains from Bathurst, but also in bringing the settlers of the latter district in direct communication with those farmers, who had taken their lands on Hunter's River.

The year 1824 had nearly passed away without the smallest addition being made to the knowledge already acquired of the interior country to the south of Port Jackson. Towards its close, however, Messrs. Hovell and Hume, two enterprising agriculturists (and the latter a native of the colony, possessing a considerable local knowledge), undertook a journey in a south-westerly direction from Argyle, with the design of reaching the sea-coast near Bass' Strait, and of ascertaining the nature of the intermediate country, of which the colonists, at that time, knew absolutely nothing. In their outfit for such an arduous excursion, the Colonial Government afforded but a partial assistance. Their more perfect equipment was derived from their own farms; and the results therefore of their tour claimed for them, very justly, the greater share of merit. Our travellers took their departure from a stock-station near Lake George, with the intention of pursuing a direct course to the south-west. This line of route, however, led them into great and insurmountable difficulties, for they soon found themselves entangled in a range of mountains connected with those of the Morrumbidgee, through which they could not possibly penetrate. They, however, soon perceived, that the only way by which they could extricate themselves and cattle from

* Whilst engaged at Moreton Bay (to the north of Port Jackson), in the winter of 1828, I penetrated to the base of a range of mountains bearing S.S.W. about sixty miles from that penal settlement.

The principal summit of that range, which was named at the time 'Mount Lindesay,' I ascertained, by trigonometry, to be four thousand seven hundred and fifty feet above the plane of the country on which it stood, and the spot I had encamped on; and this latter I found, by the mean of several barometrical observations, to be nine hundred and fifty-three feet above the shores of Moreton Bay: thus making the mean height of 'Mount Lindesay' five thousand seven hundred feet above the level of the sea,—an elevation by far the most considerable that has been measured and ascended by Europeans in that country.

their difficulties, without being absolutely obliged to retrace their steps to the point whence they had originally set out, was to proceed, in the first instance, more to the westward, before they attempted to make any southing. This they effected without material injury to their burdened cattle, and having passed to the westward of the meridian of 148°, they found no further impediments in their route to the south-west, having broadly on their left hand, or a little to the eastward of them, the great Warragong Chain. In latitude 36°, the party crossed a river, which derived its source from those snow-clad mountains, and was flowing with considerable rapidity among the hills towards the north-west. To that stream, which, in consequence of its depth and width, (exceeding one hundred yards,) they had some difficulty in passing, they gave the name of 'Hume.' Their journey was now conducted through a fine, open, thinly-timbered country; its surface was, for the most part, hilly, or moderately undulated, and occasionally, to diversify the scene, there broke upon the view a patch of plain, without a tree, but abundantly clothed with a grassy vegetation. This pastoral country was found, even in the summer months, well watered by streamlets from the hills around, the waters of which, collecting, had formed a second river, to which our travellers gave the name of 'the Ovens,' upon fording it in latitude 36° 40′. This was described as being of less magnitude than the Hume, but its stream was of equal velocity, and the direction given it by a break in the hills, and the apparent inclination of the country, was also to the north-west; in which bearing, wherever a commanding position on the hills afforded the party a view, a declining wooded country was observed, with scarcely a single elevation.

Southerly, the land continued equally good, but rising in altitude, presented a more broken, irregular surface to our travellers, who, however, patiently surmounting the difficulties which lay in their way, at length came to a third stream, to which they gave the name of 'Goulburn.' This river, which was formed by a junction of several streamlets, which came from the hills to the eastward, ran southerly in the direction of the course pursued by the expedition as far as latitude 37°, when it also took a decided bend towards the north-west.

The exploring party now passed the meridian of 146°, and beheld before them the coast range of hills. This proved to them a source of no small encouragement to continue their journey, for they had began to despair of reaching the sea-coast, in consequence of the exhausted condition of their burdened beasts, and of the loss which they had sustained in their stock of provisions, by accidents and the great heat of the weather. A beautiful country, however, appeared before them, and as it exhibited an alternation of plain and woodland of like interest, as affording an unlimited range of

sheep and cattle pasture, they had the more inducement to pursue their route to the southward cheerfully; and this they did until at length they reached salt water and a sandy shore.

On the 16th of December of the above year, Messrs. Hovell and Hume arrived at the northern shore of what they considered Western Port, notwithstanding they looked in vain for the large island, which the charts show us lying within it. This was, however, their mistake; for, without being aware of it, they had actually effected more than had been originally expected of them, for they had made the north-eastern side of Port Phillip—a large bay on the south coast, half a degree to the westward of the point at which they had supposed themselves at the time to have arrived. Of this fact the late Mr. Oxley was assured, when it was seen that their report of the extent of the Port they had made on the coast, and the country to the northward of it, agreed so fully with what was known of both from the year 1803; when Port Phillip was visited by Mr. Charles Grimes, at that time surveyor-general, who was sent to survey the harbour more minutely than either Captain Flinders or the discoverer of it, Lieutenant John Murray, R.N., were enabled, in the preceding year, to effect.

In their journey back to the colony, which they immediately commenced, Messrs. Hovell and Hume pursued a line of route altogether to the westward of their outward-bound track; and thus, by travelling on a much lower level, avoided entirely that broken hilly country, which had proved so harassing to their cattle in their former journey.

The extent to which this line of country will, doubtless, be ere long occupied by the colonists, may be understood by describing it as stretching south-westerly from 35° of latitude to the shores of Port Phillip in 38°. The boundary, on its eastern side, is a diagonal line, drawn from the meridian of 149°, as it passes the parallel of 35°, to longitude 145½°, cutting the latitude of 38°; as that line will, most probably, intersect the bluff terminating points of ridges, forming abutments against the great eastern chain: whilst its western limit may be defined by another diagonal line continued from about 147°, where the parallel of 35° passes it, until it meets the meridian of 145°, in latitude of 37°. The local knowledge of which we are now in possession, induces us to view it as extremely probable that, with the exception of any narrow belts of alluvial land which may extend along the immediate banks of the three rivers discovered by these travellers, a great extent of low steril region exists to the westward of the last-mentioned line of limitation, being, probably, a continuation of that arid desert which is shown on Mr. Oxley's chart, lying between the parallels of 33° and 35°, and under the meridians of 146° and 147°,—a country literally a perfect waste, entirely destitute of water at any

season, if we except those small quantities of rain which occasionally fall and are caught in the shallow excavations of sandstone rocks on the ridges, from which alone the party of the expedition of 1817 derived their scanty supply, after quitting their boats on the Lachlan River.

To that valuable tract of country, first laid open to our view by the above-mentioned indefatigable persons, the attention of future emigrants will, doubtless, be directed; since, from the fact of its being bounded immediately on the east by the Warragong Chain, no doubts can be entertained of its being found, when occupied, far better watered than the country already located, and less liable to the effects of those droughts which have so frequently distressed the northern parts of the colony,—its higher southern latitude giving it, as a further recommendation, a cooler climate and one which more resembles that of England.

With the exception of my examination of the western and northern sides of Liverpool Plains in the month of May, 1825, which enabled me to furnish something more than what had been previously known of those extensive levels, our stock of geographical knowledge received no accession during either that or the following year. The year 1827, however, a new scene opened to the colonists; for a journey which the late Mr. Oxley had himself at one period contemplated, was determined on, viz., to explore the entirely unknown country, lying on the western side of the dividing range, between Hunter's River in latitude 32° and Moreton Bay in latitude 27° S. For this purpose a well appointed expedition, equipped fully for an absence of five months, was placed by the Colonial Government under my direction.

On the 30th of April of that year, (1827,) having provided myself with the necessary instruments,* and with an escort of six servants and eleven horses, I took my departure from a station on an upper branch of Hunter's River, and upon crossing the dividing range to the westward, at a mean elevation above the level of the sea of three thousand and eighty feet, I pursued my journey northerly, through an uninteresting forest country, skirting Liverpool Plains on their eastern side. As it is my intention to lay before the public, erelong, a narrative of this journey, which, in consequence of the long drought by which this part of the country had suffered, cost my party no ordinary exertions, I trust that an outline of it will now be sufficient.

On the 11th of May, we crossed (in latitude 31° 2′) Mr. Oxley's track easterly towards Port Macquarie in 1818, and from that point the labours of the expedition commenced on ground previously untrodden by civilized man. It was my original design to

* Among these instruments was an excellent portable mountain-barometer by Jones, which, by care, I succeeded in carrying throughout the journey uninjured.

have taken a fresh departure to the northward, from the point at which the late Surveyor-General had passed the river named by him the 'Peel,' upon our reaching the above-mentioned parallel, and which bore from a spot on which we had encamped, due east about twelve miles: however, the intermediate country, although Mr. Oxley had passed it, proved too elevated and rocky for my heavily-burdened horses; and I was, therefore, obliged to continue the course of the expedition to the north under the meridian of our tents, (viz. 150½°,) being well aware that as the final course of that river was towards the interior, we should cross its channel whenever the chain of lofty hills which bounded us on the east, and which appeared to stretch far to the north, should either terminate or become so broken as to allow of its escape through them to a lower level. Thus we continued our journey to the north through a barren, but densely-timbered country, of frequently brushy character, and altogether very indifferently watered. Each day as we advanced, our barometer showed us that these poor forest-grounds, which, to add to the difficulty of penetration, were occasionally traversed by low arid ridges of argillaceous ironstone and clayslate, rose in elevation from the low level of the northern margin of Liverpool Plains, which I found to be only eight hundred and forty feet above the level of the sea. This rise of surface was, however, most gradual; for, after a march of forty miles directly to the north, we found on reaching the bank of a small stream, a branch evidently of the Peel, that we had attained but a mean height of one thousand nine hundred feet above the sea-coast—an elevation which was too inconsiderable to produce any obvious change for the better, either in the growth of the timber, the nature of the soil, or of the scanty herbage. Through those gloomy woods, with scarcely a trace of either Indian or kangaroo, we patiently pursued our way until the 19th of May, when, upon passing the parallel of 30°, we descended from some stony hills to the head of a beautiful well-watered valley, affording abundance of the richest pasturage, and bounded, on either side, by a bold and elevated rocky range. This grassy vale we followed northerly about sixteen miles to its termination at the left bank of a large river, which, in seasons less unfavourable to vegetation, appeared evidently a stream of considerable magnitude. This was the Peel of Mr. Oxley; which, after pursuing its course to the north for upwards of a degree of latitude from the point at which that officer had passed it in 1818, had at length forced its passage through a break in the eastern ranges, and, passing the lower extremity of the valley in latitude 29° 51′, flowed on towards an open country observed beyond it at north-west. So considerable was the dip of the vale, along which our route had extended, that we found ourselves in the channel of this river,

again nearly on the level of the northern or lower sides of Liverpool Plains—the mean of the results of our morning and evening observations of the barometer giving us only nine hundred and eleven feet. The channel of the Peel, which, at this period, exhibited a bed of gravel two hundred and fifty yards in breadth, is, in seasons of long rains, entirely filled by floods to the depth of twelve and fifteen feet, as was obvious from the marks of those freshes on the upper banks. The long continuance of dry weather, which had alike distressed the colony and these distant parts of the interior, had, however, reduced its stream to a mere rill, which we forded without difficulty. Passing the channel of this river, by which a considerable tract of broken mountainous country to the S.E. is drained, we resumed our journey to the north, between the meridian of 150° and 151°. Our course led us through a variety of country; for, on quitting the river, we traversed a barren, brushy tract, which extended more or less for fourteen miles; beyond, however, the land materially improved, and as it was less encumbered with small timber and more open to the action of the atmosphere, a considerable growth of grass was produced. A succession of open forest hills of moderate elevation, and narrow intermediate valleys, with an occasional patch of plain, of a good soil, characterised the line of country, which the expedition afterwards crossed; and although the land (the mean elevation of which did not exceed eleven hundred feet) was, generally speaking, rich, and productive of much grass, it was, nevertheless, distressing to meet with tracts, many miles in extent, entirely destitute of water. Traces of the natives were frequent, although not of recent date. We met, however, with neither the wandering Indian nor any description of animal, for the parched state of vegetation and the distressed condition of the country generally, had evidently driven both to other parts of the interior, where the means of sustaining life were less precarious, or, at least, where a permanent supply of water, although it might be in a stagnant state, was to be obtained. Hitherto our view towards the west had been circumscribed by a continued chain of thinly-wooded ridges, which had extended, northerly, parallel to the course we were daily pursuing. On reaching the latitude of 29° 10′, which we did on the 25th of the month, all the hills to the westward of our line of route terminated, and a level, open interior, of vast expanse, bounded on the north and north-west by a distant horizon, broke suddenly on our view! At north-west, more particularly, it was evident to all of us that the country had a most decided dip, and on that bearing, the line of sight extended over a great extent of densely wooded, or brushed, land, the monotonous aspect of which was here and there relieved by a brown patch of plain: of these some were so remote as to appear a mere speck on the *ocean* of land before us, on which the

eye sought anxiously for a rising smoke, as indicative of the presence of the wandering aborigines; but in vain: for, excepting in the immediate neighbourhood of a river of the larger magnitude, these vast solitudes may be fairly said to be almost entirely without inhabitants. We had now all the high grounds on our right hand, or to the east of us, and before us, at north, a level, wooded country. With an anxious curiosity to explore so extraordinary a region, we continued our route on the 26th of May, from a rocky creek, where we had rested upon some tolerable pasture. Our elevation above the sea-shore, we found by our barometer to be one thousand two hundred and twenty-eight feet, and we soon discovered that we had entered a barren waste, over which was spread a loose sand, (the debris of the prevalent rock formation of the eastern hills,) which gave it a desert-like aspect. A blighted kind of the iron-bark tree, (apparently Eucalyptus resinifera,) scarcely twenty-five feet high, clothed its surface, on which were here and there interspersed dense patches of underwood, composed of plants formerly observed on the western skirts of Liverpool Plains. In this stage of our journey we crossed the parallel of 29°, in about the meridian of 150° 40′; and having very little expectation of meeting with water, in any state, in so arid a region, we were most agreeably surprised to find the channel of a river from eighty to one hundred yards in width, winding its course to the westward. This stream, which received the name of Dumaresq's River, although greatly reduced by drought, presented, nevertheless, a handsome piece of water, half a mile in length, about thirty yards in width, and evidently very deep. My barometer, which I set up on the gravelly bed of the river, gave me only eight hundred and forty feet of elevation above the sea-coast, from which we were distant to the westward about one hundred and seventy English miles.

It was my full intention to have continued my course in the direction of the meridian, at least to the parallel of 27°, before I made the least easting towards the coast-line; this design, however, the existing circumstances of the country we had penetrated compelled me to abandon; for the great debility to which the whole of my horses were reduced, by the labours of the journey through a line of country parched up by the drought, at once obliged me to pursue a more eastern course; in which direction, upon gaining the higher lands, I could alone expect to meet with a better pasture, than that on which they had for some time subsisted.

On our new course to the northward and eastward, we had to struggle through a desert waste for many miles, before we gained a more undulated surface to the eastward of 151°, when the country through which we journeyed for about thirty miles, presented a

succession of thinly wooded stony hills, or low ridges of sandstone rock, separated from each other by narrow valleys, in which my half-famished horses met with but scanty subsistence. At length, on the 5th of June, having gained an elevation of about nine hundred feet above the bed of Dumaresq's River, we reached the confines of a superior country. It was exceedingly cheering to my people, after they had traversed a waste oftentimes of the most forbiddingly arid character, for a space, more or less, of eighty miles, and had borne, with no ordinary patience, a degree of privation to which I had well nigh sacrificed the weaker of my horses—to observe, from a ridge which lay in our course, that they were within a day's march of open downs of unknown extent, which stretched, easterly, to the base of a lofty range of mountains, distant, apparently, about twenty-five miles. On the 6th and following day, we travelled throughout the whole extent of these plains, to the foot of the mountains extending along their eastern side, and the following is the substance of my observations on their extent, soil, and capability.

These extensive tracts of clear pastoral country, which were subsequently named Darling Downs, in honour of his Excellency the Governor, are situated in, or about, the mean parallel of 28° S., along which they stretch east, eighteen statute miles to the meridian of 152°. Deep ponds, supported by streams from the highlands, immediately to the eastward, extend along their central lower flats; and these, when united, in a wet season, become an auxiliary to Condamine's River—a stream which winds its course along their south-western margin. The downs, we remarked, varied in breadth in different parts of their lengthened surface: at their western extremity they appeared not to exceed a mile and a half, whilst towards their eastern limits, their width might be estimated at three miles. The lower grounds, thus permanently watered, present flats, which furnish an almost inexhaustible range of cattle pasture at all seasons of the year—the grasses and herbage generally exhibiting, in the depth of winter, an extraordinary luxuriance of growth. From these central grounds, rise downs of a rich, black, and dry soil, and very ample surface; and as they furnish an abundance of grass, and are conveniently watered, yet perfectly beyond the reach of those floods, which take place on the flats in a season of rains, they constitute a valuable and sound sheep pasture. We soon reached the base of some hills, connected laterally with that stupendous chain of mountains, the bold outline of which we had beheld with so much interest during the three preceding days. These hills we found clothed, from their foot upwards, with an underwood of the densest description, in the midst of which, and especially on the ridges, appeared a pine, which I immediately discovered to be the same species as that observed in 1824, on the

Brisbane River. Encamping, I ascended a remarkable square-topped mount, which formed the western termination of one of these ridges; and from its summit had a very extensive view of the country lying between north and south, towards the west. At N. and N.N.W. we observed a succession of heavily-timbered ridges, extending laterally from the more elevated chain of mountains immediately to the east, which evidently forms the main dividing range in this part of the country; whilst from north-west to west, and thence to south, within a range of twenty miles, a most beautifully diversified landscape, made up of hill and dale, woodland, and plain, appeared before us.

Large patches of land, perfectly clear of trees, lying to the north of Darling Downs, were named Peel's Plains, whilst others, bearing to the south and south-east, and which presented an undulated surface with a few scattered trees, were called after the late Mr. Canning. Directing our view beyond Peel's Plains to the north-west, an expanse of flat, wooded country met the eye, being evidently a continuation of those vast levels, which we had frequently observed, in the progress of our journey, extending to the westward of our line of route, and which, it was now perceived, were continued northerly at least to the parallel of 27°.

In a valley which led to the immediate base of the mountain-barrier, I fixed my northernmost encampment, determining, as I had not the means of advancing further in consequence of the state of my provisions and the low condition of my horses, to employ a short period in a partial examination of the principal range, to the western base of which we had penetrated from the southward, through a considerable portion of barren interior. In exploring the mountains immediately above our tents, with a view more especially of ascertaining how far a passage could be effected over them to the shores of Moreton Bay, a remarkably excavated part of the main range was discovered, which appeared likely to prove a very practicable pass through these mountains from the eastward. Its more particular examination, however, I left to the period of a visit, by sea, to Moreton Bay, which I had already contemplated, and which I was enabled to effect in the course of the succeeding year (1829). And the brief notice of my having thus, in a most satisfactory manner, connected my sketch of the Brisbane River country with this pass, and with the lands to the westward, will be seen in another part of this paper.

The situation of my tents in the valley was determined to be as follows. Latitude, by meridional altitudes of the sun being the mean of five observations, 28° 10′ 45″ south. Longitude, by account corrected by bearings taken to fixed points on or near the coast-line, and compared with the mean results of several sets of distances of the sun and star antares from the moon, 152° 7′ 45″ E.

The variation of the compass was found by azimuths to be 8° 18′ E. The mean height of the spot above the level of the sea, by the mercurial column noted morning and evening, was one thousand eight hundred and seventy-seven feet; and its distance from the penal settlement on the Brisbane River, which bore by compass about north-east from us, was estimated at about seventy-five statute miles. Circumstances now urged me to commence my journey homewards, and this I determined to prosecute with as much despatch as the condition of my horses and the nature of the country would admit of. I had also resolved to pursue my course to the southward, under the meridian of our encampment, as that would lead us through a tract of perfectly unknown country, lying nearly equidistant between our outward-bound track and the coast-line.

On the 16th of June, therefore, I again put my people in motion, and quitting the vale in which we had rested, (and which I had named after the late Captain Logan, at that period commandant of Moreton Bay,) I shaped my course to the southward; and after passing through a fine, open, forest tract, abounding in excellent pasturage, in nine miles gained the north-eastern skirts of Canning Downs, of which I had had a view from a station on the hills which we had left.

At the close of the 18th, after penetrating an uninteresting forest, chiefly of red gum (*Eucalyptus robusta,*) we reached the borders of a broken mountainous country, which exhibited a geological structure, that had not been previously met with in any part of our journey. The rock was a very hard granite, in which the quartz, greatly preponderating, was unusually large; and at this stage of our homeward-bound journey our difficulties commenced. During the succeeding week, our daily journies were attended with great fatigue both to my people and horses; for being surrounded by high lands, we had no alternative but to pursue our way southerly, from one rocky range to another of greater elevation; until at length we found ourselves upon an open heath, totally devoid of trees, but covered with a low, scrubby vegetation, and interspersed with small patches of spongy swamp, in aspect similar to parts of the Blue Mountains to the westward of Port Jackson. And although the base continued of granite, and the difference of latitude was nearly 5°, yet the same species of plants as are to be observed upon those elevated ranges of the colony were, for the most part, to be found. At noon of the 25th, our latitude, observed on a very bleak sterile spot on those mountains, (two thousand nine hundred and sixty-nine feet above the sea-shore,) was 28° 45′ S., and our longitude reduced from the meridian of our encampment in Logan Vale, was about 151° 59′ E. From that point, notwithstanding our elevation, our view towards the east was alto-

gether circumscribed by lofty ranges, whose summits towered far above the height we had attained. In the course of the succeeding day, the progress of the expedition to the south was arrested by a most wild and frightful region, which obliged me at once to seek a more practicable country, by directing the course of my party to the westward, in which direction we, with difficulty, gained a lower level, and thence prosecuted our journey to the south-west, by such stages as the reduced strength of my horses was able to accomplish. On passing to the southward of the parallel of 29°, which we did in longitude 151° 32′ E., we again forded Dumaresq's River about fifty miles nearer its source, or to the eastward of the point at which we had discovered it on our outward-bound journey. Here our barometer gave us an elevation of one thousand and forty feet above the level of the sea, which showed a mean fall of four feet per mile, between the two fords.

On the 9th of July, after having traversed in a south-western direction a great diversity of country, in general of broken, rocky surface, we fell in with our former track, and on the following day crossed the channel of what I had considered the Peel, but which I subsequently named the Gwydir, upon finding it formed by a junction of Mr. Oxley's River with another as large, to which I gave the title of Horton's River. This latter has a course parallel to the Peel, through a valley lying to the westward of it, along which I was again enabled to direct my party to the south many miles, before a series of elevated forest ridges, stretching laterally from Hardwicke's range of Mr. Oxley, once more obliged us to climb the hills. These we ascended from the head of the vale, by a steep acclivity, and, at an elevation of one thousand three hundred feet above its level, resumed our course to the south. Among these hills we again observed granite, but of a reddish appearance, in consequence of the quantity and colour of the felspar which might be seen disseminated through the rock, of which Hardwicke's range is evidently formed; the elevation, above the level of the sea, of whose curiously formed cubical and chimney-shaped summits cannot be less than three thousand five hundred feet. The vegetation of this group of hills exhibited nothing remarkable; the ridges were generally grassy, but the *gramineæ*, as well as the timbers, which were of *Eucalyptus*, were of species frequent in the colony. At the close of our second day's journey, we had traversed these lateral ranges to their southern side, which overlooked an apparently level, wooded country, extending to Liverpool Plains, the greater body of which at length appeared before us to the south-west, at a distance of forty miles. Repeatedly, in our attempts to descend to the lower country, were we stopped by rocky ravines several hundred feet in depth; and it was not without considerable difficulty and danger to the horses that we gained the levels beneath

us, having actually descended a wooded ridge, from which there was an abrupt declivity of one thousand five hundred and forty feet. After a severe march of thirty miles through a barren forest, for the most part of blighted Iron-bark, furnishing but little pasturage and still less water, we at length arrived at Barrow's Valley of Mr. Oxley, which, in seasons of long rains, is evidently laid under water by the overflow of Field's River, which, in its course inland, we met meandering north-west, through the adjacent forest. On the bank of this river, where I gave my horses a day's rest upon the richest meadow-land we had seen in the whole tour, it was with pleasure that I hailed the colonial blue gum (*Eucalyptus piperita*) of stupendous size, the alluvial grounds on each bank producing also the herbage of the flooded flats of the Hawkesbury River in the colony. On the 20th of July, we resumed our route to the southward, and after pursuing a steady course for about twenty-seven miles through a barren, brushy country, not nine hundred feet above the level of the sea, we passed the northern margin of Liverpool Plains, throughout which, such had been the effect of drought, that we crossed their extensive surface almost to the foot of the dividing range (a space of twenty-five miles) before we found water for the horses or ourselves. On the 28th my party repassed the Mountain Range, and after an absence of thirteen weeks, we returned to the station from which we had departed, on the Hunter, having, in that period, traversed upwards of eight hundred miles of every description of country.

My report to the Colonial Government of this journey—of the spacious downs we had discovered in latitude 28°—and the considerable tract of very indifferent country, in part actual desert, that lay between the colony and those extensive pastoral lands, immediately suggested the importance of examining the space between those downs and the sea-coast at Moreton Bay; since, should the Gap, which had been discovered in the main dividing range in the above parallel, prove, on actual survey, to admit of a passage through that chain of mountains, the readiest point of access to the very desirable country on their western side would be from the shores of Moreton Bay and Brisbane River,—on the banks of the latter of which a penal settlement had already been established for several years. This inquiry became one of the objects of my voyage from Port Jackson the following year; and its results proved every way most satisfactory to the colonial government, and the colonists generally.

As I propose to make some general remarks elsewhere on the character of the country around Moreton Bay—a country alike interesting to the botanist and geologist—I will here simply remark, that in exploring the intermediate tract between the Brisbane River and the point where my overland journey of the pre-

ceding year had terminated, I ascertained that a line of road could be easily constructed from the western downs, easterly through the mountain pass, and thence in a north-eastern direction to the head of the navigation of a branch of the Brisbane River, named the Bremer; to which point evidently the future produce of the interior beyond those mountains will be conveyed, since from it the means of water-carriage to shipping in the bay will be found practicable at all seasons of the year, whatever may be the effect of drought on the land; the tide, which daily sets into the Brisbane for fifty miles above its mouth, flowing also up the channel of the Bremer, the depth of water in which it augments eight or more feet.

I was happy on this occasion of my visit to the Brisbane River, with in part other objects in view, to be enabled to carry on my survey from Darling Downs to the very shores of Moreton Bay; and in effecting it, I derived an additional pleasure, in closing my sketch of an extent of intricate country, comprehending from Hunter's River to Brisbane Town, 5° of latitude, to find but a very small error in my longitude. In the winter of the following year, (1829,) I again made a voyage to Moreton Bay, where I was engaged more particularly in botanical research. From that most interesting occupation, in so novel and ample a field as the banks of the Brisbane River afforded me, I found a short period of leisure to devote to geographical inquiry; and, accordingly, in an excursion to the north-west, I explored that stream far towards its source, through an irregular country*, which presented much diversity of surface to interest the geographer. During that short journey, in which I employed a small party about six weeks, I traced the principal branch of the river as far north as latitude 26° 52′, until its channel assumed merely the character of a chain of very shallow stagnant pools. In this excursion I made such observations as fully established two facts, *viz.*—That the Brisbane River, at one period supposed to be the outlet of the marshes of the Macquarie, &c., originates on the eastern side of the dividing range, its chief sources being in elevated lands, lying almost on the coast line, between the parallels of 26° and 27°; and that the main ranges, which separate the coast-waters from those that flow inland, continue to the north in one unbroken chain as far as the eye could discern from a commanding station near my most distant encampment up the river, and present no opening or hollow part in their elevated ridge, through which to admit of a

* One of the most remarkable points, in that particular tract of country, is a conical densely-wooded mountain, to which I gave the name of 'Hay's Peak,' in compliment to R. W. Hay, Esq., the Under-Secretary of State for the Colonies. It is situated on the eastern side of the dividing range in lat. 27° 36′ S., and long. 152° 8′ E.

road being made, to the interior beyond them. My pass, therefore, through those lofty mountains (the mean elevation of which above the shores of Moreton Bay cannot be less than four thousand feet) seems thus the only opening to the interior country from the coast between the parallels of 26° and 29° south.

Whilst I was engaged at Moreton Bay, the long droughts to which our distant colony has been repeatedly subjected since its foundation, and which again visiting that country in 1826, had continued with most distressing severity for upwards of three years, led the colonial government to inquire into the state of the interior, to the westward of the termination of the Macquarie River, with the view of attempting to make some discoveries in that quarter. Whilst the drought continued, an expedition was despatched under the direction of Captain Sturt, an officer of his Majesty's 39th regiment, to Mount Harris, a detached hill upon the Macquarie River, where Mr. Oxley had left his boats upon proceeding easterly towards the coast. Upon reaching that remarkable eminence, which Captain Sturt and the party forming his expedition were enabled to do on the 20th of December, he ascended the summit to survey the country below. But how much had the evaporation of the sun, which, in its operation, had continued during a period of three years, changed the face of those regions! The plains which Mr. Oxley had left entirely under water in 1818, now presented an expanse of dried up surface, which to all appearance extended northerly, without the slightest semblance of rising ground, to a distant 'clear unbroken horizon.' Encouraged by these appearances, the expedition traced the Macquarie, through the last stage of its existence, to the woodlands below Mount Harris, where its channel, becoming broken and in parts having altogether disappeared on the common level, ceased 'to exist in any shape as a river.' In exploring the country beyond this point, the party traversed the bed of that extensive morass, into which the late surveyor-general had ten years previously descended in his boat: this they now found 'a large and blasted plain, on which the sun's rays fell with intense heat;' the ground itself, parched to an extreme, exhibiting in many places deep and dangerous clefts, which clearly demonstrated the long existence of those droughts, to which every known part of New South Wales was at that period exposed. On these inhospitable levels, Captain Sturt passed a week; and in that period he skirted three distinct patches of marsh, in which were found broken channels of the river, forming so many stagnant lagoons or canals, surrounded by reeds.

In whatever direction they advanced to satisfy themselves as to the fate of the Macquarie, whether on the plains or wooded grounds, reeds of gigantic stature (the clearest indication of what

such a country is in a regularly wet season) encompassed them, and greatly obstructed their progress. Mr. Hume, whose enterprising disposition was abundantly manifested in his journey to the south coast, which has been already noticed in this paper, was associated with Captain Sturt on this occasion. With such aid, the latter proposed to divide the party, in order to undertake at the same time two distinct excursions, to ascertain more fully the nature and extent of those marshy flats, and set at rest any doubts which might be entertained as to the mode in which that river terminated—that is, of its non-existence in that low country, after the devastating operation of a drought of three years. Accordingly, one party, conducted by Mr. Hume, proceeded in a north-easterly direction, towards the Castlereagh, whilst Captain Sturt himself pursued a course to the north-west.

It would indeed have been most interesting, at this stage of the expedition, had Captain Sturt been provided with good barometers, to have ascertained the mean height above the level of the sea, not only of the lowlands over which the party had so patiently borne the burden and heat of the day, but also of the country which Captain Sturt traversed in his excursion to the north-west, and which he found, ‘ after travelling between twenty and thirty miles,’ began to rise; also his level at the end of his journey, which was extended to an estimated distance of one hundred miles, where he ‘ *made a hill of considerable elevation,*’ from the summit of which he had ‘ *a view of other high lands;*’ one in particular to the south-west, which he describes as ‘ *being a very fine mountain;*’ and which he afterwards visited and found ‘ *of sand-stone formation,*’ elevated above the ‘ *desert waste*’ on which it stands, *one thousand three hundred feet.* Captain Sturt, however, had no barometer on which he could in the least depend; the instrument with which he had been provided on his quitting Sydney, having sustained an injury on the Macquarie, four days before the expedition reached Mount Harris.

The observations made during these short excursions, satisfied the party, that the river had no existence in any shape beyond the ‘ third marsh’ previously explored. Mr. Hume passed from east to west, along the northern skirts of those extensive reedy flats, without either meeting with a further trace of a channel northerly, or finding water enough to supply his daily wants. And the character and direction of those vast flats, as well as the points to which the waters discharged upon them by the Macquarie in seasons of prolonged rains, tend, were now fully determined.

From the report of Captain Sturt’s examination of those lowlands, then, affected as they were at the time by drought, these facts may be gathered. At a distance of about twenty-eight

miles below Mount Harris, the flat-lands commence, and there the Macquarie itself ceases to be a river, having no banks, or continued channel, by which to prevent the dispersion of its waters when they rise in rainy seasons. The surface of those flats, however, has not one continued dip, but presents a succession of levels and inclinations, with each a detached lagoon-like channel, hemmed in on all sides by high reeds which catch the waters as they spread; and it is only when these are overflowed that the floods spread over the level, 'until,' as Captain Sturt observes, 'a slight declivity giving them fresh impulse,' they arrive at a second channel, and so spread to a third, until a considerable extent of surrounding country is laid under water. When such a general inundation takes place, as that witnessed in 1818, there is a current through the body of these marshes, setting, agreeably to the configuration of the ground, (as at length shown to us by Captain Sturt,) to the north and north-north-east, where, uniting with the waters of Morissett's ponds, the whole is thrown into the channel of the Castlereagh River.

To the north-west of those marshy grounds, Captain Sturt describes the country as rising, and therefore preventing any flow of the waters of the morass to that point of the compass. This rise of the surface, which I observe is elsewhere described as 'a table-land with scarcely water to support its inhabitants,' may be clearly understood as meaning a series of low terraces of dry forest-land, which present a level tract of ground, or one but slightly undulated, extending, probably, a considerable distance, until a second rise of the ground takes place. And the extreme perpendicular elevation of such a tract above the plane of the marshes is far too inconsiderable to justify its being considered a rising hilly country; nor is its actual mean height above the level of the sea raised in the least, because it has been ascertained that there are upon its desert-like surface a few rocky hills, which, standing far detached from each other, appear, when viewed with the country surrounding the base of each, like so many islands in the ocean. This view of the face of the country bounding the marshes of the Macquarie on the north-west will assuredly be verified, whenever a barometer is carried to that part of the interior.

Finally, before I quit the subject of those low marshy grounds, which have excited so much interest and speculation among geographers since the report of them given by Mr. Oxley, I would briefly remark, that although a drought of unparalleled duration had disposed of their waters, so as to enable Captain Sturt and his party to traverse their bed in a dried up, hardened state, still, whenever a wet season sets in, and rain falls upon the mountainous districts

of that colony, in the same quantity that it did in the years 1817 and 1818, it can scarcely be doubted that a like considerable inundation will again take place in that part of the interior; and when it is considered (as Captain Sturt informs us) that a space, twenty miles in breadth, and more than fifty in length, is subject to be thus deluged, can it be a subject of surprise that the late indefatigable surveyor-general, when he descended in his boat to such an expanse of water, to which he could perceive neither boundary nor shore, should, with no previous knowledge of such a water, or of the features of the surrounding country, have conceived himself in the 'vicinity of an inland sea or lake,' of the temporary or more permanent existence of which he did not, nor could he have offered an opinion?

Captain Sturt now directed his expedition to the north-west, with a view to further discoveries, aware as he was, from the observations he had previously made during his own short excursion, that a clear open country was before him in that direction. In their route his party traversed plains 'covered with a black scrub,' yet furnishing in parts some good grass. The detached hills already spoken of, as relieving the otherwise monotonous aspect of that part of the interior, and in the neighbourhood of which Captain Sturt had directed his course, he describes 'as gentle picturesque elevations, for the most part covered with verdure.' Of two of these isolated spots, the one 'Oxley's Table Land,' the other 'New Year's Range,' it appears our indefatigable officer determined the positions; these were as follows—

Oxley's Table Land, lat.	29° 57′ 30″ S.	long. 145° 43′ 30″ E.
New Year's Range .	30° 21′ 00″	146° 33′ 30″.

In continuing their journey westerly over this level country, its total want of water, excepting in creeks where the supply was both bad and uncertain, became a source of considerable annoyance to the party; who ultimately were obliged to follow one of the water-courses, which, when tracing it to the north-west, brought them (on the 2d of February) to the left bank of a large river, the appearance of which 'raised their most sanguine expectations.' To the utter disappointment of the travellers, however, its waters were found perfectly salt; and this circumstance was the more severely felt, as the horses of the expedition had travelled long in an excessively heated atmosphere, and had been without water a considerable time. After making some arrangement in favour of his exhausted animals, Captain Sturt, accompanied by Mr. Hume, proceeded to explore this river, to which he gave the name of Darling. They followed it in the direction of its course (south-westerly), about forty miles, and throughout found its waters not only not drinkable, but rather becoming, as they advanced more

considerably impregnated with salt. In one part they observed 'brine-springs,' and the banks throughout were encrusted with 'salt,' or, probably, with aluminous particles. The breadth of the river, at the point they first made it, was estimated at sixty yards, and its boundary banks were from thirty to forty feet in height—dimensions which they maintained as far as it was possible to explore the river.

At length the want of 'drinkable water' along its bank, and the appearance of a loose red sandy soil, at the point to which the patience and perseverance of the travellers had induced them to trace the river, at once destroying all hope of meeting with the most scanty supply in the back country, obliged them to give up its further examination. The extreme point to which the Darling was traced, and from which it continued its course through a level country to the south-west, Captain Sturt marks on his map, in latitude 30° 16′ south, and longitude 144° 50′ east.

Thus was a portion of the interior of New South Wales, comprehending two degrees of longitude to the westward of the part to which Mr. Oxley had penetrated in the marshes, explored; and although the country is little better than a desert waste, and, therefore, can hold out no prospect of an advantageous 'extension of the colony in that direction,' its character, nevertheless, was ascertained, and so much of the map of the country, previously a blank, was at length filled up.

The expedition had daily intercourse with the natives who inhabit the river and adjacent country, which it would seem is, comparatively speaking, well peopled; for Captain Sturt estimates that he could not have seen fewer than two hundred and fifty of these Indians, among whom his party passed on the most friendly terms, and, indeed, were frequently indebted to them for kindly acts.

Captain Sturt, however, draws a most melancholy picture of these distant regions, which, notwithstanding the population found on their surface, were rendered, by the distress of the season, scarcely habitable. 'The natives,' he observed, 'were remarked wandering in the desert, and from the badness of the water which they were obliged to drink, had contracted a cutaneous disease, which was fast carrying them off. Birds, which were noticed sitting on the trees, appeared to be gasping for existence, amidst the glare of torrid heat. The wild dog, or dingo, was seen prowling about in the day-time, being unable from debility to avoid the party; and whilst minor vegetation was altogether burnt up, the very trees were absolutely drooping from the depth to which the drought had penetrated the soil. Several of the party were affected by ophthalmia, produced by the reverberated heat from the plains which they had traversed, where the

thermometer stood in the shade at three P.M. at 122°, or from 98° to 102° Fahrenheit, at sunset.'

The Darling may be justly considered the largest river which has been discovered in New South Wales, since it is formed by a junction of all the streams which were discovered by Mr. Oxley in 1818 (and these were five in number, each of considerable magnitude), as well as of those I met with in my journey of 1827; and thus it constitutes the great drain of a tract of mountainous country lying between the parallels of 27° and 33½°. But what ultimately becomes of this river so sustained, to what other channels it becomes united, what course it eventually pursues, beyond the spot where Captain Sturt and his comrade left it flowing through a desert country to the south-west, or on what coast it is discharged, if it really does make the sea at any point, remains wholly unknown, and is therefore still to be discovered.

The party were now glad to direct their steps towards Bathurst; but before they finally quitted these parched levels, they shaped a course to the eastward, with the view of meeting with the Castlereagh, the channel of which (one hundred and eighty yards in width) Mr. Oxley experienced no small difficulty in crossing, as the rains which had fallen on the mountains to the south-east, whence it derives its principal sources, had swollen its waters to the level of its upper banks. On making this river they traced it down full one hundred miles to its junction with another part of the Darling, the water of which they found even salter than it was at the point at which the expedition had originally fallen in with it; nor did they find a sufficiency in the Castlereagh to meet their daily demands, for its bed was laid bare 'for a distance of thirty miles at a stretch,' which obliged our travellers to 'search the country round' for the little water which it had to yield them.

Surrounded as the party were by difficulties in a region 'deserted by the native tribes,' scarcely capable of sustaining animal life, and in which all the dogs of the expedition fell a sacrifice, still Captain Sturt appears to have been unwilling to quit his ground; for although the briny waters of the Darling were in themselves quite enough to have induced him to have made a hasty retreat southerly, to higher grounds and a better country, we, nevertheless, find him crossing the Salt River, to see what the country was in a north-westerly direction; nor does it appear that the curiosity of our travellers was at all satisfied, until they had penetrated a considerable distance on that course, where they found the ground uniformly level, and the surface in no part broken by either creek or minor water-course, the entire country around being, as far as could be seen from the highest tree, 'a boundless flat,' the elevation of which above the level of the sea was, pro-

bably, not more than five hundred feet. Captain Sturt had at length done his utmost; he, therefore, very wisely directed his party to the southward, and soon reached Bathurst.

Thus, much of our knowledge of the internal parts of New South Wales in the parallel of 30°, was derived from the labours of this indefatigable officer; to whom was entrusted, at the close of 1829, the direction of a second expedition, destined to trace the course of the Morrumbidgée, another western stream, rising in a range of mountains situated to the southward of the parallel of 35°, and under the meridian of 149°, at a distance of about eighty miles inland from the eastern coast line, and within what is now denominated the county of Murray. Of the character of this river it may be here briefly remarked, that its bed forms a succession of planes, of which some are of great inclination; along these its waters flow with considerable velocity in nearly a west direction.

After receiving the Yass River and some other minor streams, all which fall into it at an early stage of its progress, namely, in longitude 148½°, the Morrumbidgee pursues a long and tortuous course for upwards of three hundred statute miles, without deriving the slightest increase from the country it waters; and thus in this respect it resembles the Lachlan, which maintains a parallel course through the low interior to the northward. From this fact may be inferred the generally steril character of a considerable portion of the country lying between the channels of these two rivers, and which was in part ascertained by Mr. Oxley in 1817. As its course extends to the westward of the meridian 147°, the Morrumbidgee falls on a low level; the hills of sandstone rock, which give a picturesque appearance to the lands on its banks, higher up the stream, disappear; and flats of alluvial deposit occupy their place.

Thus far the river had been followed down some years ago, by stock-keepers in pursuit of strayed cattle, who also ascertained in their long rides along its banks, the extent to which the country westerly, from its elevation above inundation, might be safely occupied as grazing stations. The direction, which this river was also at that period known to take towards the marshes of the Lachlan, led to the conclusion, that both streams were united in those morasses; and on so low a level, (as was ascertained by Mr. Oxley in 1817,) as to favour the opinion that their confluent waters were rather dissipated over an extensively flat surface, than carried on in one body to the ocean, distant at least three hundred miles. And this opinion, gratuitous as it was, would nevertheless have proved to have been correct, had the Morrumbidgee not pursued its course so far to the westward as to reach the channel of a much larger river; since, as will presently be seen, it has neither magnitude nor velocity sufficient to force its way two

hundred and sixty miles to the sea-coast; but which the principal stream, by its volume and strength, has the power to effect.

The second expedition conducted by Captain Sturt proceeded from Sydney to explore the Morrumbidgee, in December, 1829. Tracing it down on its right bank, until he had passed every rapid or fall that might impede its navigation, he established a depôt—launched a boat, which he had conveyed overland from Sydney, and having, by dint of great exertion, built another on the spot, he lost no time in commencing his examination of the river to the westward. Before we follow the enterprising party on their voyage, it may be interesting to give the height of the river at the depôt, above the sea-coast, as derived from the observations of the late surveyor-general many years ago, on the adjacent country, which results it would have been very satisfactory had Captain Sturt been possessed of the means of verifying. This will show not only how slight is the inclination of its bed to give an impetus to its stream westerly towards the ocean, but also how perfectly unavailable to the colony are those vast flats of low country, which were observed to extend along its banks. The situation of his depôt Captain Sturt found to be in latitude $34\frac{1}{4}^{\circ}$ south, and longitude 143° 57′ east, or about twenty-seven geographic miles south-west from Mr. Oxley's extreme point of penetration on the steppes of the Lachlan, in July 1817, the mean elevation of which above the level of the sea, that accurate traveller had determined, by barometrical admeasurement, to be not more than two hundred and fifty feet. Now, as Captain Sturt informs us that the dispersed waters of those morasses again unite, and drain into the Morrumbidgee by a 'large creek,' which he passed about twelve miles west from his depôt, it is very evident that the bed of this latter river, and the country immediately adjacent, are at a somewhat lower level than Mr. Oxley's last or westernmost encampment.

On the 7th January, the expedition moved forward down the river, and on the fourth day, having passed extensive alluvial flats, on which were patches of reeds, the navigation became much interrupted by 'fallen timber,' and as the current was frequently very rapid, particularly in those parts of the river where its channel had become contracted, the boats were oftentimes in great danger from sunken logs. After advancing on their voyage about ninety miles to the westward, through a country of level, monotonous aspect, the party were relieved from the state of anxiety which a week's most difficult and dangerous navigation had caused, by their arrival at (to use Captain Sturt's words) 'the termination of the Morrumbidgee,' for its channel, much narrowed and partially choked by driftwood, delivered its waters 'into a broad and noble river,' the current of which was setting to the westward at the rate of

two miles and a half per hour, with a medium width from bank to bank of from three to four hundred feet. This 'new river,' which was called the Murray, and into which the diminished waters of the Morrumbidgee fall, is evidently formed by a junction of the 'Hume' and 'Ovens,'—which streams, taking their rise in the great Wanagong Chain, were first made known to us by the travellers Messrs. Hovell and Hume, who crossed them, two hundred and fifty statute miles nearer their sources, in their excursion to Port Philip in 1824. Pursuing the course of the Murray, on the 14th January, the voyagers made 'rapid progress to the W.N.W.,' noticing, as they passed on, a low 'unbroken and uninteresting country of equal sameness of features and vegetation,' to that observed whilst descending the intricate Morrumbidgee on quitting their depôt.

After nine days voyage down the Murray, in which period they made about one hundred miles of westing, without observing the slightest change of country for the better, or the least rise in its surface, the expedition passed the mouth of a stream flowing from the north by east, with a strong current, and in point of magnitude but 'little inferior' to the Murray itself. Ascending it, Captain Sturt found it preserved a breadth of one hundred yards, and its banks, on which were many natives, 'were overhung with trees of finer and larger growth' than those of the Murray. Its waters were, moreover, ascertained to be two fathoms in depth; of turbid appearance, but 'perfectly sweet to the taste.' The confluence of these two rivers takes place, it appears, (by Captain Sturt's reckoning,) in exactly longitude 141° east, and immediately to the south of the parallel of 34°. It was at this stage of the expedition that the face of the country began to assume (comparatively speaking) an interesting appearance; and the first rise of ground which had been seen in the advance of the party to the westward in a direct line of more than two hundred miles, was observed at a moderate distance from the river to the north-west. Previous to his reaching the point of confluence of the two rivers, Captain Sturt, it would appear, had entertained a doubt as to the 'decline of the vast plain through which the Murray flows,' as well as of 'the probable fall of the waters of the interior' to the north of it; but on observing a new stream flowing into the Murray, the circumstance of the 'parallel' (meridian doubtless) in which he had struck it, 'and the direction from which it came,' combined to satisfy him, 'that it could be no other than the Darling.' It was therefore concluded that the whole of the internally formed streams, at present known in that country, from my Dumaresq's River, (discovered in 1827 in lat. 29°,) to the Murray in 34°, are discharged into the ocean on the south-coast—the dip of the continent within the parallels of 28° and 35½°, being of course to that

point. However, the identity of this tributary to the Murray with the Darling, remains still to be ascertained,* before the declension of so considerable a portion of the interior can be said to be southerly, and before one can positively assert, with the president of a society in New South Wales, either that an interesting fact has been established—viz. 'that all the waters from the Bathurst country, owing to the dip of the earth, run to the south-west extremities of eastern Australia,'—or that these discoveries have opened a water communication from the south coast, 'one thousand miles through a variety of agricultural and pastoral country, in one of the finest climates which the world can boast of,' and capable of sustaining 'millions of emigrants.'

The character of the Darling, as also the general direction of its course, beyond the point to which it has been traced, we have yet to ascertain. Since, however, it is by far the most considerable inland stream at present known in that country, it is to be hoped, that its further examination, which may furnish much interesting information respecting the actual features of the more remote regions of the interior to the north-west, will ere long be prosecuted. But to follow the expedition down the Murray.

That river, after it receives the supposed Darling, continues its course upwards of a degree farther to the westward, and in that space receives a second stream, which falls in on its left bank from the south-east. This tributary stream, which is described as a river of 'considerable importance,' and was named the 'Lindesay,' is most probably the 'Goulburn' of the same indefatigable explorers, whose journey overland to the south coast in 1824, I have already adverted to, and who, in fording their river at a part where its channel presented a breadth of eighty yards, left it winding its course to the north-west. From this point, the Murray assumed a new feature, and along its northern bank extended a range of cliffs, which appeared to the party, as they passed beneath them, to be of 'partial volcanic origin.' The navigation at length became rather intricate, for those cliffs being immediately succeeded by others on each bank, of limestone, the river was found to force its way through a glen of that rock, in its passage frequently striking bases of precipices of the same formation, which rose to a perpendicular eleva-

* There is an intermediate tract of unknown country, exceeding in extent four hundred miles, between the southernmost point of Captain Sturt's examination of the Darling River, and the junction of the stream, discovered in the progress of this second expedition, flowing from the northward into the *Murray;* and as these exhibit no one character common to both, we cannot, in the present state of our information, arrive at a satisfactory conclusion, that the tributary to the *last-mentioned* river, and that great drain of the country to the north of the parallel of 34°, the Darling, are one and the same stream. The river flowing into the Murray is said to be sweet to the taste; the Darling, on the other hand, is described as strongly impregnated with salt.

tion of two hundred feet, and in which ' coral and fossil remains' were remarked to be plentifully imbedded. At this stage of their passage, those long ranges of forest hills, which extend along the eastern shore of the Gulf of St. Vincent became discernible, indicating to the exploring party their approach to the coast. On the 3d February, the river having reached the meridian of $139\frac{3}{4}°$, the disposition of the bounding cliffs gave its course a decided bend to the southward, through a continuation of the glen, which at length opened into a valley.

Here the river was observed to have lost the sandy bottom which it had exhibited throughout its long course from the eastward, for its bed having now dipped to almost the level of the sea, its waters had become ' deep, still, and turbid.' Its course to the south was followed by the voyagers along reaches of from two to four miles in length; and upon their passing the parallel of 35°, a more open country appeared before them, for the cliffs having partially ceased, had given place to picturesque hills and lower undulations, beneath which extended ' thousands of acres of the richest flats;' but, as Captain Sturt adds that these were covered with reeds, and were evidently liable to inundation from the river, the value to the agriculturist of such marshy grounds, scarcely at all elevated above the sea-shore, may be easily estimated.

On the 8th of February (the thirty-second day of the voyage from the depôt) the hills ' wore a bleak appearance,' and the few trees, which had at one period fringed their ridges, were for the most part broken off, ' as if by the prevalent winds.' At noon, upon entering the river's last reach, no land could be discerned at its extremity; some low hills continued, however, along its left bank, whilst its right was hid by high reeds. Immediately afterwards, these enterprising voyagers entered an extensive lake, the body of which stretched away far to the south-west, in which direction ' the line of water met the horizon.' This lake, which received the name of ' Alexandrina,' was estimated at from fifty to sixty miles in length, and from thirty to forty in breadth. A large bight was observed in it to the south-east, and an extensive bay at the opposite point; still, notwithstanding these dimensions, this very considerable sheet of water appears to be but a mere shoal throughout, since Captain Sturt states ' its medium depth' is but ' four feet'!

Upon this vast but shallow lake, he pursued his voyage to the southward, remarking that its waters, which at seven miles from the point of discharge of the Murray into it were brackish, were at twenty-one miles across perfectly salt, and there the force of the tide was perceived. As the party approached the southern shore, the navigation of the boats was interrupted by mud flats,

and soon their farther progress was effectually stopped by banks of sand. Captain Sturt therefore landed, and walking over some sandy hummocks, beyond which he had, from his morning's position, seen the sea, almost immediately came out upon the coast at Encounter Bay of the charts, whence he took bearings to Cape 'Jarvoise,' (rather Jervis of Captain Flinders,) and the south-east point of Kangaroo Island. At the lower part of the lake seals were observed, and near the spot on the southern shore, where the party had effected a landing, some natives were seen grouped together, but as they bore arms and had their bodies painted, it was obvious that their intentions were far from being friendly; nor did they, although they saw the party were peaceably disposed, attempt to visit the encampment of the travellers during their stay on the margin of the lake.

Having thus seen the termination of the Murray and the outlet of the lake into which it falls upon the south coast, Captain Sturt lost as little time as possible in conducting his party back by water to his depôt—circumstances not permitting of a more perfect examination of that extensive piece of water, from the north-western extremity of which, some hopes had been entertained of there being a clear and open communication with the Gulf of St. Vincent.

Now we gather from the results of this second tour of discovery of Captain Sturt, simply this, and no more, *viz.*—in what way the Morrumbidgee, as well as the several streams which were crossed by Messrs. Hovell and Hume in 1824, and the waters of the Lachlan of Oxley in 1817, (all which unite,) are disposed of; as also the nature of the 'unbroken, uninteresting country,' lying to the westward of the marshes of the latter. It must, however, be acknowledged that, in effecting this service, Captain Sturt has added largely to the geographical knowledge which we previously possessed, since the facts ascertained by him during the progress of his expedition have enabled him to fill up no inconsiderable blank on the map of that part of New South Wales, lying to the west and south-west of Port Jackson. That the expedition of this enterprising officer has opened to the settler 'unmeasurable tracts of well-watered' country previously unknown, as stated in the report of a society in the colony already referred to, his despatch to the local government does not in the slightest degree support; nor does it contain the announcement to the colonists, that a river, navigable for commercial purposes, has been discovered in that country, which can be available at some future day 'to convey to the coast the wools and other exportable produce' of the settlers, who may hereafter be established in those parts of the interior which lie in the neighbourhood of its banks. The reverse is the fact. The Murray, when flooded from the eastward, will doubtless

carry a boat safely down its channel, but as a navigable river at all seasons, it is, like the Macquarie, and indeed every other western stream, useless to the colonists. Even if the Murray were throughout the year, and during the driest seasons, a deep navigable river, its waters could not be rendered of use for the purposes of commerce, since it discharges itself into a shoal lake, and that again into the sea at Encounter Bay, where, although the passage is, as Captain Sturt states, 'at all periods of the tide, rather more than a quarter of a mile in width, and of sufficient depth for a boat to enter,' still, as he also observes, and the master of every coaster well knows, '*a line of dangerous breakers,*' which are constantly rolling against the sand-bars thrown up by the prevalent winds, '*will always prevent an approach to the lake from the sea, excepting in the calmest weather; whilst the bay itself will at all times be a hazardous place for any vessel to enter under any circumstance.*' The opinion also, which has been entertained, that a more practicable communication with the lake might be found from the Gulf of Saint Vincent is wholly gratuitous, for a reference to the voyage of Captain Flinders, who closely examined the shores of that deep bight, and an inspection of the chart of that able navigator, (the accuracy of which, generally, no seaman ever doubted who had sailed by it,) on which is laid down a range of wooded hills, extending from the promontory of Cape Jervis northerly, along the whole of the eastern shore of the gulf, are sufficient for us rather to entertain every doubt of the existence of such a channel of communication with the north-western bay of the lake, which is *itself*, in all probability, nothing else than an extensive mud-shoal *.

I have now given the sum of our geographical knowledge of New South Wales up to the present period; and dividing the map of that vast country into seven equal parts, one division will fully include the tracks of all the journeys which have been undertaken since 1817, with a view to discovery, by Oxley, Sturt, Hovell and Hume, myself, and others; whilst the remaining six portions, which comprehend a great expanse of interior beyond the tropic, and the whole of the equinoctial part of the continent, continue, at this day, a vast region, entirely unknown. The want of navi-

* [Since Mr. Cunningham's observations on this subject were written, the Colonial Office has received accounts from New South Wales, which show that the expectations which were entertained by Captain Sturt of the existence of a communication between the Gulf of St. Vincent and the Lake Alexandrina were destitute of foundation. With the view of setting this question at rest, an accurate survey of the Lake was recently made by Captain Barker, an officer of the 39th regiment, on his return from King George's Sound, where he had been employed on detached duty; and it is a matter of sincere regret, that from an excess of zeal in geographical science, this enterprising officer should have lost his life, in the prosecution of this object.]

gable rivers in that 'Great South Land,' must necessarily impede the progress of discovery in the interior of the country.

In closing these geographical remarks on New South Wales, I trust I may be permitted to point out the directions in which more extended expeditions of discovery might be employed in that country, and which, if conducted by individuals every way competent to such service, would assuredly put us in possession of such information, as would go far towards showing us the real features and character of central Australia,—its animal and vegetable productions,—the extent to which a region so remote from the coasts is peopled, and that which would not be the least interesting in the inquiries of such exploring parties—its system of rivers.

One expedition might be despatched to follow the course of the Darling, from the point Captain Sturt quitted it in January, 1829; or the party might be directed to trace up, in a northerly direction, the auxiliary stream that falls into the Murray, which was supposed to be the Darling; either would set at rest all doubts respecting the identity of these waters, or furnish clear proof of their being distinct rivers.

A second long and interesting journey might be undertaken, from any one of my points in the Moreton Bay-country, on the western side of the dividing range, to penetrate to the tropic, by pursuing a course as much to the westward of north-west, as the internal country, by furnishing the requisites, grass and water for the animals employed, would permit. An expedition well appointed, and furnished with six months' provisions, and moreover favoured by the country affording wherewithal to sustain animal life, might cross the tropical circle in longitude 140°: upon gaining which, the party might be directed to descend southerly under that meridian to the latitude of Moreton Bay; and, reaching that parallel, to shape a course to the eastward, in order to make the point on the coast-line, from which the expedition had originally taken its departure. In the considerable triangle which such a route would describe, the character of a large tract of internal country would be fully ascertained; and if there are any high lands to the westward of the above-mentioned meridian, which is perhaps very doubtful, these would be seen, and even visited, if not too far remote, and the several rivers, of which there are doubtless many, in four and a half degrees of latitude, flowing inland from the dividing range to the eastward, would, in the progress of such a journey, be repeatedly crossed and their tendency ascertained.

Again; of all the coasts of the continent of Australia, the north-western, as affording encouragement to hope that outlets of internally collected waters might be there discovered, calls for peculiarly minute and patient examination. Upwards of one hundred and thirty years ago, that celebrated navigator, Dampier,

whilst on that coast, found the southern parts of De Witt's Land to consist of a range of islands (now bearing his name), among which he remarked such an extraordinary rise and fall of the tides, as induced him to give it as his opinion that the northern part of New Holland was separated from the lands to the southward by a strait; unless, says he, 'the high tides and indraughts thereabouts should be occasioned by the mouth of some large river, which hath often low lands on either side of the outlet, and many islands and shoals lying at its entrance.' This opinion, says Captain Flinders, he supports by a fair induction of facts, and the opening of twelve miles wide, seen near that part of the coast by Vlaming's two vessels, and in which they could find no anchorage, strongly corroborates Dampier's supposition.

What those early navigators remarked, has been more than abundantly confirmed, lately, by Captain King, whose more extended observations upon the character of the tides, the rushing force of the currents, and other phenomena on those inter-tropical shores, all lead to the conclusion, that if that peculiarly constituted country furnishes any streams of magnitude worthy to be compared with those of other continents, the estuaries of such will most assuredly be found on that extensive line of coast.

At the close of the surveys of this latter very able navigator in 1822, there remained between Dampier's Archipelago, in latitude 22°, and Cape Hay in 14°, about five hundred miles of coast, wholly unsurveyed and unseen. Moreover, there is reason to believe, that even of those portions of that coast which were examined during those voyages, which employed between four and five years, some parts will be found to be rather large groups of islands,—the main shore itself, being probably, far distant to the eastward.

To complete the survey of that considerable range of coast, the employment of a vessel, thoroughly equipped for so intricate, dangerous, but, at the same time, most interesting service, would at once settle the great geographical question, viz. whether or not Australia, with a surface equal nearly to that of Europe, discharges on its coast, a river of sufficient magnitude to lead, by a long, uninterrupted course of navigation to its central regions; by which alone a knowledge of the capabilities of such distant parts of the interior may be acquired, and the produce of the soil be one day conveyed to its coast.