

and that it is intended during the ensuing summer to extend the triangulation along the west coast, and there to measure one or two fresh lines of verification, probably in the neighbourhood of Port Davey or Macquarie Harbour.

The Reports were accompanied with a diagram showing the triangles between upwards of thirty principal stations, extending from Ralph's Bay to Norfolk Plains, and there were appended tables of extracts from Field Books, and an elaborate series of results from local observations and from the system of triangulation.

Mr. Moore, of New Norfolk, exhibited two of the sewing machines patented by the Lancashire Sewing Machine Company, and sundry fragments of cloth were rapidly stitched together in a neat and substantial fashion in the presence of the members, most of whom closely inspected the mechanism of the automaton, which is calculated to do the work of about twenty ordinary hands.

A general discussion on subjects before the meeting ensued, when the members separated into conversational groups; the various instruments and apparatus submitted in connection with papers read were minutely examined,—His Excellency the President, Lord Alfred Churchill, Mr. MacNaughtan, Mr. Champ, Mr. Kilburn, and others taking a prominent part.

About ten o'clock the thanks of the Society were voted for the donations and papers submitted, and the President having then left, the members separated soon after.

14TH JUNE, 1854.—Monthly meeting; His Excellency Sir W. T. Denison, President, in the chair.

The following members were present:—Drs. Agnew, Downing, Hall, Hoeltzel, Colonel Last, Capt. Hamilton, R. E., Capt. Stoney, Messrs. Barnard, A. Butler, F. Butler, R. Butler, W. Champ, Dobson, Henslowe, Hone, Hull, Kilburn, Lochner, R. E., Makeig, Matson, Moore, Moss, Perkins, Rolwegan, Tapfield, &c.

The following having been ballotted for were declared duly elected Fellows of the Society:—Charles Octavius Eardley-Wilmot, A.P.M., Sorell; Walter Davidson, of Riccarton; Charles James White, of Hobart Town, Esquires. Other candidates for membership were nominated.

The following donations were announced:—

To the Library.—By order of His Excellency Sir W. T. Denison, 1 quarto volume, (2nd) of Magnetical and Meteorological Observations taken at Toronto in 1843-4 and 5, and sent out by the British Government.

Also Transactions of the Royal Hawaiian Agricultural Society, vol. i. Part IV.

Journal of the Agricultural and Horticultural Society of India, vol viii. Part IV., from the Society at Calcutta.

From the Royal Institution of Great Britain:—

Annual Report for 1852.

Notices of Meetings from November 1852 to July 1853.

From the Geological Society of London:—

Annual Reports from 1851 and 1852, together with Fasciculi of Proceedings of the Society from April 1850 to July 1851.

From the Rev. T. J. Ewing, of New Town:—

Observations on the Dialects of the West of England, by James Jennings.

Treatises on the Lancashire Dialect, with Glossary.

Ditto on the Yorkshire Dialect, ditto.

Ditto on the Exmoor Language, ditto.

From Henry Tonkin, Esq.; a Roman Catholic Missal, published at Antwerp in 1614.

From Mr. Thomas Moore, of New Norfolk, a series of Geological Specimens, comprising Galena and associated minerals from Laxey Bay, Isle of Man. *Coking Coal* from the Lancashire coal-field. *Cannel Coal* from Wigan, Lancashire. Black Bituminous Shale from Clifton, Bolton-le-Moors. Also impressions of Plants, &c., enclosed in hard nodules of a tough clayey sandstone belonging to the Coal Measures, intersected by Railway Cuttings at Clifton, between Bolton and Manchester—amongst them are species of *Stigmaria*, *Lepidostrobus*, *Trigono-carpum*, *Calamites*, *Pecopteris*, *Neuropteris*, &c.; also from Mr. Moore a specimen of Bog-Oak from the “Red Moss,” Bolton-le-Moors.

From Mr. R. C. Wood, of Singapore, a large collection (20 species) of elegant Corals obtained there.

From Mr. Mac Naughtan, a sample of the Seam of Anthracite Coal recently intersected at a depth of 56 feet in the experimental borings carried on at Spring Bay, and which it is understood are now more than 100 feet down.

From Mr. Phineas Moss, specimen of Cork cut into thin slices by the circular saw for hat-making purposes.

From Mr. G. Fraser, Colonial Treasurer, a Skin of the *Cladorhynchus pecoralis*, “Banded Stilt” of Gould, one of seven recently shot near Ralph’s Bay—a bird which, Mr. Fraser remarks, has been described by Gould as belonging to the Southern and Western Coast of Australia, and is not noticed as an inhabitant or visitor of Tasmania.

From Mr. Jeffery, of the Observatory, a Skin of the Black Cockatoo of Tasmania, *Calyptorhynchus xanthonotus*, GOULD.

A note read from Mr. W. H. Catlett, Secretary to the Australasian Botanical and Horticultural Society of Sydney, soliciting an interchange of Specimens.

A letter read from Mr. Mitchell, Secretary to the Zoological Society of London, acknowledging the receipt of “Papers and Proceedings” of this Society.

The Secretary reported that a “Ward’s” case containing 51 plants, &c., has been furnished to Mr. Swainson, together with a packet containing 30 varieties of Seeds, on condition that the case is to be returned filled with indigenous plants of New Zealand.

The Secretary read a short paper by Alexander Cross, Esq., R.N., of Rochester, on the pointed-nose shark of the Pacific, *Oxyrhina gomphodon*, of which the formidable jaws, tail, and spine in the Museum were exhibited.

The Secretary submitted a note from Alexander Mac Naughtan, Esq., drawing attention to the evidence given by Professors Ansted, Brande, Anderson, and other eminent chemists and mineralogists, upon a trial reported in the *Witness* newspaper of 3rd August, 1853, in which the physical characters and chemical composition of a mineral deposit, which he supposes to be similar to the combustible schist from the Mersey River, used instead of coal, for the purpose of producing illuminating gas, are fully detailed. Various extracts were read.

A paper was then read by Thomas Moore, Esq., on the experiments which he has lately conducted with the view of testing the comparative value of the Mersey schist, and of the coals from Schouten Island and the Douglas River, for gas-making purposes, and the printed details were laid on the table; from which it appeared that a quantity equal to 2lbs. weight of each left of residuum as follows:—

Mersey combustible schist	25 ozs.
Schouten Island coal	26 ozs.
Douglas River coal	22 ozs.

Specimens of each were placed before the meeting and carefully examined—the first consisted of fragments of brownish shale and a soft, sooty, fine, pulverulent matter; the second consisted of hard, greyish-black angular fragments, such as had been introduced into the retort apparently little altered by heat; the third had fused into a compact and nearly solid mass of coke. The amount by weight, therefore, of gases actually yielded during the distillation must have been as follows:—

From the Mersey schist	21.9 per cent.
Schouten coal	19.06 „
Douglas River coal	31.25 „

Results not in accordance with the volumes observed to have entered the gasometer in the three cases respectively.

Mr. Moore observed that his apparatus, having been constructed for producing gas by the decomposition of refuse, fatty and oily matters, slowly entering a retort which ought certainly not to rise above a dull red heat, is not calculated fully to elicit the capacity of coal for gas-making, but he had considered that even approximate results might be of some use, and that he hoped soon to see the day when Hobart Town would be lighted with gas from Tasmanian coal, of which he could aver from his own observation there is great abundance, and of a quality calculated alike for steam purposes or for gas-making.

A long and animated discussion on this subject followed, in which His Excellency the President, Dr. Agnew, Captain Hawkins, the Secretary, and several other members bore a part.

Sir William Denison was of opinion that more precise experiments and an exact analysis was still a desideratum as respected these fuels, more especially the Mersey Schist.

Mr. Milligan reminded the meeting, that as the inflammable basis of this mineral, when examined by Mr. W. Archer and himself, with the aid of a microscope, had

been determined to be a resin, it would probably be found to differ from that of "Torbane Hill," in Linlithgowshire, Scotland, descriptions of which had been quoted from the *Witness* newspaper, as it had been distinctly stated that in this latter no trace of organic matter could be discovered.

Mr. Barnard read the following paper by R. H. Bland, Esq., of Melbourne:—
On the Character, Habits, and Customs of the Aborigines of Western Australia:—

"Sketches and anecdotes illustrative of the habits and customs of the aborigines of Australia are interesting, particularly now that the race is rapidly disappearing, and the habits of the remainder materially altering, owing to their intercourse with their more civilized neighbours.

"The aborigines of Western Australia shortly after the settlement of that colony in 1829 showed themselves very hostile to the settlers, and in a few months a system of bush warfare commenced, which lasted for several years, causing much loss of life and great interruption to the settlement of the country.

"The leaders in this warfare on the side of the Blacks were two men named "Midgegaroo" and "Yagan," father and son, men of courage and determination, far above the rest of their tribe. The former was captured, and shot at the jail door, Perth: the latter, who, though extremely treacherous himself, placed the most implicit reliance on the word of the white man, was proclaimed an outlaw, and a reward offered for his apprehension, a circumstance of which he was perfectly aware. I regret to say he was afterwards shot by treachery, his head taken off, and sent to England, where it probably enriches the shelves of some Museum. The boy who shot him was in turn killed by the blacks immediately after while attempting to escape.

"The Murray tribe were very hostile to the whites, and were not reconciled to their presence until a considerable number were shot in an encounter with the police and soldiers who accompanied the Governor on a tour in that district. This discomfiture and loss completely broke the spirit of the tribe.

"The York tribe were also very troublesome, and took every opportunity of attacking any unarmed settlers that fell in their way: as might have been expected, the lives of many blacks were taken in retaliation. This system of retaliation continued until the murder by the blacks of a woman and child, under peculiarly revolting circumstances, induced the Government to use additional efforts to apprehend and bring the perpetrators to justice, when two of the principals were taken and convicted, and sentenced to be hung in chains upon the spot where the murder was committed,—a piece of well-timed severity which had a most salutary effect, as from that day to the present there is sufficient reason to believe that not one case of premeditated murder has been committed by the blacks in that or the neighbouring districts; a result partly dependent on circumstances that we were not aware of at the time,—namely, that the blacks of that colony have a dread of their remains lying unburied, and being of opinion that if their bodies are exposed as a prey to the birds and wild dogs, they can have no prospect of an existence in a future state; the extent of their belief in which, however, so far as I have been able to make out, amounts to little more than the notion

of a transmigration of the souls of departed blacks into the bodies of white men whom they have most closely resembled in appearance or manners, and whom they named accordingly after those of their friends who had died. This belief, I think, arose from their being otherwise unable to account for our appearance amongst them, as when occasionally taunting them with the absurdity of the notion, they have with some warmth answered by asking, how could you have known the way to this country unless you had been here before?

“ Religion, I may safely say, they have none. They believe in an evil spirit; and the *Boyala* men, or doctors, have considerable influence over them.

“ They disbelieve altogether in natural deaths, that is death from natural causes. If a man tumbles out of a tree and breaks his neck, they think that his life has been charmed away by the *Boyala* men from another tribe, and the duty of avenging his death devolves upon his brother or nearest relative. This leads to constant feuds and numberless treacherous murders. Every attempt has been made by the Government through the Protectors to check the evils arising from this barbarous superstition, hitherto, however, with but partial success, as the obligation they feel under to avenge their relative’s death is very strong. One man I recollect whose brother was killed, struggled hard against this feeling, which in the end, however, prevailed. He wasted away, said he could not sleep, and that his brother’s spirit continued to haunt him wherever he went, and to upbraid him with cowardice for not avenging his death; an act which in the end he felt himself compelled to accomplish.

“ The Government of Western Australia have latterly, I regret to say, resorted to hanging aborigines guilty of this offence. I much doubt the propriety of interfering to such an extent in quarrels purely *inter se*—it would seem to be a subject for the Missionary to deal with, not the hangman. Of the intelligence and aptitude of the aborigines for learning, I am favourably impressed; their powers of imitation enable them, with very little practice, to assist in all the ordinary occupations of a settler’s life. At school they are quick at learning the rudiments of education, and will generally learn to read in a much shorter time than a white child of the same age. A curious circumstance occurred at Perth connected with education;—a labouring man married an aboriginal girl who had been educated at the Wesleyan mission establishment, and who after marriage taught her husband to read. It is much to be deplored that all the efforts hitherto made permanently to improve their condition have met with but little success. In Western Australia great exertions were made in this good cause by the Wesleyans, aided by the Local Government; but after a residence of a year or two at the institution, Perth, where they were well cared for, a large proportion of them died within a brief period of each other of some complaint of the lungs. Indeed, their predisposition to pulmonary complaints is rather surprising: very many die of influenza, and it is evident that they are more susceptible of these diseases now than formerly; a condition which may, I think, be partly accounted for from the fact that the bush blacks are worse clad now than before the country was settled. Formerly, every man had a good kangaroo-skin cloak: that garment has now given place to some cast-off clothes

of the Europeans, or to an old blanket, confessedly insufficient to protect them against cold and wet. Their mode of life has also materially altered: instead of gaining a subsistence by the highly invigorating practice of hunting, as formerly, many live amongst the settlers; while others get a very precarious livelihood between begging and stealing, eating dead stock, &c."

His Excellency the President referred to the Secretary for information as to the religious belief and notions generally on spiritual matters of the aborigines of Van Diemen's Land.

Mr. Milligan said he had ascertained that the Tasmanian aborigines, previous to their intercourse with Europeans, distinctly entertained the idea of immortality as regarded the soul or spirit of man: their legends proved also their belief in a host of malevolent spirits and mischievous goblins, whose abodes were caverns and dark recesses of the dense forests, clefts in rocks on the mountain tops, &c., and that they considered one or two spirits to be of omnipotent energy; but that they do not seem to have invested even these last with attributes of benevolence, although they reposed unqualified trust in the tutelar agencies of the spirits of their departed friends and relations. To these guardian spirits they gave the generic name "Warrawah," an aboriginal term, like the Latin word *umbra*, signifying shade, shadow, ghost, or apparition. Mr. Milligan stated that the dead were variously disposed of by different tribes,—by some they were burnt,—by others placed in various attitudes in hollow trees and abandoned,—while by others dead bodies were thrown into holes made by the casual uprooting of large trees, and therein left, partially covered with rubbish, &c.

The Secretary laid before the meeting an elaborate analysis of the relation between Heat and the Constitution of Gases, by a resident in Melbourne, transmitted by the author to the Society.

The thanks of the meeting having been unanimously voted for the papers produced and the donations made to the Society, His Excellency the President left the chair about ten o'clock, and the members separated soon after.

12TH JULY, 1854.—Monthly meeting.

The members present were:—His Excellency Sir W. T. Denison, President, in the chair; Dr. Agnew, Dr. Butler, M.L.C., Dr. Hall, Dr. M'Carthy, Colonel Last, Lieutenant Lochner, R.E., Messrs. Champ, Hone, R. Butler, Gould, H. Hull, D. T. Kilburn, Mac Naughtan, T. Moore, G. Makeig, Moss, Rolwegan, Vautin, Whitcomb.

The following gentlemen having been ballotted for were declared duly elected Fellows of the Society:—Thomas Cruttenden, of Woodsden; Joseph Ward, of Fingal; Malcolm Laing Smith, of Flinder's Island, Esquires.

The Secretary announced the receipt of Three Parts of the Journal of the Royal