

The CHAIRMAN announced the discovery, on the West Coast, of a fern, new to the flora of Tasmania, in reference to which he read the following extract from a letter, received by him from Baron von Mueller:—"The fern of which you sent a small fragment is *Aspidium hispidum* of Swartz. As you rightly surmised it is new for Tasmania, though it does not show itself now unexpectedly, inasmuch as this fern has been found in two places of the colony of Victoria. For nearly half a century this *Aspidium* had not been noticed outside of New Zealand, but it has in later years also been gathered in Mauritius." This fern was recently procured by Mr. George Lefroy, some miles to the north of Macquarie Harbour.

The proceedings terminated with a vote of thanks to the author of the paper read, and to the donors of presentations to the Museum and Library.

NOVEMBER, 1881.

The monthly evening meeting of the Society was held on Tuesday, the 15th November, His Excellency Sir John Henry Lefroy, K.C.M.G., the President, in the chair.

Messrs. H. M. Hull, E. B. Gawne, and W. H. Macfarlane, M.B., who had previously been nominated by the Council, were balloted for, and declared duly elected as Fellows of the Society.

The hon. Secretary, Mr. BARNARD, brought forward the usual monthly returns, viz. :—

1. No. of Visitors to Museum, October, on Sundays, 559 ; on week days, 414 ; total, 973.
2. Ditto to Gardens ; total, 4,607.
3. Plants, etc., received at Gardens during September and October :—From Mr. C. F. Creswell, Sydney, 1 bag of Norfolk Island Pine Seeds, and 9 new Dahlia roots. From Messrs. H. Low, London, 50 plants. From Baron von Mueller, 6 papers of seeds.
4. Seeds sent from Gardens :—To the Botanic Gardens, Melbourne, 1 package ; to Messrs. Villmorin, Andrieux, and Co., Paris, 4 ditto ; to Mr. E. B. Heyne, Adelaide, 6 packets.
5. Books and periodicals received.
6. Presentations to Museum.

Meteorology.—Mount Nelson, from the Marine Board, table for October.

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

- 8th. *Carpinus betulus* commencing to break.
- 18th. *Ailanthus glandulosus*, ditto.
- 20th. Black Mulberry, ditto.
- 21st. Common Lime, ditto.
- 22nd. Elm, commencing to shed seed.
- 25th. *Melia azederach*, commencing to break.
- 30th. Horsechestnut, in full flower.

The presentations to the Museum were as follows :—

1. From Mr. J. W. Johnston. Specimen of Native Bread (*Mylitta Australis*), from Broad Marsh.
2. From Mr. A. Jackson. A Musk Duck (*Biziura lobata*), from Hamilton.
3. From Mr. S. H. Wintle, F.L.S. A Pouched Lamprey (*Geotria Allporti*), from George's Bay. A large Crab (*Pseudocarcinus gigas*, Lamarck), caught in 70 fathoms water, off St. Patrick's Head, East Coast, Tasmania.
4. From Mr. E. B. Gawne. A Diamond Snake (*Hoplocephalus superbus*).

5. From the Rev. George Brown, C.M.Z.S. A Native Drum and 13 Spears, from New Britain. Specimens of the Shell from which the "Shell money" of New Britain is made.
6. From Mr. T. H. Bromfield. A young Porcupine Ant-eater (*Echidna setosa*).
7. From Mr. R. M. Johnston, F.L.S. Specimen of a species of Sea Bream (*Girella tricuspidata*), from Southport. In reference to this specimen, Mr. JOHNSTON remarks:—"This interesting fish was obtained by me from a dealer, and is locally known to the boatmen as 'The Sweep.' Hitherto this species was either not known to exist in Tasmania, or it may have been confounded with some other member of the 'Sea Bream' family. Like nearly all of this group, it is an excellent fish for the table, and, in my opinion, when in good condition, is superior to the 'Sand Mullet' (*Mugil cephalotus*), and almost rivals the 'Trumpeter' (*Latris hecateia*) in flavour. I have temporarily, with hesitation, placed it under Quoy Gaimard's *G. tricuspidata*. It is in some respects intermediate between the latter species and *G. simplex*, Richardson; but while it more nearly agrees with the latter in lateral and transverse series of scales, and in relative length of head, yet its peculiar, well marked, tricuspidate teeth ally it more closely with the former. The two species named are, however, very closely allied."

Presentations to Library:—

From the Ballarat School of Mines, two copies of the Annual Report for 1880.

From His Excellency the President, diagrams prepared by him to illustrate a lecture on the Southern Skies, delivered on the 17th ult., to be made use of hereafter for any instructional purpose the Council may think fit. Symons, British Rainfall, 1879. A file of the *Waratah Weekly News*, in manuscript. Portrait of Mr. W. Spottiswoode, LL.D., President of the Royal Society. Magnetical and Meteorological Observations taken in North America, by Captain Lefroy, R.A., and Sir John Richardson, C.B., M.D., 1855. Agricultural Report of Bernuda.

The President exhibited a number of harmonic curves drawn by Donkin's Harmonograph. This instrument is described in the Proceedings of the Royal Society for 1874. The mechanical construction of it is such that a finely pointed glass pen, following the motions of a pendulum, or of a regularly oscillating crank, traces an endless line on a sheet of paper which is itself in motion under the influence of another crank or pendulum. Some of the curves were produced with pendulums, and some by wheel-work.

In this instrument one or both of the pendulums may be made to revolve either in a circle or in an ellipse. The result is to produce an endless variety of beautiful figures.

The attention of the Fellows was particularly called to the remarkable fact that whenever the ratio of the times of vibration, or of vibration and rotation, is one which corresponds to a definite interval in music, say thirds, fifths, octaves, the result is a figure symmetrical and pleasing to the eye, as the result of the two notes is harmony to the ear, and whenever the ratio of the times is not a musical interval, the result is an unpleasing figure, as it would be a discord in music. This was illustrated by many examples.

Mr. R. M. JOHNSTON observed that the Harmonograph bore a slight resemblance to instruments, made by some machinery manufacturers, which produced similar curves. There was also a form of harmonics produced upon films of soap. In this instrument (the "Phoneidoscope") when true fifths, or any other harmonic intervals are put together, bubble rings are developed; and if two persons sang together into the instrument at an

interval of a full tone, a most disturbed, stormy sea would present itself in the soap film.

The PRESIDENT remarked that the results Mr. Johnston mentioned all turned upon the same law of harmonics, although produced by somewhat different mechanical means.

A botanical paper, by Baron F. von Mueller, K.M.G., M.D., F.R.S., entitled "Notes on *Leontopodium catipes*," was read by the Secretary.

The meeting terminated with a vote of thanks to the authors of the papers, and to the donors of presentations.
