glad to receive skins or skeletons of Thylacines (Native Tigers), and skulls or skeletons of small Whales; also, fresh water Fishes and Crustaceans."

The SECRETARY read a letter from Baron F. von Müeller, K.C.M.G., with a short paper entitled, "Remarks on the Vegetation of King's Island."

Mr. R. M. JOHNSTON, F.L.S., followed with a "Note and Description of the first discovered representative of the Genus *Pupa* in Tasmania," with a drawing of the Shell.

The meeting closed with a vote of thanks to the writers of the papers and to the donors to the Museum, making especial mention of the presentation of Birds from the Australian Museum, and of Shells from Miss Lodder.

At 8 o'clock the members adjourned to the upper rooms of the Museum, when an exhibition of the telephone took place, at which a number of ladies were present by invitation. Mr. R. Henry, the superintendent of telegraphs, conducted the proceedings, and commenced by giving a lucid and interesting description of the construction and uses of the instrument. Communication was made with Pearson's Point, Mount Nelson, and Battery Point; the extreme distance traversed being about 20 miles. The experiments were very successful, and afforded much gratification to those who witnessed them. Twelve telephones were employed on the occasion, by which means the various messages and replies were made audible to a number of persons simultaneously. In addition to conversation held between the several stations, music and singing were introduced, the airs being distinctly heard in the room.

In conclusion, Mr. Henry gave explanations of the working of the phonograph and microphone, which were attentively listened to.

MAY, 1882.

The monthly evening meeting of the Society was held on Tuesday, 9th May, His Honor Mr. Justice Dobson, V.P., in the chair.

Mr. Fleetwood Wilson was balloted for, and declared duly elected as a Fellow of the Society.

The Hon. Secretary (Mr. BARNARD) brought under notice the following Returns for the month of April, viz.:—

1. Number of Visitors to Museum—On Sundays 959, on week days 777; total 1,736.
2. Ditto to Gardens, total 4,880.
3. Plants and seeds received at and sent from Gardens.
4. Presentations to Museum.
5. Books and periodicals received.

Meteorology.

1. From Hobart Marine Board. Tables from Swan Island for March, South Bruny for do., and Mount Nelson for April.
2. From Captain Shortt, Meteorological Observer. Mean of Observations taken at Hobart during April, 1882. Result of Rainfall at Southport during do.
3. From Mr. H. W. F. Kayser. Register of Rainfall at Mount Bischoff do.
4. From Mr. F. Abbott, jun. Do. at Botanic Gardens do.

The following are the results of the observations above referred to:—

Hobart, April, 1882.

Barometer—Mean, 29·695.

Thermometer—Means, Max., 61·1deg.; Min., 45·2deg.; Dry, 54·4; Wet, 51·5.

Humidity of Air—Means, Dew Point, 48·54deg.; Humidity, ·814; Elastic Force of Vapour, ·346.

Condensation—Number of days on which rain fell, 13; amount collected, ·90in.

Cloud—Mean daily amount 5 (scale 0-10).

Wind—Mean force 1·3 (scale 0-12), principally from westward; light airs and calms prevailing during the month.

Remarks—"In the above the rain was taken for the month, the other observations for the last 24 days only. The greatest temperature in shade was 74·8deg. on the 10th, the lowest 37·0deg., on night of the 6th. On the evening of the 17th, the Aurora Australis was very brilliant, commencing a little before 8 o'clock, and lasting nearly all night, streamers of light ascending to the zenith from between the S.E. and S.W., illuminating the heavens and making it as light as if the moon was up. It was said to be the grandest Aurora seen in Tasmania. A smaller Aurora appeared on the evening of the 20th, but with no streamers. Calms and light winds prevailed through the month, though heavy gales have been experienced on the coasts of Tasmania and other Colonies."

J. Shortt, Meteorological Observer.

Southport Rainfall, April, 1882.—Number of days on which rain fell, 14; amount collected, 2·55in.

Waratah, Mount Bischoff, April.—Number of days on which rain fell, 18; amount collected 5·27in.

Botanic Gardens, Hobart.—Number of days on which rain fell, 9; amount collected, 0·58in.

Time of leafing, flowering, and fruiting of a few standard plants in the Botanic Gardens during April, 1882:—

10th. Chinese Chrysanthemums commencing to flower.

12th. Elm leaves commencing to fall.

12th. Coe's late red Plum commencing to ripen.

20th. Pyrus aucuparia leaves commencing to fall.

24th. Black mulberry ditto ditto.

26th. Seeds of Hornbeam ripe.

The presentations to the Museum were as follow:—

1. From Mr. F. Bednall, Adelaide, per Mr. C. E. Beddome, two Specimens of *Voluta flavicans*, and one of *Cyprœa thirsites*.
2. From Mr. E. D. Swan, a Specimen of *Nautilus pompilius*, and one of *Nautilus umbilicatus*.
3. From Mr. H. White, two Specimens of Copper Pyrites, from Saxon's Creek, near Beaconsfield, Tasmania.
4. From Mr. W. K. Dixon, Ouse, a Specimen of a Petrel (*Prion turtur*).

[No particulars furnished with this specimen, which had probably been driven inland by the severe weather lately prevailing on the coast.]

5. From Mrs. Percy, Rokeby, Clarence Plains, a Basket and Eggs from a petrifying spring at Matlock, Derbyshire, England.
6. From Mr. Justice Dobson, a specimen of the Fern *Schizea bifida*, found near the Cascade Brewery.

[The donor of this specimen remarks—"This fern has hitherto, so far as is recorded, been found only at Southport in this colony. The Schizea found at George Town and on the North Coast, which is commonly known as '*Schizea bifida*' on Hooker's authority, is, according to Bentham, p. 693, not '*Schizea bifida*,' but '*Schizea fistulosa*.'"]

To Library—

1. Annals of the Entomological Society of Belgium, Vol. 25, 1881. From the Society.
2. Catalogue of the Australian Stalk and Sessile-eyed Crustacea, by William

A. Haswell, M.A., B.Sc. From the Trustees of the Australian Museum, Sydney. (Two copies.)

3. Smithsonian Miscellaneous Collections, Vols. 6 and 7. Report, 1865. From the Smithsonian Institute, Washington, U.S.A.

Mr. BARNARD read a paper, entitled "Notes on the economic value of the aquatic plant *Typha latifolia*."

Some conversation followed the reading of this paper, after which Mr. J. B. WALKER read a communication from Mr. G. McIntyre, of Christchurch, New Zealand, "On the State of the Surveys in Tasmania."

Mr. STEPHENS said that as the discussion and correspondence on this subject had been started by the quotation of some remarks of his by His Excellency Sir J. H. Lefroy, in a paper read before the Royal Society, he might be allowed to say a few words. The late Mr. J. E. Calder was one of the earliest pioneers in the exploration of the Western country, and from his long experience in the Survey department was entitled to speak with some authority upon the question of land surveying. The author of the admirable paper which had just been read clearly points out the defects of a magnetic survey, and shows that a proper system can be carried out even in the wildest parts of New Zealand. It was almost unnecessary to say that his criticism upon Mr. Calder's letter was conceived and written in no unfriendly spirit, and that at no time had there been any intention to find fault with the surveyors of Tasmania, but only with the system under which they had to work. With reference to some unfavourable remarks which had been made respecting the conduct of the trigonometrical survey, which was unfortunately discontinued before it could be made much use of, he (Mr. Stephens) would read a short extract from the report of Major Cotton, then Deputy Surveyor-General, upon the subject, which was read before the Royal Society on May 10, 1854 :—From the Papers and Proceedings of the Royal Society, Tasmania, Vol. 3, p. 87.—"The observations have been entirely in the hands of one individual, Mr. J. Sprent, whose scientific knowledge, together with untiring perseverance and patient endurance, has enabled him, single-handed, to effect what would in other countries have been shared by many equally qualified for the work. But the result is such as he will, I am sure, from the interest he takes in this work of science, feel no small recompense for his efforts."

A long and interesting discussion then ensued, in which Captain STANLEY, Mr. J. M. CLARKE, and the CHAIRMAN took part.

Mr. C. H. GRANT considered the thanks of Tasmanians generally, no less than of the Royal Society, were due to the author of the paper for again calling attention to what was undoubtedly a matter of great regret in the present system of conducting the surveys of the colony. A previous speaker had alluded to the discrepancy between the due North and South lines shown in the survey of the property held by the Van Diemen's Land Co., and what purported to be similar lines in more recent surveys. This was shown in even a more striking manner on the land plan of the township of Somerset, where the lines of the true and magnetic meridian were shown at a considerable angle to each other, leaving a triangular space between them of a "no man's land." He presumed that by the Lands Titles Act the Government guaranteed the owner of each property registered thereunder the correctness of his boundary lines, but this they were practically unable to do under the conflicting systems of survey, which, in his own experience, had been productive of very great embarrassment, expense, and delay. The increasing resources and importance of this colony, and therefore improvement of its landed estate, appeared to make it desirable that a scientific department of the Government should be created, and placed under the charge of a highly competent scientist, who should be specially charged with the superintendence of the Land Surveys and of the Meteorological and

Astronomical observations. There would then, he thought, be no difficulty in having the surveyors' field notes sent direct to the central office, and there plotted, with the check lines and angles also furnished, and a well-established conection with a trigonometrical station or some accurately learned point or line. It would doubtless, under existing circumstances, involve too much time, and therefore cost, to connect all surveys with the trigonometrical standard, but the great importance of doing so should always be kept in mind, and every effort made at the central office to correctly plot each new survey on the land plan of the colony; and, as far as practicable, correct any errors discovered, rather than allow them to indefinitely accumulate. The matter of the paper now read being of such great importance, and the necessity of a change in the present system being urgent, he desired to suggest that the Secretary be requested to forward copies of Mr. McIntyre's valuable communication to each of the town and district surveyors of this colony, and that they be asked to favour the society with their views thereon, in order that the subject may be more fully discussed here, and some practical suggestions arrived at for the improvement of the present anomalous system of the land surveys.

A vote of thanks having been accorded to the authors of the papers read, and to the donors of presentations, the proceedings terminated.

JUNE, 1882.

The usual monthly evening meeting of the Society was held on Tuesday, 13th June, Mr. T. Stephens, M.A., Vice-President, in the chair.

The following gentlemen, who had previously been nominated by the Council, were balloted for and declared duly elected :—As Fellows of the Society, Mr. William Knight. M.A., and Mr. Patrick Mackay ; as a corresponding member, Mr. George McIntyre, of Christchurch, New Zealand.

The Hon. Secretary (Mr. BARNARD) brought forward the following returns for the past month, viz.:—

1. Number of visitors to Museum, May—On Sundays 747, on week days 601; total 1,348.
2. Do. to Gardens, 3,319.
3. Plants and seeds received at Gardens :—From Baron von Müeller, Government Botanist, Victoria, a collection of miscellaneous seeds, comprising 402 varities. From Messrs. Shepherd and Co., Sydney, 20 varities of Eucalypti. From the hon. the Colonial Secretary, a packet of seeds of Typha Latifolia, received from the Italian Consul, Melbourne. From Mr. J. Latham, Hobart, a collection of imported seeds.
4. Seeds, etc., sent from Gardens :—To Mr. C. F. Creswell, Melbourne, 20 varieties of seeds and bulbs.
5. Periodicals received.
6. Presentations to Museum and Library.

Meteorology.

1. From Captain Shortt, Government Meteorologist. Monthly means of observations taken at Hobart during May.
2. From Mr. F. Abbott, jun., register of rainfall at Botanic Gardens for May.
3. From Mr. H. W. F. Kayser. Do. at Waratah, Mount Bischoff, do.
4. From Mr. D. C. Purdy. Do. at Strahan, Macquarie Harbour for April and May.
5. From the Marine Board, Hobart. Tables from Mount Nelson for May Swan Island for April, South Bruny, for April and May.
6. From Dr. Hector. Printed abstracts of observations taken in New