Gelehrte Gesellschaften.

Edinburgh Botanical Society: July 14.

The Society met in the class-room, Royal Botanic Garden, Professor Isaac Bayley Balfour in the chair. The death of Professor Schleiden, as well as that of Professor George S. Blackie, M. D., of Nashville, Tennessee, were noted.

The following communications were made:

I. Mr. Geddes read a paper on Chlamydomyxa labyrinthuloides Archer, a remarkable organism, discovered by Archer in the cells of sphagnum, and described by him in the Quarterly Journal of Microscopical Science for 1875. The lamination of the cell coatings, and the formation of peculiar wart-like thickenings inclosing red pigment, were considered as tending to support the old view of growth by accretion of successive laminæ. The occasional collection of the chlorophyll into definite patches—incipient chlorophyll grains—was also described. A distinct resting Protococcus stage occurs early in development.

On these grounds it was pointed out that this organism could not be satisfactorily referred to any existing animal or vegetable group, since it presented close affinities with the Rhizopods on the one hand, and with the Palmellaceous Algæ on the other. A more perfectly intermediate type, indeed, cannot be imagined.

An interesting and animated discussion followed, in which the President, Professor Dickson, and Ramsay MacNab, of Dublin, took part.

II. Mr. **J. M. Macfarlane** read „Notes on the Action of Aniline Dyes on Vegetable Forms", describing a new method of preparing and staining laticiferous vessels by coagulating the latex with alcohol, and afterwards staining with saffranine; the specimens being best preserved in glycerine jelly. Certain improvements both in double staining and the use of various aniline dyes for demonstrating the minute structure of cells were also indicated.

III. „Notes on Plants Grown at Hay Lodge, Trinity". By Mr. **Isaac Anderson-Henry**, F.R.S.E., F.L.S.

The attention of the Society was first directed to two plants of Androsace incisa, raised by Mr. Henry from seed sent by his niece from the hills above Rawul Pindee. Sir Joseph Hooker has confirmed the naming of the plants, one of which he proposes to figure in the Botanical Magazine. The furthest advanced of the two plants on the table showed the tendency in the flowers to fade off into scarlet before they die. As this species blooms well in the open border it appears well suited for the rockery. Another plant, apparently a species of Dracocephalum, collected by the same relative in Ladak or Kashmir, had stood all winter in the open border, thus appearing quite hardy. A beautiful Sanguisorba raised from Sikkim seeds was also exhibited.

Amongst the hybrids sent was a Primula (P. rosea × P. kashmirensis) in flower, as well as another plant flowering at this late season for Primulas. The leaves are slightly fragrant, though a disagreeable odour is emitted by the foliage of both parents—that of the P. kashmirensis being quite offensive. A hybrid Rhododendron (R. Jenkensii × R. Edgworthii), made in 1864, but only blooming now, showed in the only bloom open five petals, apparently all pedicelled, though they all may be joined at the bottom; yet the flowers of both parents are monopetalous. The plant exhibited bloome in June, and the style and seed vessels are yet upon it, springing, as it were, out of a kind of involucre. This cross has been recognised by hybridists as a most difficult feat to accomplish.

A plant of which the foliage was very fragrant with a perfume like that of lavender or lemon, and with umbels something like that of Bouvardia, but which the threadlike filaments of one of its flowers showed it not to be, was submitted for determination.

A plant of Rheum Moorcroftianum had been raised from seeds collected by Dr. Aitchison in Afghanistan at elevations between 12,000 and 14,000

feet, and kindly sent from Kew, hat shown itself a very rapid grower, outstripping R. nobile in this particular. Royle, in his Illustrations of Indian Botany, vol. II., p. 315, speaks of this Rheum as being superior for its purgative properties, and says, „Mr. Moorcroft sent me some Rhubarb which for compactness of texture, colour, and properties, was as fine as any I have ever seen, from near Ladak in N. lat 34° and E. long. 77 1/2°". As this is a very cold region, the plant should be hardy in our climate.

A plant of Veronica chathamica, a native of the Chatham Islands, near New Zealand, had been raised from seeds sent from the latter country. Though not yet recorded in any of our botanical works, it has been cultivated by Mr. Travers in his garden at Wellington, where the profusion of its dark flowers and prostrate habit have proved it a most showy addition in ornamenting rockwork or earth-banks. It is a small prostrate shrub, with wiry branches. The racemes are few or many. The flowers are numerous, closely set, peduncles half an inch long, corolla large, dark purple. Veronica anomala, a tiny alpine shrub, gathered at an elevation of 3000 feet, had been also raised from seed got from New Zealand, and has not yet been recorded in botanical works. Sir Joseph Hooker, New Zealand Flora, p. 213, has described Veronica Haastii as a tortuous decumbent shrub, with flowers sessile and in pairs, but the corolla not seen. This and V. epacridea are most remarkable plants, of a different habit from any hitherto described. Only young plants of this species were on the table. A specimen of V. Kirkii (Armstrong), another alpine, with an elevation of from 3000 to 4000 feet, was also exhibited. V. lycopodioides, a young plant, was so small that Mr. Henry hesitated to lay it before the meeting. It looks more like a moss than an Phænogam, yet Sir Joseph Hooker describes it (New Zealand Flora, p. 211) as an erect (?), much branched, stout shrub, having leaves most densely and closely 4-fariously imbricate, having flowers sessile, in small dense oblong heads at the ends of the branches. But altogether Sir Joseph's description is in all its particulars so disconform to the plant Mr. Henry had raised from seed received with this name, that he hesitated as to its correctness. Yet these New Zealand things undergo such singular transformations that the plant exhibited, still in babyhood, may yet realise the description Sir Joseph gives of it. Wahlenbergia saxicola, the Bluebell of New Zealand, also exhibited, is fully described in the Handbook of the New Zealand Flora. It is an alpine and subalpine species, going up to an elevation of 6000 feet; it must therefore be quite hardy with us, though it had not yet been tried out all winter at Hay Lodge.

IV. Mr. **Symington Grieve** read some notes on the flora of the islands of Colonsay and Oronsay, two connected islets of the Hebrides, with a list of plants collected during May and August, 1880, and June, 1881, supplementary to a list of the flora of the same locality, already published in the transactions. The vegetation rather lacked variety. The author was inclined to account for this on the geological hypotheses of the islands having passed through an intense glacial cold period, as they exhibited marks of striation throughout their entire area. This also might account for the absence of vipers, toads, and frogs. Though against this reasoning was the finding of the stumps of immense trees on the shores of Loch Fada and cut down by the early inhabitants for fuel, as peat is so scarce on the plains. Pines which have been introduced, with few exceptions, do not thrive, but other trees flourish, including a number of rare Himalayan shrubs and trees on the grounds of Colonsay House.

The author gratefully acknowledged assistance in the work of identification from Mr. H. C. Watson, and the late Mr. F. M. Webb, and from Mr. Chas. G. Hobkirk, of Huddersfield, in respect to mosses. Though none of the plants enumerated are specially rare, still some are not very common in Scotland, and seem to reach here nearly their northern limit. Thus, Hypericum elodes, Scutellaria galericulata and minor, are quite abundant. A new station for Orchis pyramidalis, besides the one previously noted on Colonsay as unique for the West of Scotland, was discovered. This plant does not appear to come up every year, as last season not a single specimen could be gathered at the Colonsay station, though this year it may be

abundantly. A clump of Verbascum thapsus grows in a wild state in Ardskinish Glen, Colonsay; and this, though now a mile inland, once formed the sea-beach. This plant has also been introduced into several cottage gardens. Ulex europæus, though this year much hurt apparently by last winter's frost, luxuriates, growing near Scalasaig, to 10 or 12 feet high. Narcissus biflorus, though probably an escape from cultivation, is now quite established in a wood near Kiloran. Mimulus luteus, also manifestly an escape, is found along the course of the stream flowing from Loch Fada, especially near Colonsay House, and at its junction with the sea. Only one Hieracium is mentioned in the list. Mr. H. C. Watson holds that one of the grasses mentioned in the list, published in the Transactions as having been found by Dr. Lightfoot, should de deleted. The author of Flora Scotica himself seems to have been dubious of this plant when he named it Bromus arvensis, when it was probably a dwarf specimen of Bromus mollis.

Amongst Colonsay mosses Bryum alpinum is found in fructification; so beautiful are its dull velvety pads on wet rocks near Scalasaig during spring that they attract even popular attention: the islanders extract a most beautiful dark brown colour, with which they dye their native cloths. Ulota phyllantha, Bud., is very plentiful on Ash trees near Colonsay House, and on old walls, as well as rocks: this species propagates by gemmæ covering the apex of the stem. Zygodon viridissimus, Dick, as well as its sub-variety, rupestris, Lindb., both grow on this island; the first, along with Eurycleum pumilum, Wils., in semi-darkness on the walls of the crystal spring cavern; and the second on moist rocks beside a small stream running into Loch Fada. Near this station may be found, in crevices of rocks, Pottia Heimii, Hedw., and Bryum pendulum, Hornsel., and on moist ground Dichodontium pellucidum.

The southern part of Oronsay is sandy, and contains numerous small lochans, whose basins fill during winter rain and snow, but which almost dry up during the summer heat. Along their margins may be collected Hypnum aduncum, Hedw., and its variety Kueffi, Bayear, also Hypnum polygonum, B. and S., and stellatum, Schw., Syntrichia intermedia, Brid., grows on the sandy shores in soil made up of comminuted shell débris—its usual habitats are limestone walls. Ditrichium flexicaule, var. densum, was found growing in similar material in rock crevices near the sea. This sub-variety only appeared in the second edition of the British Moss Catalogue of the Exchange Club, published this spring, as extending through several of the Watsonian districts of Great Britain, but its appearance in the West Highland district does not seem to have, previous to the present communication, been specifically noted.

The author regretted that since his previous paper on these islands, visitors, during the season of 1880, had committed such havoc amongst the clumps of Osmunda regalis as to have induced the proprietor to exhibit a notice at the hotel requesting visitors not to take away plants without permission. Such vandalism on the part of strangers in a hitherto safe, because unknown locality, was to be deprecated. Still, might there not be another solution of the difficulty, not involving an absolute prohibition to remove botanical desiderata? Suppose seeds and spores were collected at stations, and sown on ground suitably prepared by the labour of the most poverty-stricken of the islanders, sold to parties desiring them, and the proceeds allocated to the poor—might not the claims of botanical collectors and those of the proprietor be thus amicably adjusted?

In a population of 400 in these islands no necessity is found for a resident physician. Indeed the balmy air and refreshing Atlantic breezes suggest their suitability as a sanitorium for invalids, within the limits of Scotland, akin to Bournemouth or Torquay.

V. Continuation of report on the effects of the winter of 1880—81, on vegetation in different parts of Scotland, and temperatures in, and progress of open-air vegetation at the Royal Botanic Garden, from the beginning of June, by Mr. **John Sadler,** Curator.

The thermometer had not fallen to the freezing-point during June at the Royal Botanic Garden, though in different areas in Scotland, as in

Berwick, Roxburgh, Aberdeen, and Inverness-shires, it had gone down several degrees below it. Thus, Mr. Loney, Marchmont, Dunse, reports that on June 10 he registered 9° of frost on the ground with the black bulb thermometer, and 3° at 4 feet above the surface. Young Potato plants and young foliage were blackened. The lowest readings at the Royal Botanic Garden were as follows: — On the 6th, 38°; 7th, 35°; 8th, 37°; 9th, 34°; 10th, 38°; 16, 38°; 24th, 36°; 28th, 38°. These low temperatures greatly checked the growth of vegetation and the fertilising of the flower.

Since July commenced the night temperatures on an average have been higher, the four lowest being, on the 1st, 40°; 2d, 44°; 7th, 45°; 9th, 45°.

During the past six weeks the effects of last winter on vegetation have become very marked. Many plants that produced young shoots in spring, and gave promise of continued growth, have succumbed, while many more threaten to follow them next season. Since the last meeting 162 species of plants have come into flower on the rock garden, making for the season over 500 species and varieties. Mr. Sadler read, amongst others, the report he had received from Mr. Davidson of the Palace Garden, Hamilton.

Mr. **Alexander Buchan** called attention to the striking parallels of temperature betwixt this Hamilton district and that around Edinburgh. He accounted for it by a similarity in features of physical geography.

VI. Miscellaneous communications:

1. Professor Balfour exhibited specimens of Maw's encaustic tiles, containing beautiful imprints of Davallia, Selaginella, and the marks of Lepidodendron.

2. Professor Balfour also showed a specimen of the bark of the so-called „Panama wood", or Quillaria saponaria, from South America, belonging to the Rosaceæ, and yielding a saponaceous secretion in practical use. Sent by Messrs. Duncan, Flockhart & Co.

3. Mr. Robert Hutchison, of Carlowrie, sent Elm leaves from Islay destroyed by insects.

4. Mr. Sadler exhibited two large photographs by Mr. Magnus Jackson, showing the Tay at the south entrance to Perth during the flood, caused by the breaking up of the snow of March, 1881, displaying the Elm trees of the Inch, reflecting double in the water.

5. Mr. Sadler exhibited barren stems of the fungus Lentinus lepidens (Cooke, Handbook, p. 242, No. 684), obtained from a damp cellar in Morningside, sent him by Dr. Craig.

6. Mr. Taylor showed specimens of foreign plants collected by Charles W. Cowan, Esq., from among the Esparto-grass used at Valleyfield Mills, Penicuick, including the Lavender, a Sedum, several species of Compositæ, and amongst the grasses Bromus madritensis, B. erectus, B. asper, Dactylis hispanica, &c.

7. Professor Dickson called attention to plants on the table from the stove-houses. They included specimens of Cyananthus inflatus, Dianthus alpinus, D. eximius, Linum viscosum, Ranunculus acris, straw-coloured variety, found by Professor Dickson; Parnassia himalayensis, as well as a species of Saxifrage from Kidarkanta, India; Meconopsis aculeata, Allium oreophyllum, Umbilicus sempervivum, Saxifraga aizoides aurantiaca, Androsace lanuginosa, &c. (From the Gardeners' Chronicle. New Ser. Vol. XVI. No. 395. p. 121—122.)

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Personalnachrichten.

Der ordentliche Prof. in der philosophischen Facultät der Universität Halle Dr. **Julius Kühn** hat den Charakter als Geheimer Regierungsrath erhalten.

Am 4. Januar 1881 starb zu West Farms, N. Y., Nordamerika, **Alphonse Wood,** welcher den Botanischen Lehrstuhl an dem „New York College of Pharmacy" inne hatte.*) Wood wurde geboren zu Chesterfield, N. H., am 17. September 1810. Nachdem er „the village school and academy"**) besucht, auch an „village schools" unterrichtet hatte, trat er im 20. Lebensjahre in die „sophomore class in Dartmouth college" ein, wo er 1834 ein Examen ablegte. Auf dieses Examen hin wurde er aufgefordert, eine Stelle als Instructor des

*) Cfr. Bulletin of the Torrey Botanical Club. New York. Vol. VIII. No. 5. (May 1881.) p. 53—56. — Bot. Centralbl. 1881. Bd. V. p. 255; Bd. VI. p. 251.
**) Man darf bei dem in Nordamerika sehr gebräuchlichen Worte academy auch nicht im entferntesten an unsere Akademien denken. B.