

Miscellaneous Communications.

1. Professor Balfour read a communication from his son, Sub-lieutenant Andrew F. Balfour, of Her Majesty's ship "Challenger," giving a list, by the Botanist of the Expedition, of some of the plants peculiar to Nightingale Island, one of the *Tristan d'Acunha* group in the South Atlantic Ocean, visited in the course of the scientific cruise. The most interesting tree on the island was *Phylica arborea*, P. Th., of which specimens were sent by Mr Balfour for the herbarium at the Royal Botanic Garden.

2. A note was read from Mr James Leslie, C.E., in which he stated that on the Greenheart (*Nectandra Rodiaei*) piles of Easdale Pier, west coast of Argyllshire, driven in November or December 1872, a growing specimen of tangle (*Laminaria digitala*) was found 12 feet in length, on 23d September 1873.

3. Professor Dickson exhibited specimens of *Polyporus brumalis*, a rare British fungus, collected by him near Carluke.

Thursday, 12th March 1874.—Sir WALTER ELLIOT, K.S.I.,
Vice-President, in the Chair.

The following Candidates were elected as Resident Fellows:—

PROFESSOR LISTER.
JOHN MACMILLAN, M.A.
JAMES BELL PETTIGREW, M.D.

The following Communications were read:—

- I. Notice of a new *Lepidodendroid* Fossil from Devonside, Tillicoultry, with Remarks on other Fossil Plants. By CHARLES W. PEACH, A.L.S.

The author first referred to a specimen of a fossil plant which he had noticed in the Dundee Museum, marked as *Bothrodendron*, from Alfreton coal-fields, Fifeshire, which on examination appeared to be *Megaphyton*. Although the

specimen possesses the dots and other characters mentioned by Lindley and Hutton, the rows of scars on each side differ much from those of *Megaphyton*, which show circular radiating markings at the bottom of the concavities, as if made by cones, and the scars are far distant from each other on the stem; whereas in the Dundee specimen they touch each other, and have a ridge up the centre dividing the scar into two parts, with the double "horse-shoe" at the top, and instead of the smooth radiated lines in the bottom of each concavity, have a ragged fibrous structure, as if large leaves or branches had been torn off. It therefore agrees more with that figured by Lindley and Hutton as *Megaphyton distans*, than with *Bothrodendron*. Mr Peach illustrated his remarks by a cast and drawings. He considered the fossil new to the Scottish coal-fields.

He next noticed a specimen of *Lepidodendron* from Deeside, Tillicoultry. The leaf scars on each rib, instead of being in a single row, have lines of two or three ranged diagonally across each rib, and had on the outer bark scale-like markings, such as those figured by Heer, in his "Fossile Flora der Baren Insel," which are represented lying close together. In the Tillicoultry specimen they are widely separated, and have beautiful flagree markings running lengthwise as well as transversely, thus separating them from each other. Mr Peach considered it to be *Lepidodendron Veltheimianum* of Goeppert, var. *reticulatum*. The normal form has been figured by the Geological Survey from Fife and East Lothian. The variety is new to Scotland, and has also been found by Mr D. Grieve near Colinton.

Mr Peach exhibited specimens of *Halonina* from various localities in Scotland, remarking, that though widespread it is not common, and little is known of this beautiful fossil plant. He exhibited a small but perfect specimen of *Favularia nodosa* of Bowman, showing impressions of leaves in the shale, which are not seen in Bowman's specimen. Mr Peach expressed his belief that a *Lepidodendron*, figured by Dawson, in his Fossil Plants from the Lower Carboniferous formations of Canada, as *L. corrugatum*, is not uncommon in shale at Colinton near Edinburgh, and other places. He concluded by mentioning that Mr Hodge

of Dundee had given him a small but beautiful cone found in coal-shale at Wemyss, Fife, which did not correspond with any described species.

II. *Climatal Changes in Scotland*. By JAMES M'NAB, Curator, Royal Botanic Garden, Edinburgh.

Since my paper on Climatal Changes was read before the Society in November 1873, much discussion has taken place on the subject, and many of my opinions are endorsed by old Scottish gardeners, as well as by amateur cultivators. All maintain that many varieties of fruit now cultivated are not equal to what they were thirty to fifty years ago. The Ribston pippin and Nonpareil apples are alleged to be inferior in size and flavour, as well as in quantity, to the specimens formerly seen on walls, espalier rails, and standards. If seen good now, it is only on walls in very favourable situations, and during very fine summers. Walter Nicol, a great authority on Scottish horticulture, wrote in 1810 that the Ribston pippin will thrive and ripen at John o'Groats, while it deserves a place at Exeter and Cork. The Jargonelle pear is another fruit at one time extensively grown, and thoroughly ripened on standard trees in various districts in Scotland. Standard ripened Jargonelles are now exceedingly scarce, although during a fine summer a few are occasionally seen.

What has become of the boasted Carse of Gowrie orchards, which, half a century ago, were so remunerative to their proprietors? We find it recorded, from the years 1809 to 1813 inclusive, that seventy varieties of apples were then cultivated as standards in the Carse orchards, including Ribston pippin, Nonsuch, Yorkshire Greening, &c.; thirty-six varieties of standard pears, including Galston, Moorfowl egg, Swan egg, Jargonelle, &c.; eight varieties of plums, including white and red Magnum, Orleans, and Damson. The money produce of the thirty apple orchards alone, covering 126 acres, exclusive of the grains and grass frequently grown amongst them, from 1809 to 1813 inclusive, amounted to L.10,515. During 1809, the apples from the 126 acres yielded L.2318; 1810, L.2366; 1811, L.1840; 1812, L.2333; and 1813, L.1668, averaging from