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The Hepatitis Of The Glenshee District

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MEETING OF THE SOCIETY,

Thursday, April 13, 1905.

Professor I. BAYLEY BALFOUR, President, in the Chair.

Dr. A. W. BORTHWICK gave notice of a motion regarding the time of meeting of the Society during the winter session.

Mr. WILLIAM YOUNG read a paper on the "Hepatics of Glenshee."

THE HEPATICS OF THE GLENSHEE DISTRICT. By WILLIAM YOUNG.

This paper contains the results of a week spent in Glenshee in the month of July 1904 for the purpose of working up the hepatic flora, and, if possible, adding to the records of their distribution at present being collected by Mr. Symers M. Macvicar. I am much indebted to him for examining and naming all the plants herein mentioned, and so they may be regarded as authentic.

The localities visited were the same as those described in my communication at last meeting on the Alpine flora of the district. There is, therefore, no need for a lengthened description of the features of the country, either geologically or otherwise, on this occasion. Briefly, the nett results were to add 12 new records of species and varieties for East Perthshire—vice-county, 89; 6 for Forfarshire—v.-c., 90; and 5 for South Aberdeenshire—v.-c., 92.

One of the records for v.c. 89 was also new to Scotland. This was *Cephaloziella Jackii* (Limpr.) It is only a few years since it was discovered in Britain, as Spruce in his monograph of "Cephalozia," published in 1882, gives no British station for it. Cooke's "Handbook" of 1894 does not mention it. Lett, however, in 1904 quotes it from three provinces—Cornwall, the Mersey, and the Lake Districts. It was gathered at the head of Glen Beag among the roots of a juniper bush growing by the side of a boulder. When returning the specimen Mr. Macvicar wrote me: "As it is an addition to Scotland,

and is a minute plant, I sent a piece to Mr. Pearson, who has confirmed my naming, so that you may be at ease about it being correct. It is a nice addition to our flora." It has since been gathered by Miss Macvicar in Dumfriesshire.

Of the 12 new records for v.c. 89, 10 were gathered in the course of one afternoon in a single locality—a marsh between Ben Gulabin and Carn Mor at an elevation of 2000 ft. Of these there are two which are sufficiently rare to deserve special mention—*Lophozia socia* (Nees), and *Harpanthus Flotowianus*, Nees. *Lophozia socia* has only been found in four vice-counties in Scotland. *Harpanthus* was plentiful by the side of rills in the marsh. It is easily distinguished by the small round notch at the apex of the leaf. This plant was discovered in Shetland by Mr. John Sim in the year 1878, and was fully described by Mr. Pearson in the "Transactions" of this Society for 1879. It was then called "a new British hepatic." Five years earlier, however, it had been gathered by the Rev. Mr. Ferguson in Aberdeenshire, and named *Jungermania bantriensis*. The error was discovered by Mr. Macvicar. The other records for the county were:—

<i>Aplozia pumila</i> (With.)	<i>Cephalozia connivens</i> (Dicks.)
<i>Lophozia bicrenata</i> (Schmid.)	<i>Odontoschisma Sphagni</i>
<i>Lophozia Floerkii</i> , var. <i>Baueriana</i>	(Dicks.)
<i>Sphenolobus exsectæformis</i>	<i>Pleuroclada albescens</i> and
(Breidl.)	<i>Nardia obovata</i>

This single afternoon's outing yielded some 40 species in all. Of course this includes some which are common everywhere, and one continually comes across them on the hills, such as *Frullania Tamarisci*, *Nardia scalaris*, *Lophozia ventricosa*, *Diplophyllum albicans*, *Lejeunea cavifolia* (Ehrh.), etc. There were a few, however, which, though not records for the county, may be mentioned:—*Cephalozia pleniceps*; *Cephalozia leucantha*, Spruce; *Lophozias bantriensis* and *gracilis*; *Sphenolobus minutus*; *Scapania uliginosa*, and *Chiloscyphos pallescens*. The two *Mylias*, *Taylori* and *anomala*, were very common.

This marshy ground seemed a likely place for *Pleurozia purpurea*, but a diligent search failed to reveal it, and it remains a desideratum for East Perth. It is strange that in the western part of the county it should be plentiful, and

stranger still that it has been gathered in Forfar to the east and in Aberdeen to the north. However, Mr. Macvicar says this plant is very rare in North-East Scotland, and possibly does not occur in v.-c. 89. He has seen only one specimen from Clova, and one from Ben Macdhui. He found it in one place near Aviemore.

A whole day was spent in Glen Beag on the rocks forming the west side. They are decidedly dry, consequently hepatics are scarce. *Madotheca rivularis*, Nees, and *Acolea obtusa* (Lindb.), were the only species of which I took specimens. *Lophozia Floerkii* was one of the commonest in all the localities visited. *Riccia sorocarpa* was found on the soil at the foot of the rocks, and *Lophozia bierenata* was fairly abundant on the soil by the roadside associated with *Cephaloziella divaricata*. In a small gorge at the foot of Carn nan Sac a quantity of *Cololejeunea calcarea* (Lib.) was scraped from the smooth, wet, under-surface of an overhanging rock, and large tufts of *Lophozia Mulleri* and its variety *bantriensis* were pretty frequent. A few stems of *Scapania æquiloba* (Schwaegr.) and *Kantia Sprengelii* (Mart.) were picked up, as well as some of the commoner *Lophozia barbata*, *Aplozia riparia*, and *Scapania undulata*.

Glen Tatnich, which lies on the other side of Ben Gulabin from Glen Beag, was rather disappointing. We walked up about two miles, but the right kind of habitat for hepatics seemed wanting. Probably further on towards Loch nan Ean, or within the corrie of Glas Thulachan, would be more productive. *Radula Lindbergii*, Gottsche, was our best find in Glen Tatnich, followed by *Frullania fragilifolia*. Both were growing on shaded rocks. The latter is easily named in the field by wetting the tip of one's finger and pressing it on the plant, when the leaves are readily detached. *Diplophyllum ovatum* and *Metzgeria conjugata* were got on the rocks in a little ravine, and *Scapania subalpina* among the gravel by the margin of the stream. *Hygrobiella laxifolia* occurred on the moist banks of some of the rills from the hillsides.

In Glenshee itself the only work done was during a morning constitutional on the road down from the hotel. A casual glance at the bank and drystone dyke on top of it yielded *Lophozia alpestris* and *Aplozia pumila*, and the variety

gracillima of *crenulata*. This last was one of the records for the county.

We fully expected to find some of the rare alpine hepatics in Canlochan and Corrie Ceanmhor, but whether they did not exist, or our attention being divided between looking for them and flowering plants, especially *Gentiana nivalis*, we may have overlooked them, it is certain we did not get a very favourable impression of either locality. At the head of Canlochan, on the slopes, the soft clayey soil, which in winter will be readily displaced by sliding snow or heavy rain, does not afford a sufficiently permanent and stable footing to the cryptogamic plants. There is no humus, such as there is at the back of Ben Lawers on the rising ground above Loch na Chait. In Canlochan, where harder parts of the rock have resisted weathering, they project in spurs and ledges on the top of which carices and hawkweeds luxuriate, and the sides are so crumbly that mosses and hepatics cannot establish themselves. Hepatics need abundance of moisture, and for those which affect rock surfaces, a hard yet porous quality of rock, which absorbs moisture readily but parts with it slowly. There seem to be the extremes of bad conditions in Canlochan and Ceanmhor: in the former soft and friable rock; and in the latter hard crystalline, non-porous, granitic rock. The records for v.c. 90 consisted of *Gymnomitrium varians* (Lindb.) (formerly *Acolea conferta*), *Gymnomitrium crenulatum*, *Harpanthus Plotowianus*, *Scapania uliginosa*, and *Lophozia alpestris*, var. *gelida*. *Gymnomitrium varians* was found as very small black tufts on stones. *Harpanthus* was very common in its usual habitat by the side of running water. *Pallavicinia Blythi* (Morek.) was in fine fruit on a bank near the Glen, and much stronger than specimens from various localities in the Killin district. *Anthelia Juratzkana*, *Bazzania triangularis*, and *Radula Lindbergii* were all scarce, whereas in West Perthshire they are often met with. We searched for hours for a hepatic which was first found by Mr. Macvicar a year or two ago on Ben Lawers, and since then in several localities in West Perthshire. I had the pleasure of finding it on Ben Laiogh two years ago, so I knew what to look for. It grows as isolated stems in wet grassy ground by the side of streamlets above 3000 ft. If we failed to find *Sphenolobus politus* we found another

equally important, viz., *Scapania paludosa*, C. Müll., which has raised some discussion. At first sight it looks like *Scapania irrigua*, but it is larger, and more lax in habit. The keel of the leaves is highly arched, and the postical lobe is often toothed. It agrees with the description and Plate in the "Bulletin de L'Herbier Boissier" for 1903 by Karl Müller. Mr. Macvicar reports it was gathered in Clova in 1876 by the Rev. Mr Ferguson, and last summer by Mr Cocks on Scur nan Lapaich.

Mr. Macvicar, in the "Journal of Botany," says he has identified it in collections where it had been labelled as *Scapania undulata* or *uliginosa*. So there are additional records from Braemar, Croall, 1856; Ben Wyvis, Barker, 1872; and Schiehallion, Carrington, 1882. It seems to be an Alpine species, as we found it at 3000 ft.—the same elevation as that at which Mr. Cocks found it. "The chief points to be remembered when searching for it are that it is a marsh plant, growing in large grass-green or yellow-green masses, and is very flaccid. The position of the plant is rather doubtful. It combines some characters of *S. undulata*, *irrigua*, and *uliginosa*. I am inclined to think it nearer *S. irrigua* than the others. Herr Müller is probably right in making a species of it, as it is difficult otherwise to know where to place it. It is widely spread in Europe, and has been found in New Hampshire, U.S.A." Mr. Macvicar also mentions that a form found by Mr. Ewing and myself last year in Canlochan is the variety *vogesiaca*, C. Müller, which has hitherto only been found in four localities in the Vosges mountains. He sent a piece to Schiffner, who confirms the naming, and says it is "absolutely identical with Müller's original specimen."

In Corrie Ceannmor *Gymnomitrium concinnatum* was very common, along with *obtusum* of the same genus, and *Anthelia julacea*. The only records were *Anthelia Juratzkana* and *Gymnomitrium concinnatum*, var. *intermedium*. I cannot understand why *coralloides* was absent, as it occurs on rocks with *concinnatum* frequently in the Western ravine of Lawers. *Scapania purpurascens* was very plentiful. Most brilliantly coloured clumps of it, extending to three or four square feet, were seen with water constantly percolating through the mass. *Scapania curta* and *Marsupella aquatica* complete the

list for the corrie. The latter was growing in about three inches of water on the margin of the loch. In this same county of South Aberdeen, near the patch of snow on the side of Glas Maol, we gathered *Pleuroclada albescens*, and on a stone Mr. Ewing gathered a small tuft which contained *Marsupella Sprucei* (Limpr.), *Gymnomitrium adustum*, var. *olivacea* (Spruce), and *Lophozia alpestris*, var. *gelida*, a mixture of rarities very difficult to separate out. The *Pleuroclada* and the *Marsupella* were records, and, along with the variety *heterostipa* of *Lophozia inflata*, complete the five new records for v.-c. 92.

Mr. GEORGE WEST showed an interesting series of Aquatic Phanerogams from Scottish lochs, pointing out the marked effect of habitat upon many forms. He also showed a series of rare Aquatic Mosses.

Mr. WILLIAM EVANS read a short paper on the occurrence at Low-Level of *Oligotrichum incurvum*.

The above gentlemen received the cordial thanks of the meeting for their communications.

The PRESIDENT exhibited a series of *Bergenia saxifragæ* ;

Mr. W. B. BOYD, *Andromeda hypnoides*, and a green double snowdrop.

Mr. JAMES WHYTOCK exhibited a fine collection of flowers from Dalkeith Palace Garden, and a number of varieties of apples to illustrate methods of keeping.

Mr. SYMINGTON GRIEVE showed a plant of *Trichocolea tomentella*, and Mr. R. L. HARROW, a series of Alpine plants in flower.

The above exhibitors were cordially thanked by the meeting.