OCTOBER, 1897.

The monthly meeting of the Royal Society of Tasmania was held on Monday evening, October 11, when Mr. Thos. Stephens presided.

METEOROLOGICAL STATION ON MOUNT WELLINGTON.

The ACTING-SECRETARY (Mr. R. M. Johnston) reported that in regard to the application to the Government for aid for a high level meteorological station for three months on Mount Wellington an answer was expected at an early date.

NEW MEMBERS.

Mr. J. W. ISRAEL and Mr. W. E. HARPER, of Sydney, were balloted for, and were unanimously elected members of the Society.

MEASUREMENTS OF ABORIGINAL CRANIA.

A learned and highly technical paper was partly read by Dr. Clarke, prepared by himself and Mr. Walter E. Harper, member of the Polynesian Society, on the measurements of the crania or skulls of Tasmanian aboriginals now in the Hobart Museum, and comparing them with the measurements of skulls of Europeans. The writers did not attempt to draw conclusions as to the origin of the Tasmanian aboriginals nor to define their characteristics. It was simply an account of the measurements of the skulls of an extinct race, and which was a work of importance to anthropologists. The reading of the paper was accompanied by illustrations in the shape of lantern slides of photographs kindly lent by Mr. Russell Young and Mr. Arthur Butler, the latter gentleman manipulating the lantern. The distinctive features of the skulls of Tasmanian aboriginals specially mentioned the projection of the lower part of the forehead, the deep notch at the root of the nose, and the keel shape of the vault of the skull.

TOPAZ QUARTZ AT MOUNT BISCHOFF

The ACTING-SECRETARY read a paper on "The Topaz Quartz-Porphyry or Stanniferous Elvan Dykes of Mount Bischoff," prepared by Mr. W. H. Twelvetrees and Mr. W. F. Petterd. This rock formation was first described by Mr. S. M. Wintle in 1875 as eurite porphyry, which it had been termed by Professor Ulrich, who, however, did not publish his description till 1877. In 1875 the late Chas. Gould wrote as follows:—Mount Bischoff is a conical eminence rising to about 2,500ft. above the level of the sea. . . . . It consists of a small protrusion of porphyritic rock bearing a felsitic base with granules and crystals of quartz and felspar. It weathers white, and is honeycombed or vesicular on the surface, most probably from the decomposition and removal of pyrites, which is freely disseminated throughout the place. Professor G. von Rath, of Bonn, first determined the existence of topaz in the specimens sent to him by Professor Ulrich, and the description was published in 1879. The rock was further submitted to investigation in 1884, when A. von Groddeck microscopically examined specimens from Claushalf, received from Tasmania. Von Groddeck's two papers on the subject disclose a thorough treatment of the material available. He definitely negatived the idea of his sample being quartz porphyry at all, and called it a porphyritic topaz rock. Since then Mr. H. W. Ferd. Kayser, in his paper on Mount Bischoff,

and Messrs. Kayser and Provis speak of the quartz porphyry and topaz porphyry. Mr. A. W. Clarke in 1892 wrote a short note on the microscopical appearance of a specimen of this rock in the collection of Mr. R. L. Jack, Government Geologist for Queensland; but while recognising a radially arranged mineral, highly coloured between crossed "nicols," failed to recognise it as topaz. Finally, the topaz and quartz porphyries of Mount Bischoff are recorded in the catalogue of minerals by W. F. Petterd, p. 90 (1896). No systematic microscopical examination seems to have been published since von Groddeck's time. His material was plainly limited, and the essential nature and derivation of the rock were not dealt with in his painstaking inquiry. After renewed examination in the field, and with the aid of an extensive series of microscopical slides, Messrs. Twelvetrees and Petterd restate the problem, and as they believe advance a step in the process of its solution. In this paper the position is restated at considerable length, and they sum up the petrographical conclusions to which their inquiries have led them as follows:—"1. That the quartz porphyry is not a marginal portion of the main granite mass, but belongs to dykes running through the granite, and having a slightly different composition from the latter. 2. That it partakes of the nature of elvanite with occasionally a quartz felsite facies. 3. That both in its microcrystalline condition and its felsitic modification, it has been subject to topazising and tourmalinising agencies of a hydroplutonic nature, which have, when unchecked, transmuted the rock into a topaz-quartz porphyry. (4.) That the crystallisation of the cassiterite was contemporaneous with that of the topaz and quartz. As to whether the tin ore ascended as a fluoride, or stannous acid was derived from the individual components of adjoining rocks, the microscopical appearances convey the impression that the condensation or precipitation took place in the presence of water. (5.) That the great Brown Face workings are not in the basin of a vent issuing from the bowels of the earth, but are in the iron gossan of a fissured and disintegrated area enclosed by the quartz-porphyry dykes. Our study lays no claim to be exhaustive. We have approached the subject simply with the desire to record such contributions to our knowledge as may be gleaned from the evidences furnished by microscopical petrography; and we lay before the Society this essay to expound the nature and genesis of the much debated Mount Bischoff rock, hoping that extended work by others will effect a further advance towards the solution of the problems which are involved in the inquiry."

Attached to the paper is a list of minerals known to occur in the elvan dykes of Mount Bischoff, being 34 in number. Also an illustrative plate.

TASMANIAN ABORIGINES.

Mr. J. B. Walker read an interesting paper on the Tasmanian aborigines from notes from the journal of his father, Mr Geo. Washington Walker, and was aided in his explanations by lantern slides, Mr. Arthur Butler manipulating the lantern. He said that in 1832 Messrs. James Backhouse and G. W. Walker, two members of the Society of Friends, arrived in Hobart from England, the object of their visit to the Australian colonies being a philanthropic one. One purpose they had in view was an investigation of the condition of the prisoner population and the working of the penal settlements. Another was to inquire into the treatment of the aboriginals. The reports which they from time to time made had considerable influence in obtaining an amelioration of the condition of the large number of men under penal discipline. In 1832 they visited the aboriginal establishment at Flinders Island. The deadly feud between the natives and the settlers, which

raged between 1825 and 1830, led to Governor Arthur's military operations known as the "Black Line." In October, 1830, some 500 men took the field to sweep the island from North to South, with the view of converging on the Oyster Cove and Big River tribes and driving them into the *cul de sac* of Tasman Peninsula. The total result of the expedition, which cost about £30,000, was one solitary aboriginal, and there were only about 100 to take. Then Mr. Geo. Augustus Robinson, in his daring mission of conciliation among the blacks, accomplished what the whole force of the island had failed in. Having got the aboriginals together, for 15 years (from 1832) the miserable remnant of the native tribes were kept on Flinders Island, and which was destined to become the grave of most of them. Mr. G. W. Walker compiled a vocabulary of their language, and collected some of their songs. Their countenances did not exhibit marked savage ferocity; they were a naturally good tempered race. At first the arrangements for their supplies of food on the island were bad, and were at the outset under the control of very unsuitable officers. Under Lieut. W. J. Darling things improved. At first, shelters or "breakwinds" were erected for them, and then huts. To a race of savages accustomed to sleep in the open air and wear no clothing, closely heated huts and clothes (the latter they would throw off and put on, and when wet they often kept their clothes on) induced pulmonary disease—a complaint which existed among some of them—notably the West Coast tribe, when in their natural state. Hunting wild animals for food, when in their natural state, kept them far more hardy and healthy. One great cause of mortality among them was their home sickness; their desire to be back in their native haunts, which induced depression of spirits. But they had to be got together and taken care of for their own safety's sake, and the safety of the settlers. Everything was done for them that could be done after their capture—a great deal of it was mistaken effort, still it was done with the best intentions. In captivity tea and potatoes were their favourite diet. Mutton and beef they preferred to salt meat and even kangaroo. Their appetites were enormous. One native woman was recorded to have devoured at one meal 50 to 60 mutton bird eggs, besides an allowance of bread, and each of those eggs exceeded that of a duck's in size. They developed our intense liking for tobacco, both male and female. Their good humour was constantly referred to by the two visitors, who found that they were not naturally treacherous, vicious, nor vindictive. The outrages which they experienced at the hands of Europeans had naturally excited their love of revenge, with the result that they would retaliate on the innocent as well as the guilty. Their readiness to oblige and the absence of cruelties among them was evidence of their good nature. Their tractability was remarkable. They could be induced to do almost anything by kindness—as good-natured as children, and as imitative as monkeys. They endeavoured to follow European customs in every way, and the women learnt to make bread and to sew, and were very honest. They had not a sluggish disposition, but they showed the usual improvidence of savages. Dogs they got very fond of, being a great aid to them in hunting. At first it was amusing to see them throw away utensils. It was difficult to get them to understand the value of the skins of their game, and the use of barter. Some of the young men even got to read and write a little. In 1834, five or six of the boys were removed to the Orphan School at New Town, where they were taught more systematically, and, it is stated, they showed very fair intelligence. Aboriginal children, when young, were found not to be inferior in capacity to European children. In 1835 Mr. Robinson took charge of them on Flinders Island, and established three schools among them, and they showed a wonderful advance in civilisation, but it was hardly to be wondered at

that they broke down under it. Whilst this was going on they were rapidly dying off. The name of the catechist, Mr. Robert Clark, deserved most honourable mention for his loving labours among them, and he was held by them in the greatest veneration. In 1847 the number at the settlement was reduced from over 100 to 44 souls, including 22 women and 12 children, and some of these children were half-castes. In the face of much opposition they were then removed to Oyster Cove, which saw the last of them, excepting Fanny Cochrane, who still lived on a farm at Port Cygnet, and was the sole survivor of that Flinders Island native settlement. In 1854 there were at Oyster Cove a remnant of three men, eleven women and two children. In 1865 Billy Lanny and two women remained, and Truganninni was the last of her royal race. There were four tribes of Tasmanian aboriginals, and four different languages or dialects. The greater part of the island was too densely timbered and scrubby for even them to live. They existed around the coast lines, chiefly where they got a good supply of shell fish, having no hooks to catch other kinds of fish. The West Coast contained four small tribes, numbering about 100. Then there was a tribe at Recherche and the Huon. There was the Ben Lomond tribe in the North, another about Campbell Town and Ross, and a number about the Tamar, and about the Middlesex Plains. Then there were the East Coast tribes. Their tribal organisations, however, were rapidly broken up when settlement began. The Big River tribe came down from the Ouse to the Derwent. They were rather smaller people than the English, generally walked very erect, and in all their movements evinced remarkable ease and agility. Their complexions were not quite black, a few approaching the colour of copper, with thick lips, flat nostrils, and many of their countenances were certainly pleasing. They made great guys of themselves with red ochre in their hair, oil smeared on their bodies to resist the influences of the weather, and incisions into their flesh made with sharp flints. They had no idea of a Supreme Being, but had an evil spirit, to whom they attributed all fatalities and misfortunes. Some of them seemed to have an idea of a future state. Some nominal authority of a patriarchal kind seemed to have been exercised by their chiefs. Their food included every animal they could catch, from the kangaroo to the kangaroo rat ; birds when they could get them, mutton birds and penguins they could catch, but seemed to have no special means of catching other birds. They ate fern roots, various fungous growths, and many things that a civilised individual would think harmful. Their mode of cooking was to throw the animal killed on to the fire. All were very expert divers, the women especially so, as it was their duty to procure the fish. They had native canoes, which they got along the water by swimming alongside of the craft. The Western tribes generally burnt their dead with logs of wood built up in a conical structure, and they besmeared their faces with the ashes.

Votes of thanks to the readers of the papers terminated the meeting.