

NOVEMBER, 1867.

The monthly evening meeting of the Fellows was held on Tuesday, the 12th November, J. Barnard, Esq., in the chair.

Captain W. Crosby, who had been previously nominated by the Council, was after a ballot declared to be duly elected a Fellow of the Society.

The Secretary, Dr. Agnew, laid on the table the usual monthly returns, viz. :—

1. Visitors to Museum during October, 664.
2. Ditto to Gardens ditto, 2119.
3. Plants, &c., received at Gardens.—From Mr. C. Creswell, 63 papers of seeds of annual and herbaceous plants, most of which are new to the Gardens. From Messrs. Taylor and Sangster, Melbourne, 15 plants, six varieties of Rose cuttings.
4. Seeds sent from Gardens to Acclimatisation Society, Otago, New Zealand—50 papers of seeds.
5. Time of leafing, flowering, and fruiting of a few standard plants in Botanic Gardens.
6. Periodicals received.
7. Presentations to Museum.

Meteorological Returns.

1. Hobart Town, from F. Abbott, Esq.—Table and summary of observations for October.
2. Port Arthur, from J. Boyd, Esq.—Table for September.
3. Westbury, from F. Belstead, Esq.—Table for October.
4. Sydney, New South Wales, from G. R. Smalley, Esq., Government Astronomer.—Printed tables for June, July, August, and September, 1867.

A letter was read from the Secretary of the Queenborough Horticultural Improvement Association, acknowledging with thanks the receipt of the meteorological records and abstracts published by the Society.

A communication from Mr. Denny, A.L.S., (Leeds Philosophical and Literary Society) was read, asking for parasites from our indigenous animals, especially from the Native Tiger, Devil, Bandicoot, Kangaroo and Wallaby, Platypus, Echidna, &c.; also skeletons of any of the above. If any of the Fellows or other friends in country districts could send such specimens as are required, the Secretary intimated that they would be gladly accepted, and forwarded to Mr. Denny by the first opportunity.

The presentations to the Museum were as follows :—

1. From Mr. Aitken, Southland, New Zealand, portions of upper and lower mandibles, and joint of toe of Moa (*Dinornis sp.*), human lower jaw, and frontal bone showing two tomahawk cuts, two fossil shells (*casts*), specimen of fossil wood, two masses of fossil shells, and eight other geological specimens.
2. From Mr. Duncan Chisholm. Specimen of the Channel-bill (*Scythrops Novæ Hollandiæ*, Lath.), shot at Clarence Plains, Tasmania, by Mr. D. Josephs.

This is a very interesting specimen, being the first which has been procured in Tasmania. According to Gould the *Scythrops* belongs to the Cuculidæ (Cuckoos), and is a migratory bird of New South Wales, which is the only colony in which it was seen by him. This specimen was

probably blown across the Straits by some of the very high winds which have of late been so prevalent.

3. From Mr. E. J. Hampton. A white fantailed Pigeon, prepared and mounted.
4. From Mr. Dickenson. Specimens of *Agrotis vastator*. [These were obtained by Mr. Dickenson from the Blue Mountains, New South Wales, where, as in other parts of that colony, they occur in incredible number, inflicting damage of the most serious nature on the growing crops and grass lands.]
5. From Lieut. Col. Dwyer. A Russian officer's helmet from Sebastopol.
6. From Mr. J. V. Buckland. Queen Mary's signet ring.
7. From Mr. E. D. Swan. A collection of nests and eggs of Tasmanian birds.

Mr. Swan drew special attention to several points of interest in connection with the nests. The nest of the White-shafted Fantail (*Rhipidura albiscapa*), was peculiar for its shape, which very nearly resembles that of a wine-glass. In addition to these the presentation included nests and eggs of the Wood Swallow, the Yellow-throated Honey-eater, the Flame-breasted Robin, &c.

Mr. M. Allport brought for exhibition some living microscopic objects either identical with or closely allied to *Volvox globator*. Before placing them under the instrument, Mr. Allport remarked that his attention was first drawn to these specimens from the fact, that out of several small fish ponds one only contained the volvox, and in that pond the perch fry invariably grew more rapidly than in any of the others, leading to one of two conclusions—either that the minute fish feed upon the volvocines which are distributed through the water in countless myriads, or the volvocines supply food to a number of small insects or crustaceans, which in their turn go to feed the fish. As to the volvox itself, Mr. Allport observed that in the early days of microscopic research all minute moving specks in water were at once looked upon as low forms of animal life. Further investigation, however, soon showed that these minute organisms might be separated into two very distinct classes, viz., those which possessed stomachs, and could be seen to take food, and those which, even under the highest powers of the microscope, had no trace of a digestive cavity. As to the first class there was no doubt they belonged to the animal kingdom. As to the second class much difference of opinion long existed, but it is now generally believed that they are really vegetable cells, reproducing themselves by the ordinary process of gemmation or budding. In the lower forms of those organisms, which are undoubtedly animal, motion is effected by precisely the same means as in the volvox now exhibited, viz., by minute vibratory hair-like appendages covering the surface in vast numbers, and known technically as vibratile cilia. The second class of organisms mentioned may be subdivided into two great divisions, the first division possessing a calcareous or silicious skeleton, many forms of which will be well known to Fellows of the Society as the Diatoms so deservedly admired for their delicate lace-like markings, and so often used as test objects. The second division (known as Desmidiæ) consisting of a gelatinous mass, but nevertheless symmetrical, and covered with markings as delicate and beautiful as those of the diatoms. To the last division, viz., the Desmidiæ, the *Volvox* belongs. Upon examination they will be found to present the appearance of delicate globes of some transparent and colourless substance, each globe entirely surrounded by a network of fine lines, the lines and knots being of a pale green colour. They are in vast numbers, of various sizes, and are per-

petually revolving and moving at different speeds across and about the field of the microscope. They wind round and round and over and under one another in graceful circles, yet never seem to impede each other, the action of the cilia appearing always to keep them slightly apart. Many of the specimens exhibited contain the germs of young volvocines suspended in the jelly-like interior. These germs are also spherical, of a deep green colour, and present the appearance of a mass of granules. The germs can be seen in all stages of their growth, from the merest rudiment to the young Volvox, about to burst from the parent sphere. The number of young contained in each differs considerably, varying from four to sixteen in many hundreds of specimens examined; by watching for some time the actual bursting of the parent Volvox, and the extrusion of the young—at once endowed with independent motion—may frequently be seen. In conclusion, Mr. Allport stated that he had frequently endeavored to find some means of preserving the desmidiæ as permanent objects; but the result fell so far short of the beauty of the fresh and living specimens, so as to remind him of the barbarous custom, so common in Tasmania, of cutting down our lovely fern trees, the growth of half a century, to decorate streets, churches, and ball-rooms, where they become monuments of faded wretchedness in the course of an hour.

The special thanks of the meeting were accorded to Mr. Allport for his very interesting exhibition of microscopic objects, and the business terminated with the usual vote of thanks to the donors of presentations.