Report from the Botanical Camp Committee on the Flora of Glen Lyon. By W. WATSON, M.D., and J. M. MACFARLANE, D.Sc., F.R.S.E.

(Read 8th April 1886.)

In presenting this report of the work done by our members in Glen Lyon, the authors of it desire to express their warmest thanks to Mr S. Grieve, who not only originated the Committee, but has contributed very largely to the success already attending it.

Through the kindness of Mr Bullough, the proprietor, and Mr Lindsay, the tenant of Invermerran Farm, excellent accommodation and attendance were secured there for the two parties who visited the Glen. Situated at the foot of Loch Lyon, and at the junction of the Lyon with the Merran, the locality is one of the most remote on the mainland of Scotland. Far from mail coach and railway route, it is rarely visited by tourists, but it is the centre of a landscape whose hills are second to none in the richness of their botanical treasures. On the steep hill ledges too the golden eagle still builds its nest, and finds a safe retreat. A fine specimen was seen by our second party sailing round the top of Ben Vannoch.

The first company met at Invermerran on Monday evening, July 27th, and was composed of Mr Neill Fraser, Mr Brebner of Dundee, and Dr Macfarlane.

Next morning the party ascended Ben Creachean, about 3500 feet high. They proceeded up the Merran Burn, and reached a ravine on the north-east side of the hill. Passing up its sides there were noticed, in addition to the alpine plants usually found at from 1000 to 2000 feet, several early flowering ones, such as the marsh marigold, wood sorrel, and primrose, in full blossom. On reaching the top of the ravine, a descent was made to a small hill tarn on the south side of the hill fed by a rivulet from a snow wreath above, but no noteworthy plants were got. From this point a detour round the north-east shoulder of the hill brought us to the summit. Retracing our steps, we separated to explore the large corrie facing northward, and meeting on the west side, the following plants

were found to have been gathered :—*Thalictrum alpinum*, *Caltha palustris* in flower, *Rubus Chamæmorus*, *Saxifraga stellaris*, *Gnaphalium dioicum*, *Salix herbacea*, *Juncus trifidus* and *triglumis*, *Carex atrata*, and *Polypodium flexile*. The discovery of another locality for *P. flexile*, in full view of its previously known home on Ben Alder, suggests the idea of its occurrence on other of the hills which stretch along the east side of the Moor of Rannoch to the hill just named. Descending by the west side of the hill into the glen between Ben Creachean and Ben Vannoch, we soon joined the Merran Burn. On the whole, the day's results were very disappointing from a botanical point of view, the hill being too bare and dry to afford good results.

Next day, from unforeseen causes, very little hill work was done, but down the Lyon valley *Meum athamanticum*, *Habenaria chlorantha*, *Gymnadenia conopsea*, and commoner plants were noted. At a height of about 1200 feet on Meal Pubhil, the only specimens of *Asplenium viride* recorded during the visit were obtained.

On Thursday morning an early start was made for Ben Heasgarnish, a fine massive hill, 3530 feet high, facing the farm, and showing a large shady corrie on that side. This proved to be the most interesting and productive place visited. After ascending to the foot of the corrie face, we each selected separate lines of ascent. From under the huge boulders, about 2000 feet up, splendid specimens of *Polystichum lonchitis* pushed out their fronds, while an abundance of *Polypodium alpestre* grew out from between the stone crevices. About 100 feet higher, rich carpets of *Silene acaulis*, varied with *Saxifraga aizoides* and *hypnoides*, formed a fine contrast as they spread over the soaked earth and dripping stones. *Cerastium tomentosum*, *Saxifraga stellaris* and *oppositifolia*, *Saussurea alpina*, *Gnaphalium supinum*, *Bartsia alpina*, *Juncus acutiflorus* and *triglumis* were also mingled amongst these. At a height of about 2600 feet, a considerable quantity of *Cystopteris montana* was got in three localities pretty widely separated, and along with it *Saxifraga nivalis*, *Juncus trifidus*, and *Carex atrata* were also got. On the east side, about 200 feet from the summit, a very interesting set of

environments was discovered. A little tarn filling a hollow, and supplied with water from a large snow wreath about 50 feet above, had its margin bordered with a dense growth of *Caltha palustris*, whose flowers formed a rich yellow carpet. Such a striking local climatic effect, seen in the height of summer after broiling days of heat, impresses on one the importance of noting local conditions as bearing on the flora and fauna of any district.

What proved to be the best "find" of our party was made by Mr Brebner while botanising along the face of the corrie. In 1810 Don reported that he had found *Carex ustulata*, Wahl, on the Breadalbane mountains, but as it had never since been confirmed, it was classed by Hooker, in his appendix to the *Student's Flora*, as "one of Don's reputed discoveries"; but three specimens, gathered by Mr Brebner and forwarded to Dr Buchanan White, have been identified by him, and confirmed by Mr A. Bennett of Croydon, as Don's plant. The smaller and more slender habit, nodding head, and different hue, all separate it in appearance from *C. atrata*, with which it might be at first confounded. And here we may be allowed to do honour to the memory of that most indefatigable of all our early Scotch alpine botanists, whose "finds," once regarded as doubtful or mistaken, are being all verified, year by year, as a more perfect knowledge of our hill flora is obtained.*

We reached our headquarters about 7 P.M., thoroughly satisfied with our day's botanising, and convinced that this hill, which has received so little attention from botanists, is worthy of all praise.

On Friday, an accident happening to one of our number, we were prevented setting out for the hills till twelve o'clock, when it was resolved to circle Ben Vannoch, 3100 feet high. Nothing of importance was gathered. On the succeeding morning an early start was made for Tyndrum station, which was reached after a tough walk under a burning sun.

* NOTE.—6th October 1886.—Mr Brebner, along with two accomplished botanists, revisited the spot during the past summer, and were gratified to find that *Carex ustulata* was pretty plentiful. Specimens of it are now deposited in the Herbarium at the Royal Botanic Garden.

The second party, consisting of Mr Grieve, Mr Rattray, and Dr Watson, reached Invermerran on Monday, 3rd August. On the 4th, Mr Grieve and the author walked along the south side of the loch, and the former then made his way to the summit of Craig Mohr, 3300 feet high, and found among other plants *Polygala vulgaris* var. *depressa*, *Saxifraga hypnoides* and *oppositifolia*.

On the 5th the party climbed Ben Vannoch and Ben Achallacher, the latter 3400 feet high. During the ascent from the Merran stream, great quantities of *Lysimachia nemorum* and two specimens of *Malaxis paludosa* were got. On Ben Vannoch the best plants found were *Thalictrum alpinum*, *Saxifraga stellaris*, and *Juncus trifidus*. Ben Achallacher is remarkable for its very abrupt rise from Loch Tulla on the west, and its very gentle slope on the east, down to the Old Woman's Burn (allt faillich), a tributary of the Merran. The plants got on this hill were mixed with those from Ben Vannoch; but the two are continuous, and form a single group.

On the 6th of August we ascended Ben Heasgarnish. The day was very misty, but Messrs Grieve and Rattray remained all day wandering over the hill, and reached home at 6 P.M. Among the plants found were *Gnaphalium supinum*, *Juncus acutiflorus*, and *Saxifraga nivalis*. Dense mist and several heavy showers of rain interfered with successful plant-collecting.

On the 7th, two of our number went up the Avon Glass or Grey Water to the source of one of its tributaries. One chose to climb to the top of Cham Craig, 2887 feet high, and then crossed to the flank of Craig Mohr; while the other collected plants along the whole of the west flank of Craig Mohr. *Saussurea alpina* and a very stunted form of *Systopteris fragilis* were gathered.

The author went up the Merran Water to the watershed between Glen Lyon and the Moor of Rannoch. Though the elevation was not great, the view was an exceedingly beautiful one. Crossing Meall Tionnail, the following were got:—*Alchemilla alpina*, *Galium saxatile*, *Valeriana sambucifolia*, *Hieracium murorum*, *Menyanthes trifoliata*, *Utricularia minor*, and *Hymenophyllum Wilsoni*.

The party walked down the river Lyon on the following day to Pubhil Farmhouse, when they spent some time searching for *Utricularias* in the low ground near the mouth of the Pubhil Burn, and were successful in getting quantities of *U. minor* and one plant of *Malaxis paludosa*. One of us then climbed Meall Pubhil, 2290 feet, and descending to the Pubhil Burn in the upper part of its course, rose again over Meal Buidh, and crossed the summit of Meall Daill, 2888 feet, finally reaching the Merran stream, which was followed to our home. On Meall Pubhil were collected *Carduus lanceolatus* and *heterophyllus*, *Orchis mascula*, and *Habenaria albida*. Another of our party, after climbing Meall an Odhar, 2648 feet, crossed on to the Grinnan hill, and then went over the Lyon river to climb Meall-a-Chall on its south bank. On it were got *Drosera anglica*, *Rubus chamaemorus*, *Veronica saxatilis*, and *Avena alpina*.

The 9th was very wet and windy, and the streams came down in high flood.

On Monday (10th) the party broke up, after a week of rather indifferent weather.

During that time Mr Grieve collected the following mosses, mostly from Ben Heasgarnish :—

<i>Biscutella arcuata</i> .	<i>Racomitrium heterostichum</i> .
<i>Polystichum commune</i> .	lanuginosum.
<i>Hypnum tamariscinum</i> .	protensum.
loreum.	canescens.
Schreberi.	<i>Dicranum squarrosum</i> .
squarrosum.	<i>Philonotis fontana</i> .
eupressiforme.	<i>Pterygophyllum lucens</i> .
purum.	<i>Bartramia pomiformis</i> .
triquetrum.	

The best plants found by the second party were:—*Draba incana*, *Silene acaulis*, *Cherleria sedoides*, *Dryas octopetala*, *Saxifraga nivalis* and *oppositifolia*, *Drosera anglica*, *Galium boreale*, *Utricularia minor*, *Listera cordata*, *Habenaria bifolia*, *Malaxis paludosa*, *Tofieldia palustris*, and *Cystopteris montana*. We found hundreds of two-flowered plants of *Juncus triglumis*, which we at first took for the rare *J.*

biglumis, but the round stems, channelled leaves, and short b actææ, all proved them to be the former.

A number of *Carices* were sent by Mr Grieve to be named by Mr Bennett of Croydon. The following have been identified :—*C. dioica*, *pulicaris*, *ovalis*, *stellulata*, *vulpina*, *curta*, *atrata*, *vulgaris*, *pallescens*, *pulla*, *panicea*, *ampullacea*, *fulva*, *flava*, *pilulifera*, *capillaris*, *glaucæ*, *rigida*, *Hornschuhiana*, and *binervis*.