TO

THE INHABITANTS OF THE COLONY

OF

NEW SOUTH WALES

AS

A TOKEN OF GRATITUDE,

FOR THE

PATRONAGE AND FRIENDSHIP

WITH WHICH

HE HAS ON ALL OCCASIONS BEEN FAVOURED,

Most Respectfully,

THE AUTHOR.

Quo mihi rectius videtur ingenii, quam virium, opibus gloriam quaerere; et, quoniam vita ipsa, qua fruimur, brevis est, memoriam nostri quam maxume longam efficere. Nam divitiarum et formæ gloria fluxa atque fragilis; virtus clara aeternaque habetur.—Nam et prius, quam incipias, consulto; et, ubi consulueris, mature facto opus est.—SALLUSTIUS.

A

JOURNEY FROM SYDNEY

TO THE

AUSTRALIAN ALPS.

After a labour which I may call immense, in order to compress into a narrow compass, and that at the least possible expense, the requisites of a long Journey, I started from Sydney on the 10th of January, 1834. I had with me a cart with one horse, and four men; it matters not whether they were called free or assigned: as long as an assigned servant conducts himself properly, I treat him as a free one, and I should wish to possess the discretion, as often as I should deem it expedient, of acting *vice versa*.—I left behind me all Bills of Exchange, Courts, Summonses, Attorneys, Editors of Newspapers, Gaols and such like, and exulted in the feeling, that abandoning all these delights of ultra-civilized society, I should once again enjoy for some time, a freedom nearly approaching the state of nature. I left Sydney at 10 A. M., and determined to stop for dinner with my party in the bush opposite Grose Farm, as the heat was excessive, and as I was desirous of habituating my half-wild horse, and town-fashioned servants by degrees, to the change of life we were about to commence. We were all in the best possible spirits—At 3 P. M. the heat reached its highest degree, and there were only a few fine cirrho clouds standing

in the zenith, at an immense altitude, in the perfectly clear and serene firmament, while a rather fresh N. E. breeze was blowing intermittingly.

My health which did not suffer during an 18 months residence in the hottest parts of the Brazils, had been much impaired since my arrival in New South Wales, and though I cannot call the climate of Sydney unhealthy, yet the sudden transitions of Australian temperature, and the predominance of Southerly Gales, charged as they are with incredible quantities of the dust of our unpaved and unwatered streets, injure the lungs of the inhabitants more than might be believed. This day, however, I was induced to attempt a remedy, which under the necessary precautions and restrictions, may be adopted by persons similarly circumstanced. I bared the upper part of my body, and in that state walked for half an hour in the currents of air among the trees. The effect was excessively beneficial, and I felt the muscles of my thorax so much invigorated, that I repeated the experiment during my journey with the most beneficial result. To physicians at home, this ærial bath has been long known, and it would appear besides, that the slender clothing of tropical nations, rests on a deeper diatetical foundation, than is generally supposed. I stopped the first night at J. Solomon's inn, on the Liverpool Road, where the accommodation as in many other Country inns of the Colony, was not to be complained of. From this place, George's River is distant in a straight line, about 6 miles; Botany, 19; Banks Town, 19; these distances however, do not accord exactly with those given in our latest map, viz:—that published by Captain Sturt; but we rest assured that these, and other errors of that map will be corrected in the shortly expected publication by Major Mitchell, whose application, and exertions as a Surveyor, are so well known to the whole

Colony. At 9 P. M., I observed lightning to the N. N. W., although the horizon was clear and the air chilly and bracing. Scarcely a day passes without this phenomenon being observed in the Northern parts of the Colony. Neither heat nor cold, wind or calm, rain or drought, seems to effect the excretion of electric matter, which should therefore appear to be exceedingly copious in our skies. At Sydney I have observed lightning in different, and almost opposite directions.

At an early hour in the following morning (January 11,) I resumed my journey along the Liverpool Road. The deep sand which surrounds the neighbourhood of the Metropolis, soon disappeared, small declivities of red loam were seen, and the land began to assume a more fertile character. According to all human calculations, this and similar places in the immediate neighbourhood of Sydney, (some spots even on the Parramatta Road being above mediocrity) ought all to be now under cultivation, and small farms should be already coagulating into villages. These however, are to be looked for in vain. As all lands here, were originally given to a small number of individuals without sufficiently binding restrictions, they have fallen very soon into the hands of a few, who are now too rich to direct their attention to such isolated spots of good ground. To the existing mass of misregulation respecting the alienation of land, the conditions of the government notice of the 1st of July 1831, suppressing even the primary grants to new comers, the natives of the Colony, and the freed-man, may be said to have given the finishing stroke, to have erected an insurmountable bar to emigration, and to have planted in the bosom of our young Colony, the deleterious germ of an eminently aristocratical system. The small hamlet of Irish-Town, composed of a few modest tenements, abstracted me for a moment from these gloomy and melancholy reflec-

tions. From the many specimens scattered along the road, I concluded that a secondary stratum of Trapp formation exists in the neighbourhood. The country near Liverpool is well cultivated, in fact so much so that this is one of the few places in the Colony, where a traveller may fancy himself in some parts of Europe, surrounded as he is by drays and teams, persons on horseback and in vehicles, combining the appearances of active agriculture, and thriving village life. The public houses here, as in many other parts of the Colony, are far too numerous, their number between Sydney and Parramatta, being 29. Thus I arrived at Liverpool, an improving little town, having some good public edifices.

We encamped at noon beside a pond of water, near the road side, at an open forest space, called "the Long Bridge." This was the first time I bivouaced with so large a party in Australia. During such intervals, my horse was walked about, a practice which I never allowed to be neglected when it was taken from the shafts, either at noon or night, and by this and some other means, I was able to bring this animal, (which by some accident in its purchase, happened to be a very bad one), so far as Pass Britannia, where it died. To the little attention which travellers are usually able to pay to such apparent trifles in this wholesale country, the failure of many expeditions is to be attributed. The vegetation near the Long Bridge, began already to be very different from the coast vegetation near Sydney. The experience I have as yet obtained, during my Australian travels, enables me to distinguish five systems of vegetation in this country. The coast vegetation from Sydney, South to Illawarra; in these extensive sandy levels and hills, the Epacris, Borronia, Dalvinia, Gompholobium, Xantorrhea, Hakea, Grevillea, Personia, and such like, are prevalent

and characteristic, when of the higher forest trees, scarcely any other than the Eucalyptus are visible. However, I must observe, (as far as I can do so on the present occasion), that even this coast vegetation, has a subdivision of a very striking character; and this is the vegetation of our rocky gullies. Here, although few springs appear, which feed the small number of creeks we possess, and the periodical or permanent moisture, elicits a series of plants not to be seen any where else in the same geographical localities. In such gullies, or small flats surrounded by such gullies, is the spot where the two sole species of palms we possess, are to be found. Here the Corypha Australis projects its annulated stem, of a hundred feet high; here the Seafortia Nobilis ascends to an equal height, but with a thicker and smoother trunk. The second sort of vegetation which I shall here mention, is the *Argyle vegetation*, or that with which the grassy hills, flats, and plains of that County, and all congenial places in the Colony abound. Here, almost all the families of the Coast are wanting, and a certain number of others appear, which begin to be mixed with the tribe of the Compositæ, the vast quantity of which characterises the extensive downs of Menero.* In similar reflec-

* According to an examination of about 100 species which I collected in passing Argyle, about 66 of them were brought under names, the remainder might be considered as undescribed genera and species. The genus of Thlaspi, Cerastium, Goniocarpus, (2 species,) Convolvolus, Euphrasia, Prunella, Thymus, Verbena, Scandix (2 species), and Hydrocotyle, are characteristic of this vegetation, and an indication of the great discrepancy of the Australian Coast—and Inland Flora. The far more prominent genera of Compositæ, found under the same localities, are Calotis, (2 species), Elichrysum, Bellis, (2 species), Senecio (2 species), Sonchus, Angianthus, Gnaphalium (2 species), Cotula, Podolepis, Cassinia, Erigeron, Craspedia.—We are indebted for much information connected with Botanical nomenclature in this work, to Mr. Richard Cunningham, Colonial Botanist, who stands unrivalled in the knowledge of Australian plants, amongst all the persons we have met with in this Colony.

tions I indulged at my noonrest of to-day. Several persons passed the road near us, asking the usual hospitalities of Australian Camps, a drink of water, and a light for their pipe. My people were ordered to give a bit of tobacco to all persons, who appeared in need of such a present. In the afternoon I descended some slightly undulating hills, and passed Raby, one of the most famous farms in the Colony. I stopped for the night at Mr. Howell's farm, called Molle's Main, and situated a short distance to the left of the road. Mr. H. had invited me previously at Sydney, and I could not fail to call upon a gentleman, who in conjunction with Mr. Hamilton Hume, was the first traveller who saw the Australian Alps from a distance, and brought these giants to the notice of the world. Both he and Mrs. Howell received me very politely. I saw the chart of Mr. Howell's journey, and was confirmed by this document and his information in my original plan, to approach the Alps (as I did afterwards,) by the Eastern side. The soil of the farm is rather moist, and rich in grass, upon which a considerable dairy stock is kept. In the winter of 1831, ice was seen about this place.

On Sunday (12th January), I left Molle's Main, whence the land ascends towards Mr. Scott's farm, and commands a fine view over the land at the Cow Pasture River, towards which the country gently verges. The floods of this river are, as the inhabitants know too well, sometimes excessive, so much so, that they once reached even Mr. Campbell's farm, situated at a considerable elevation. The stream valley of the river consists of an alluvial soil of fine quality, in the grassy places of which, a quantity of the Argyle vegetation is observed. The river has a constant run of water, which is a scarcity in Australia, and the colour of the water is perceptibly yellow. The Cow-Pasture Bridge is a good piece of wooden work, constructed I believe, in

the reign of Mr. Oxley. The road after passing the bridge, is very bad, the alluvial soil on this side of the river, being still finer, and extending to a longer distance than on the other side. However, the many remarks I have to make on the roads of New South Wales, I will delay for some future page. At Noon, I stopped at Cawdor, an old Government station. This is one of the places, which are called in the Colony, "watering places." In such the government men,* and other people who are desirous of practising œconomy, stop with their teams, and cook their provisions; here the travelling stockmen remain with their herds for refreshment. Here, therefore, you may be assured of meeting with large heaps of half consumed timber, often still burning, and then nothing is necessary, but to put on pots of water for tea. In such places the Australian traveller who happens to have a few good servants, may enjoy a state of the greatest independence and ease. Nothing but the sun and meteors (those rulers of nature herself), will influence his determination, he may fancy himself master of all that surrounds him, he can walk for hours or days under the dome of gigantic Eucalyptus, repose on the down of ever-verdant herbage, he may stop or start as he pleases, and circumscribed by his own will to the moderate comforts conveyed in his cart (a sort of terrestrial vessel,) he is always in that tranquil state, where neither buying nor selling is wanted. In that way I greatly enjoyed my camps. One of my younger servants was strolling about to catch some insect, another to gather plants, whilst I was occupied in arranging and classifying such objects, and composing my journal.

In the afternoon I ascended a slight range, which

* This is one of the names, by which the Transported Convicts are distinguished in the Colony.

lies before a higher one, called Razor-back; the latter extends from N. N. W., to S. S. E., forming the South boundary and bulwark of the Cow-pasture River, and is an elongated thin-spined range, of 700 or 800 feet in height, covered on its flanks with timber. At 3 P. M., the wind was S. S. W., and the horizon cloudy. The lower parts of the mountain present no rocks at all, but an alluvium of loam and sand is visible, then succeed some small strata of Greywacke. Razor-back is one of the best specimens of this formation I have seen in the Colony. The rock is composed of rather fine and very well united grains, of a color between brown and dirty green, and the size of the grain is almost the same all over the mountain. I did not observe any tendency to stratification in the rock, although by the last operations of the Road Department, some of the higher parts of the mountain had been cut to a considerable depth. To this, the learned will be indebted for some more exact observations in future, than I was able to make. Our Greywacke never occurs porous, however I have several specimens, where some cavities on the superfices are observed, which being rather more yellow, it seems that they owe their origin to the admixed iron, which has been affected and dissolved by the air. A very fine *occasional admixture** of this rock is *solid Lithomarge*, which occurs in thin strata between its cavities. It is perfectly white, and slightly botryoidal at the surface of some specimens. Very fine samples of this (for Australia new) mineral, are to be found on the top of the mountain, at the right hand side of the road.

* I have followed in my geological and mineralogical terminology, the works of the celebrated German mineralogist, Sir Charles C. Leonhard, whose "Characteristic of rocks," 3 vol. printed 1824; his "Oryctognosy" published 1821; finally his "Agenda Geognostica," printed 1830, will I believe bring me very nearly on a level with the mineralogical notions now adopted in Great Britain.

As Heterogeneous Layers (Fremdartige Lager) I found our Greywacke,—1st. mingled with amorphous parts of Argilaceous Shiste—2ndly. with the same and a Mandlestone of very fine grain, mingled together. In specimens of the latter extraction, I found some thin strata of petrefactions, of which some present the shape of small vegetable stems, others appear more to belong to the animal kingdom, as wings of insects, &c. Our Greywacke therefore, fully justifies by the scarce admixture of organic remains, the name of a transitory formation. The higher parts of this range command to the N. W., an extensive view over an immense Panorama of forest and manifold transsected and undulated land. The highest peak of the Blue Mountains bears here N. N. W. 40 miles distance. On the most elevated point of Razor-back, the view is still more extensive and majestic. But such and all similar sensations were damped by a feeling which darkened all my views in Australia, namely, that the vivifying feature to all this scenery—the man is no more. The Aborigines of all these extensive lands are gone, they have given room to another race of people, and what these will be, time alone can unvail! On the top of the hill, I collected some good plants, amongst which was a very fine Paspalum, with stellular, hispid seeds. The road over this Mountain must be in bad weather, a nearly impassable one; I fed my horse with some corn on the half-way, and as I said, it was only by such trouble and exertions, that I was able to go on at all with my small outfit. I stopped for the night on the other side of Razor-back, in a small valley, surrounded by rocky declivities, over and through which a small rivulet was serpenting.

I chose this place, because I was told before, that the Stockade which was here, belonged to an Ironed Gang,

However, I found it to be only a Road Party.* At this intelligence even my prisoner servants were alarmed, it being known, that many dreadful crimes are committed by such men, who are permitted by negligent or vicious overseers, to leave their huts at night. However all passed quietly with us, and the early Sun of the next morning, found me surrounded by all the freshness and serenity of a fine day in the bushes of Australia.

Monday, (January 13,) at half-past 5 A. M., the Thermometer ranged from 58 to 60, according to the force of the Western breeze. I found afterwards, that the Thermometer is always affected by this circumstance. At 6 A. M. the rivulet, which is at the foot of the rock, shewed 61. Here, as well as at Razor-back it was, that I and my men began to collect specimens with more carefulness, and we stopped at this place until 3 P. M. All sorts of preparations were going on, of the product of which, unfortunately I can give the reader little account, several of my boxes which I left in charge on the road, (those from the Alps, I took back in my cart myself) having been maliciously spoiled or plundered. The discriminating reader will not blame me for the many apparently minor affairs, I mingle with this work. In this spacious country the germ of a vast Empire is laid, and it will doubtless be interesting to an European, as well as the impartial Australian reader, and also to posterity, to know something concerning "veteris populi prospera, vel adversa"—as says Tacitus.† Besides the first rudi-

* Road Parties are formed by probationary Convict Servants, returned to Government by their masters, where they must remain six months, before they are again assignable to private service. They do not work in irons.

† Amongst a collection relating to the history of New South Wales—a collection which I am daily increasing, I possess a very valuable Ma-

ments of the Argyle vegetation, a large fine Datura from 2 to 3 feet in height was growing here, which I should have taken for a stranger, had I not found it equally in distant forest gullies. This too was the first place, where the very rare Aneilema—Cristatæ similis—much resembling the Genus Tradescantia, was gathered.

After the heat of the day was over, and our business transacted, we started, and passing different ridges of forest land, reached Stone Quarry Creek, whence we proceeded to Myrtle Creek to stop for the night. Between these two places is a remarkable stratum of Limestone, and at the last one, an interesting simple mineral of the same tribe, which at present I am unable to distinguish any further, two parcels containing my collections in this quarter, having been exposed for weeks in the heaviest rain at Sydney, and in consequence, all the paper and straw which surrounded the stones, was converted into mere dung, all labels were rotted &c. At the "Travellers arms" I found a merry party dancing to the strains of a violin. Music is a thing seldom heard in our Colony, I listened therefore with pleasure even to these monotonous tones. All passed very decently, and I enjoyed myself in my room seeing others to enjoy.

A crystaline dew the next morning (Jan. 14,) covered all herbage along the way; such freshness and elasticity of

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nuscript in 2 vols. under the following title; "An account of the first Colonization of New South Wales—also, of that part of the Country colonised, its inhabitants, &c. &c., in a series of letters to a friend, by G. B. Worgan, Esq., surgeon in His Majesty's Ship SIRIUS." This manuscript communicated to me by the son of the author, (Mr. John P. Worgan,) will, when published, afford much information, and complete the—as it were, primordial narratives of Captains Phillips, Hunter, Collins, &c.

the air, may I am sure, extract every germ of pulmonary affection, from the discriminating European traveller's chest. We approached Bargo Brush, a range of little elevation, stretching from S. W. to N. E. The heat was oppressive, we therefore encamped near Lupton's inn, to divert the harrassing way through the Bargo. This is a dry, uncomfortable, shrubby piece of land. All the way from Sydney, I saw no Banksia, no Hakea, nor any plant of this tribe; here in this dry, arid and rocky situation, the Lambertia formosa appeared, and brought with some other plants, the character of the vegetation to a level with that of the Sea Coast. In these dry, desert, lonely shrubs, we met a transport of handcuffed men and women, escorted by some soldiers. They passed us silently, and all appeared more exhausted than we ourselves were. This scene reminded me after some days, which had elapsed since I left the metropolis of New South Wales, where I was—a consideration which vanishes when a man is only surrounded by the simple and pure scenes of nature. In this locality I saw for the first time, those somewhat gigantic nests of ants, not to be met with near Sydney. They are from three to four feet high, commonly of a conical shape, and externally formed of a yellow loam, and placed either totally unsupported in the bush, or leaning on a tree, and sometimes, but rarely so, situated in hollow trees. Here, and afterwards in several other places, I opened such nests, and found the inside consisting of a cavity, running through the length of the construction, which exhibited a mass of curvated Cellulas, which seems to be a compound of earth, and some glutinous secretion of these laborious animals. I observed the same structure of curvated Cellulas in those nests, which are found on the sea coast upon the branches of trees,

although the mass of Cellulas is in that case not earth, but rather a vegetable matter.* From Bargo we arrived at J. Keigron's inn, situated in a valley of good land, but closely encompassed by bushy hills, which give to the whole place a rather wild aspect. The continual anxiety of an Australian Traveller, is regarding the existence of some potable water. I was therefore much annoyed, when I saw this day towards sun-set the firmament getting covered with dark clouds, which decrepitated [illegible]ast in a heavy Southerly storm with lightning, whilst we had still five miles to go to the place where I had determined to stop. We therefore proceeded with some haste through a wood of gum trees, which were actuated, and as it were swept by a heavy gale. After some time proceeding on a road not well settled, we perceived, quite in the darkness, lights which however were only belonging to some drays, the pitched tents of which looked rather strange in this perplexing obscurity. Upon inquiry we heard that houses were near, and after some straggling about, I fell into the house of —— Chalker. This rather renowned pugilist received me with civility enough, and offered us every accommodation his little quasi Inn offered. The place about is called Mittigong Flat, and consists of a series of good meadows, intersected with water. Farther on is Mittigong Range, not so high as Razorback and stretching from E. S. E. to W. N. W. A small river called the Bong Bong is 6 miles further, running in a N. W. direction, where plenty of Ornitoryn-

* I possessed very fine specimens of such cellular work, but although I offered repeatedly to our Colonial Government my collections, composed of all sorts of Australian curiosities, for sale, I could not get even an answer to my applications. These very curious objects are therefore now scattered about over many of the Museums of Europe, when they could in a great part have been united (for a comparatively trifling sum) in our well doted Colonial Museum.

chus (Platypus) are to be found. Chalker, a native of Australia, is rather an athletic man, in his external appearance a sort of William Tell, and I was gratified by seeing in his house the two wings of an enormous eagle, which he had shot, and of which, and also the head, he made me a present.

Mittigong Range, (one of the many passages in the Colony, which are a horror to the travelling drays &c.) is composed of Hornblende, specimens of which I am able to distinguish amongst my collection, all others being as I said corroded by the damp.—I look now to tell the truth, with tears on this heap of well shaped geological specimens, the knowledge of the localities and stratifications of which being lost to me, are now only fit to be thrown away; many of them were marked with the blood of my cut hands. Bargo Brush, Mittigong, &c. &c., are therefore, in a great measure mere empty names to me. To the decomposition of the Hornblende, (which is here chiefly composed of a black clay and iron) the surrounding land owes its character and fertility, all soil there being light, and of a blackish colour. Four miles from the range is a small creek running north. Here about, on the estates of Mr. Riley, I took to day my noon-rest; it was a large open valley, surrounded by fine forests. Approaching now South (my present distance was about 75 miles from Sydney) I found a change even in the Cryptogamical Flora, and some rough barked Eucalyptus were covered with a quantity of fine Lichenes. So we arrived at Bong Bong, a Township of about twenty hearths, situated in a very fine fertile valley, I would not stop close to the Town, which I had occasion afterwards to regret, because after leaving it, I found the road enclosed on both sides for miles with a heavy substantial fence, which I could not pass. Here the recollection struck me that even in the East, that coun-

try inhabited some thousands of years, and imbued with prejudices as we call them, there are places left at convenient distances for the accommodation of travellers. In those caravanseries he finds shelter from wind and weather, whilst in the bushes and deserts of young Australia, he can proceed for miles, pass the most desirable places, without finding an inch of land where to pitch his tent, or where to lay down his head. These fences, quite useless at present, have been erected by the gratuitous labour of prisoners, to enrich further people who are already in comfortable circumstances; whilst the poor emigrant, the new comer whom Great Britain vomits out, as well for her relief as for his benefit, must despair in the same country, without getting a single inch of land of the vast patrimony of Australia.* After several miles however the fences ceased, and we encamped at the right hand side of the road, opposite a few small huts. Towards evening there was some thunder in S. S. E —the wind was South, and cold. The night was very cold, but without dew. When about to start the next morning, one of the tenants of the huts, (a shoemaker) came to my tent and entered into conversation with me. He offered me the last numbers of the *Monitor*, of which he was a subscriber, and (as it is occasionally written,) a great admirer, and I found with some satisfaction, that my name had penetrated through such medium, into the huts of the unprejudiced and humble.

Thursday the 16th, we passed Sutton Forest, one of those fine fertile valleys the traveller meets with on proceeding towards Argyle. Here stands the little

* It is notorious that since the abrogation of primary grants of land, three or four Emigrants of decent sober habits, have put an end to their existence at Sydney. Some such case was very probably the motive for establishing the Emigrants Friend's Society.

wooden built church, which is the nearest parochy for all this comparatively great population, which is scattered between this place, the Alps, and Twofold Bay, about 250 miles in both directions. The land is as I said, very good about here, and the situation so pleasant, that several farms, huts, inns, blacksmith shops &c., stand here, and in fact the rudiments of a village are already formed. It would be time now, that in such localities yearly, or what would be still better, quarterly fairs should be established. Besides this, another very fit place for such fairs would be Limestone Plains. The prices for the usual commodities of life in these remote districts, particularly the latter, are exhorbitant. Tea is sold by dealers who go there occasionally, at 8s. per pound when the retail price in Sydney is 2s. 6d., sugar for 1s. when it costs 3½d. in town, &c. In such ratio the setler also sells these articles to his free or freed, or ticket of leave shepherds and stock-keepers &c. Certainly a very good arrangement for the wealthy, to pay a man £12 or £15 yearly wages, and have two thirds of it taken out this way. The small farmer on the other hand when his stock is consumed unless he goes to Sydney, is subjected to the same inconvenience and extortion. For both these latter parties (and therefore for the people in general) the establishment of fairs in the interior once a quarter would be highly beneficial. Such a mart would afford the poor man an opportunity to exchange his produce without the expense of a long journey to Sydney, &c. Besides such fairs would vivify in some degree the death-like monotony and silence of the Australian interior. However severe measures against troublesome prisoners and others ought to be adopted, a strong body of field police provided, the quantum of spirits which any dealers dray might carry, determined, &c., enactments easy to be executed with the enormous

sum now in the Colonial Treasury; whilst the increased commercial movement thus introduced in the Colony, would soon recompense the temporary outlay of rusting public money. In such and similar reflections, I was engaged, when I perceived a short distance from the way, the first Aborigines I met with since I left Sydney; a very striking contrast with the period when Captain Phillips saw in Sydney Cove, tribes of 50 and 60 of them—now not one to be found in a space of about 90 miles. I shall have more occasion hereafter to explain, why I consider this extinction of an entire race of men, as one of the greatest blames of all the different governments, which have succeeded each other in these Colonies, whilst the present success of civilizing the Aborigines of Van Dieman's Land, shews clearly, that all other failures were and are owing to the whites and not to the blacks. The tribe I saw, was composed of a few individuals, amongst whom a rather handsome young girl was remarkable. As we had a long journey before us, I did not choose to stop with them, whose small number could not afford me any important information. This however was quite contrary to their expectation, and they sent after me some strong oaths, because I had not—they said—given them even a bit of tobacco. I knew a long time since, that such black Bajaderes considered it an affront to be passed without notice.—Proceeding further on my road, I lost entirely the guidance of the "Itinerary comprising the roads throughout New South Wales," in the main a meritorious paper annexed yearly to the Sydney Post Office Directory. There are so many "old and new lines" mingled together in that (apparently semi official) publication, that I could not even upon the very spot make out whereabout I was really travelling. However, I camped at noon at Moore's Flat, where I found the earth in some places, 3½ feet deep. A short

distance from us, some heavy drays were also camping, and I went to the men to ask about the continuance of my road. They came from Limestone Plains, which was the first place I was aiming at, and they described the passage there to be horrid, which I did not altogether believe. However I was pleased to converse with persons, who were in some degree acquainted with so distant a part of the Colony, as Limestone then appeared to me. They informed me further that the distance on the main road by the Wombat Brush to the first water place was 14 miles, and that I should do better to proceed by a cut to Mr. Oaks's Stock-yard. On that way there are, about a mile and a half S. W. from Moore's Flat, a few detached houses. We proceeded thence 7 miles S. W., through a continuous superb Forest, chiefly composed of Eucalyptus (pulvigerae similis.) This tree so characteristic of some of the Australian forests, was for the first time observed by me in Bargo Brush, where it forms only small shrub-like trees, but I scarcely ever afterwards saw a place where it grew loftier, than at the spot now alluded to. It is a gum tree never higher than 20 or 30 feet, with rather round leaves, but these as well as the smaller branches, are covered with a mellowish silvery dew, and present therefore in their ensemble the most curious, and rather enchantment-like appearance, as in such large masses, the green softens to a mild blueish white, which combined with the surrounding azure of our sky, makes the whole like one of the scenes of the gardens of Armida. This magnificent scene however, has never been drawn by any traveller whatever, and here I must confess sincerely, that as to representing nature systematically, even the works of Humboldt and Martius, meet not with my entire approbation. Three miles from the above mentioned habitations, is a basaltic formation which appears

on the surface with a quantity of rocky debris, and which is probably superposed on Pudding-stone.* The basalt is sometimes porous, and contains red iron oxyd in such a quantity, that some specimens appear on the first inspection like cinnabar. In this neighbourhood is one of those places, which are called in the Colony "ploughed grounds." The Author of the "Itinerary, &c." says in the Sydney Post Office Directory for the year 1834, page 83,—that such places "*may* be the remains of that character, as impressed on the earth, when it first emerged from the deluge." By such tame geological hypothesis, certainly the Author will not claim any prominent place among naturalists, who have written on New South Wales. My opinion in the present case is, that the basalt the great attraction of which for atmospheric moisture, and consequently great tendency for entire decomposition is notorious, has formed, by the last procedure, these bare open places, composed as they are of a deep fine basaltic mould,† which bears the appearance of tilled land. This soil thus formed is so soft and moveable, that any comparatively recent inundation produces a series of ridges, and sweeps away every succeeding germ of vegetation in this so peculiarly formed earth. The plouged ground in question is evidently placed in a large concave basin, where such inundations are likely to occur. Towards evening the forest extending about seven miles, through which we travelled,

* In my present circumstances my time is so taken up by minor business, that it was impossible in my Journey, and so it is now in my study, to pay to such geological occurrences the minute attention necessary. My minerals I am about to send to the Geological Society, London, and Wernerian, Edinburgh; where they will, combined with my rhapsodic observations of their localities, contribute at any rate to lay down the *first rudiments* of a radical *Geology of Australia*.

† Vide "Characteristic der Felsarten," vol. 2, page 534.

ceased, and a fine although circumscribed valley called Garner's Station, intersected by a few small boscages of a *Banksia*, which I never saw before, and flanked at the N. E, by a highly picturesque range of hills, displayed itself before my eyes. We had now travelled seven days from Sydney, with scarcely any interruption; I determined therefore, to remain in this delightful place the whole of the next day.

An Overseer of Mr. Oaks' of Parramatta, who possesses a snug little farm here, afforded me much assistance. The night of the 16th January was rather cold, the following day neverthess extremely hot. At 12 o'clock (17th January) the thermometer ranged in my tent 87 degrees, at 2 o'clock 92 degrees In the sun at half-past 2 P. M. 119 degrees. The wind was East slight and only blowing momentarily. I had sent out Walker (formerly a valet of Colonial Secretary Goulburn's,) at an early hour in the morning for shooting, and he returned in the forenoon with a good quantity of game, which I proceeded to skin, and of which I noted the observations mentioned below, regarding our Colonial Zoology, &c.* I suffered exceedingly from the heat in my tent, which besides, was filled by an immense number of flies, attracted by the skins and carcases of these animals. Every tool left a few hours exposed, got useless by the exsiccating rays of the burning sun, so that every handle for tools in such an expedition, ought to be made of the dryest wood, and

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* *Laughing Jackass*, (Dacelo gigantea, Leach) lingua brevissima, cartilaginea, spatulata, angulis posterioribus serratis.—*Bendicut* (Thylacis nasutus. Ann. du Musée 14. t. 44) Urina croceae luea, vivi pulicibus parvis nigris obsessi. Testis perfecte ovalis, epipidimis duplicibus. Lingua ovina, minime aspera ad fundum alata, infra linea alba; meatus auditorius externe cum valvula cartilagena particulari, hunc forsan claudete.—Muscalus?—*Mutton Bird (?)* oculis rubis, pupilla nigra. Epizois aeatet

bound with iron hoops. One of my thermometers owes its deranged state in which it afterwards got to the splitting of the case, which was of cordwain, instead of tin as it ought to have been. In such a day, snakes are to be doubly apprehended. As my men were standing at noon quite close to the tent, in an entirely open place, one such venemous monster about 7 feet long, appeared suddenly amongst them, it was one of these called in the Colony, *black snakes*, which general name however conceals many distinct species. This one was reddish under the belly. After the heat of the day was over, I ascended with my chief servant William, the hill to the N. E. of the valley. It is rather a steep one, the mass of which is composed of a hard argillaceous rock, without stratification, and several secondary minerals in the state of rolling stones, the hill exhibiting strong signs of a recent diluvial inundation. From the top, which forms a rocky flat, I saw S. S. W. three undulatios of forest land, and S. W. by W. a long mountain range, terminating to the S. with a very abrupt declivity distant about 35 miles. Here amongst these rocks, was the first time that I observed our fine *Eryngium ovinum* (All. Cunningham,) and another plant of the *Papilionaceæ*, the branches of which spread at a distance of two feet. The evenings after clear hot days are in Australia indeed heavenly; there reigns then a sort of metallic resonance in the air, the majestic trunks of our white-barked Eucalyptus look as if made of massive silver, and their tender ramifications and leaves show to a remarkable degree of perspicuity in the extreme clearness of the atmosphere. In such nights I reposed on my cloak often until a late hour at my watch fire, the feelings of past and present, the musings of future times overwhelmed my imagination, a mental operation which it appears impossible to be denied to

the spirit, when surrounded by such scenes. The occupations I was engaged in in this Edenlike valley, collecting insects, &c. &c.,* were so multifold that I even remained there the whole Saturday (18th of January.)

Sunday (19th January) the heat was again very intense, so much so as to make me feel rather indisposed. Two miles from Garner's station is Patrick's River, a stream running to the N. N. W. I arrived under some exhaustion at the Pack Inn, and took my noon's rest on the banks of the Wollondilly in a small valley, a short distance to the right hand side of the Inn. There are some ridges of rocks there, stretching from N. E. to S. W., the almost perpendicular declivities of which being towards the South. The middle of the day was oppressively hot, wind E. with thunder in the N. W., and a slight shower of rain. Some good plants of the Argyle vegetation were gathered on the banks of the river. Passing the Pack Inn on our way, I was asked by the owner to send one of my servants with

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* The whole collection (worth in London £600 or 700) which I now possess from this expedition, consists of about 9 or 10 large boxes, casks, &c., for the kind and safe transmission of which I am principally indebted to Robert Campbell, Esq. Sen., M. C. and his superintendents. Besides my extensive collection of minerals and plants, amongst the latter Lichenes on rocks, of all the different formations, I transected; a sort of collection which had never before been attempted by any Traveller in this Country,—there are about 3000 specimens of insects and above 100 of quadrupeds and birds. The only gentleman who could render me any assistance respecting *insects* (non omnia possumus omnes), who is besides in possession of an incomparable library on Natural History, is so entirely engaged in the sphere of high and official life (which under present circumstances seems to be *incompatible* with a scientific one) that it would be out of the question to request his literary assistance and co-operation. However we will give some *Entymological remarks* in the course of this work, and the Insects will be sent to the Zoological Garden, London and others, for their radical and final elucidation.

his man, after some wild turkeys, *(the New Holland Vulture,* of Dr. Latham) which were seen in the adjacent wood. This was the first time I saw this noble bird of our forests, which however gets more common on proceeding towards Menero, but was not observed by me on those downs. Two or three miles from the Pack Inn, a range of hills appears, extending in a circular line from N. E. to S. W., four or five miles distant, and well timbered. In the vicinity of *Stuckey's* Farm is a Government Limestone reserve, from which the first marble in this Colony was worked. This refinement has been introduced into New South Wales by *Mr. Clewett.* According to information obtained from Mr. C., he at present works six different sorts of marbles: *a reddish spotted one,* and *a yellow one* from this place, a sort of *dove marble* (a most beautiful one) from a place belonging to *Mr. Francis M'Arthur, a black one, a black and white one,* and a *black jack* one, from the land of *Mr. Ryrie.** *Mr. Clewett* aplied some time since to our local government, for a Grant of Land upon which marble is found, but under the present ingenious regulations, the introduction of sculpture into Australia, does not entitle a man even to so poor a favor as this. Three quarters of a mile ftom *Stuckey's,* I found the first granite I met with in Australia. We stopped the night at a flat before Mr. Lockyer's Farm. The night was serene, the wind N. but rather chilly. We killed another black snake near my tent, but of a different species, with a yellow belly. It was at the Pack Inn, and afterwards at Lockyer's Farm, that I first observed those highly characteristic *chain of Ponds,* which would deserve a geological examination of months, as they are a phenomenon not to be found, to

* An altogether insignificant notice on "Australian marble," appeared a few days ago in some of the Sydney papers.

my knowledge, in any other part of the world. They are commonly round or oval basins, of from 20 to 200 feet in diameter, or length, excavated or sunk in the superficies of an alluvial soil, which is commonly of a rich kind, fed by subterraneous springs; often, indeed generally very deep, and not at all to be confounded with water holes owing their origin to the accumulation of atmospheric water. As far as I may hazard any hypothesis upon them in the present work, they are strikingly analagous to the *systema gangliosum* of animal bodies, the cosmic operations of the globe not having in our continent, proceeded so far as to the formation of the *vascular system*, which in the organism of the globe is represented by *rivers*. I cannot here omit saying, that I do not believe that any one of our rivers, as the Wollondilly, the (upper) Murrumbidgee, the Snowy River &c., will ever be made properly *navigable*, by any other method than by converting them into canals, and then further by means of locks. The simple transforation and digging up of their shallows, would never obtain a complete run of their waters, unless they were also partially received and retained by the means above alluded to. But in that way Goulbourn might in the course of a century, be on the banks of a highly active canal.

The waters of the little ponds near which I had camped for the night, were smoking in the early matin hour when I rose, and the steam was slightly propelled by an Easterly breeze, but this lasted only a short time. We started, (20th Jan.) and proceeded silently through a serene fresh air, surrounded by the beautiful forest land of the Argyle. After a few miles, we passed a number of fine large ponds, around which the forest was more dense, the dark shadow of which reposed like a mystic dream, upon the surface of these quiet and limpid waters. We soon reached a place where

the road approaches the Wollondilly a second time; the rock near this place is a Puddingstone, with large white silex. At 10 A. M. we arrived at the first ford of the river, and I camped on the bank. The surrounding flats aud small ponds were rich in interesting plants. One of my men brought me several of the large spikes of a bulrush, which much resembled the *Typha angustifolia*, but the leaves are rather glaucous. A very fine little white *Lobelia* appeared in the fresh herbage of the banks; *Lythrum australe* with long spiked red flowers, also embellished the verdure, and the very rough and scrubby *Grevillea sulphurea* with dark pine-like leaves, alone indicated to the European traveller, the distant place in which he was moving. The rocks on the shore were few, and protruding upon the surface with sharp spines. To the left, the river moves in a straiter course, and its graceful winding was visible at a considerable distance. The east wind which prevailed all the morning, increased so much towards noon, that I was obliged to go into my covered cart to change the paper of my plants. At 1 P. M. the thermometer ranged in the shadow from 90 to 92 degrees, according to the changing impetuosity of the gale. The water of the river where it was open to the rays of the sun, was 80 to 81 ° and the mercury descended when taken out of the water, by evaporation, 1½ ° lower, to about 79 °. Exposed to the sun it ranged 110 °. The scene at this ford was a lively one, heavy teams passing it, and watering their animals; upon one of them, a black boy quite naked, was extended very comfortably. We started after the intense heat of the day had a little subsided, and passing through fine forest land, arrived at a second ford of the Wollondilly, the waters of which are yet covered with a great variety of ducks. My man wounded one, but our dogs, although good swimmers, could not get it,

as it dived under, when near to them, not re-appearing till some time at a considerable distance. At the other side of the river, stands a row of Bark huts, which formerly harboured a road gang. One mile from thence, we entered a rather wild forest, from which a lofty range of hills was visible to the N. E., of at least 600 feet in height, and covered with timber. The expectation to reach Goulbourn Plains (here commonly called *the plains,)* increased every moment. We reached a little flat at the foot of the above ranges, where two small, but well cultivated farms are situated, and plenty of vegetables were growing about. We again entered the bush, and reached the Wollondilly, whose course was visible to a long extent through a fine open forest land, the verdure of which, contrasted agreeably with the placid waters of that limped stream. While engaged in contemplating this scene, it appeared as if a vast mass of clear and pellucid dust was transpiercing the umbrage of the forest—it was the extensive scenery of Goulbourn Plains. This was the first view of the kind I had in the present journey. I therefore sent my party forward, and sat down comfortably to analize and enjoy this new, and hitherto unseen sight. The plain I saw stretches about five miles in length, and two and a half in breadth, and being an almost perfect level, the very few undulations being unimportant, it is visible to the whole of that distance, extending from N. N. E. to S. S. W. A long range of wooded mountains, about 600 feet high, girt them from N. E. towards S. W. To the S. S. W. another large one of nearly 2000 in height is visible at a distance of about 40 or 50 miles; and at the S. W. some lower ones appear at near 25 miles distance. After having repeatedly seen the banks of several streams in the Colony, and lately those of the Wollondilly, I now became convinced, that almost

every fertility in New South Wales, is the effect of former inundations, very seldom as in other countries of humufaction. I saw also that the bed of the Wollondilly was a newly sunken one, its banks (which are almost always perpendicular) being composed of an alluvial soil of from 3 to 7 or 12 feet in height. But its floods have now ceased to be, as they must formerly have been, extensive. I saw no marks which exceeded more than twice the breadth of its channel. While making these reflections I perceived the sun sinking below the horison of these plains, gilding them to a large extent. I started and went towards the township, where hospitality had been offered to me in Sydney by a gentleman, possessing a farming establishment here. But as I found his house accidentally occupied by a military officer, I could not expect to find room enough for my manifold operations. I turned therefore to the right, and searching a long time for water, camped at the North side of the Plains, upon the extensive grounds of *Mr. Hannibal M'Arthur*. For the sake of shewing the *animus* of my party, I just observe, that through accident the only thing we had this night with our tea, was some raw salt pork and a few handsfull of wheat. The night however was delightful, and in the morning (the 21st of January,) we reached very soon in a S. E. direction, *Rossiville*, a fine estate of F. N. Rossi. Esq., who besides his situation as Chief Magistrate of the Colony, managed a considerable farming establishment at this place. However, it was, and is managed with judgment, and I believe the men are treated justly.

At this place I enjoyed four days rest, looking round the neighbourhood, with the two promising sons of the owner. Although the previous days were very hot, the temperature changed suddenly on the day of my ar-

rival, and at Half-past 6, P. M., the thermometer ranged only 68 degrees, whilst the evening was cloudy and cold. The Wollondilly, was at the same hour, 72° and the instrument descended by evaporation so low as 59°. One of my first visits, was to some of those strata of Limestone, which transect Goulbourn Plains. It is a transitory Limestone, forming a pure compact mass of a greyish color, in which, however, streaks of white, and even rose color are observed. The admixture of silicious minerals in these rocks, is rather great, and I found not only large pieces of common *quarz*, but also some layers of *iron flint*, embedded in it. In the latter again are found some small druzy crystals, which require to be investigated in Europe, they will probably be found to be Zeolithe. In some places, the Limestone is mixed with a large quantity of alumina, which appears under the form of a *mandlestone* of blueish white grains, and of which I found square lumps in the hollows of several of these rocks. There is also another mineral which is of a yellowish brown color, presenting an altogether porous mass, found in the same localities. But the most characteristic admixtures of this rock, are certain irregular grains of a metallic nature, varying in size from a pea to a small walnut, with vitrous superficies, uneven fracture and of considerable weight. This mineral appears to me to be *Titanit*, or some of the congenial tribes.* The Limestone of Goulburn is rather de-

* I must observe here once for all, that it would be a loss of time and quite out of place in New South Wales, to make "new genera and species." For this, the gentlemen connected with the British Museum &c., are better provided with books, instruments, and the fostering assistance of Government. My province is only to make such observations, as are necessary to be made on the spot, and for which the learned in Europe will be thankful enough, as it is out of their sphere, to make them.

ficient in petrefactions, however I am told that Dr. ——, found in a similar formation at Paramarago, some perfect ones of shells, which he presented to Mr. —— ——, the gentleman who with one or two more, claimed 'till the present time, an exclusive monopoly and dictatorship over all information respecting the Natural History of New South Wales, and the transmission of specimens to the first rate Museums in Great Britain.—*Hinc illæ lacrimæ.* Hence so much crying and sanguinary injustice, I have endured in this Colony.—The Limestone rocks in this place, I found covered with a great variety of characteristic *Lichenes*, as *Parmelia*, *Verrucaria*, &c. &c., however, they were unluckily in the boxes, which as I before stated, were maliciously damaged.

W. S. W. from the farm, 2 miles distant, is a Government Limestone Reserve, of 650 acres, the strata of which are falling towards E. N. E. under 45 degrees. There is found about here, as well the common grey, as a whitish and variegated Limestone, which would as may be concluded from the appearance of the superficies, yield an inferior sort of marble. About 200 yards farther on the right or East bank of the Wollondilly, is a thick stratum of grey and yellowish clay slate, of which some pieces were large flats fit for slating. Captain Rossi postponed the examination of its utility, until after my departure.

The next Thursday (January 23,) was again very warm, after this a heavy storm passed in an Eastern direction. At 6 P. M., the air varied from 78 to 80°, according to the blowing of the gale; the river was 77° by evaporation 70°. In the night lightning was playing all about, from the North towards the East, without the flashes being visible, the horizon being only illuminated by them sunlike; the wind was S. S. E. On these Plains a considerable

change in the climate is already perceptible; in the months from April, heavy and wet fogs fill them, which abate not 'till several hours after sunrise. For these reasons, Captain Rossi has given up all endeavours to cultivate any other fruit than apples, pears, and such like of Northern Europe. I went over once to see the Township of Goulbourn, the locality of which however, has now been changed further down towards the South. There are a few public houses, at which the vice of drunkenness was going on in the usual way of the Colony, and I heard with true commiseration, that persons waste here as much as £40, in keeping themselves continually drunk for a fortnight, their families at the same time lingering in misery. To similar mismanagement or want of proper regulations, it may be ascribed, that according to a calculation of Mr. Barton's at Captain Rossi's, among twelve persons who were buried here in a certain period, eleven died of some accident or other, as horses becoming unmanageable, drowning, accidents with fire-arms &c. The few days we were at this place passed away very rapidly, being spent besides my ordinary occupations in putting my whole threemaster into order, for which purpose several mechanics of Mr. Rossi's were employed, and the repaired wheels, shafts &c., lasted us again until we reached Limestone. The evenings were spent with the Captain and his little household, and I felt it to be a satisfaction for an outcast as I might be considered, to meet at the end of the civilized world with men of experience and feeling.

In the afternoon of the 24th we started, taking a S. W. and partly W. direction, and travelling over a tract of land without very characteristic features, passed different farms, as Mr. Kinghorne's, 2 miles and a half from the Captain's, where is the last Windmill. One

mile further is Mr. Chisholm's sheep station; before arriving at which we forded the Wollondilly for the last time. The land here becomes gradually more undulating, and small rocks of clay slate protrude at the surface. The sun was quickly descending the æthereal vault, when we entered Bredalbane Plains, a vast expanse of smooth, level land, altogether destitute of shrubs and trees of any kind, and encompassed by wooded ranges. There are properly speaking three such Plains, the first stretching towards W., then is a sort of turn, whence the second stretches to S. S. W. After the long drought and parching heat of the summer, these Plains strikingly resembled an immense green and yellow carpet, only furrowed by numerous cattle tracks, the scarcity of water obliging the stock to go a long way in search of it. We all passed silently through this strange and imposing scenery, while the sun was majestically plunging below the horizon. The surrounding forests exhibited then a singularly beautiful appearance, the long rows of white barked Eucalyptus presenting a pale blueish colour, the masses of foliage beyond looking dark in the approaching umbrage of the evening, while the higher parts were still gilded fairy-like by the rays of the departing sun. In this wide expanse two strange looking heaps of white silex, were the only things which diverted attention amongst this, as it were grandeous monotony. The lumps of this silex were of a milky colour, and uneven fracture. Even my men were impressed with the magic beauty of this scene, and as to myself the name of Bredalbane Plains will for ever resound in my bosom. It is one of those objects which can never be erased from memory, and when surrounded by conflicting passions or untoward accidents, a feeling will rise in our hearts, which seems

to say:—" though unhappy and dissatisfied now—I have once seen—Bredalbane Plains!!"

" Once seen became a part of sight."

The night was approaching rather rapidly, when we arrived at a place where the road divides; that to the left leading to Lake George, that to the right towards the third Bredalbane Plain. I took the latter which led towards some hilly land, as it appeared that huts were in that direction. At this (the W.) end of the second Plain, a stratum of *Basalt* appears on the surface, of a blackish grey colour and uneven fracture, corroded and as it were perforated at the superficies of some specimens, several of them having the shape of fractured six sided prisms. Other lumps were rather of that kind the French Geologists call *basalt amygdaloyde*, and in the mass of all these sorts are interspersed small and sometimes circular bits of a yellowish simple mineral, which may be *Augit* or some of that tribe. Approaching the objects I had taken for huts, I found with a feeling which partook as well of satisfaction as of disappointment, that they were large roundish blocks of granite, under the shelter of which I was much pleased to pitch my tent. Our fire was soon lighted, and cast its broad glare over a long expanse of the surrounding Plains, whilst the full moon appeared in the zenith of an ætherial sky. I and my party were prepared to pass the night without tea, as we had not met with any water for the last ten miles, with which to fill our cask. However the blazing of the fire attracted some men belonging to Mr. Chisholm's stock yard, which was at a short distance from the masses of granite before mentioned. One of them said he would guide my servant to a Pool, where a pot of water might be obtained. I therefore armed my man with a tomahawk, and they went away, and soon returned with a small quantity.

I will avail myself of this opportunity to give a rough idea, how I in general conducted the arrangements of this journey. Although my outfit could be neither extensive nor sumptuous (the Government having even within the last week previous to my departure, refused to assist my expedition with a loan of £40 or 60, on bills upon some of my constant customers, the public Museums of Europe)—it was nevertheless a radical and well calculated one. Besides a great quantity of paper for drying plants, 10,000 insect needles, with four different insect nets and forceps, a set of hammers and chisels for breaking and shaping minerals (such and similar things were made for me on credit by Messrs. Onions, Blanch, and Wilson), anatomical instruments, telescope, drawing paper and colours, twelve or fifteen mineralogical and other books, &c. &c. even provisions for health and comfort were not scanty. As well as tea and coffee, I had with me pounded almonds for *orchade*; *sulphuric acid* with sugar served for lemonade (which I and my people found greatly *disaltering* in the subsequent heat of 129°), our slops and boots (made on the above terms by Messrs. Maeltzer and Ross) were of excellent quality; needles, thread, awls, wax, twine, &c. of all kinds in abundance; and my servant *Walker* was at once sportsman, bird-stuffer, and shoe and harnessmaker; *Kelf* groom, tailor, and plant collector; whilst *William* was storekeeper, and a man so much attached to my person, that I could leave with him the keys of my boxes, containing bank notes and other valuables. *Paddy* a little Irish lad performed the more minute occupation of insect catching, and often equally amused us by his ingenuous and *naive* questions and observations. One of my ruling principles was during this hot weather, to rise some hour before day-break, and after proceeding for miles we often found camps of drays, the men belonging

to which were still sleeping. At from 10 to noon (according to the heat) we made our first stoppage, but it was extremely difficult to meet a place combining shade, water, and food for the horse. Australian bushes are (so far as I am acquainted with them) all nearly destitute of *shade*, the trees of which they are universally composed (I mean the Eucalyptus), growing in the first place only solitary, never in combined tufts; secondly, their branches being scanty and their foliage loose, they are unable to withold the rays of our semi-tropical sun. Although I cannot develope this statement here at any length, the fact that Australia possesses properly *no shade*, is one of the most characteristic features of its Botanical Geography and Physiology. As it was not worth while to pitch my tent in the day time, we were obliged to shift my cart every half hour according to the movement of the sun, to give us a little shade by its canvass cover. I had at first no provision of meat or flower with me, and this for two reasons. I am not in the habit of inquiring or saying too much before I do any thing, and consequently my information respecting the roads in the Colony was derived chiefly from the "Itinerary." There I read of "*a great South road*," and so many other old and new lines, that I was quite satisfied, that as far as the roads were officially described, they would be good ones, on which as a matter of course a constant and lively traffic, public houses, &c. would be found. In this, however, I was greatly disappointed, and I must take this opportunity to say for the sake of the public &c. at home, that after passing Liverpool (20 miles from Sydney), there is in that direction no *artificial road* whatever, nothing than better or worse bush-ways, tracked and kept in order as far as they are so, by the working of the iron wheels; and from the Pack Inn near *Stuckey's* there is no public-house until reaching Goulburn, where is the last one. I had there-

fore often much trouble about my provisions. However, I was always welcomed in the houses and huts of the humble and lower classes. They sold me salt pork and other meat, flour, or wheat for the usual prices, and very often after making such insignificant purchases, I was invited to a good cup of tea, my men too were treated with milk. As to the high and wealthy (excepting the gentlemen with whom I was previously acquainted, and a few others), I received from them no civility whatever, notwithstanding tidings of my expedition always preceded me: none of them invited me, nor did they in fact take the least notice of me, when proudly passing my camp in their gigs. Like Cain in the time of old stained with fratricide, I was marked with the guilt of two capital offences, which very few in this Colony (spoilt as it is by two bad and corrupted administrations), will ever forgive. I was a man without fortune*, and unconnected with Government. But enough of this *Jeremiad* on Bredalbane Plains.

In the morning, (Saturday the 25th January), I commenced the examination of the rocks under the shelter of which we were camping. They were huge, roundish blocks, scattered about on a rather level but bushy ground, some of them measuring as much as 10 feet in height. The granite was of a white colour, the admixed greyish *Mica* being in small proportion. The Quarz of the Granite was not of the texture nor of that (milky) colour, which the stratum of the Plain exhibited, and its whole mass was of a slight concentrical texture, which showed itself by the effect of our fire, the heat splitting away from them such shaped strata. Proceeding on our road, I met one mile from the place where

* "With others poverty is a misfortune (or rather a casualty), with us it is a crime" says the ingenious Mr. Bulwer in his Work "England and the English."

we encamped, with some strata of *Aphanit* or *porphyroid Basalt.* The direction of the road this morning was N E, and at times even N., probably thus tracked by the first stockeepers and drays to avoid ranges and swamps, and to proceed on more open and firmer ground. We went on towards the third Bredalbane Plain, through forest land, with here and there a pond of water. This Plain stretches westward, and there are about six miles from Chisholm's Stockyard, two houses occupied by a man named "Mud Billy." In the neighbourhood we chased some wild turkeys, which we saw quietly feeding on the open Plain. It was, however, impossible to come near them, unless on horseback, and although Walker crept along with great circumspection, hiding himself behind some shrubs, they soon got scent of him, and flew away majestically into the adjacent forest. The road then keeps constantly west, and one mile from Mud Billy's the country is chiefly composed of debris of an iron grey quarz, the fracture of which exhibited a rather vitruous lustre, the land thus composed was of course very barren, and no water is here to be found, save some rain collected in a few puddles. A phenomenon of our Botanical Physiology, which very often attracted my attention during this journey, was the *decortication* of our Gummtrees. They shed their bark at certain periods under the concomitance of very remarkable circumstances, an operation, which may not inaptly be compared to the yearly moultering of the feathered tribe. I also observed here some such trees, which grew to a height of about 60 feet before any branches appeared, a fact which occurs in almost all of them, although not always in the same degree, and contributes greatly to the before mentioned *shadowlessness* of Australian bushes. I cannot refrain here from anticipating my further journey by saying, that although Australian nature may possess great charms

and beauties, nevertheless in all the tract (about 500 miles)—which I traversed this time, there reigns a uniformity in its forest trees, that banishes imagination and *scantifies* experience; and although I saw new kinds of Eucalyptus in "*Byron's*" and "*Napoleon's*" Valley, about Mount *Didic** and *Pass Britannia*, there is always the same monotonous ramification, the branches stretching from the trunks in very obtuse angles, the same simple coriaceous leaves, the same unshowy flower, an entire deficiency of the picturesque creepers of the other semi-tropical climates—and it is only in the higher parts of the Alps, that some *Callithris*, spining as it were the flanks of their gigantic rocks with their pyramidal crowns, make some variation in this *mind-blunting* monotony. We took our noon's rest 4 miles from Mud Billy's, where the land was composed of *Chloride shiste* between a grey and green colour, cleaving in very thin strata, and appearing not to be an independent formation, but only superposed on granite. In the afternoon our direction was W. and partly W. N. W., and the land as barren as before. We made now towards the *Fish River*, and our final direction on that day was W. and W. S. W. We were

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* It is a fact acknowledged by all unprejudiced Britons, (especially Scotchmen) that the English pronunciation of vowels, annihilates every regularity and system of other languages. However as I am not disposed to set about *reforming* the English language in New South Wales, I can only say on the present occasion, where I begin to write names and words of our Aborigines ("the Papuas") that I am obliged to adopt for their language the Italian vowels:—a as *a* in *father*, e as *e* in *exercise*, i as *i* in *internal*, o as usual, u as *oo* in *wool*. I will remark here by the way, that the Rev. Mr. Threlkeld told me, that in his "*Papua Grammar*," he will adopt the same orthography. This Work he ought now to publish, as his pay of £150 a year, besides the considerable grant made to him, can only be understood to be due for *this* undertaking; we were at his (non) Mission!! at Lake Macquarie.

about to descend a steep granite hill, when some persons passing informed me, that a tribe of about 60 Papuas was camping at the place, where I intended to stop for the night. I and my people were rather glad at this news, as the continual lonely camping of a few persons in the bush, although it might induce some gleams of imagination, and afford opportunity enough for reflection, produces after sometime, a sort of eremitic dullness and obstipation of the spirit. The tidings of our journey, as I have before said, generally preceded us a considerable distance, I was therefore received by this tribe with all the petty diplomacy and cunning of half civilized people, which afforded me some observations upon that interesting (although not very exalted) state of mankind, when between the state of nature and perfect humanity.

As we were about to pass over the last hill, three men well dressed and ornamented stopped us, and after the exchanges of mutual curiosity, asked or rather begged for some tobacco, of which they desired a large quantity; but how was I astonished, when I found that even powder and shot were among their diplomatic requisitions. These (seemingly videttes of the tribe) of course expected to have the cream of the travellers donations. We then descended into the stream valley of the before mentioned Fish River, which however consists only of a succession of several Ponds or sheets of water, tending Southward. I pitched my tent at a rather enclosed part of the bank, whence to the left on a fine grassy place the *Gunjas** of the tribe were seen, where was much uproar and confusion. Unmoved however I pursued my ordinary occupation of tent pitching, plant arranging &c., when I observed several females *circumambulating* my encampment. This and the great number of the tribe induced me to enclose the whole of my camp with a sort of rope paling, within

* This is the Papua name for their shelters of bark or boughs.

which, none of these half savages should be admitted. After completing such arrangements, I lighted my long pipe, and proceeded towards their camp. The whole presented in the delightful evening a tolerably good appearance. The men and women (some of the latter were out hunting) were sitting under their *Gunyas*, either without any particular occupation, or preparing Opossum skins for cloaks, making nets of corrigiong, &c. Upon a fine round Plain the male youths were playing with a ball made of wool, which they threw to a great height, catching it with much dexterity. It was very interesting to see these fine, naked, athletic bodies in such a gymnastic exercise; they were almost all muscular, smart people. The quality of a gentleman was of course immediately ascribed to me, and they made inquiries respecting several of the neighhouring farmers. A question which I could not at first well understand was "name you, name you," which they kept addressing to me in an inquiring way. I at first conceived they alluded to Emus, but I soon found that they wished to know my *name*. I could not venture to submit to their unpractised guttural organs, a rather barbaric name, but I entirely satisfied them with the general appellation of "Doctor." I then asked in return their names, when the Chief (an elderly man) was introduced to me as Mr. Tommy, others called themselves Kegg, Wullumwudalla, &c. Asking them how far they extended their peregrinations, they said, they go as far as Goulbourn, and Yass Plains, but not so far as Limestone. None of them was ever in Sydney, and the use of our coins was unknown to them. An elderly man, however, had a small old fowling-piece carefully wrapt up in some rags. Even amongst these savages, there were some rattling youths, which understood my questions better, and answered them very intelligibly. My watch greatly excited their

curiosity, and they all left their play to see it, as I pointed out to them the motion of the hands. The inside however, appeared more familiar to them, they gazed very eagerly upon the balance, which they called a wheelbarrow.* But now came a moment of great perplexity for me. I had brought from my cart some figs of tobacco, of which I gave some bits to the first askers, and so on, but soon every tongue was loudly clamouring for tobacco. This made me rather uneasy, and as I am fond of addressing numbers, I explained to them (turning out my pockets), that if I were stuffed with tobacco, I could not satisfy all their demands. But I soon saw, how questionable it might be sometimes, even among the Papuas, when a man fraternizes with the people; for at once a simultaneous cry of "not budgeri you" (you are not a good man) resounded from almost every mouth, and reminded me of the jewish outcry of old:" crucifige illum." However, the clever and allianced youths before-mentioned, extricated me from this commencing *unpopularity*, and brought the affair more on a level. In the mean time, Walker was coming after me, and entered into conversation with some of his old acquaintances, as he had before lived in this neighbourhood. He asked after some persons of other tribes, and unluckily mentioned some, who he was ignorant had since died. To mention even the name of a dead person, give a deep apprehension to all Papuas I met with. They turned their heads and reminded him by their silence, and very serious countenences of the unwelcome question he had put to them. It is difficult to say whether this feeling be based on materialistic, or superstitiously re-

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* This is the name the Menero tribe give to any Cart or Dray.

ligious belief. We were by-and-bye informed, that this tribe (they called themselves the Pajong tribe) expected this night the attack of a wild tribe, with the intention of carrying off some of their women. They were all naked, excepting that the men wore a girdle with a small sort of apron formed of fringes before and behind. Some of them had curled, others plain hair, some very long beards, nostrils perforated, in which they wore the usual piece of reed. A few of the strong young men wore a sort of armlet upon their left arms, made (as were also the girdle above-mentioned) of the twisted hair of Kangaroos, and which was a sort of distinction for brave warriors. I tried to enter into conversation with them respecting their ideas of eternity or mythology; however I found I had not known them long enough to gain their confidence. I had afterwards an opportunity of obtaining some information on this matter, from my friends of the Menero tribe near the Alps.

I now returned to my camp to get supper, which I had scarcely began, when three men of the tribe arrived, two of them with plates* (Chiefs), the other without, the latter one representing as it were the House of Commons. The object of their visit was of course to obtain their supper from me, the time of which was well known to them. I gave each of them a quart pot full of tea and some bread, however they found fault I believe both with the quality and quantity, and asked for some meat. I was induced to address them

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* It is a custom in this Colony, to give to a good behaved or well deserving man, a sort of half-moon brass plate, with his name engraved upon it, which characterises him as the Chief or King of his tribe. However his comrades pay no particular attention to this our, imposed upon them distinction. In their original state, the Papuas near Two-fold, and the Alps have no chiefs.

once more saying, that if they would make any thing useful to travellers, as opossum cloaks, nets, &c. or if they had during the three hours I had been there caught some opossums, kangaroo-rats, or fish, I could save my other provisions, and give them in exchange some of the things they desired. I was confirmed here in my observation made often in Sydney, that the English had acted with these blacks as high people commonly do with the poor or beggar, to throw down a crust from their table, or a penny out of their pocket, without being willing to trouble themselves by inquiring into their real wants, or in giving them advice how to remedy their poverty in a radical way by *labour*. Such and such like I call a cheap and easy PHILANTHROPY. In the same way our present Government have spent in the current year £900* to supply some blacks momentarily with bad blankets, and to feed fifty of them one day at the Governor's feast at Parramatta—*nefandum regina ! !*—As they were now with me, not I with them, the old "not budgeri you" issued not from their lips, notwithstanding my mountain sermon before alluded to—it was upon their countenances. As it soon after became one of those supernatural Australian full moon nights, I confidently expected that a *Corrobery* (a dance and song) would be performed. Without fear of the "not budgeri you" I proceeded (again with some tobacoo in my pockets) to their camp, where they were painting themselves with white clay and red ochre. However the dance could not commence before the affair with the wild blacks was terminated. We were all in expectation of the things to come. But as I am in no case fond of long waiting, I soon returned to my tent, leaving Walker behind to tell me the sequel of the story. He informed me, that a short

* Vide Colonial expenditure.

time after, the wild blacks (few in number) were heard, and that he was hidden by the people in the camp under a large piece of bark, to prevent his being injured. Probably our tribe was too numerous for their enemies, and the only hostility committed was, that a few Bauerings (a sort of crooked wooden projectile) were thrown into the camp as the enemy passed by. After this the Corrobery began, to which I listened, pleasantly extended on my cloak. Their strain was in 2-4 time, which they marked by beating crotchets, and in moments of greater excitement, quavers. I will hereafter describe a like scene I witnessed near the Alps, and give the music and words of one of our Papua songs, which for majestic and deep melancholy, would not dishonor a Beethoven or a Handel. The tones weakened by degrees, the tones died away, and grand silence and ætherial clearness filled the Plain and all the wilderness about my camp.

Sunday (26th Jan.), the camp of the Blacks was entirely silent, when we left the bank of the Fish River at an early hour. The road tended now towards Mr. Kennedy's farm, about which Granite is the predominant formation. The latter farm is situated in what is called *Goneng Valley*, (Gonning in the Surveyor General's Map,*) intersected by a chain of

* Since the publication of the first sheet of this journey, Surveyor General Major Mitchell, with that liberal spirit, which a man of learning and science *ought* to possess and to exhibit on every occasion, has notified by an announcement in the papers, that the Maps in his department are open for inspection. I was not at all surprised to find them laid down in a superior way, doing honor to the present and anterior Surveyor General's.—*Ne sutor ultra crepitam.* A Surveyor General of this Colony has now enough to do with this department, and ought not to be troubled with the material business of roads, with iron-gangs, &c.; neither has he time to make expeditions to the interior, which according to the style, in which people of £1,300 and upwards a year are accustomed to live, will be commonly (as the last of the Major's was) abortive.—

Ponds. These, the tendency of which is towards the Lachlan, as well as those which run in the Murumbidgi, and which I traversed afterwards, abound with fish, amongst these, a fresh water cod is the most remarkable, of which some were caught hereabout, weighing as much as 90 pounds. From Kennedy's we perceived over the flat of the valley, an extensive hill, called *Rocky Hill*, bearing from the house S. S. W. six miles distance; S. E. 14 miles distance, are the banks of Lake George. A short distance in Goneng Valley is a house, which I was obliged to enter, on account of some occurrence with my cart. The landlady received me very politely, but I observed a certain reserve and fear expressed in her countenance. Being called aside by William, he told me, that the woman had asked him if I was a Colonial Officer, and that he had heard from the servants, that she and her husband were *Squatters*, the name given in the Colony to persons who cultivate unoccupied Ground, belonging therefore, as they say to Government. The fear of the poor woman afflicted me deeply, and a feeling of profound indignation seized me, seeing that in British Australia, on a surface nearly as great as Europe, a poor British family must be afraid to cultivate with the sweat of its brow, a few inches of land, belonging to the nation. The cream and other refreshments she gave me, burned as it were my bowels, and I was ashamed that she considered me connected with a Government, which had enacted regulations of this kind.

Our direction hence was S., the first five miles barren and arid, then ravines with water. The sky was contiuually clear with a few *cirrho* clouds. At noon the wind was N. W., 2 P. M. calm. Thermometer in the sun 104°, water in the ponds where it was exposed to the rays of the sun 82°, the instrument descending

by evaporation to 75°. At my noon rest of to-day, which I took on the border of a perpendicular ravine, the bottom of which was covered by several ponds of good water, I was much annoyed by ants, which were numerous in this barren, dry place. They carried away entire bits of our bread and meat, and entered my insect boxes, so that it is not so easy as it may appear to many, to bring home 3000 insects, and so many other specimens from such an expedition*. Here the recollection struck me, that since leaving Goulburn, I had not observed any of their nests, and even those, nearer to the Plains were no longer the conical buildings of Bargo and the *Ploughed Ground*, but merely flat heaps of a loosely connected sand. The most of our ants belong to the genns of *Atta* of Fabricius, and I have some red ones found during this journey, which are of a very fine size and colour. In these hot days, when a sudden change of temperature is greatly to be avoided, I and my men were occasionally attacked by diarrhœa. I was able to cure this illness by the most simple means, viz. the tying of the abdomen with some cloth, a rather rigorous diet, some unsugared strong coffee, and by the application of a remedy, which it is rather hazardous in this colony to mention, so much the public is indifferent about it; I mean "Animal Magnetism." However the recent observations of Dr. Martius in South America, have again proved the efficacy of this powerful agent, even upon the savages of that country. But the exhaustion which follows every

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* "Our *Botanical* specimens were as scanty as our *Zoological*, indeed the expedition may, as regards these two particulars, almost be said to have been unproductive." Two expeditions into the interior of Southern Australia. By Captain Sturt, London, 1833. Vol. 2. p. 188.

diarrhœa, weakens the nerves to that degree, that I felt the parching heat of the noon sun of this day in a very uncomfortable manner. But a rather mental inducement it was, which abstracted me from my present uneasiness, and this was a grandeous formation of Porphyry (Feldstein Porp. *Leonhard;* Porph. euritique *d'Aubuisson*), upon which I was travelling a short time after I left Kennedy's. The Porphyry in question then extends as far as Limestone Plains. In this large space its character is of course much varied. Its colour is, 1st Brownish-red (road to the left side of the rocky hill); 2d, Flesh-red mingled with green (Dairy of Limestone) 3d, White, five miles from Kennedy's towards M'Leod's. Feldstein is predominant in this latter rock*, in which crystalline masses of Quarz are inspersed. No. 1. has bipyramidic Dodecaeder crystals of Quarz, which are the most pronounced in the fine specimens of No. 2. In another part of the road after passing M'Leod, the admixture of Quartz becomes so predominant, that the rocks get very like the *Porphyre Keratique* of *Hauy*, besides which numerous scales of Hornblende are likewise appearing. Three miles from Gonderoo about Packer's, I observed some small balls of Hornstein or the *Porphyre en boules* of the French, three miles before the latter place the Porphyry is transient into ancient sand-stone, (aelterer sandst:), and the hills before reaching Gonderoo are entirely composed of Silex, as large layers in the main Porphyry. This whole country exhibits the lacerated barren character of this Geological formation, however it will be

* In this place probably some Caolin, *Porcelain Clay* will be found, it being nothing else than decomposed compact Feldspar or Feldstein. But for such discoveries we want an instructed administration.

become particularly adapted for vineyards, the dissolved Porphyry forming a very fit soil for such plantations. Some geological observations respecting this formation, will find a more appropriate place in the description of Limestone Plains.

After noon (the above-mentioned 26th January), our direction was W. and W. S. W., when we passed, with much difficulty, a steep hill, over which the road led, and which was to the left of the *rocky hill.* From this elevated spot I again perceived a succession of steep ranges and gulleys to the E., the verdure of their wooded summits, being splendidly illuminated by a brilliant sun. These ranges are called *Mount Chaton,* in the maps of the Surveyor-General's Office. The wind was now easterly, and there were no clouds. I carefully noted that the character of the vegetation changes visibly in the parallel of Lake George, but in an expedition undertaken (as was never any other in any British Colony) without the least public assistance, it was impossible to make a minute arrangement of my dried plants, objects which I must defer for my next expedition. However, I see that a very fine *Pultenæa (aristata n. s.)* a *Melichrus, Bolax (andromedifolius n. s.), Trachymene ovata,* a beautiful *Pleurandra,* &c. have been gathered on this high and barren land. Towards evening we entered upon a spot of land, composed of a better soil, where the glaucous Gum tree (*Eucal: perfoliata* vel *pulvigera)* grew to a great height, in which species I never perceived any decortication. I will here likewise observe, that the branches of several of our Gum trees, after the period of their decortication is over, are so much and so smoothly swelled, that the bark in places, where thick branches bend, gets plicated and overlaid in such

a manner, as strikingly to resemble the fine muscular swelling of a well formed human limb, exhibiting a rather curious phenomenon in the vegetable world. The vegetatative force in these trees is considerable, because I observed large and old stumps of them, not more than a few feet above the surface of the ground, budding again, and bunches of new saplings shooting from the centre of such decayed trunks. This night I pitched my camp in a rather thick and lofty forest, being unable to find any other place combining all the conveniences we required. It was a somewhat grand scene, to observe my party walking with fire-brands in their hands, through the pitchy darkness of the forest, the condensed foliage of the trees, and the transpiercing beams of the moon creating an incomparable *chiaroscuro*. Save the champing of the horse, stillness all about—only now and then broken by the dismal howling of the native dogs, the rustling of snakes, or the shrill buzzing of some solitary locust (Tettigonia ?).

Monday (27th January,) I heard at day-break the singing of a little bird, the tones and strains of which were very delicate and tender. This is rather rare in Australia, the feathered tribe here not being very melodious. However during this season (the summer), in exposed places, scores of Magpies (*Picus*—) are to be seen, which greet the rising sun with their clamarous, gay, and flute-like tones; flying, playing, and hopping upon the trees near the traveller, in fact so tame are they, that I felt considerable reluctance to shoot any of them. Another characteristic bird of this land is the white Cockatoo *(Psittacus Galeritus)*, but it is somewhat singular, that there are only certain places where I met with it. For instance they were very numerous near Captain Rossi's, and I also saw many of them on my return near Lake Bathurst. They are very shy,

and perch only upon the highest branches. Those which are kept in the houses and farms of the Colony, are taken from their nests when young, and become very familiar. My direction this morning was S. and S. half E, and after two miles travelling on high land, (as was the whole road since the Rocky Hill), we at last perceived some fine low ground, but again surrounded by higher ranges, which kind of scenery is one of the most pleasant a person can meet with in our Colony. After a mile more, a very high range appeared in E. S. E., the porphyric ground continuing barren and destitute of water. I noted the particulars of this interesting *plateau*, upon which we were travelling for some time, but as I had nothing with me but the very superficial map which accompanies Captain Sturt's work, I could not divine its Geological and Geographical importance, until upon perusing the maps of the Surveyor General's office at Sydney, I found that this was the dividing watershed between the Lachlan and Murrumbidgee. Such *plateaus* are commonly (as I had previously observed in South America) barren and destitute of creeks, these running down in different directions at the flanks of their declivities. Gonderu Plains now announced themselves by a few patches of good grassy land, in which a solitary shepherd was gathering his sheep from the neighbouring ranges. This condition is certainly one of the most distressful in which a prisoner can be placed in this Colony, being condemned to pass whole days in the parching heat without seeing a human being, so different in this respect from what is the case at home. But there is salvation for man under most circumstances, and indeed I found some such shepherds, beguiling their time in making straw hats, which they sell to the neighbouring inhabitants, and thence derive some comfort, whilst others

drowned and torpified by such a condition, pass their days in a brutal apathy, and drag on a wretched existence in rags and misery. After traversing some forest land, we arrived at *Gonderu* Plains, (18 miles from Kennedy's) amid which the Gonderu creek was gracefully winding. I greeted its waters with exultation, it was the first tributary of the Murrumbidgee which I saw, and this name, connected with the fame of enterprising Sturt—Lake Alexandrina, and my favorite central Australia, took hold of my thoughts. Although I saw a good house in the neighbourhood, I pitched my tent a quarter of a mile distant, thinking of Cain in the times of old. However after a short time I perceived three gentleman advancing towards my camp, amongst whom one wearing a long beard was remarkable. This gave me at once some confidence, thinking myself among *originals*, when I recognized in the second, my friend Assistant Surveyor Stapylton; conversation soon flowed freely, and surveying parties, expeditions, Sturt, minerals, Australian Alps, (Snowy Mountains as we then called them), occupied very agreeably the day and a half I passed with these friends in the house before mentioned, which was inhabited by the bearded gentleman, (Mr. Rae, superintendent of Mr. McLeod). *Gonderu* Plains are about two miles and a half in length, stretching southward, at which end is a singular triangular hill 12 miles distant. At 10 A. M., the wind was S. by E., and at 5 P. M.. the thermometer ranged in the shade at 76°, *Gonderu* creek water where exposed to the sun, shewed 82°, the instrument descending by evaporation to 70°. This creek has no floods of any extent, and the fresh water cod and the turtle, inhabit its waters; I found its banks toward *Nallango* range, composed of a sort of porphyry shiste. A great many *dypterous* and *hymenop-*

terous insects were caught upon its banks, and the river seemed in several places as if overlaid with a green and yellow covering, which I found upon a closer examination to be a *hepatic* plant of small pinnated and rather vascular leaves, and nourished by an extensive fibrous root. The same plant I afterwards found on the Murrumbidgee at the entrance to Menero, but I did not observe it either in the Cromwell, or in the main channel of the impetuous Snowy river* (! !). N.W. from M'Leod's house is the above *Nallango* range, which is not marked in the Surveyor General's map. One of those evenings which I have characterized so oft, tempted me to wander from my party, along the banks of the creek, and I took the first of those views, of which one has been already executed by Mr. H. Harrison of Sydney.

Thursday (28th January), a heavy fog filled all the plain and country around, greatly refreshing the herbage after the previous dry weather, it disappeared about half past 7, A. M. Before last Christmas a drought of 15 months had desolated as well *Gonderu*, as Limestone and Menero Plains. Mr. Rae told me, that during this drought fogs were common, but appeared less frequently after the rains set in. Here already snow is common in the winter. Alum occurs about this place, and there were found some time before I arrived here, part of two human skulls concealed (probably by the natives, but for what purpose or ceremony is unknown) in the hollow of a tree. Mr. Stapylton shewed me some specimens of an ore, which he found at the outskirts of the Alps, about Mount *Marragorah*, near *Yayock* Creek, which is a tributary of the Murrumbidgee. I recog-

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* I flatter myself that I am the first writer introducing this river into Geography.

nized in it one of the finest and heaviest *Hæmatite*. The specimens were externally botryoydal, internally of a radiated texture. On the forenoon I bade farewell to my friendly hosts, to proceed towards Limestone. Our direction was S., and we passed the farms of Styles, Jackson, Barlow, and Packer, all about one mile distant from each other, in fact these are the last places in that direction, where contiguous habitations are to be found. We encamped upon Packer's ground, the weather was constantly serene, wind N. N. W. and slight. The Plain extends here from N. N. E. to S. S. W. for two miles, ascending towards S., consequently the fall in the chain of ponds is considerable, and a continual flux of water is again rendered impossible. However the stream and water formation of this continent is so extraordinary, that I am only able just slightly to touch upon it, and thus laying down a few rudiments for a future hydrography of Australia. We next passed a third flat which is in some degree connected with Gonderu Plains, it stretches S. by W,. and I perceived in the rear, some ranges, with rather soft elongated lineations. There were no stones whatever to be seen on the flat, and I must observe here by the way, that the plains I traversed in this journey, are all destitute of those characteristic pebbles *(Geroelle)* of other countries. Four miles S. by W. is a deserted blacksmith's hut near the way side, where an incomplete or imperfect channel of a creek attracted for the first time, my observation. We camped at this place.

Wednesday (29th January), I rose with the pleasing hope of reaching Limestone to-day, and thus to complete the first part of my journey. So far as this, the meritorious Allan Cunningham had penetrated about nine years since, at which time it was considered a difficult undertaking. After this I was about to move

outside the limits of the Colony on my own ground, and thus to lay some slight shade of colour, upon a part of the undefined blank of the map of Australia. We travelled again through good forest land, with some chains of ponds. The country was occasionally furrowed by those slight ravines, which I observed in different parts of my journey, and which are evidently the imperfect, or incomplete channels of creeks, in which the water flows in heavy rains. Now, why with such apparently equal materials to those which other countries possess, our continent could not develope itself so far as to the more perfect formation of creeks and rivers, is a fact, the explanation of which I may guess, but cannot at present account for. On such terrain it was, that we again lost (as we so often did before) the road, or rather the tracks, which exist here, leading from one habitation to another. Because although a great many *roads* are incorporated and figuring in the "Itinerary," and marked in this direction to about 190 miles, there are properly, nothing else than occasional ways or tracks formed in the progress of inhabitation, at first by the lonely stock-keeper, and followed and maintained by drays. While struggling thus, the forest opened, and Limestone Plains were before our eyes. I entered the dairy, which is surrounded by some lofty gum trees, through the fine foliage of which, and a heavenly sky, the Italian-like scenery towards the S.—the colosses of the Alps were visible. Limestone Plains are at least 7 miles long, but there are several other branches here, separated from each other only by some slight ranges or undulations of land. So are *Molonglo* Plains, 15 miles S. E. from the dairy; they are 7 miles in length, and four or five broad. *Kembery* Plain lies to the N. N. W., 3 miles from this place.

Beyond the expanse of the plains it was that I now saw the outskirts of the Alps, beginning at the first only with detached hills, over which rises a long chain of higher mountains, not however to be compared with the main ranges I afterwards ascended. From this place the people pointed out to me *Namadgi* range, being 18 miles distant S. W., which is covered with snow during a great part of the year. I was obliged to remain several hours at the dairy on account of the intensity of the heat, which was indeed distressing, and I was induced to try for so many times more, the efficacy of an ærial bath, and it was only in that state, that I was able to write, or busy myself in my usual way. Near the house I gathered the *Malva plebeia All: Cunn:*, perhaps upon the very spot where he first discovered it. The dairy is a very considerable one, the season commences here generally in September, but could not begin last year (1833) until December, by reason of the 15 months previous drought, which destroyed also Mr. Campbell's wheat crop at Limestone, confirming the Australian proverb, "we have here always or feast or famine."

As I had letters from John Campbell, Esq. jun. to the Superintendents of his father's estates, I expected to feel myself quite at home when in the cottage of Limestone, and this was indeed the fact. It is a clean, romantic little house, overhung with vines, the last one with window panes and such like comforts, as it were at the end of the world. The distance from Gonderu to Limestone is 24 miles. I remained six days in Limestone cottage, and I brought together, amongst other things, a collection of minerals, which displayed as they are now before me, elates my heart by the regularity, beauty and variety of its specimens. However I am rather at a miss to lay its results before the reader,

because my time and attention being taken up by selling wood and vegetables, my mind is consequently not quite in that equable state, which a work of this kind requires. But as the cause is connected with the acts of the existing administration, I may be permitted in this work (the object of which is to convey general information respecting New South Wales), to advert to it. Although this young, and (as it now is) poor, distressed, lingering Colony is annually taxed from £1000 to £1300 for Natural History, the writer of these lines was not deemed worthy to receive, either before or subsequent to the expedition herein narrated, any official assistance whatever. My offence against the Government was indeed an inexpiable one. I reminded Governor Bourke and Mr. M'Leay, nearly two years since of a salary, which was and continues to be voted for a dead man,* and I petitioned that the vacant situation might

* It was under the administration of Governor Darling, that a Museum was very judiciously founded in Sydney, and the situation of *Colonial Zoologist* was given to a Mr. W. Holmes, who died at Moreton Bay in August 1830. However the salary continued to be voted, as appears by the following account of

COLONIAL ESTIMATES VOTED.

1831 (for 1832).	1832 (for 1833).	1833 (for 1834).	1834 (for 1835).
No detailed expenditure is to be found. But a salary which was voted in 1833 for a man who died in 1830, was beyond doubt also voted at an earlier period.	*Colonial Museum.* Colonial Zoologist.... £130 Purchase of specimens, &c. 70 £200	*Colonial Museum.* Colonial Zoologist .. £130 Purchase of specimens, &c. 70 £200	Towards the support of the Colonial Museum £200. The latter item is a mere shift, in consequence of the voting of a salary to a dead man, having been commented upon at a public meeting, etc.

The sum thus annually voted is said to be given to Mr. M'Leay

be bestowed upon me pro tempore, until confirmed or revoked by the Home Government. From that moment every thing I have set about, is condemned to frustration. Thus was treated my "*Australian Mine Exploring Company,*" my "*View of Mount King William the 4th,*" (of which the Colonists have purchased two copies by raffle for £21). Thus also was it with the discovery of my "*Mineral spring*"—vilipending as it were even the health of the citizens, for the mere sake of annihilating my exertions. And it is only by the patronage of the community, that this frail work (the first however—frail though it be—wherein it happens that Australia speaks for herself), is continued. But it gives me satisfaction amid the sorrows, and strength amid the difficulties under which I labor, that this work will be a lasting warning to the future Governments of the Colony, not to — (divert) even such insignificant amounts of public money, and to distress in that way any person, who has a just claim upon such funds. This work, combined with other facts, may also induce our home government, to send in future to these distant Colonies men of aptitude for rulers; as individuals of an opposite description, (like Governor Darling for instance, who realized in different ways, £50,000 during his administration), are rapidly alienating the feelings of the community from that line of respect and affec-

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for his scientific, and Mr. Deas Thompson, (Clerk of the Council Chamber, in which place the Museum is kept), for his *mechanical* attendance. The collection is (if at all!) increased by additions, ordered to be made occasionally by some prisoner or other gratis. Such and similar facts are loudly clamouring for a more numerous legislative body, than the present one of 15 members.

tion, which a British sovereign and the British constitution so truly merit.

Returning again to the main narrative of my journey, the next day after my arrival (Thursday, 30th January), I ascended a fine hill to the W. of the cottage (*Cottage hill*), about 200 feet above the plain, and covered slightly with gum trees. Its lower parts are again composed of porphyry, which however approaches more to an argilaceous nature, and in which a considerable quantity of iron has become apparent, seemingly by some previous *pseudo-volcanic* operation, (such a one is still in progress at Mount Wingen). Some of the greenish brown lumps of it are covered with a thin layer of red oxyd of iron, in others the operation has proceeded so far, as to convert the mass into a sort of argilaceous iron ore, and some specimens, of which the top of the hill is composed, present the finest possible appearance, and look like scoriæ, being however of a lilac red, and very tender, some of a cellular structure. If thus, the comparatively recent existence of terrestrial fire is indisputable in *Cottage hill*, it is as evident, that a deluvial or alluvial revolution was operating in this locality anterior to the volcanic one. In proof of this I have a specimen, in which one or two tubes of a *moluscous* animal are visible in the indurated and burnt clay. The middle of the hill is composed of a stratum of very hard rock of rather fine grains, and a greenish yellow colour, and which is one of the many varieties of *Greenstone* or *Trapp-porphyry*, the exact classification of which is not yet decidedly settled. From this point an extensive view over the higher parts of the mountains is afforded, possessing a more decidedly Alpine character. These higher ranges extend in an arcuated line, from S. W. $\frac{1}{2}$ W. to W. $\frac{1}{2}$ N. at a distance of 30, and some of them 40 miles, their highest peaks bearing S. W. On this spot an observa-

tion of the ingenious Mr. Humboldt struck me forcibly, that however varied a vegetation the different parts of the globe may exhibit, their fundamental geological appearances remain always the same. These mountains with their long protracted, but well defined and marked summits, reminded me of several such scenes which I saw in the Alps of Tyrol. The cryptogamical Flora of this hill (I mean Lichenes) was very varied and beautiful, and I must here observe also, that in these (as in other) climates, every geological formation produces a different series of species of this sort of vegetation. The heat continued very intense, and I diverted myself during a part of the night by leaving the door of the parlour open, when scores of moths *(Tinea)* flew towards the candle, of which I caught a considerable number, as did also my men outside the house with a lantern. This night a fine Southern breeze, agreeably refreshed the animal and vegetable world.

Friday, (31st January) was however the hottest day I experienced in this journey, the thermometer ranging at 3 P. M. 129°. In such hours my customary activity was about to leave me, and sulphuric acid, with much water and well sweetened, was the only thing which in any degree kept down the boiling quality of the blood. Even my dogs (which were mere skeletons, from the effects of a harrassing journey of 220 miles, which they made double or treble), came every moment to me, with their tongues hanging out, imploring relief as it were at this dreadful crisis. However, what is stable, or uniform in Australian nature? The same night an E. ½ S. wind sprang up, which depressed the temperature at 10 P. M. to 72°, there was also a little rain, and none of the insects of the previous night appeared. The subsequent day, (1st February) I felt as cold as I melted the day before, and the instrument at 8 A. M.

ranged only 62°. A locality which occupied me very much was the banks of Limestone-, or as it was originally called by the natives (they are now no more!) *Kembery* River, the source of which is at *Molonglo* Plains. It receives afterwards the *Quinbien* Creek 5 miles from hence, in a place bearing S. E. by E. The source of the latter I was told, is to the S., right over the Twins or *Tindery* Mountain, at Mr. Keef's place near *Mikelego** Plains. The Limestone River discharges itself into the Murrumbidgee about 12 or 15 miles from the Cottage, in a point which is between W. and S. W. Neither of these two streams has a constant run of water, indeed the Quinbien exhibits in most places nothing more than the appearance of an incomplete channel, or a slightly marked and inclined planum, over which the rain water occasionally runs. We put our tackle in the Limestone River, and caught two cod,† weighing abont 13lbs each. A larger one took the bait, and carried away line and all. I stuffed the two we caught. Among the reeds of this river the Platipus *(Ornitorynchus)* is rather plentiful, but they are so extremely shy, that even the flash in the pan makes them dive under with amazing celerity, so that the shot often has no time to reach them. Walker wounded a very large one with my percussion rifle, and followed it among the reeds, but the spurs of the monster prevented his approaching it. At another part of the river the sand of the banks was interspersed with shells, amongst which a snail *(helix)* was remarkable. The shell is of the very finest description, and resembles an extremely thin coat of dissolved isinglass, its color is yellow

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* *Monquedelan!* of the "Itinerary," p. 81, N. S. W. Calendar, 1834.

† *Salmo, (Aulopus Cuv:)* Tergo profunde viridi et luteo punctato, ventre luteo albo.

brown. Three more fresh water shells were found in this river, one of which is of considerable beauty. The vicinity of the river presented a rich spot for Botanists; a fine white *Ipomea* wound itself amongst the reeds, and *Gratiola ovata, Lobelia inundata,* a species of *Illecebrum*, several *Polygonum*, a *Crambe*, *Euphorbia, (diffusa*, n. s.), a *Sysimbrium, Epilobium, Galium, Sphæranthus, Thymus,* and such like, grew in swampy places; whilst the beautiful *Centaurea riparia* All: Cunn: (native artichoke) grew on grassy banks, but was very rarely to be found in flower. The root of this plant, as well as all others of any size, are roasted and eaten by the natives. The genus of *Rumex* began to appear, amongst which was *R. diffusus*, n. s. Fallows and such like places were covered for half miles to the height of a man, with a species of *Polygonum*, which made the passages through them extremely annoying. Speaking here of plants, I must observe for the sake of other Botanists, who may come after me, that the proper flower season is in these latitudes already over by the end of January; however taking all together, I hit upon the best time, because I found so many plants in flower, and others in seed, of which latter I made (especially on the Alps), a splendid collection.

Returning home from such excursions, I found even upon the fences of the farm some subjects for observation. A number of hawks were so unshy, that they remained for hours there and on the adjacent trees. They are about the size of a fowl in the body, of a brownish plumage, the female variegated upon the breast and neck in a very handsome manner, the male more of a uniform brownish red, and in the opinion of Mr Coxen, who has much experience in Australian Ornithology, are a new species. I called it *Falco Napoleo*, on account of its resemblance to the emblematic arms of that cele-

brated man. The approaching sunset drew me several times to the garden bench, whence a superb view over the outskirts of the Alps is to be seen. Under this pure sky, in the ærial freshners wafted from the Alps, in this remoteness from all the pestilential exhalations and miseries of towns, the—"beatus ille" resounded often in my bosom. Although an exact denomination of mountains cannot be expected in a country, which (like this) has never been surveyed or laid down, it is certain, that that portion of the ranges, which is from this place to the right (S. W.) is called *Namadgi range;* but this is composed of several successions of ranges. *Tenant's Hill* is the scene towards the middle, bearing S. by E. Thereabout, 14 miles from Limestone, is Joe Beard's station, on the banks of the Murrumbidgee. The *Twins* or *Tindery* are to the left (S. S. E.), where the mountains shelve towards the plain land, and the latter ones are two united *Mamellons* of from 800 to 1000 feet in height above Limestone Plains. All these are of course only such mountains, as, being in the first planum, strike more the eye of the passing beholders. But above the first row of mountains, a number of other peaks and summits are visible, which I sketched in the second of those views I took in this journey. From any of the hills on Limestone, it is visible, that the highest parts of these ranges extend from S. W. $\frac{1}{2}$ W. to W. $\frac{1}{2}$ N., of which again the most elevated peaks are in S. W. For the sake of uniting similar subjects, I will here describe a scene which I observed from the fine *Boa vista* in Mr. Campbell's garden, where as before mentioned, I most commonly passed the time of sunset. On the 3rd of February, (a rather rainy and stormy day), a reflection of the setting sun was seen in the East. One ray again was reflecting and projecting towards the S., painting the Twins for several minutes

with a reddish blue color, and illuminated all valleys of the mountains to such a depth, as I had never seen them before. After the sun sunk behind the range, a strong westerly breeze sprung up, and clouds like a thin grey gauze curtain, passed before the glare of the W. It was certainly rain, but the direction of the streaks was not vertically towards the ground, but inclined towards the S., some such representing the form of an imperfect S. The whole phenomenon was tending and propelled Southward. Lightning also was visible, flashing and phosphorising over the darkness of this mountaineous world, and some I observed flew horizontally from one cloud towards another.

On the 1st and 2d February, I made some excursions towards Kembery, when passing Limestone River, I examined the pebbles of its bed, which of course are the documents of the composition of the land, through which this river and its tributaries (the Quinbien, &c.) flow. I found several kinds of *basalt*, of which some were of porous superficies, others containing a superabundance of oxyd of iron. Several sorts of Trachyte, amongst which was the Tr. *celluleux* Beud:, the pores of which are handsomely filled with *Analzim*, *Mejonit*, or some such simple mineral. Some more specimens of a chlorit-shiste, iron-flint and different kinds of Quartz were also found. It was in one such large and porous lump, that I found one of the few vestiges of ore, I met with in this journey. It is interspersed throughout the mass of Quartz, and consists of small grains, some of which approach to the form of cubododecaeders. Some of them are of a silver or pinchbeck white, others of a decidedly gold colour. It is neither sulphuret of iron, nor sulphuret of copper, however, a minute examination is impracticable for me under the circumstances, adverted in p. 31 and 57.

The temperature of this day was moderate, the night, however chilly, wind E by S., thermometer 66. On the 3d February, I made an excursion towards *Ginnin-Ginnindera*, the direction of the road being N. W., and one mile from Limestone is visible *Mojora* hill, bearing from that spot N. $\frac{1}{2}$ W. 1 mile distance. It is a small range of about 400 feet, and well timbered. Hereabout my attention was attracted by one of the finest minerals discovered by me in this Colony, and this was *Nephrite*, of which lumps of angular form were scattered about. It is generally of a green colour, which varies between leak, apple and (though not frequently) dark green, of an even fracture, transient into a coarse splintery one. Polished it exhibits an appearance, which is between that of the New Zealand Axestone, and Verde anticco. The exact geological occurrence of this mineral is not known in Europe, it having been found only in a very few parts of the globe. I found it lying about on the summit of a flat hill, which was composed of Porphyry, and many specimens were sticking in the loamy ground one or two inches deep; some pebbles of serpentine, were alse strewed about. Proceeding about a mile further, we entered a snug plain, where Mr. M'Pherson has a small, but well managed allotment of land. This plain extends about one mile in length, one extremity stretching towards S S W. and the mountains, the other N E. towards Mojora-hill. It is a Tempe-like spot, but being away from Limestone Creek, and its stream-valley, water is not sufficiently plentiful. About the middle of the plain is a very conspicuous conical mass of rock, M'Pherson's Sugar-loaf, composed of serpentine of a larger grain, than that near the Nephrite, of a fine greenish colour, which when polished will at some period adorn the edifices of Limestone. The outside of these rocks cleaves away in

thin strata, and is besides covered with a slight layer of a simple mineral, intermixed with some chrystals. The temperature of this day was very curious. The heat, even at the rising of the sun, was oppressive, viz. 90° in the shade. Towards noon a gale came from the N.W., with rain. At 4 P. M. there was somewhat of a storm, the air was then the same as in the morning 90°, whilst the rain water subjected to observation immediately after its falling, ranged 70°, water from the river, which had been kept some hours in buckets being 80°. Towards midnight a dreadful storm of wind and rain was raging, which frightened the large spiders and triantalopes, which were amongst the beams of the roof, and drove them into the room. I was lying in my bed, and just observing through the window the fine effect of the lightning upon the plain, when one of the above-named gentry nearly as large as a child's fist, fell sans céremonie upon my face. I could not forbear whistling between my teeth: "Oh, the joys of Travellers!"

But I should be compelled to be too diffuse, were I to give the reader a full account of all the Mineralogical and Geological relations of the interesting Plain of Limestone, where, unencumbered by any sorrow, I wandered happy upon the adjacent hills and gulleys, with the confident anticipation, that so extensive a collection as I was able to make, would gain after my return, the approbation of the two persons who command our Colonial Museum; an expectation which however was altogether frustrated by reason of the old (but in this instance greatly misapplied) principle: "Amor incipit ab ego." I will conclude therefore these sort of observations, saying, that towards Kembery Plains and on the Plains themselves, there are strata of different sorts of rocks which protrude on the surface,

as a white shiste, which is between argilaceous and marl shiste, then another stratum of silex, which contains hollows with fine chrystals, overlaid with iron, which is prevalent all through the rock. But there are strata of a rock protruding at Kembery, which with my means and time, I am not able to bring under any known classification whatever. It is a homogenous rock of the silex tribe, of a fine splintery fracture, very hard and tough, fragments angular and sharp, opaque, and of a color between reddish brown and yellow. It exhibits no stratification. Throughout the whole mass, there is interspersed in some small cavities a substance of a pure yellow color, near which the matrix acceeds more to a pure silicious nature. In some parts this rock* exhibits that external shape, which is called backed, and in others, large spots of the surface are even and very smooth, which quality cannot be in the present instance (as is the case in some rocks, which I have from the Hunter), the effect of melting by lightning. I cannot refrain from anticipating, that many Australian rocks possess such smooth and polished-like superficies, as for instance, the granular Limestone near the *Mineral Spring* on Menero, which exhibit the same qualities in an eminent degree.

Limestone is also one of the most important spots as far as the political economy of the colony is concerned. The Plains themselves must contain at least 20,000 acres of good, compact, arable land, besides which they form a point where three principal roads, the great road from Sydney, that to Yass Plains, and that to Menero Downs—will eventually converge. At Limestone, therefore, at no distant period, a fine town will

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* Several specimens of this rock being on hand, there will be ample room for its elucidation at competent quarters.

exist, uniting Spencer's Gulph (by means of the Murray), Sydney, and Twofold Bay. If any British Colony deserves the attention of the Ministry and Parliament, ours certainly does, a whole continent of immense extent being before us, and therefore any fault committed in the first organization of so large a body, will have incalculably awful and embarrassing consequences. More especially the disposition of land is loudly claiming attention, if an *Agrarian Law* in some shorter or longer period is to be avoided.* With regard to Limestone this is now too late, the whole plains belonging by grant or purchase to a few (although very worthy) landholders. And although five shillings per acre is far too much for primary grants to Emigrants or well behaved freed men, it is far too little for those already possessing large property, who in that way might now purchase entire Dukedoms. However, it is not only the inconsiderate disposal of such large portions of lands which is amiss at Limestone, and similar places in this Colony; these distant parts have in every respect escaped the attention of the two or three rather questionable Governments, which have ruled these Colonies for the last 12 or 15 years (vide *Dr. Lang's* N. S. W. throughout). When speaking of Menero Downs, the kind reader will perceive the importance, which these places already possess, regarding not only the numbers of overseers and

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* It is a curious fact, that the families of the original founders and settlers of Colonies, seem not to be endowed with any principle of duration. Where are the successors of Cortes, Pizarro! In the Brazils too, there are very few families of the first settlers in existence. Where are the palaces, the parks, the estates of these people? Moderation!—Moderation! is the grand lesson continually proclaimed by history, to which however neither nations nor individuals seem willing to listen.

prisoners who live there, but also as the commercial exponent of at least 35,000 sheep, and a proportionate number of other cattle. A parsonage with an ambulating Schoolmaster, an Hospital, a Court-house, a Post-office, and a quarterly fair ought therefore to be immediately established at Limestone, this being the regular thoroughfare for the above stated vast country. As regards the first point, be it known by all religious and humane persons in Great Britain and N. S. W., that under our present (as it calls itself philanthropic and humane) Government, with the sum of £100,000 recently accumulated and locked up in the Colonial Treasury, there are hundreds of British subjects, who may remain for years and years in the Colony, and far more on our outstations, without hearing the consolatory or admonishing voice of a minister of religion; be it known that hundreds, nay thousands of christinans, and British christians too, are dying in this (officially!) rich Colony like brutes, are buried like brutes! As to the Post-office, the establishment of a Mail once a-month, has been proposed to the authorities by some gentlemen, who received for answer, that "it would not pay." But I would remark, that any public expenditure ought not to be considered as to its topical, especial and immediate reimbursement, but as to its compatibility with, and expediency to the *general* welfare. And here I would advert once for ever to the fact, that there can be no occasion at all for saving and accumulating public money, in a young, as it were just sprung-up Colony. The exhibition of such a figure before the eyes of the Secretary of State, may at the first sight be charming, and it is very likely to have been accumulated to charm and please him, and thus to cause a duration and prolongation of the present system. But this charm will quickly vanish, and turn into the

opposite extreme, when the Ministry, and Mr. Spring Rice in particular, come to know, that such unnatural savings have been acquired by an unpardonable retardation, retrojection; misery, starvation, and incipient unmanageableness—in fact by a general negligence of all the interests of the Colony, and its immediate dependencies. *Witness* numerous and *importantly* signed petitions, sent to the Newspapers, for a reparation of the *principal roads*, erection of bridges; bread at 17d the 4lb. loaf; the Banks compelled to restrain their discounts, an approaching stagnation of all business; mutiny at Castle Forbes; *first* mutiny at Norfolk Island, *second* ditto ditto; war-like appearance of New Zealand; nearly half of three free female ships thrown upon the streets of Sydney, a degradation to themselves, poison to our young generation; non-publication of a highly useful map of, and for the Colony, made by the Surveyor's Department, paid by the Public (£20,000 per annum), and printed four months ago; an unpaved, unwatered and unlighted—in fact, unclean, village-like Colonial Metropolis, &c. &c.

As to the management of Mr. Campbell's farm in particular, I was told that the sheep breeding commenced here nine years ago with about 700 head, which the overseer Mr. Ainsley has, to the present time, succeeded in increasing to upwards of 20,000, not taking into the account the number sold during that period. The farthest out-station of this establishment is *Dilighet*, about 170 miles S. from hence, and thence four or five days journey, according to the Blacks, are Plains (called by them *Omeo)*, larger than those of Menero, and containing an extensive Lake.

Thus it gave me great satisfactian to reflect on the many objects I had collected, and the observations I had noted in Limestone Cottage; however it was now

time to push on. I therefore gave orders to pack up the three boxes, which were to be sent directly to Sydney, and to arrange the other concerns for the cart. The articles which we had to put in order were indeed innumerable, (an expedition of this nature with one cart and horse is no easy job); and I must again confess, that I was astonished at the quantity of work my four servants performed, they busied themselves indeed like Britons. At last our *fair* was broken up, and three trunks, each containing a vast quantity of articles, as arsenic-soap, camphor, gypsum, powder and shot, candles, tinder-boxes and phosphorus, plaster and physic of different sorts, saws, chisels, twine; then other detached cases, boxes, bundles of paper, cask, bottles, guns, baskets, tomahawks, ropes, soldier's knapsacks, and the good supply of provisions which I got by the order of Mr. Campbell—completely filled my cart up to the roof. Thus on the 4th of February, the shrill tone of my mates whistle, summoned my men for departure, which we always did with the spirit of sailors about to weigh anchor. We made now for *Giribombery* (alias *Giridibombera*), a farm of Mr. Palmer. The day was cloudy and rather mizzly. Our direction was S. and S. S. E. The plains are here divided and broken by banks and small hills, and three miles from Campbell's Cottage, is a stratum of Limestone, of a greyish black colour, flat conchoidic fracture, and there also are some small seams of Limespar and another simple mineral *(Anhydrit ?)* occurring in it. There is some more Limestone towards Kembery, and it is from such strata, the plains have their name. No shrubs, save some *Hakea* were met with, and the very few Gum trees, the seeds of which carried there by the winds, birds, &c. from the adjacent bushes—did not prosper, but exhibited a scanty, lingering appearance. After 7 miles work we reached Giribombery, which lies on the banks of a distant creek, or chain of ponds. Six

miles E. from hence is *Tagranong* or *Gin Bell*, a farm of Mr. M'Laren's, in a plain called Isabella Plain, and equally on the bank of a small creek. About the same direction is *Nies*, a cattle station of Mr. Harbert, 25 miles distant, in a very mountaineous country. In the house were two Farmers from Lake George, who remained for the night, and gave the following information. This Lake recedes every year from its original circumference, it having diminished about 25 feet in the last three years. There are Blacks, who say, that they have seen it dry. No fish or frog, or animal of any size inhabits its waters, with the exception of a small turtle, and therefore aquatic birds are not so numerous, as from its extent we might be led to expect. The prevalent winds are W., and produce considerable current and waves. In one of my companions (an Australian), I observed a certain reserve and singular taciturnity, which in his absence, was explained by the other men, to have for its cause some heavy family affliction, which happened when he was a child. In the morning we could not find him for his breakfast, and the servants told us, that he went away half a mile to the creek, to wash himself. "He would rather go "five miles, than ask any person even for such a thing as a glass of water," said his friend. I felt inclined to call this a good sample of old British tenacity.

But it occurred that Giribombery should exhibit to the travellers a specimen of the characters of different Nations, and it was after breakfast that a sort of N. S. Wales Don Quixote, presented himself at the entrance of the farm. This was the superintendent of a neighbouring place, known all about for his occasional fondness for spirits, and extravagant deeds. He arrrived in full gallop upon his bay horse, and exercised some manœuvres of cavalry with his horse whip upon the shoulders of my servants. This personage

had the mania (when he was in liquor), to think he had been at Waterloo, and was then hudibrasising upon the many good Frenchmen, he had killed at that battle. This might have been all very good for an after breakfast joke ; but as Mr. Duncan told me, that in these heroic fancies, he some times got eccentric, indeed, so much so, as at one time to have driven an aide-camp out of his house in the middle of the night, I deemed it not convenient to see a repetition of the " Battle of Waterloo in minature," just now. I preferred therefore of making my retreat by an outer door, and gave my servants directions to follow me *incog.* with the cart.

Thus, on the 5th of February, I was about to transgress the limits of the Colony. We passed through some forests of blue and red gum trees, over two of the steepest hills I had hitherto passed. Our present task was to flank the Tinderies, and to make for a sheep-station of Mr. Campbell's, called the Waterholes. However, such a task was too much for one horse, and especially for such a one, as I got at Sydney. We arrived at length at a shepherd's place, about four miles from Giribombery, where I was obliged to remain two days, in order to procure another horse and cart to assist me over the pass. These two days were wasted in some such preparation or another. We saw here one of those green Snakes, which are called in the Colony Grass Snakes ; they attain the length of ten feet, and are harmless. The shepherd informed me, thatthe brown and yellow species bite the sheep, and when seen by a flock, they rush asunder with great precipitation. These species also attack and bite dogs, but very seldom seize upon larger cattle. When in the greatest perplexity with the horse and cart, a rather new appearance presented itself to me, and this was two settlers on horse-back passing from Menero. They were habited in quite a bush-like

undress, their tethering rope was wound round the horses neck, some tin pots for boiling tea suspended from their halters, their bedding apparatus placed at the back part of their saddles, and muskets and daggers by their sides—gave these travellers a truly Australian appearance. Finally on Friday, the 7th February, I was able to start with two carts from this solitary sheep station. My direction was S S E. Two miles further appeared some rocks of Gneiss, of which several of these ranges seems to be composed. However, the general formation was still that Feldstein-Porphyry, which I transected since I left Kennedy's.

Thus we arrived at the foot of the Twins, which remained to our right (W.) Only one projection of this mountain was visible in this enclosed valley, the other parts receding behind the woods. Here upon a small flat a hut was once standing, hut the people were obliged to relinquish it for want of water, which is dedeficient upon this plateau for many miles, this being again the watershed between the Limestone River, and the (main) Murrumbidgee. This is the more to be regretted, as the declivities of, and the flats between these hills, would afford a fine pasture for sheep*. After this I arrived at an opening, through which the road passed between the Twins and another small range, this opening being due South. I called this whole mountaineous, and important passage, leading over a certain number of tertiary ranges, and probably the only one from Limestone to Mikelego Plains,

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* There are people, who believe and say (in their own interest), that N. S. Wales will, and can never become a thickly inhabited Country. We would remind, however, these gentlemen, that history in its grand evolutions cares very little about the selfish views or wishes of individuals; and that the introduction of *Artesian wells !!* (reserved perhaps for some Canning-like Governor), will shew the falsity of their anticipations.

"*George Canning's Pass*," in memory of that great forerunner of the present Reformed Government. After a few miles more, we arrived at a place, where a large range of mountains (Mikelego Range) covered with clouds, was visible. We encamped at some ponds for dinner, and although the morning was very hot, at 11 o'clock A. M., a fine refreshing N E. breeze sprung up. After noon we made a very steep descent, when several branches of mountains appeared; in fact, there is a whole reticulation of mountains here, and I believe this is the place, where the system of the Australian Alps is concatenated with the coast range of the Murroo-River and Bateman's Bay. One such range runs from S S E. to N N W. about 1,200 feet high, another smaller one from S W. to N E. Four miles further my direction was S E., rounding several circular hills of a secondary or tertiary magnitude. Arriving near the waterholes, my direction was S E $\frac{1}{2}$ S. The distance here from Giribombery is 21 miles. The information which I here obtained respecting the surrounding locality, is the following. The Murrumbidgee runs near this side of Mount Tenant, the foot of which, it reaches at a place bearing N W $\frac{1}{2}$ W. From Tenant's Hill, it runs N W. towards a very pronounced pyramidical hill, which is 20 miles from the ~~same place~~. There the junction with the Limestone River takes place*.

On leaving the waterholes, a decided disposition of rivification Southward is visible, all water hasting rapidly towards the Murrumbidgee. We had again to

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* It will require the laying down of a regular map to purge and correct such and similar data; however, I am at present at a loss to know, how I shall be able to get this map done. It is one of the foibles of our young Colony, that political feelings are mixed with, and influencing private intercourse—nay, interfering with that civility and co-operation which every useful exertion deserves. Whigs

pass the yoke of a small range, which stretches from W ½ N. to E ½ S., and which is the range, that encompasses Mikelego Plains towards N. Thus, at 4 P. M., we arrived at the Plains, (6 miles from the waterholes) where, to the right is Mr. Keef's farm, composed of level, arable land, and commanding an extensive cattle run upon the Plains themselves*. The Plains are three miles long and one and a half broad, and stretch from N. by W. to S. by E. The peaks of the splendid range towards the E., appear from hence in their whole grandeur. I was induced to bend from the main plain to the left (E.), as water was nearer in that direction. After passing a little range of hills, we arrived at a secondary plain, where Mr. Packer has a station. This hill was composed of Gneiss, and I found there a fine specimen of Calcedony, of a light apple-green colour. The latter flat is connected in S S W. with Mikelego Plains. We encamped upon the declivity of a hill commanding Packer's flat, and contiguous to some pools of water. This was some of the worst water we used in this journey, it being quite green from decomposed

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and Tories, Radicals and Conservatists, are mingled at home in one common feeling to support arts and sciences; and if the Duke of Wellington were to be personally offended with all, that is said against him politically, he could not take in a single one of the English Papers or Periodicals. *Meminisse juvabit.*

* This farm is unquestionably beyond the marked limits, and therefore in the unlocated parts of the Colony. Without wishing to reflect upon the particular claims or merits, which Mr. Keef might have for a grant of land in such a locality, I must say, that under the greater number of Governors, who have ruled these Colonies until now, every thing was possible with, and nothing at all practicable without—favour (Vide Dr. Lang's N. S. W. throughout). I am given to understand, that Mr. G. M'Leay, and others, have received grants as far as Twofold Bay, and should not be astonished, if, by and bye, even the Whaling Grounds should be given away to Cousins, Sons-in-law, &c.

vegetable matter, and disturbed by the cattle. However, the view from this hill towards Mikelego range was heavenly, the range stretching from N W ½ W. to S E ½ S. for many miles length, and so high as to shutting up the horizon entirely from this side. It is at least 1500 feet above the plain, of a rocky barren character, timbered half way up, then peaks composed of steep scrubby rocks. Many of these are perpendicular, and present the form of elongated cubes, as I afterwards found them so frequent in the Alps. Amongst those here, I noticed the *Throne of Liberty*, the highest but one, and remarkable for a long level rocky peak. In the half-dry puddles of the flat, many insects were caught, amongst which I observed a rather large wasp *(Vespa)*, the body of which was black and orange variegated, the hind part of the wings was of a similar colour. This insect, when about puddles, vibrates its wings so quickly, that the colours unite, and its whole body appeares like a small disce of the finest radiating colour, so much so that I did not know at first what to make of it. It was not till several days after, at *Gunguandra*, that my boy was able to catch one, which he brought me, exclaiming—"Here is the fly which so long made fools of us." Towards evening, I and Walker passed Packer's flat, for the purpose of seeing Mikelego range from a nearer point. It was again one of those supernatural evenings, the travellers were favoured with during this journey, when we passed over a range of barren hills, S. E. from Packer's flat. Upon this range I was gratified, for the first time, with the sight of a remarkable tree, which I afterwards found upon several ranges, and on the main Alps. They are called in the Colony Old Man's Oak, and are a (probably new) species of *Callitris*. They ascend as high as 60 or 80 feet, and resemble in their external appearance, as well as in the grain and resinous con-

tents of the timber, our European pines. If they should be found plentiful (as however I never found to be the case), rosin and some sort of turpentine may be extracted from them. The name of Old Man's Oak, is rather appropriate, as far as the first two epithets are concerned. The lower branches of this tree (often as high up as 20 or 30 feet), die away, and present a decayed, broken and hanging down appearance; the bark is extremely rough and ruggid, upon which and the decayed branches, great numbers of *Lichenes* and *Hepaticæ* are growing, of which I gathered at *Cuma* a whole boxful. The upper part of the tree alone presented a green appearance, the leaves being however small, cypress-like, and of a dark colour. I saw no flowers, but collected a quantity of seeds. Wandering about in these solitudes, I discovered (always in the same direction), the last plication of these plains, contiguous to Mikelego range "*Bolingbroke's Valley.*" It bears entirely the character of a mountain valley, debris of rock scattered all about, and stretching in a S. S W. direction about one mile; its inclination however is towards E. N. E ½ mile. Walker, who was altogether an enterprising fellow, would hardly be restrained from ascending Mikelego range from this place the next morning, being (as he said) confident, there must be water at the foot of such a range as this. My time and means however permitted no such delays of my principal projects (the Alps); besides the ascension of this height as it were of hewn rocks, must be no easy task The evening approached, when we left this melancholy, solitary valley; but in making home, we lost our way, having nothing but the waning glare in the West for our guide. To tell with what pleasure I at last percieved from a hill the fire of my camp, where my people, according to an old regulation of mine, fired guns, every quarter of an hour—would carry me

too far out of my latitude. After such harassing days, besides an extra allowance, some moral incitements were always conceded to my men. The reading aloud of Robinson Crusoe (which became the unattainable, but not therefore the less enviable prototype for every one of them), playing cards, and a jewsharp. I smoked my pipe, and gazed at the silent but eternal rotations of the nocturnal lights above me. "There," it is said, "the ephemeric destinies of men are recorded."

As I was now beyond the limits of the colony, I found myself quite in a new situation, even so far as social life is concerned. I had lived before under absolute monarchies and under commonwealths; here I found myself surrounded by absolute anarchy and lawlessness. For the next 100 miles to come, I had still to traverse from station to station, some of them of great importance—however there was no perceptible tie or sway, connecting man and country with any authority whatever. If any motive will inculcate upon the government the imperative necessity, of infusing into our council a sufficient number of men of experience, the great shallowness which exists in our colonial laws regarding out-stations, will not be the least important. For the present, I will only mention, that I found on Mikelego, one of the places called in the colony, "sly grog shops."* In such places, the convict stock-keepers, shepherds, runaways, bush-rangers, &c. congregate, to dispose of stolen property, especially cattle, to some squatter or another, which latter nuisance has just now reached to an unprece-

* Our community being composed of a great number of slaves, deprived of their civil rights, without the capacity of buying and selling, &c., the retail of spirits is very properly restrained by several restrictive and modifying regulations; these of course are not likely to be observed, where there is nobody to enforce any law whatever.
Dr. Lhotsky's Australian Alps. G.

dented degree in this colony. There, fighting and disorder of all kinds is going on, for which there is no redress—no stoppage. And I repeat, is this with such an absolute want of law, regulations, paid magistrates, constabulary, &c., that our colonial revenue is to be locked up, or diverted (as is a great part of it at the present moment) into an un-colonial, and consequently foreign and unlawful channel! (Ample room for another of our patriotic John Blaxland's protests.)

It was rather late the next morning, (Saturday, 8 Feb.) when I started from Packers flat, the other cart left me, and we plunged further into an unknown country.* The (S. S. W.) end of Mikelego Plain is again divided by a small longitudinal hill. As we proceeded, a high range appeared to our right (W) 4 or 5 miles distant, and a little nearer, a smaller one covered with timber. Between these two ranges, runs the Murrumbidgee. Both keep the same direction as the plain (from N. to S.), and the river must keep the same, running here in a probably very narrow ravine, formed by their junction. Our direction was, for the first four or five miles southerly, when we passed the lonely expanse of

* I cannot forbear remarking, for the sake of preventing mistakes, that every thing which will be said by me after leaving Giribombery, is (even so far as geography is concerned), my exclusive scientific property. Mr. Keef's place is the last object, which is merely named in that official (and as I said before, in part meritorious) document, "the Itinerary." There is not a word in that publication about the *Snowy River*, nor *Menero*. After my return from this expedition, many persons became on the qui vie upon these subjects, and I understand that shortly after, three Gentlemen of the Surveyor General's department were dispatched for these spots, where some of them still remain. However, I do hereby solemnly claim the priority of any such discovery, and declare that any rhapsodical notice sent home since my return, could not originate other than in the hearsay of my discoveries, and is not to be put in a parallel with the authenticity of the present work.

Mikelego. We crossed with some difficulty a hill, which encompasses on that side the plain, and successively the high range to the left receded, and that to the right, became more prominent. I must say here by the bye, that to form general observations of a country, to construct philosophical inductions of its nature, requires more time than I could properly devote to such objects, and I restrict myself in general to the laying down the simple data, leaving to others, or to a subsequent period, more discursive reasonings. However, it is obvious, that the axis of this great chain of plains, which follow each other at the south eastern side of the Australian Continent, is altogether in the direction of the meridian. It is besides, a most remarkable, but not very easily explicable fact, that they are altogether destitute of trees of any kind, and only on the secondary hills or banks, which divide their plications, are some gum-trees thinly scattered, whereas large timber covers the main ranges. The assumption of a diluvial flood, which might have left these plains and downs in a comparatively recent period, receding, of course, by degrees, is a fact which presents itself immediately to the observer. But admitting that, it is difficult to understand, how it is, that there is not even a vestige of incipient *sylvification* in the plains and downs themselves. In this case, the investigation of the channels, through which these floods disembogued themselves into the ocean, would be a highly interesting study for the Geologist, and it is very probable, that our Shoalhaven Gully, (one of the most striking phoenomena in the known world, (vide Sturt vol. 1, p. xxxix.,) may be such a dike. Barometrical admeasurements of those places, would decide much appertaining to these questions; however, I had no such instrument with me, which, as Sturt broke his very soon, amounts to about the same.

There is one fact which sheds a little light in this respect, and this is the immense trunks of gum-trees, which I observed from the Cove of Port Jackson, travelling all along the high coast ranges of Illawarra; some of these giants (for instance in Mr. M'Leay's garden, at Elizabeth Bay), measure from 6 to 7 feet in diameter, a dimension like to which I found none others even approaching, in my whole tour from Sydney to Pass Britannia, (the latter place about forty miles from Bass's Straits). There must be points, when proceeding in a westerley direction, such trees will again appear, and in that case the ranges of the sea coast, and the latter places would probably have first emerged from the Australian deluge, forming thus early groups of dry islands and rocks, adapted to vegetation and sylvification, whilst all the plains of the S. E. part of the coast were still covered with the fluid element. The fluctuating lakes, George and Bathurst, would be then the last existing pulsation of this grand natural phenomenon. There is some tradition amongst the Blacks to this amount, that there was a time, when their forefathers passed in canoes the tops of the highest trees, which were then all under water. If the kind reader will call to recollection, that the traditions of a deluge were found in the Hieroglyphics of Egypt, and amongst the sacred documents of the Inkas, this (rather natural) fact may be the only one, in which the religious (if it may be thus termed) belief of mankind may converge.

Four miles from Packers, the road turns to the S.W., the high range to the East disappears, whilst that to the right approaches the road. At noon, a breeze from the N. E. refreshed the air. We stopped at a small plain, where several roads branch off to different stations. To the left, that of Mr. Campbell, (Good night Barlow), Keith's (Monkey Dillon), to the right,

a station of Bunn's. This place was only a mile and a half from the Murrumbidgee, but extremely barren for many miles. I had a few drops of water in my field bottle, but men and horse were compelled to go without, although two of the men went with the barrel, supported by means of a pole upon their shoulders (the way they usually managed), some distance in search of it. We left this inhospitable place very soon, however the appearance of the country did not change, and we arrived after several miles work, at another very barren and rugged plain, round and encompassed by hills, like the funnel of some volcano. Small lumps of Gneiss, not properly pebbles, were lying all about the ridges, as if left there by the retreat of a recent deluge. However, on the N. W. corner of this Plain, we found finally one of these circular deep waterholes, I characterised in page 25. In this lonely place we were met by a prisoner, belonging to a neighbouring station, who barefooted and covered with rags, reminded me forcibly, that I was in a land of banishment and expiation. I asked him how he came to be so badly off, he replied that the slops were issued very irregularly, and was besides of the very worst description. He was also all over affected with the Syphilitic disorder, and told me, that many men were in the same situation, without any surgeon at hand. I shook my head, as it appeared to me, as if some demon sentenced to perdition was addressing me in this valley of desolation.* I had no medicine with me for such cases, but I offered him my good services, when returning to Sydney. He declined every offer with a mournful resignation, saying that he should soon be entitled to freedom. Here the thought struck

* One of the Sydney Papers (called the *Sydney Herald*,) which owed its momentary prosperity to the low price, first established by it in

me, that there is no regulation as to master's issuing to their assigned servants, slops of a substantial kind. Indeed the principal superintendant of convicts is setting a very bad example in this respect, as I was told by several settlers and magistrates, even within 80 or 100 miles of Sydney, that the slops which the men get upon leaving Hyde Park Barracks, (and for which every master has to pay £1 per head), are of a worthless description, so much so, that the men commonly arrived at the farms bare-toed. I know myself, that I once got a young boy from the barracks, for whom I was obliged to take out shoes immensely too large, no others being in the stores. *Nefandum Regina!*— The man pointed out to me a rather high range 16 miles East from this place, called Bredbow-range, where there is some stations. Half a mile from hence is Jun-

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the colony, not independent enough to be a *bona fide* opposition or reform paper, has, however, taken up some time past, a bauble, with which it plays childlike without plan or aim, and this is the crying out for an increased severity in the punishment of prisoners. It is indeed a shallow, and at the same time a pityful system of Colonial Reform, which this paper engendered, consisting chiefly in a multiplication of lashes, and an increase in the weight of the cat. The two young printers under which firm this paper is written, should be reminded, that no man however situated, (nor indeed even brutes) can be managed by the scourge alone. The mis-government of our prison population, lies not chiefly in the leniency of the secondary punishment Act, (which, it is said, owes its origin to the head of our honored and independent bench, Chief Justice Forbes), but in the too great accumulation of assigned servants in the hands of a few, and in the little attention which the present government, and in consequence private individuals pay to their improvement and reformation. Compare the energetic regulations with respect to the cleansing, diet, cooking, clothing, &c. of prisoners, enacted lately by the Legislature of Van Dieman's Land. It is easy to pass an Act such as the above, but it ought to be accompanied with a profound study of, and energetic personal investigation into, the situation and management of those men—but the low state of health of Governor Bourke seems not to allow him to perform such laborious exertions, as the daily more complicated circumstances of the colony require.

gelera, a station of Sir John Wylde. The distance from Mikelego to Jungelera Plain, is 12 miles. The Murrumbidgee is 1 mile hence, and then so far as to a distance of 15 miles, the country is composed of ranges and very much broken.

As it was not late in the day, I pushed on for Gunguandra, another of Mr. Wylde's stations, 8 miles distant. Beyond Jungelera Valley, the road turns to the S.E., and we passed all the way forests of blue and white gum, but remarkably destitute of any underwood, to which cause the want of moisture and water must be equally ascribed. It was in this place that I found a lump of splintery Silex, which appears under the *Lens* to be coloured with some reddish substance, and in which small grains of a very bright ore are interspersed. This is therefore the sixth or seventh kind of ore discovered by me in Australia. I saw after 6 miles work, that we could not reach Gunguandra this evening—I was therefore obliged to stop, although not a trace of water was to be seen. I sent away two of my men, but they returned without, after having gone far in search of it. Luckily I had filled my keg at the water-hole of Jungelera, and we made shift with this.

There is always a great supply of dry wood in Australian bushes, as several sorts of the Eucalyptus have unproportionately long (tortuated) branches, which are broken off by every wind; but to keep up a fire the whole night even by these means, would be nevertheless too troublesome. Australian travellers have recourse therefore to a plan, which the internally rotten and decayed state of several of our gum trees, must have suggested very soon. In this way we made a fire to-night, at the bottom of such a tree, which in a short time exhibited one of the finest scenes of nature, I ever saw of this kind. The decay of our gum-trees is not

confined to the lower part of the trunk, but extends all up the tree, and besides this decay the internal texture of the wood is so splintery and impregnated with resinous matter, that the fire ascends with surprising rapidity. Scarcely is such a tree lighted at the foot, than some of the lower branches begin to evaporate and smoke, this proceeds quickly to the higher branches, until the smoke bursts out of some spiracle or hole of a branch; finally condensing and increasing, a lively flame springs up in the midst of verdure and apparent life, and illuminates like a Bengal fire all the adjacent wilderness and solitude. Such spiracles multiply in number, and this phenomenon continues thus for many hours; until first branches, consumed by the action of the fire, separate from the trunk, then the solid exterior of the trunk itself being weakened from the same cause, the tree falls with a noise, which echoes through the silence of the night. Tents and carts must therefore be kept out of the reach, this however is not very easy, the nights being sometimes so very cold, as to induce the men to approach even to such a dangerous proximity. Almost all forests contain gum-trees burned in this manner, some of them erect, although the bark alone remains, others lie upon the ground, and harbour a quantity of Opossums, and Kangaroo-Rats—and in the Alps, several other undescribed animals. On Sunday morning, (9th Feb.) we pushed on for Gunguandra, lying about 2 miles S. W. from the spot, where I had passed the night. Some savage-looking prisoners received me in their hut, but seeing the easy and quiet manner, in which my party proceeded, I was every where received well and with civility, and I must confess that many of the lowest of this class have manifested much British pride regarding the Zoological Gardens, British Museum, and such institutions of the Mother Country.

This hut is situated in a small enclosed valley, the rocks of which are the first, exhibiting a decided *primitive* character. Behind the hut is a hill, on which I collected two species of Exarrhena, which genus very much resembles the Scorpion grass (Myosotis). To the right of the hill are some meadow-like plains, and opposite the hut is a well, the temperature of which, was at 10 A.M. 63°. At noon, the instrument was 84° in the shade, 106° in the sun, in the well 64°. About the well we caught many insects, amongst which was a very singular sort of gad-fly, (Oestrus), which I previously remarked on the windows of Limestone Cottage, but did not mention while speaking of that place, as my observations thereon had already taken up a large portion of these pages. It is about double the size of the common fly, and of nearly the same colour, excepting that the back part of the body is brown, and marked with a longitudinal line, as well as a spot of the same colour near the implantation of the wings. I saw it flying about the windows hunting after the common flies, which it grasped with its hind legs, and commenced sucking them with its sting. The luckless captives buzzed much, the tormentor walking them about until it let them fall dead. Although the room was full of common flies, they kept from the window as much as possible.

The Murrumbidgee is S.S.W. hence, again one mile distant, and it is very obvious, why the persons who first penetrated into this country (Mr. W. C. Wentworth was the first, who had a cattle station here), kept near the river, avoiding, however, its enclosing ranges, and thus road and stations were established in their present position. In the hut, I found the stock-keeper of Mr. William Bradley, to whom I had a note from his master, whose station is four miles distant. It is usual among the men on Menero, to pass their

Sundays in mutual calls, having shaved and cleaned themselves and swept out their huts, the whole presents a rather patriarchal appearance, however, all looks extremely *masculine*, the conversation also is mostly confined to the topic " in such and such a hut they have grog." I must here likewise observe, that after leaving Mikelego Plains, we saw no more white females, although we travelled upwards of a hundred miles on stations. In the afternoon the Stockman returned to his hut to prepare for my reception, and we followed him with the cart, with the pleasant anticipation of reaching this evening the first of Menero Downs. We passed thro' dry barren plains, the herbage of which, literally scorched by the heat of the summer, presented a yellow autumnal appearance, at length we arrived at a Creek, which, running in a W. N. W. direction into the Murrumbidgee, is considered the northern limits of Menero. As Menero will constitute ere long, some of the most important counties or dukedoms of Australia, I named this Creek " Earl Grey's Creek," in commemoration of that great historical personage of our age. In one place the banks of this Creek, were five feet high, and composed of a sandy alluvial soil. A short distance from the Creek is a hill, whence I for the first time beheld the Murrumbidgee beautifully winding through the plain of Bellebalaing. From this situation, two mountains were also pointed out to me, as being beyond even the "Snowy River," bearing S. 195° E., 50 miles distant. To our right the Murrumbidgee was only half a mile off, its left (W.) bank being backed by mountains of 1,200 feet high. Thus we arrived at Bililingra, a station of Mr. York's, the low roof of the hut being implanted in the main declivity of a hill, pre-

sented rather a wild appearance. From hence, we heard the Murrumbidgee murmuring over its gravelly bed (a rare occurrence in Australia), and after fording the same, we arrived at Ballebalaing hut on Menero.

PART THE SECOND.

*TRAVELS THROUGH, AND DESCRIPTION OF MENERO DOWNS.**

THUS I was on Menero Downs, the name of which is just emerging from Geographical obscurity. The present plain (called Ballebalaing, alias Bulangewaing), extends from N. N. E. to S. S. W., four miles long by one and a half broad, and is shut up at the south side by a range which is barren and thin-wooded, as are also those which enclose it entirely on the E. and W. sides. Near the hut, the river in some places hastes over a rocky or gravelly bed, in other parts it presents several fine sheets of water, overhung with interesting species of Leptospermum, boarded with reeds and bull rushes. I was much pleased at finding a large tub on its banks near the hut, of the water in which I

* It was rather late, that I had an opportunity to see the paper of Captain Currie, R. N., who in Mr. B. Field's "Geographical Memoirs" published his "Journal of an excursion to the south of Lake George," in which he discovered (in 1823) Menero Downs, and the Australian Alps, the outskirts of which are called by him, "Murrumbidgee Mountains. *(The kind reader is requested thus to correct what I said about this discovery, p. 8).* However it would require too much time to bring the stations of the Captains (so far as they go) in accordance with my route, besides it is so very tedious to trouble ourselves with data, of which several are, for instance Captain Curries South Fish River, probably already placed and rectified in Major Mitchell's new map. But, it is a fact belonging to history, that a British Colony is deprived of the use of a map, made at her expense, and printed now four or six months ago.

availed myself to make many thermometrical observations, which are in continual variance with that observed in the river, and will yield interesting facts respecting the relative incalescence and refrigeration of dead and living water. The wind at 6 P. M. of the same day (9th February) was S. S. E. and fresh, at 7 P. M. air 64°, river 76°, by evaporation 62°, tub 73°. As Mr. Bradley's stockman seemed willing to accommodate me in the best way possible, I determined to make here another stay as at Limestone, to which the delightful banks of the river so much invited. Rising early next morning (10th February), the air was alpester and very fresh, the atmosphere cloudy, the ranges covered with fog, and there was a dead silence about this extensive plain. At 6 A. M. air 58°, river 70°, tub 60°. At noon, wind N.N.E. slight, thermometer shade 86°, sun 98°, river where exposed to the sun 75°, evaporation 72°, tub where exposed to the sun 72, evaporation 89°. The river at this place was 30 or 40 feet broad with a very rapid current, but much interrupted by rocks of which the bed was composed. This rock was a micaceous shiste of a reddish brown colour, containing a great quantity of Oxyde of Iron, and with the Mica a proportion of Talcum and very little Quartz. The Strata are very thin and slightly bent, the angle of stratification being 70 to 75°, almost vertical. My first endeavour was to trace the Murrumbidgee upwards, which I was able to do to a distance of about five miles. The first part of the way was rather annoying, the stream-bed of the River being covered with a high and stout grass, growing in large and thick solitary tufts. After passing this plain ground, I found the river flowing through a narrow valley, lined by rocky, or thinly timbered hills of 150 to 200 feet high. Its general direction is here N. W, although

from its rather tortuous course, and the projecting angles of its banks, it is seldom visible to any considerable distance. Two gullys, supplied in rainy weather with water, disembogue themselves into it from the West side. The banks of the river are from 5 to 12 feet high, the left or westerly higher, and almost perpendicular, however, there are plenty of fine alluvial patches, where as well as upon the adjacent rocks, a number of very fine plants (Veronica n. s., Aster n. s., &c.) are growing. The current of the stream is very rapid, although interrupted by rocky banks, with some fine Acacia, Leptospermum inclining over its pure and limpid waters. From hence to Yass Plains there may be at some time a canal, but never a simple navigation. At these places, the banks and adjacent ranges are composed of a granitic rock, the general colour of which is a paler or darker flesh-red, however, the rock of the banks is entirely destitute of Mica, (the Granite graphique of Hauy), whilst in those of the more distant ranges, there is a vestige of this mineral, and some chloryte. Many solitary lumps of a white silex are scattered about the alluvial soil near the river. As far as the picturesque is concerned, nothing can be more beautiful than these secluded banks, the flesh-red masses of granite, resplending in a semi-tropical sun, and covered with tender shrubs and flowers, the tepid shade of the winding valleys, the freshness and murmuring of the stream, and a solitude which transforms the passing beholder into the Proprietor of all he sees—

"O! that *such* desert were my dwelling place."

I cannot omit mentioning a very fine beetle, which I never found in any place but this. It is an inch long, its wings and thorax are black, with fine white spots, however, its antennæ are of extraor-

dinary construction, being like a fan, composed of very tender ribs and of a concave shape. They are rather copious here, and fly about with great celerity, when their antennæ gets very conspicuous. By reason of these features, the people on Menero call them devils. I observed them sitting much upon the flower of the Kangaroo-grass (Danthonia). At 7 P. M. the wind was S. E., thermometer in the current of the wind 75°, out of the current 74°, river 76°, tub 70°, descending from the latter through evaporation to 58.

The next morning, (11th February, in the middle of the Summer), was again a Menerian one, air 54°, thermometer placed in the dewy grass 52°, river 72°, tub 59°, the lively devils of the preceding day, hanging stiff and motionless in the spikes of the Kangaroo-grass. In the course of the day, I made an excursion towards S S.W. After two miles climbing over rocks, we arrived at a more even place, and I found one of those curious plains, called on Menero, "dry lakes." These are circular flat places of smaller or larger extent, perfectly level, the outsides of which are covered with slight verdure, whilst the middle parts have a loamy, gravelly, or (in the larger ones) rocky surface. I collected on the border of this, a very handsome Erodium, with blue flowers, which like many plants of these latitudes, may be considered new ones, however, I lost this by some casualty. The banks of this lake towards W. and the ranges, were composed of a singular sort of Gneiss, partly of a dirty and rather muddy colour, of soft texture, so as to break easily under the hammer. After I had collected some plants and insects round the dry lake, I turned towards N.W., where we arrived at some perpendicular rocks of granite, and then at the bank of a tributary creek of the Murrumbidgee, which from the grandeur

of its scenery, I named "noble creek." It exhibited to me, in an unprecedented way, the nature of Australian creeks, it being sometimes nothing but a ravine of micaceous shiste (of which rock the greatest part of its banks are composed), through which in rainy weather (the period round which turns the totality of Australian nature), the water rushes like a cataract, leaving behind debris of rocks and timber. Then followed again a more even gully or valley, where fed by subterraneous springs, fine, although not very extensive sheets of pure water extended their specular surfaces, overhung and interrupted by huge rocks, and bordered by a verdure of smiling and interesting flowers. I could not forbear sometimes sitting down at such delightful places, and not busying myself about any thing in particular, remaining entirely absorbed in reflections upon the indescribable beauty of the surrounding scenery; and I am sure, if many of our Town-people could imagine the beauty of the Australian interior, the freshness and elasticity of its air, they would not bury themselves in a town, possessing (as it *now* is) all the curses and pest of social life, without even any of its refinements, to say nothing of sublimities. Noble creek runs generally E. or N., and receives succesfully two tertiary torrents from the S. and one from the N. W. In these places I found different sorts of rock, the strata of which were succeeding each other in great variety, thus was a sienite composed of fine green Amphybole and white Feldspar, another sort of micaceous shiste, the mica of which was of a strong metallic lustre.* The anomaly and irregularity

* I was in many places on Menero, that my attention was fixed by the people upon the *Gold*, which they said is to be found in Creeks, &c. However, I knew it always before, that it was nothing but the metallic scales of Mica, they were pointing out to me.

of Australian torrents was throughout visible in Noble Creek, its water-holes and water-sheets decreasing in size, as we descended its banks, when finally the place, where it empties itself in the Murrumbidgee (always understood in the time of floods), was barred by a large sand-bank; which, however, was at some distance from the embouchure of the creek. Returning home, the stock-keeper and others gave me the following information about the Murrumbidgee: Its course upwards, from hence, is known about seven miles; whilst its banks are barren, rocky, and mountainous, but afterwards it forms a very obtuse angle, and comes down from N.W. (which must be somewhere about *Kuma*, vide infra). Its heads cannot be far distant, but they are unknown. The floods of the river are considerable, commonly two hundred yards beyond its bed; but in the preceding year (1833), they were excessive, covering all contiguous flats, and lasted from March to November. The former month is that in which its annual rise takes place, which, however, is never very sudden. The periodical rising of the Murrumbidgee cannot be easily explained, rains being there, generally speaking, irregular and rather scarce, as on Gonderu and Limestone-Plains. But this fact is equally incompatible with the melting of the snow in the Alps, March being there, the end of summer or begining of Autumn, when little or no snow may be met with. However, speaking of seasons on Menero, I perceived from the state of vegetation in February and March, and was told too, that the proper flower-season (the middle of Spring) is Christmas, which would better coincide with the end of the inundation in November. They also spoke to me here, and on other stations, of a summer and winter-grass, upon which the cattle are depastured in these respective seasons; but at times, when floods or snow cover the flats, and

downs, they are obliged to retreat among the ranges, and to feed sometimes upon the young leaves of the Eucalyptus.

As I remained four days at Mr. Bradley's station, I had ample room to observe, that the vegetation had again considerably changed, at the entrance of such a *natural limit* as Menero: to which many causes, as the geological formation of the country, composed of the most ancient primitive rocks, and the existence of an ever-running stream are contributing. Indeed, every spot near Ballebalaing would be interesting for the Botanist of leisure and experience. Near the hut I found a small plant covering inundated patches, with its low but splendid tapis; the flowers of which being white and carneous, appeared like pearls strewed upon green velvet. This plant belongs to the family of Caryophylleæ, but its beauty gets entirely lost by drying. On other parts of the banks three species of *Umbelliferæ* were growing, of which one resembled parsley, *Apium*. Grassy places were embellished with a species of *Cyathodes*, the genus *Podolepis* (originally discovered in Van Diemen's Land) first appearing, with its large scaly yellow calyx, as well as a small earth-creeping Bindwood (Convolvulus — sagittifolius.) And when many of the antecedent plants reminded the Traveller so strongly of European genera, it was a beautiful species of Cinquefoil *(Potentilla—Menerensis)*, * which transported us altogether

* These plants surprised even here many persons, amongst others "*Baron Huegel*," a German Gentleman, who obtained a good practical knowledge of Australian Botany, by his visits to Swan River, Van Diemen's Land, and within the limits of our Colony. He possesses a fine botanical nursery-garden near Vienna, of which there exists a printed Price Current. By the great many seeds he collected in the Australian Colonies and elsewhere, he will not only contribute to the advancement of Horticulture and Botany, but his journey will turn out to him a very lucrative speculation.

upon European meadows, resembling as to the first appearance, so much our Goosegrass cinquefoil. In the same way were adorned the banks of the river, where two species of speedwell (*Veronica*) were growing. One is probably the *Veronica Derventia*, the other is a highly ornamental herb of two or three feet high, with glaucous leaves and a spike of very tender sky-blue flowers.* Several nearly fruticous species of *Senecio*, and a fine Aster of the same growth (rosmarinifolius ?) vegetated amongst the rocks; and another *Composita*, much allied to *Erigeron*, grew in large tufts along the Creek.—I collected a great many of, and paid particular attention to the pebbles of the Murrumbidgee, which having been carried down from a long extent of a mountainous country, are very varied and beautiful, and they deserve more skill and attention than I possess, or any man here can bestow upon them. They are composed of solid and porous Basalt, Trachyt of various kind, Chloryte, very hard Breccia, Jasper, silicious Limestone, † argillaceous Shiste, Mica Shiste, and some other even simple Minerals.

Wednesday, (February 12th), was consumed in the arrangement and packing of my different collections, which I did with enough ease, although hut and yard were scarcely ever free from travellers. There is, indeed, a greater trafic and motion on Menero, than our Legislature (not even the name of these downs appearing in any of our *Acts*), may believe. This time of the year is the conclusion of sheep-shearing, where the persons employed in it (free and bond), were returning home, or to the head-stations, from whence they had been taken for this purpose. Some

* V. —— glaucescens, spicis elongatis terminalibus, foliis sessilibus oblongo-cordatis acuminatis, crenatis. Planta suffruticosa ulnaris.

† Analogous to the formation of Goulbourn.—Vide p. 30.

of the former earn a good sum at this employment. It will not be here out of the way, to mention something about the present financial relations of the out-stations in New South Wales. Money is a thing seldom met with after leaving the main road, and it was with great difficulty, that I could get two pound-notes changed at the Township of Goulburn. After this, *Orders* were the order of the day, and I even once saw one for the sum of eighteenpence. It may be, that the particular (penal) circumstances of the Colony may influence the monetary system of our outstations, however it is nevertheless certain, that incredible distress, for want of a sufficient circulating medium characterizes the administration of General Bourke, marring every sort of business. His Excellency was the first Governor, who thought it a benefit to the Colony, to lock up, and shew off to the home authorities at one time about £150,000 in the Colonial Treasury, although this accumulation being perhaps the half of the whole specie existing in the Colony, created in this infant society, much and inexpressible obstruction and embarassment.—The present day was warm, towards evening, a S. by W. wind sprung up, and it got cold. At 7 P.M. the foot of the mountains was covered with a sort of fog; air 62°, River 72°, evap 58°, tub 70°, evap 55°.

We left Ballebalaing, Thursday (13th Feb). The wind was N. by E., and the air again temperate. Our direction was toward S.E. We saw the running of the Murrumbidgee a good distance, and as far as we did, its course was from S.S.E. to N.N.W. We made a rather steep hill, where we lost the track, and had, as I often had before, recourse to my compass. On the top an extensive view presented itself, and I perceived the barren range, which borders the plains to the S. To the W. a prolongation of the Ballebalaing Moun-

tain started towards the Firmament, whilst to the E. the chain receded further back. We reached now what is called "the Little River," a tributary stream of the Murrumbidgee. In dry weather, there is not a continual run, but it presents a number of different reaches of water. We travelled two miles on its banks, where its course was N,W., then we perceived it coming from an Easterly direction. The rocks about this river are Gneiss, composed of rather thin strata, and resembling the formation near Canning's Pass. We travelled now S. by W. four miles, and arrived at the top of that barren range, which shuts up Ballebalaing-plain towards the South, from whence I was surprised with the most extensive view, hitherto had on my journey. It appears hence, that all ribs of the great mountain-yoke, which we had now to the W. (running from S. to N.), were diverging from the main chain in a S. E. direction. It appeared further, that the great Nodule of this mountainous system is N.W. from Mr. Bradley's hut, where many imposing mountains are towering one above another. We travelled now upon a plateau, which divides two extensive plains, Ballebalaing, stretching N.N.W., Meneru S.S.W. A watershed which is hereabout, is obliged to round a hill to meet the Little River. After two miles journey S.E. by E. a solitary, perfectly triangular hill appeared to my left, surrounded by a perfect level flat, to which I gave, in commemoration of an ancient and powerful association, the name of "*Masonic Hill.*" Travelling again along some forest, we perceived through the opening of its branches a scenery, as if a yellow ocean was extending behind; it was the second down of Menero, furrowed and divided (like waves) by longitudinal small ranges. To the W. was a double range of hills, between which (about 4 or 5 miles distant) the Murrumbidgee is running. Descending from the slope

of the Plateau, I perceived with a sort of inexpressible (social) feeling, two gentlemen walking in the plains under me, it was Dr. Reid and a friend, the first being for the sake of superintending the shearing of his flocks, in this distant district of the Colony. After enquiring from some passing men, the name of this Down, they called it Meneru. This was then the κατ' εξοχεν Meneru. It is very probable, that Captain Currie must have reached as far as this place, because he says, l. c. p. 376. "From these natives we learned that the clear country before us was called Monaroo, which they describe as very extensive." It is therefore only an error to call all these successions of Downs, which extend from Ballebalaing until *Plato's Plain*, and perhaps, but not known to me, as far as Bass's Straits, Meneru, the latter being only a specific name. To avoid this inconvenience, I have given to the above the name of Menero, by which they might be distinguished from the latter partial locality. As to the blacks, it is obvious to me, that they have no general name for comprehending any aggregation of objects whatever.

After I had pitched my tent, I could not resist giving this very evening a call to Dr. Reid, whose tent was at some distance from the hut of the sheep-station. It is also the custom in Sydney, to keep away from the contact with prisoner servants—though many may deserve this treatment, it ought not to be made a general practice. Dr. Reid's tent presented a thorough Colonial appearance, being about fifteen feet long, and supported by strong poles, where tea-chests and rum-casks served as tables and chairs. There were other guests present, and we partook of a substantial field supper, consisting of fried cheese and other eatables, and concluded with a moderate potation of grog, (properly speaking the circulating medium of our out-stations), when the conversation turned on politics, several

of the company arguing, that the Colony ought to have now a Civilian for a Governor, which I *translated* thus, that the Colony ought now to be treated, at any rate, civilly. A man conducted me at rather a late hour, over stumps and reeds to my encampment.

On Friday (14th February), I began to examine the heights which were to the W. of the hut of Meneru. They were composed of large masses of Rocks, similar to those of the Murrumbidgee behind Bradley's hut, to wit, a flesh-red Granite without Mica; however this formation is mixed with banks of a soft gneiss, which form considerable masses. The latter is composed of thin, rather undulated strata, the quartz being colourless, and the feldspar of a milky colour, which is very nearly decomposed into Caolin. The whole Gneiss is interspersed with garnets, of which however I found none either of a large size, nor a pronounced chrystalization. Wandering over these huge masses of rocks, I arrived at a ravine, in which the waters congregate in rainy weather, to unite (as all creeks hereabout do) in the Little river. There were some cavities under the granite rocks, where very singularly, small banks of a *Lime Tuffa* protruded on the surface. I saw with great edification these most recent operations and products of an active nature, and I felt myself happy to observe, that in this distant quarter of the globe, these alluvial formations are going on in the same way as in Europe. This Tuffa is very soft and spungy, in which however botryoidal and tubular parts are to be met with. The same as in the European Tuffa, I found in ours also some fragments of roots; belonging to still existing plants. The Tuffa in itself is white, but being mixed with a quantity of soil, the whole presents a more dirty appearance. Treated with sulphuric acid, it effervesces considerably. It is strange, that such rapid waters, as must flow occasionally in this gully,

can deposit any mass, thus constructed as this Tuffa is, and it is more to be supposed, that this operation takes place in the cavities, after the main waters have receded, and only some stagnant puddles are remaining. To the E. of the hut, are two springs, of which I noted the following. At 2 P. M. of the above mentioned day, the wind was W. and the instrument ranged in the shade 84°. The spring more to the N. ranged then 74°, the mercury descending by evaporation to 64°, the temperature of the mud surrounding that spring was 69°. The other spring a few feet more to the S., ranged at the same time 64°, evaporation 58°. At 7 P. M. the wind changed to E, the air was then 62°, the first spring 64°, evaporation 57°, second spring 61°, evaporation 56°.—Walker whom I had sent out to shoot, came back towards evening, and told me, that proceeding 3 miles W. he reached the banks of the Murrumbidgee, and had found some little plains, where a good station could be established, and a flock of a thousand sheep maintained. I shall have occasion to mention many others, and far more extensive places in the course of this work, where any settler, or any free beginner (ticket-of-leave ought never be permitted to squatt), may find for years a gratuitous place of abode, or a pasturage for his flocks and herds.

Saturday (15th February).—The morning was calm, and at 7 A. M. the air was 61°, the first spring 59°, evaperation 57°, the second spring 61°, evaporation 56°,6. After 9 o'clock the E. wind set again in, and blew the whole day very hard. I visited Dr. Reid, who told me the following about his sheep-farming. From 900 sheep shorn at this station, he had obtained fifteen bales wool at 245lb each. The produce of his whole flocks on Menero, consisting of 2192, was 8200lb., and about 600lb refuse. One man shears commonly 70 sheep a day, but there are some, who shear 130. Such free

men could do exceedingly well, but it happens generally, that after having accumulated their wages for one or more years, they do not employ it to buy some small bit of land (our Government sells no land, except in large parcels, and therefore *none to the poor*), and to establish themselves accordingly, but go to Sydney on a speculation, when they fall in with some bad friends, and drink 40 or £50 in a short time. The winter is at Meneru, as I was told, cold, foggy; these fogs not dispersing sometimes until 8 P. M. The snow lays only for a few hours, and here also cattle and sheep must feed in the winter sometimes on young leaves. I have yet forgot to remark, that the distance from Ballebalaing to Meneru is twelve miles.

Sunday, Feb. 16.—Preceding evening and night after the setting of the moon quiet, and in the beginning temperate, then fresh. To-day 6 A. M. air 54°, first spring 55°, 6, dewy grass 52°. There was first some fog, it disappeared, the morning got fine—" the hand of fate was on the curtain, and about to bring the scene to light."

W. Scott.

Acquainted by experience with the manifold windings of human life, I had expected from my very starting, that some circumstance or other might occur, which would give to my journey a *decided* direction, and I was finally not disappointed in this anticipation. The person who thus, like the spell of fate was expected by me, appeared finally, though in a rather humble apparel. I was this morning occupied about my cart, when a simple dressed man on horseback approached, and said to me, that he had heard of my expedition, and should be happy if I would honor him with a call at his place. He promised to give me information about my following tour, which I soon perceived was important and useful. I agreed to proceed to Mr. Bath's (this was his name), who proved to be an overseer of Messrs. Cooper, Holt, Roberts & Co. in Sydney. After I had packed up my cart, we went on our way towards Kuma. Our direction was for the first two miles South, then one mile S. by W., leading over a barren land, without any water or trees, or even shrubs; the very grass was burnt away by the preceding heat, and the wind raised and blew up whirlwinds of dust, which was flying before us in these solitudes. Then came some undulated, mammellon-like hills, as if produced by the immense waves of an agitated ocean. We felt exceedingly hot, which sensation was increased by a momentary, torrid gale from E.N.E. Our subsequent direction during two miles (the distance from Meneru

to Kuma being five miles) was first one mile W.S.W., and the second mile W. to N. We passed in the beginning another *dry lake*, a spot perfectly round, like a menage, forty yards in diameter, and encircled by a zone of reeds. We turned finally, as I said, W. to N. and arrived at a water-run, overgrown with fine luxuriant grass, where a number of fine cattle were grazing. The hut of Kuma appeared, backed by some rocky hills, and being at the border of a fine water-hole. As the building of huts on Menero (and probably at all Australian out-stations) is always upon the same principle, I will give a short description of it. Such huts are built of stringy-or iron-bark trees, the stems of which being straight, require little shaping and adjusting. The bark of both these trees being besides separable from the stem easily and in long sheets, is one of the principal materials of our forest architecture, as the latter is equally used by our natives. Such sheets are nailed on the uprights, and form the walls, and of the same materials is the roof, all which produce of course a rather sylvan appearance. Such huts are composed, firstly, of the main room, in which a large fire-place is always fed with the robust branches of the adjacent forest. About this place, pieces of salted meat are hanging, ready, as it were, to glide into the equally large kettle, which is constantly boiling or simmering. Next to the fire-place is the table, and a place like an arm-chair, the exclusive lounge of the overseer or stockman, which of course was always ceded to the honored guest. One of the sides of this room opens into another place, where the beds of the men, also made on the long sheets of bark are visible. This place serves sometimes as a store for casks of beef, flour &c., and above this is a loft, where other articles are deposited. Many of the huts are kept in good order, but this is only accidentally, because I am convinced, that few masters are aware, of the vast influence of material cleanliness and order, even upon men's morals and feelings. As such huts are commonly near water-holes, where a quantity of the best *humus* and alluvial soil abounds, spots are often cultivated as kitchen-gardens, and the reader will be astonished to see in the course of this work, that I found at Mutong (the last out-station in that direction of the Alps), the finest sort of water-melons, cabbages, and other vegetables.

After we had taken our refreshment, Bath called my attention to some curious birds, which were swimming in the water-hole, and of which we soon shot a couple. There was no native

name given to them, but they belong to the family of Pygopodes, perhaps some genus about Uria or Colymbus. The body like a small pigeon, but of an entirely eliptical form, having no tail. The wings very small, the webs consisting of lobes, the head not at all like that of a duck, but with a straight, pointed bill. Their eyes shortly after they were killed were very curious, and glittering like diamonds.* As Bath was well acquainted with the stations in and about Menero, I noted from his information the following table:

Statistical Return of the principal Stations on Menero and thereabouts, in the beginning of the year 1834.

Name of the Station.	Owner.	Locality.	Number of Stock		How Long since Establishe'.
			Cattle.	Sheep.	
Waterholes, Dziliket etc.	R. Campbell, sen.	Menero etc.	----	22,000	7 years
Kuma	Cooper & Levy	Ditto	3000	1600	5 years
Pindjera	Dr. Ried	Ditto	2000	2000	4 to 5 years
Collerandong	Ryrie	Ditto	----	6000	2 years
Womerob	S. Bouleway	Ditto	700	----	5 years
Yayak	J. Slake	Murrumbidgee	150	----	3 months
Yuiquimbiang	Faithful	--------	400	----	6 months
Jijompeka	Wright	--------	300	----	1 year
--------	Mitchell	Murrumbidgee	600	----	1 ditto
--------	Gibson	Ditto	----	----	1 ditto
Wulwey	E. Buckles	Menero	700	----	2 years
Bobondera	Styles	Ditto	700	----	2 ditto
Eiemmondgy	T. Bird	Ditto	600	----	2 ditto
Jijedery	Brooks	Ditto	1000	5000	6 ditto
--------	Sherwin	Mt. Lauchlan, entering Snowy riv	600	----	3 years
Yinibrothers	Ditto	Menero	6000	----	2 years
--------	J. Moore	--------	1000	----	2 years
--------	Cooper & Levy	--------	700	----	3 years
Tomgrogin	White	--------	----	----	4 ditto
Benilingra	York	Menero	600	2000	5 ditto
Bulungewaing	Bradley	Ditto	800	----	2 ditto
--------	C. M'Guigen	--------	200	----	2 ditto
Buloka	Guise	--------	1000	----	6 months
Maranombla	E. S. Hall	Menero	500	----	1 year
Gilimatong	J. Hosking	Ditto	300	----	6 months
Biggon	Capt. Thompson	Ditto	200	----	8 months
Plato's Plains	M Laren	Ditto	----	1200	3 months
--------	Crisp	Ditto	300	----	2 years
Mutong	Cooper & Levy	Ditto	600	----	2 years
Arabel	------	--------	----	----	------

* Colymbus?—oculis brunеis, punctis albo-luteis micantibus, pupilla externe circulo albicanti, micanti—nigra.

Gingiban G. Hill 1200 = 6 m.

Asked about the particular breed of the cattle depasturing on Menero, Bath said that nothing could be made out, it being now so much crossed. Of the tribes of the natives, which visit this hut sometimes to the number of sixty and seventy, I heard the following: the Menero tribe is already very weak, consisting of about fifty men, they are entirely tame (indeed not civilized, but corrupted), and wander as far as Yass and Limestone Plains. The Kunora alias Gundanora tribe, over the Snowy river, and in the Alps, may consist of 300 men, they never go farther than Menero. Then is the Omeo tribe, near the lake and Stanley's plains. The other tribes to the westward are numerous, but very shy. The number of the men in all the tribes exceeds that of the women, some of the former are very old, and have hair white as flax—others are perfectly bald. There are regular doctors amongst them. For the bites of snakes they scarify the wound, and several persons suck it, after which they wrench out their mouth. This operation is repeated until the patient is exhausted. The doctors perform also on other occasions bleeding with a fine stone, they catch the blood in a bark vessel, bake it, and shew the place where the disease was. The parents assign their children for marriage. Males bathe in ponds and water-holes, but if they see a woman doing so, they do not drink out of it. They eat Yams (of which hereafter), Biggon, a root of a sort of Sonchus—ants, grubs (upon which they put some broken charcoal), and their own parasites: and I heard even, that they bleed themselves in cases of great hunger, and eat their blood baked. The frost generally begins about Kuma at the latter end of March, but it is not rare even in January, and this year it nipped about that period all the potatoes near the hut. In the winter ice occurs even in the huts, and in that of 1831 the snow was knee deep, remained two days on the ground, and some shallow places in the Murrumbidgee were so much frozen, that a man could slide over.

I come now to a rather important part of my journey, and this is the description of a mineral spring. The search for precious minerals and mineral waters, was, although by no means my principal, still one of the objects of my journey. I calculated as far as the latter are concerned, that the visiting of this salubrious Colony by invalids from the surrounding tropical countries, would much increase, were such an inducement, added to those already existing. I therefore enquired frequently amongst other things, as to the existence of springs of a curious kind. It was at Limestone

Plains that I heard first, that such a spring existed on Menero, and the extravagant reports told, such as to its occasionally exploding and cracking the adjacent rocks etc., increased my curiosity to visit it. From Dr. Reid as a professional man, I also of course made enquiries, but he knew it only from hearsay; and although there were arrangements made for our going there together, by some accident, we were prevented. If any person except Bath, says, that he went with me to this spring (and many things were indeed said, and done to vilify and annihilate this my discovery), he says—a falsehood. After I had made enquiries from Bath about this spring, and arranged and prepared every thing required for conveying a water, impregnated, as this was supposed to be, with gas (preparations unknown to any person, who visited the spring before or after me), I set out on Monday, the 17th Feb. for the place. The preceding night was very cold, and at half-past five in the morning the air was 56°, the water in the tubs 50°, the instrument falling by evaporation to 49°,3. We rode 2 miles S. along the creek, in the fine grass of which a quantity of fat cattle were grazing, our direction was then two miles S.S.E. and two miles again S. We passed long extensive downs, whose vegetation was now all scorched, all looked yellow and livid, and this singular aspect, unvaried by a single tree, and only clothed with very scarce shrubs of Hakea or Bursaria is one of extreme originality, characterising these far extending, lonely downs. Amongst the herbs, I saw a few parched specimens of Eryngium ovinum, several Rumex, and a few Syngeneseous plants, resembling Chelychrysum etc. Now and then our way was intercepted by long undulated hills, and the horizon was bordered with small peaks and prismatic, elongated mountains. Amongst these were the three Brothers, which were S.S.W. eight miles distance. These conspicuous heights are the only bearing, which the lonely stockman or hut-keeper, who is obliged to go from one station to another, has, and Bath told me, that a few years back, when this country was first inhabited, several men were lost and starved by mistaking their way. We saw also the bones of cattle, which died here some time ago of a very mortal disease, called the black leg. There was a curious mineral to be found on the surface of these downs, namely lumps of a Jaspery Clay-Iron-Stone, which however were of no large size. They have been rolled by some diluvial revolution, and were smooth and shining at their surface. After ten miles travelling, we perceived suddenly a range of huge,

escarped rocks starting from amongst the downs—it was the locale of the spring.

Scarcely descended from my horse, I was surrounded by several men, tending a flock of sheep, which was depasturing there. I asked them where there hut was, but they said, they had none, and although this station was occupied for several months past, they have been obliged to live in a shelter under the rocks. As I had no tent with me, I felt no great pleasure at this news. I soon penetrated the whole management, which was here going on, and as the men surrounded me repeatedly, asking for physics to cure their rheumatic complaints, I said (shrugging my shoulders): "I had none." In fact, I ought rather to have said, that I, for my part, was not rich enough, to supply them (as every convict ought to be by law from his master in such a locality), with cloaks, substantial boots, trousers etc. However they gave me every thing they could, in the two days I stopped with them.

The basin in which the spring is situated, consists of a concave valley, of one mile diameter, the deepest part of which is stretching from S.S.E. to N.N.W., surrounded at some distance by undulated, barren hills. Almost in the center of this level part, are two masses of huge rocks about 2 or 300 feet high, divided by an even passage of about 200 feet, that to the N.N.E. stands insulated, whilst that to the S.S.E. is connected by some slight undulations with the surrounding ranges of hills. To the N.N.E., about 80 feet from the foot of the rocks is the spring, coming forth at the most elevated part of the flat, where it forms a sort of mamellon-like vault. I approached the spring alone, the words of the poet resounded within my soul:

> Egeria! sweet creation of some heart,
> Which found no mortal resting place so fair,
> As thine ideal breast.
>
> Ch. Harold.

When I arrived at the spring, it presented only a small cavity, the opening of which was about 8" diameter, the water was limpid, and a constant eruption of gas was visible. This took place in its original state (I opened it afterwards considerably), from two holes in the main cavity of the spring, which was about one foot deep. One such hole was situated to W.S.W., whence the gas issued almost continually from a perpendicular tube, the second spiracle was towards S.E., the gas escaped there from a horizontal tube in larger bubbles, but rarer than in the first one. At noon of the

above day, the wind was N.W., the thermometer ranged in the sun 102°, shade 92°, water of the spring 60°, the instrument when exposed to the air for 45 minutes, rose to 76°. At half-past two P. M. the spring was 59½°. At four P. M. the water of the adjacent pond was 72°. At six P. M. there was lightning to the E. and thunder, wind S.S.E., the air became cold to sensation, the spring was still 60°. I made this day the following experiments. At noon the water bubbled strongly, the intensity of which changes often, and as far as I could observe, without a certain succession. A tin pot filled with water became soon overlaid at its sides with bubbles, which covered after half a minute all the vessel, and began then to erupt. I had nearly forgotten to inform the reader of its taste, which is that of the most valuable mineral waters, as Seltzer and Cheltenham, to wit, a pleasant, slightly acidulous taste, *prickling* upon the tongue, and affording by this, and from its constantly low temperature, a very pleasant and disaltering beverage. As the relish for mineral waters is idiopathical, I was not able to drink more than a cup of it, but there are men who drink pints at once, and some found it very beneficial for the syphilitic disorder (rather common on Menero), constipation of bowels, sore eyes etc. Under such and similar occupations sunset approached, and I felt myself so much elated by the interesting spot I was in, that I determined to leave off all gealogical enquiries until the next day, and to enjoy sunset on the top of the huge rocks, which are at the S.S.E. of the spring. I ascended them with some difficulty, but was rewarded with a sublime and extensive view. Thence

The middle one of the Three Brothers bore W. 78°, distance 9 miles.
A conical very conspicuous mountain, S. 175°.
A high, long yoke of mountains, due N.N.W. distance 25 miles.
Another very long yoke, composed of several rows, due N. distance 25 miles.
A two saddled mountain projecting over all the rest, N. 7°, 40 miles distance.
The place where the hut of Bath is, appeared from here to be N.W. seven miles in a straight line.

The scene all around was composed of waste undulated downs, long projected hills amongst them, covered with a very few trees. At the foot of the rocks to the N. were some ponds of water, the direction of this run was from N.E. to S.W., and it was chiefly in the grassy land, which bordered this run of water, that the sheep could exist at the present moment.

When I had descended from my observatory, I found the men all busy to light and provide a good fire for the night, and a bed

was made for me on some hurdles in the open air, as their shelter under the rocks was infested with centipedes (Scolopendra?) of a considerable size. An Irishman in particular exerted himself, and he fetched logs upon his shoulders from the adjacent heights, which had at least 250 pounds weight, exclaiming every time he chucked one to the ground: "There is still some pith in an Irishman." At the cheering sight of the fire, and the tea and tobacco I brought with me, a general and very pleasant conversation ensued. The climate of this part of Menero was also represented as changeable and sometimes inclement, which however, it must be observed, appeared more so to persons wanting clothes. One of the men told me of the occurrence of hail-storms in this part, in which also entire lumps of ice are projected from the atmosphere.

The next morning, Thursday, Feb. 18, was foggy and unpleasant, at sunrise the air was 58°, spring 58°, the instrument descending by evaporation to 52°, 3, the pond of water at the brim 68°, in the middle 66°. I begun now with crowbars and hammers to break open and to enlarge the basin of the spring, and to examine the geological relations of the spot. The foundation of this whole basin is probably the same, as both masses of rock before alluded to—primitive limestone, the fracture of which however is tending towards the splintery. It is very hard, effervesces but little with acids, and as parts are of a rather white colour, it would yield a fine marble for architecture and even statuary. The rock exhibits no stratification, but a homogenous, solid mass. At one place, which forms a prominent angle near the spring, it presents an obviously polished surface. If this is the result of melting by lightning, or of some dilluvial revolution, is impossible for me to say. With the simple eye and far more with the lens, very small blackish grains of a metallic lustre appear throughout its mass, however there is no occasion for investigating minerals microscopically—in N. S. Wales. I found some other minerals about the spring, but did not trace their respective stratification in the main rock. (L'appetit vient en mangent. *A man learns to travel by travelling*). Amongst these are specimens of Diorit of a very homogenous texture, and blackish colour, and which bears the appearance of a columnar shape. The faces of these columns are corroded. Another mineral approaches Zeolite, its exterior is more corroded, so much so, that it looks melted—and scoriæ-like. The latter quality is far more visible in a specimen, which has the appearanee of burnt clay—and all this (conjointly with the analogy

of the spring shows, that besides the action of diluvium, igneous revolutions too have reigned once on that spot. Our primitive limestone is occasionally split into large crevices, and contains also, as is the case at Antiparos and in Languedoc,* some caves. Walker, who became while with me, a thorough *amateur*, tracked them out the first, and one or two were of a sufficient size for a man to enter; memorable to say, they contained large layers of native dogs' excrements, in which a great quantity of bones of minor animals—Kangaroo-rats, Bandicoots, Opossums (?) were imbedded. The bones are not properly petrified, but present the same appearance as the larger ones at Wellington Valley.† On the surface of these layers, some efflorescence was observed, which was lilac-red like the finest Cobalt. But I found there even some canine and molare teeth of larger animals, probably native dogs; it is difficult to say how these came there, unless they were brought as a prey by some of those gigantic eagles, of which I saw some very large ones (as large and larger than the Vultur barbatus of the Swiss Alps), in the environs of this place. The primitive limestone is then undoubtedly the stratum, upon and in which the operation of our spring is going on, but how different and various are the mineral masses which cover this spring. A vault as it were, which, whether it was formed coeval with the spring, or was constructed in a succession of centuries by the concretion and precipitation of it—is impossible for us to discuss, as it is perhaps beyond the reach of antropocentrical knowledge.

This large vault, which occupies the whole space between the rocks and the creek, is composed of Travertine, which, is of a more or less white colour, containing a number

* D'Aubuisson Devoisins traitée de Géognosie. Edit. 1. Vol. 2. § 227.

† When I first read in one of the numbers of Professor Jamieson's Philosophical Journal, the opinion of one (I believe) of our colonial naturalists, who traced back the accumulation of fossil (or rather half fossil) bones in the caves of Wellington Valley, to some animals of prey, I laughed at the idea, how any one could ascribe the cause of grand geological operations to such paultry agencies—and I do this still in that instance, as bones of Rhinoceroses and Elephants have been found at Wellington. But on the present occasion, the great accumulation of excrements shews clearly, that in our caves (I don't know, if in any others yet described), some influence might have been exercised by these, comparatively insignificant animals.

of smaller and larger cavities, some of them being covered with a sort of Sinter. The fracture is earthy, and it has considerable hardness. In some places it makes a transition into a sort of roe-stone, the nodules of which however not being round, no regular concentrical formation is observed. Small slabs of the above Travertine are scattered copiously round the spring, and as a saline, white substance effloresces continually from all those Travertine rocks; the vicinity of the spring looks, as if some extensive buildings had gone on, and the plasterers had just left off working. My men swept together a quantity of this salt with some feathers, and as a little rain fell shortly after, all the salt was momentarily dissolved and disappeared accordingly. It has an obviously ammoniacal taste. In breaking open and enlarging the spring, I met with two, as it were arcs or bridges of rock, which shows clearly, that the whole mass is composed of cavities. The minerals then found were also very interesting. In the first the Travertine began to be mixed with some Sinter, which appeared in small seams, and of a rather crystalline texture. The colour was white, yellow and brown, the latter two being produced by different oxydes of iron, of which some appeared in the state of ocher. The rock in the next vicinity of the spring presented small cavities, in which some stalactytes occurred; they were not of course of a large size, but some of them beautiful and of a peculiar shape. As I was by such operations, stirring up the spring, I was astonished to see, that conjointly with large bubbles of gas—freed by the breaking away of small vaults of rocks—a quantity of the bodies and other parts of beetles were forthcoming, which supernated the surface of the water. Although mostly broken, they were not decomposed, which may be owing to the preservative quality of the water. Some of them were partly covered with a crust of Tuffa. I was, I said, astonished, but not surprised by this curious fact, because a Naturalist travelling in Australia, gets prepared successively for many strange and unheard of things. The lower parts of the spring (about 2 to 3 feet under the surface of the ground), presented precipitations and incrustations, of substances, with which (as it will be hereafter seen) the mineral water is

impregnated. The Tuffa becomes entirely brown, and in this species also, cavities, transversed by botryoidal and tubular masses, overlaid with drusy crystals of various kinds are visible. Other parts are white and have a farinaceous appearance, in others this white substance covers roundish drusy places. But as I went deeper, I found, that all the latter minerals were in state of formation and entirely soft. I was astonished especially to find, that the yellow and martial substance, which covered the cavities of some of this Tuffa, was soft and tenaceous, and I could handle it like macerated animal skins. Thus it seemed to me, as if I was surprising nature's operation on this spot, and I believe, that after such substances have been chemically precipitated out of the water, there is an intermediate state between this soft and moveable existence, and the final induration and solidity In these places the insects alluded to appeared in great numbers, and I have specimens, in which part of these beetles are imbedded in a white, farinaceous substance. Whether the animal glue, contained in these insects contributes to render some of the deposits and precipitations so tenace as I found them, it is difficult to say, as this phænomenon has (as far as I am aware of), no analogy in the present compass of our Geology. A further question is, how and whence such a quantity of beetles could accumulate in the spring. They belong to some genus allied to Curculio, they are black, about half an inch in length, and the same as I found in many places on Menero. The vegetation however around the spring is null, and even the two masses of rocks adjoining, are only very slightly overgrown.* I believe, that the water of the spring may be lethal for insects falling in, because none of the cattle ever drink it, but even with this assumption, the accumulation of so many beetles in the recesses of the spring, will always remain a curious query. After I had considerably enlarged the basin of the spring, I could not find (with a bar of about four feet long), any bottom in one of the perpendicu-

* I did not observe any peculiar phenerogamic plants round the spring, with the exception of a very large Thysanotus, which grew amongst the rocks. The Lichens however were numerous and beautiful, some of them nearly scarlet-red, others green, and thus form superb drawings upon the even, white masses of the Limestone.

lar spiracles, laid open by my mining operations, and it was from this depth, that, when stones were fractured, insects were forthcoming. In the natural state, the spring is, as I said before perfectly clear, and none of the men remembered ever to have seen there any thing like beetles.

I must now mention, that the spring besides the eruption of gas, is entirely immoveable, because there is neither any place visible, nor could I discover one with my instruments, through which the waters can eflux. The richness of the spring is considerable, because although after it had been enlarged, and its cavity could not contain at once more than three to four gallons of water, it took four men nearly half an hour, to empty it with some tin pots to a certain degree; an experiment I made for that reason, because the people told me, that the spring is inexhaustible. This properly speaking is not true, however, the copiousness of the water must be considerable, as the basin, soon after we had nearly emptied it out, became full again in a few minutes. As I wished to know, whether the protrusion of mineral water is the same at a certain distance from the spring, I made a hole with a crow-bar about twenty feet from it, towards the pond. The terrain was Travertine and Sinter, and water was forthcoming at a depth of one to two feet; there was also some effervescence of (carbonic) gas, but the water had, by no means the chemical strength of that of the spring. What quantity of water the spring will yield, if it should be systematically enlarged, no one can say, but orders should be issued, that this shall not be done without permission, because it is a well known fact, that the Thermes of Carlsbad were impaired for some period, after they had been incautiously enlarged.—The reader will perceive, that I was not idle the day and half I remained at the spring, yet although the efflorescence of a saline matter all around the rocks near the spring, conjointly with the taste of the water, proved clear enough, that it must be abundantly saturated with salts, I determined to try this by experiment. A kettle was therefore put upon the fire, and a quantity of water exposed to evaporation, when a rather large proportion of saline matter was obtained. Owing to the roughness of the operation, the

salt produced was not pure, whilst that swept away from the rock, when observed with the lens, exhibited very distinct plumiform crystals of a perfectly white colour, but as a matter of course, mingled with soil. Both of them have now been kept for eighteen months in air tight bottles, when the natural one, has still retained a pronounced amoniacal smell, a smell which the second one possessed too, a long time after it had been obtained.—I am obliged to cut the matter short, saying, that I filled and carefully arranged four bottles of the water, packed up my specimens and prepared for starting.

This spring has been discovered like some others in a rather humble manner. (It is known, that Carlsbad was discovered first by a dog of the Emperor Charles IV.) Shortly after some sheep had penetrated into this part of Menero, a Convict assigned to Mr. John M'Laren of Sydney, *William Macnamara*, wanted some flags, to bake bread upon; when breaking and lifting a rather large one, water sprung up to his face, which seemed boiling, and frightened him very much. Upon tasting it, the people compared it to ginger-beer, and drank it for several diseases. *William M'Namara*, (whose assertion has not been disputed by any of the men present), asked me repeatedly, to recommend him for some reward, which I do hereby in the most solemn way, and I hope, that the Secretary of State will be graciously pleased to send orders, that this man may be provided for the remnant of his life, he being rather infirm and broken down.— My people being employed in packing, I went alone to the spring, the bubbling and murmuring of which was solemn in the silence of this solitude. The rocks of marble around me, originated strange thoughts and dreams within my breast, imagination constructing an Australian "Bath" before my eyes. I saw the proud country-palaces of future Kings or Presidents of these vast countries, built of the same material, over the rough masses of which a solitary wanderer was now treading—I saw long rows of buildings and hospitals, wherein numbers of sick from all adjacent countries were relieved and restored to health—I saw sumptuous roads leading over these yet lonely and melancholy downs. The conviction, that my memory will be for ever blended with this important and interesting spot—was a solace

for that, I had before experienced at Sydney, and I was apprehensive of (as has yet been the fact) I probably would experience, as long as the present administration exists—and as there is a place in history for all sorts of notorieties, I named then, and I name now this spring "Governor Bourke's Spring,"—leaving it with posterity and the (if any) future public career of the General, what epithet will become most appropriately appended to his name.

I come now to the, as it were official part of the description of this spring. Considering that the British Government has always rewarded all discoverers, I assembled finally the men round me, and declared: "that as I was the first person, "who took any scientific notice of this mineral spring, in- "curred considerable trouble and expense to make it eventu- "ally known to the world—as besides this spot was so far "off from the located part of the Colony of New South "Wales—I was only imitating the custom of other dis- "coverers, in taking possession of the spring and the "adjacent, now wild and worthless land; and placing the right "and title of this discovery under the protection of our "Sovereign and Lord, King William IV." A more detailed document of the same tenor was written out, and signed 23d Febr. at Kuma by three witnesses. Arrived at the latter place, I proposed to send an express on horseback with my report and two bottles of the water and some specimens to Governor Bourke, requesting His Excellency for some trifling assistance to pursue my discoveries in the Alps. But I abstained finally from so doing. However on my return, and after having ascended twice the Australian Alps, I sent from the road (about the 20th March) a letter to the Governor, reporting the result of my expedition. This letter was never taken any notice of. When I had returned to Sydney, I communicated with several gentlemen about this mineral water, and a board was assembled in the Civil Hospital on the 16th April, 1834, composed of Messrs. J. Bowman, (first Colonial Surgeon), J. Mitchell, (second Colonial Surgeon), George Moncrief (third ditto), W. Lithgow, (Auditor General M. C.), and Mr. R. Campbell, a gentleman of chemical knowledge. The certificate of these gentlemen declares: "—the

"water having been tasted by us, we are of opinion, that it "is a cold acidulous mineral water, containing a large quantity "of carbonic acid—and further indicated carbonate of lime, "Muriatic acid and Magnesia."—"The care and trouble "evinced by Dr. Lhotsky in bringing this water under the notice of the public, we consider deserving commendation."—A second bottle was opened on the 30th April, and subjected to the examination of Sir John Jamison, M. D., Mr. P. M. Hosking, Surgeon, and other gentlemen of scientific acquirements, who certified: "that they are of opinion, that it resembles "the celebrated Seltzer water, possessing a pleasant and "slightly acidulated taste. We therefore consider the dis-"covery of this spring well deserving public notice."—Relying upon these sentiments, and considering the extent of my other geographical discoveries, I addressed 29th May, 1834, a memorial * to His Excellency Governor Bourke and the Honourable the Legislative Council of New South Wales, soliciting: "to grant him (me) such a remuneration, as his "very dangerous and arduous expedition in general, and "this very especial and immediately available discovery"—"a mineral water for the invalids of, and the many others visit-"ing, New South Wales"—"deserves."—Mr. G. K. Holden, (Private Secretary of the Governor) answered under June 16th,—"soliciting remuneration for the discovery of a "spring of mineral water during your late Journey *towards "the southern part of the Colony,* I am directed to inform "you, that His Excellency does not think your claim of such "a nature, as to justify its *being* LAID *before the Legislative "Council.*"—† I do not know, if it has ever occurred, that a memorial addressed to a Governor and Council has been *refused* by the former *even to be laid* before the latter, when it contained the request for a small remuneration for geographical and scientific discoveries, made in the very same country—

* These and several other documents will be printed in the appendix to this work.

† By this letter it appears, that Mr. H. has been induced to believe, that my journey had only extended so far as towards the southern part of the Colony, whereas the kind reader will perceive, that I am even in the present stadium of my expedition 60 miles beyond the southern boundary of the Colony.—That the discovery of a mineral spring for the sake of our sick "is not of a nature to justify etc" will be a new feature in the history of any British administration.

however, Governor Bourke was then so very busy in accumulating and EXHIBITING a large amount in the Colonial Treasury, that every other consideration vanished before this paramount aim of his.

But enough and more than enough of this official transaction, which I had never mentioned, if it had not injured me materially, and of course paralysed to the present moment all my further endeavours for exploring this interesting continent. Thus the mineral water also has been neglected for nearly two years, and I am sure, many patients have been debarred of cure, far more of relief. It will not be out of the way, to insert here the opinion of some good books of reference, respecting the medical qualities of those mineral waters, to the class of which Governor Bourke's spring undoubtedly belongs, as Seltzer, Cheltenham, Scarborough etc—to wit: "these waters have been found beneficial in hectic fevers, weakness of the stomach and indigestion, in relaxations of the system, in nervous, hysteric and hypochondriacal disorders, in the green sickness, scurvy, rheumatic and asthmatic complaints."—"This water has been long in high repute, on account of its medical virtues. From its agreeable taste and exhilerating effects on the spirit—"* As our Colony gets every year more visited by invalids of the adjacent semitropical countries (we calculate that at any time between thirty and forty military, civil and medical officers are here on leave of absence or sick certificate), we will tell the manner how these waters could be used even in the present rough state of the place. We would advise, to dispatch ten days before the patient starts himself, a dray with three bullocks or two horses, containing besides the necessary provisions (with exception of meat, which can be bought on Menero) a good tent. This dray ought to expect the patient at Gondaru, which is 160 miles from Sydney (and where, if he has not his own gig or horse he can now go by the Mail.) Thence he has only 110 miles to go to the spring, for which

* This quality is essential to our Menero water, and if I had been able to present six bottles instead of one at each of the meetings—they would have been expended. The importation of Seltzer water into Java is 150,000 bottles a year. Our colony is not yet awake to the advantages of such a beverage in a hot climate. However the Seltzer water imported, sells at 4s. a bottle.