

AUGUST, 1900.

The monthly meeting of the Royal Society was held at the Museum on Monday August 13, His Excellency the Administrator, Sir John Dodds, C.J., presiding.

Before the proceedings commenced Mr. T. Stephens, M.A., F.G.S., speaking as a vice-president, said that, on a former occasion, the society had congratulated His Honor, Sir John Dodds, on the distinctions conferred upon him in recognition of high services rendered in the course of a long public career. Any honourable distinction of this kind reflected credit not only on the recipient, but also on the country to which he belonged, and the institutions in whose welfare he had personally interested himself. On behalf of the Fellows of the Royal Society, of which His Honor would now become President, he desired to tender their hearty congratulations on the rank and position he was again about to assume as Administrator of the colony. (Hearty applause.)

Sir John Dodds, in reply, said:—Mr. Stephens, Ladies and Gentlemen,—I am taken completely by surprise. I did not know that I was to receive, nor did I expect, this further mark of your kindness. It adds to the many obligations under which my fellow-colonists have placed me, and I thank you very sincerely for the generous approval that you have given to the more than kind words in which Mr. Stephens has offered your congratulations. In whatever office it has pleased the people of Tasmania to place me, I have endeavoured to discharge the duties of that office to the best of my ability, and I most gratefully acknowledge and appreciate the encouragement and assistance that I have invariably received from the people amongst whom I have lived the greater part of my life. (Warm applause.)

Apologies were received from the senior vice-president, Sir James Agnew, K.C.M.G., and Mr. A. G. Webster, regretting that, owing to ill-health, they were unable to attend.

NEW MEMBERS.

The following gentlemen were elected members of the society:—Rev. W. R. Cunningham, Messrs. Thos. Bennison, Wm. Burn, C. B. Target, C.E., of Hobart, and Mr. W. J. Norton Smith, of Burnie.

PAPERS.

MAGNETIC SURVEY OF TASMANIA.

Professor E. G. Hogg, M.A., of the Tasmanian University, read a paper, which

was illustrated by some specially-prepared lantern slides, entitled "The Proposed Magnetic Survey of Tasmania."

The writer said the discovery of the approximate position of the Southern Magnetic Pole by Sir James Ross, in 1840, was largely instrumental in causing Hobart to be selected by the Royal Society of London as the station of observation of the scientific expedition sent out under its auspices in the early forties, to investigate magnetic phenomena in this part of the Southern Hemisphere. Detailed magnetic observations were carried out in Hobart under the superintendence of Lieutenant Kay, R.N., from 1842 to 1850. During this period both the magnetic dip and the horizontal intensity passed through minimum values, though not in the same year, while the magnetic declination was found to be steadily increasing at the rate of about $1\frac{1}{2}$ min. per annum. Dr. Neumayer, who had been investigating magnetic phenomena for some years in Victoria, and had carried out a magnetic survey of that country, visited Hobart in 1868. He found the magnetic declination of Hobart to be 10deg. 25min. 9sec. E., a value not far removed from that calculated from Kay's observations on the rate of variation. The next determination of the declination was made by His Excellency Sir J. H. Lefroy, in 1881. He found it to be 8deg. 49min. E., or, rather more than 2deg. in defect of the value computed from Kay and Neumayer's observations. The explanation of this difference is probably to be found in the fact that, shortly after Neumayer's determination of the declination, it attained its maximum easterly value, and has since that time been slowly moving towards the west. Since 1881 no further observations on the magnetic elements of Hobart appear to be available, and some considerable uncertainty exists as to their value at Hobart, and their annual rate of change. Absolute magnetic observations have been carried on without intermission in Victoria since 1858. During each of the past two years the New Zealand Government has voted the sum of £500 for the purposes of the magnetic survey of that colony,

and considerable progress has been made. During the coming summer Professors McAulay and Hogg propose to begin a magnetic survey of Tasmania, a set of instruments of the latest pattern having been placed at their disposal by the University of Sydney through the kind offices of Professor Pollock. They intend to limit their work this summer to the absolute determination of the magnetic elements at the following selected stations:—Hobart, Port Esperance, Port Davey, Strahan, Mt. Lyell, Wynyard, Longford, Scottsdale, St. Helen's, Spring Bay, and possibly Oatlands. From the observations made at these widely distributed stations they hope to be able to construct a rough magnetic map of Tasmania, showing the approximate positions of the lines of equal magnetic declination, dip, and horizontal intensity. To ascertain the annual rate of variation of the magnetic elements it will be necessary to re-determine their values after the lapse of a few years. In order that their work may be easily available to future observers, and may also be of assistance to surveyors. Professors McAulay and Hogg have applied to the Government for a grant of £150 to enable them to erect suitable permanent marks on the sites of observation, and to defray other expenses incidental to the survey. If this grant of public money is made it is proposed that the work of the survey shall be carried out in co-operation with the Surveyor-General's Department. In addition to the magnetic observations at the selected stations, it is intended to lay out at each place the true geographical meridian, and to determine the bearings relative to the site of observation, of any prominent landmarks, etc. A detailed description of each site of observation will be lodged with the Surveyor-General.

The paper dwells briefly with the importance to navigation and surveying of a correct knowledge of the magnetic declination. It points out that if the rate of variation of the magnetic elements of Tasmania were once determined it might be possible, by examination of the magnetic records of Victoria and New South Wales, to learn approximately the value of the elements in Tasmania in the recent past, and by

connecting the present observations with those made in the past form a fairly accurate conception of the magnetic history of Tasmania during the last 60 years.

A letter was received from Mr. Counsel, Surveyor-General, indicating that he supports Professor Hogg's views.

The Treasurer (Hon. B. S. Bird) said he felt that the work proposed to be undertaken was very important, and Ministers had placed £150 on the estimates towards the cost of this magnetic survey, so important in connection with navigation and scientific surveying. (Applause.) He moved a vote of thanks to Professor Hogg, which was very heartily accorded.

Mr. Stephens, in reference to Professor Hogg's mention of the record which he had sent him of the magnetic variation in 1839, said that he had received the record from the late Mr. Molesworth Jeffrey, who was with Sir John Franklin when he took the observation at Lachlan, near New Norfolk. This was in 1881, when he (Mr. Stephens), being engaged on the revision of the old map of Tasmania, had reported to the Government that, if there were much longer delay in reconciling the survey system of the colony, which was based on magnetic lines, with the true bearings established by the trigonometrical survey, inextricable confusion would be the result. The matter was taken up by Sir Henry Le-froy, and a reform of the survey system initiated by the Government, which, though interrupted by a change of Ministry, is now progressing as satisfactorily as is possible under existing circumstances. In connection with Professor Hogg's mention of causes of local variation Mr. Stephens cited a remarkable instance of the deflection of the compass needle, which he had noted on the summit of a peak in the Midland district, and recommended Rocky Cape, Badger Head, and a point between Bridport and Cape Portland as being, with Port Davey, the best sites for magnetic observations in Tasmania, so far as freedom from elements of local disturbance is concerned.

MUSEUMS AND ABORIGINALS.

The Bishop of Tasmania read a paper entitled, Notes on a Visit to the Museums at Perth and Adelaide, with special reference to the Blacks of West Australia, as follows:—

"During a recent visit to West Australia and South Australia, I found time to visit the Museums, and to discourse with the curators. I think a few observations will be of interest.

"I was struck here by the immense

amount of work still to be done in many departments of science. The botany of West Australia has been apparently well studied, but there are fields of science virtually unexplored—shells, insect life, and, perhaps fauna; for these a great deal has to be done. But there is yet another department needing attention, and that without delay. The crying need in West Australia seems to be for a small body of men who would study the habits and customs of the aborigines of the colony. In no colony in Australia are they so numerous, and in no colony have they been so little studied. The reason is obvious. For the last ten years this colony has been engaged in the tremendous task of providing the resources of civilisation for a quadrupled population, and before that period the colony was small in number, and oppressed with the state of too much land area. The Government, however, is most generous to science, as a yearly grant now raised to £4,000 to the Museum in Perth testifies; and there is no reason now why this pressing duty in regard to the natives should not be taken in hand effectively. I put the question, indeed, to Dr. Stirling, in Adelaide, whether there was still room for a work on the Blacks of West Australia commensurate with such books as those of Roth, of Spencer and Gillen, and of the Horn Expedition. Dr. Stirling answered in the affirmative without hesitation, adding that, though the Australian black all through the continent is the same person, yet the effect of a long western coastline of thousands of miles with the food it gave, and the habits it fostered, must make us look forward with the deepest interest to the work on the blacks of this vast region, which has still to be written; and as the native population tends to diminish, I ventured to urge the question in Perth, suggesting, indeed, that steps should soon be taken to found a Royal Society, which does not at present exist. I went further and reminded them of the meeting in Hobart of the Science Association in 1902, and I even proceeded to suggest that West Australia might make a bold move, and try, at all events, to induce the Australasian Association to visit Perth in 1904.

"It seemed also a fitting opportunity to remind the Museum authorities and the Public Library, that possibly large quantities of historical material might soon be lost or removed to Sydney or Melbourne, unless they turned their attention to old records of the colony.

"I now proceed to give some account of the blacks of West Australia, their numbers, and the steps taken for their wel-

fare. Two years ago the blacks were under the charge of an Aborigines Board, but this has now become a regular Government department, and in 1899 the first Government report under the new management was published, Mr. Prinsep being the Protector of the aborigines. Last year nearly £11,000 was spent by the Government on the natives, chiefly in the distribution of food to the aged and infirm, and in their own camps, blankets also forming a large item. There is a travelling inspector, who understands the dispensing of simple medicines. As to the numbers of natives in the colony, the following is the latest calculation:—Employed by settlers, 4,740; in receipt of relief, 868; self-supporting, 6,690. This makes a total of 12,300, exclusive of what may be called wild blacks, chiefly in the Kimberley district. They are numerous there, and of fine physique. The total number of blacks now in the colony of West Australia is computed to be 30,000. It will be of interest also to note what is the number in other colonies. Apparently the following are the latest figures:—New South Wales, pure blacks, 3,230; New South Wales, half-castes, 3,661; Queensland, computed, 20,000; Victoria computed, 479; South Australia (in the Northern Territory chiefly), 20,000; in all, 80,000 in the continent of Australia.

"It will be noted that the colony which has the largest number of this interesting race has still its scientific work to do among them. Indeed, up to the present there has been no regular system for photographing or measuring the natives at the prison at Rottnest, although for years blacks have been kept in confinement here, brought from all parts of the colony. I believe this first step is now to be taken. With regard to areas of land reserved for blacks, I note that 890,000 acres are put aside for this purpose, one block in Kimberley being 700,000 acres. By far the largest portion of this reserved ground is simply left for the blacks to roam over, and they are undisturbed in it. There are, of course, a good many questions of extreme interest which have to be faced by the Government.

"I believe there is no doubt that public opinion is becoming more and more directed to the welfare of the native population. There is much less chance of their ill-treatment, and cases of injury are more quickly detected, and the offenders punished. A great many of the blacks, chiefly in the proximity of a white population are becoming dreadfully and distressingly diseased, and owing to their nomadic habits and their impatience of regular control in hospital, it is hard

to know how to grapple with some of the worst forms of mischief. Even the distribution of blankets has its evil side by inducing the blacks to give up their native habits, which were better suited to their condition. Again, when a district becomes settled by white men some of the wisest of the settlers have come to see that it is their duty to provide work and food for all the blacks in that district, since the game has begun to disappear, and it is a fact, I believe, in some places that work is found for all the blacks, whether their aid is really needed or not. There is a conflict of opinion also whether the system of contract labour is the best. In this case, the native is bound to the settler for a certain period, and may not leave him, whilst the employer is bound to treat his black servants kindly. But it is also found that if a boy does run away, he is never any good afterwards if he is forcibly brought back, and if a simpler form of contract were possible with this nomadic race some think it might be better for both parties.

"It is well-known that there are several establishments under more than one religious denomination where the natives are cared for; New Norcia, under the Roman Catholics, is well known throughout Australia. The Swan River settlements, under the Anglican Church, are also doing good work; and there are others. Two questions of general interest are worth mentioning. First, the problem of the half-caste population. In some districts this class is increasing, and is at present uncared for to any great extent. The other problem is a very perplexing one, namely, what to do with native girls, brought up from childhood in such a mission as that on the Swan River. At present they are sent into the world, at 16, with only often very sad results, indeed. It looks as if native young women of this age are quite unfit to be turned loose on society, and really need another establishment, where they could be usefully employed till 25 at least. Enough has been said, I think, to show what a large field of work presses for workers in West Australia.

"One request I pass on to Mr. Morton from the Curator at the Perth Museum, namely, that the Perth Museum may be permitted to get a cast of a Tasmanian native's skull.

ADELAIDE MUSEUM.

"The change to the Museum in Adelaide, as regards the study of the natives, was great, indeed. Probably there is no such collection of native weapons and properties as in the Museum there. A very large room is filled with

cases in double and treble rows, illustrating every department of their life; and what is still more striking is the classification of objects. Each district in Australia, and sub-district, has its own cabinet. Yet wonderful as this collection is, Dr. Stirling was of opinion that it could still be equalled, if not surpassed, by those who could afford to conduct expeditions into the interior; but it would be at great cost. Dr. Stirling told me that he would be glad to furnish us with a collection of certain number of aboriginal weapons and properties, if Mr. Morton would apply for them.

In conclusion, I beg to state that I put myself into communication with two gentlemen who could aid us in the scientific study of the natives, Mr. Campbell, of the Geological Survey Department of West Australia, one of the few gentlemen who has taken a deep interest in native habits and customs. He has promised us a paper ere long. Mr. Foelsche, Inspector of Police at Palmerston, Northern Territory, has taken photographs during a course of years of all types of natives in the North. I ventured to write to him to ask if he could supply the Museum with a representative set.

"I heard a curious story at Albany, fuller details of which I hope, in due time, to receive from Mr. Wright, the magistrate at Albany. This gentleman says that a party of six blacks were brought into Albany, about four years ago from the Frazer Range, charged with murder. They were very small — not much over 4ft. high, and they all had six fingers and six toes. No one could talk their language, and after some days they were dismissed, and I regret to say that no one thought of photographing them. I gather from a Government report that the blacks in the Frazer Range do not number more than 100 now, but it is clear that there is a great deal yet to learn about the natives in the Western regions of the Australian continent."

CHEMISTRY AND MINERALOGY.

Mr. W. A. McLeod, B.A., B.Sc., Lecturer on Chemistry and Mineralogy at the Tasmanian University and the Hobart Technical School, read some notes, giving a description of some interesting rocks collected at Cape Adare during the recent Antarctic expedition.

LIGHT RAILWAYS FOR TASMANIA.

Mr. G. E. Moore, M. Inst. C.E., read a paper entitled "A System of Light Railways for Tasmania." He strongly recommended the more extended use of light railways in Tasmania to open up the country, especially in view of the success

of the working of the Dundas light line. Considering the rough nature of the country on the West Coast, it might be fairly conceded that in other parts of the country a 2ft. 6in. gauge light line (which he most favoured), might be constructed at about £2,000 per mile. Such lines would be very useful in serving country districts; a light or narrow-gauge line would pay interest on capital, whilst a standard-gauge line would never pay expenses. Adjacent land benefiting by a light line, and increased in value, should be assessed accordingly to assist in paying for the same. A light 2ft. 6in. gauge railway would be a great boon in bringing about better communication between the East Coast and the capital.

Hon. A. Murray, M. Inst. C.E., M.L.C. (Surveyor-General of the Straits Settlements), made some observations on the paper read by the Bishop of Tasmania, especially in regard to the natives of Ceylon and the ruins of the ancient cities, and Tanks, of Anuradhapura and Pollonaruwa, in the North Central Province, where a teeming population once existed, but which had disappeared owing to hostile incursions of the Tamils from Southern India, who drove the Singhalese from their homes and fields, and destroyed their magnificent network of irrigation reservoirs or tanks. Mr. Murray also

spoke of the great benefit light railways would be to the colony, if more generally availed of, and he had been over every part of it. Tasmania, from what he had observed, had reason to be proud of her railways, and their management. (Applause.) Notwithstanding the annual losses sustained in the working of some of the lines, he believed they would ultimately prove to be a splendid asset as the country became more opened up and settled upon. Mr. Moore had stated that the narrow gauge line from Williamsford to Zeehan had only cost £2,800 a mile. Here was a line that in 1899 earned approximately £6,000. Out of this £4,000 went for working expenses, leaving a profit of £2,000, or about 3.20 per cent. on the capital expended in construction. That was a very satisfactory result, reflecting credit on the able General Manager and his staff. He expressed regret at having to leave the colony, which he admired so much, and where he had been so very kindly treated. He hoped to return to it some day. He wished the colony every success. (Hearty applause.)

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

Mr. Nat. Oldham rendered valuable assistance in manipulating the lantern for the exhibition of the slides.