Verreaux of Paris, who obtained it in a collection from Santa Fé de Bogota. In size it fully equals, if it does not exceed, *O. dentatus* and *O. speciosus*, from which latter it differs in the total absence of any black on the throat.

BOTANICAL SOCIETY OF EDINBURGH.

November 12, 1857.—Professor Balfour, V.P., in the Chair.

The Chairman gave an account of an excursion with some of his pupils to Arran. The party collected 500 species of plants, of which 1-25th consisted of true Ferns.

The following papers were read :—

1. "Notice of Abnormality in a Flower of *Lilium*," by J. Christian, Esq.

In this Lily there are ten sepals, eleven stamens, and two ovaries; the petiole is slightly flattened, and appears to be formed of two petioles united. The monstrous flower is undoubtedly formed, not by the growth of additional parts, nor by the splitting of organs during their development, but by the fusion of two flowers into one. According to this view, the number of parts should be as follows :— sepals, twelve; stamens, twelve; ovaries, two. Two of the sepals seem to be lost by adhesion, as is indicated by two of them presenting a slight cleft towards the apex, showing apparently that they are double. Add this number two to the number actually in the flower, ten, and we have the proper number, twelve. There were only eleven stamens. He is unable to account for the missing stamen further than by supposing that it may be due to adhesion or abortion.

2. "Short Notice of a peculiar form of Fungus," by James Young, M.D.

It was found by Dr. Young while assisting Mr. Edwards in the operation of excision of the knee-joint. The patient (an Irishman) was, after the operation, laid on a new and clean bed, with a hair-mattress, which had been previously covered with gutta-percha sheeting. The patient lay in considerable comfort for some days. The bed, however, became very soon damp, and it was found necessary to have him changed. On the fourteenth day after the operation, he was removed from the bed till the mattress was changed, and a new one substituted, when attention was directed to an extraordinary appearance on the under part of the bed, where the Fungus was produced in large quantity, growing both from the spar and from the mattress. The bed was thoroughly cleaned; but in spite of this, at the expiry of nine or ten days, the same appearance was again presented, the Fungus being nearly in equal quantity as before.

3. "Remarks on the above Fungus," by the Rev. M. J. Berkeley, M.A., F.L.S.

The Fungus is an imperfect state of some *Coprinus*. A similar case is reported in some Italian Transactions, and I recollect one

which occurred at St. George's Hospital in 1825. The treatise to which I allude is entitled 'Sopra alcuni Funghi ritrovati nell' apparechio di una frattura. Modena, 4to, 1805. Targioni-Tozzetti.'

4. "Notice of the discovery of a new station in Britain for *Polygonatum verticillatum*," by the Rev. W. Herdman.

The station is Drimmie Burn Den, near Glen Ericht Cottage, parish of Rattray. It was found at Strone of Cally, by Dr. Barty, some years ago, and has been long known at Craighall. The Drimmie station is nearly intermediate in position between these two places, which are about four miles apart.

December 10, 1857.—Dr. Seller, President, in the Chair.

The office-bearers for the ensuing year were elected, viz.:—
President, Dr. Seller; *Vice-Presidents*, Professor Gregory, Professor Balfour, Dr. W. H. Lowe, Andrew Murray, W. S.; *Secretary*, Dr. Greville; *Assistant-Secretary*, Dr. George Lawson.

The following papers were read:—

1. "Notice of Egyptian Plants," by Dr. John Kirk.

Dr. Kirk gave a short account of a tour in Egypt and Syria during the spring of 1857, and exhibited specimens of the more interesting plants.

2. "Notice of Plants found in the neighbourhood of Comrie, Perthshire," by Mr. D. P. Maclagan.

Mr. Maclagan called attention to the importance of a knowledge of local floras, as a means of extending our knowledge of the geographical distribution of plants. After a few remarks on the situation and climate, he described some of the more important parts of the district, and laid a detailed list of the plants on the table; including varieties, 442 had been noted, consisting of Thalamifloræ, 68; Calyciflorae, 98; Corolliflorae, 120; Monochlamydeæ, 37; Florideæ, 30; Glumiferæ, 70; and Acrogenæ, 19.

3. "Contributions to Microscopical Analysis. No. 1. Tobacco," by Dr. George Lawson.

Dr. Lawson called attention to the imperfect descriptions that existed of the histological characters of tobacco, and the consequent liability to error in microscopical analysis. It has been customary to characterize the tobacco as distinguished by its hairs being 'glandular,' or having an 'enlargement' or 'roundish swelling' at the tips; but this very imperfectly indicates the peculiar structure of these hairs, which, although extremely variable in size and general form, present certain characters in their lower cells, and in the structure of the glands at their tips, which are very constant and of great practical value. The characteristic hair of the tobacco-leaf varies from 1-20th to 1-100th of an inch in length, and is generally thick and gouty at the base, and tapering towards the extremity where the glandular structure is placed; that structure is of an oval or

rounded form, and consists of a few closely packed but well-defined cells, which are very much shorter than the other cells of the hair. The elongated cells of the body of the hair (of which the lower one is most characteristic on account of its very large size), contain fine colourless, granular matter, and generally nuclei ; but the secreting cells are well furnished with colouring matter of a reddish-brown, but sometimes of a green colour. A one-inch object-glass, recommended for the examination of tobacco, is usually insufficient to show the *structure* of the gland, and the mere presence of 'glandular hairs' proves nothing, these being common in plants. It is also necessary to keep in view that many small hairs occur on tobacco-leaves which are normally without glands. The glandular hairs are most abundant at the tips of the shoots, and especially on the calyx and flower-stalks of the tobacco. To the fact that epidermal hairs are so frequently organs of secretion, Gasparrini has recently added the additional one, that they are also the organs of absorption.

4. "Notice of Galls found on the Leaves of the Beech," by Mr. James Hardy.

GEOLOGICAL SOCIETY.

January 6, 1858.—Major-General Portlock, LL.D., President, in the Chair.

The following communications were read :—

1. "On *Cephalaspis* and *Pteraspis*." By Prof. Huxley, F.R.S., F.G.S.

Of the four species originally included by Prof. Agassiz in the genus *Cephalaspis*, two, *C. Lloydii* and *C. Lewisii*, are so different from the others that the possibility of their proving generically distinct is hinted at in the 'Recherches sur les Poissons Fossiles.'

Subsequently M. Kner endeavoured to prove that these two species are not fish-remains at all, but are the internal shells of a Cephalopod, for which he proposed the generic name of *Pteraspis*.

Roemer has still more recently expressed the opinion that the *Pteraspides* are *Crustacea*. These conflicting opinions clearly indicate the necessity of revising and comparing anew the characters of the different species of *Cephalaspis* and *Pteraspis*. And a still greater interest is lent to the inquiry into the true nature of *Pteraspis*, from the fact that species of this genus are now known to occur in undoubtedly Upper Silurian rocks. As the evidence stands at present, they are, if fish, among the oldest (and nearly the very oldest) representatives of their class.

In undertaking this inquiry, the author of the present paper considered it desirable, in the first place, to determine with precision the microscopical characters of the shield of *Cephalaspis*. This shield is exceedingly thin, nowhere exceeding $\frac{1}{40}$th of an inch in thickness on the dorsal surface, and on the ventral suddenly thinning off a little way from the margin into a mere membrane.

The subjacent cranium appears to have been wholly composed of cartilaginous or soft fibrous tissue; for the "layer of fibrous bone,"