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JAMES BRITTEN, K. C. S. G., F. L. S.

LATE SENIOR ASSISTANT, DEPARTMENT OF BOTANY, BRITISH MUSEUM.

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versus foliorum deciduorum cicatricibus ca. 5-natis verticillatis dispositorum onustis conspicuis. *Folia* magna subcoriacea, elliptico-lanceolata v. oblonga, apicem obtusum brevissime apiculatum versus vix acuminata basi acuta fere cuneata, supra glaberrima subpolita subtus in venis primariis necnon reticulo interveniente manifesto minutissime strigillosa aliter glabrata, *venis* primariis subtus prominentibus lateralibus utrinque 17-20 marginem parallelis leniter curvantibus nonnunquam inter se anastomosantibus, petiolo longiusculo supra anguste necnon altiuscule canaliculato minute etsi dense puberulo-strigilloso; *stipulae* caducae post delapsum lineam alto sulcatam relinquentes interpetiolarem. *Flores* majusculi umbellis cymosis dispositi sessilibus v. subsessilibus petiolos manifeste brevioribus, pedicellis conspicuis glabratis calycem demum longitudine excedentibus graciliusculis; *calycis* tubus tubulari-infundibularis magnus extus breviter necnon notabiliter sericeus, dentibus acutissimis conspicuis lineari-lanceolatis coronatus; *corollae* extus sericeae tubus latus anguste infundibularis lobis brevior ovato-lanceolatis acuminatis acutissimis.

BRAZIL. Para, Rio Tapajoz, région des Cataractes inférieures: nom. vulg. *puruy*. *Ducke* 16872! Forêt entre Armina-mirein et Tiramba, Rio Trombetas, *Ducke* 11463!

Leaves about 40 cm. long, 18 cm. broad; petiole 6 cm. or more in length; primary lateral veins, 18 pairs. Floral pedicels nearly 3 cm. in length, with average transverse diameter of 1.5 mm. at most. The calyx consists of a narrowly funnel-shaped tube over 1.5 cm. long, rather more than 1 cm. wide at the mouth, crowned by 6 very short, but conspicuously sharp, teeth. The corolla-tube, 1.7 cm. or longer, broadens, somewhat, from a diameter of about 4 mm. at the base to 8 mm. or more at the mouth; the spreading limb of the corolla measures about 5 cm. in diameter, each of the six lobes being about 2.3 cm. long and 7-10 mm. broad just below the middle.

LICHENS OF LLANBERIS AND DISTRICT.

BY W. WATSON, D.Sc., A.L.S.

THE list of lichens given by Mr. Wheldon in the January number of this Journal (pp. 11-15) is a useful one, but, as the author remarks, cannot be regarded as exhaustive. In 1915 I spent a week in the district and last year (shortly after Mr. Wheldon's visit) a fortnight, and I am thus able to add a few notes to the above-mentioned list.

The inclusion in the list of *Lecanora epanora* was useful to me, as it brought to my notice that a plant which I overlooked as a sterile form of *L. sulphurea* was this much rarer plant. Some of the plants in the list, e. g. *Cladonia uncialis* f. *obtusata*, *C. lepidota* f. *hypophylla* (which I think descends from *C. cervicornis* or *C. degenerans*), and the "unexpected" *Cerania vermicularis*, were recorded from the Snowdon district in this Journal for 1917 in my papers on

“New Rare or Critical Lichens.” *Baomyces roseus*, which Mr. Wheldon only saw in a sterile condition, was observed with abundant apothecia on the side of the path leading from Llanberis to Helfa. Most specimens of *Lecidea lapicida* I examined gave a yellow reaction with potash, and are therefore referable to *L. polycarpa* Flk.

The following are additions to Mr. Wheldon's list, and also to those recorded from the district by me in the papers already mentioned. Where no locality is given Llanberis must be understood.

Thermutis velutina Th. Fr. On damp precipitous rocks from Glyder, overlooking Pass. Only a few apothecia were seen.

Ephebeia hispidula Nyl. Cwm-y-glo.

Collema ceraniscum Nyl. Moist rocks overlooking Pass. Rock ledges, Clogwyn. *C. pulposum* Ach. Rare, on mortar of house, Hebron. *C. cheileum* Ach. On walls, Dinorwic.

Leptogium scotinum v. *sinuatum* Malbr. *L. lacerum* Gray, not common; var. *lophæum* Nyl. Beddgelert; var. *pulvinatum* Krb. On mortar and surrounding rock with *Placynthium nigrum* *Callopisma rupestre*, *C. calvum*, and *Physcia cœsia*.

Pannaria nebulosa Hoffm. On wall-top, Pass.

Massalonia carnosa Krb. Frequent, 400 to 2000 ft.

Peltigera rufescens Hoffm. and *P. polydactyla* v. *hymenina* Nyl. are frequent.

Solorina saccata Ach. In addition to the stations given, this was noticed at Clogwyn, Glyder (3200 ft.), and Beddgelert.

Stictina fuliginosa Nyl. and *S. limbata* Nyl. Cwm-y-glo and Beddgelert.

Coniocybe furfuracea Ach.

Sphærophorus compressus Krb. Snowdon, 3000 ft. *S. coraloides* form *conyestus* Lamy. Common.

Ramalina calicaris Fr., *R. farinacea* Ach., and *R. fastigiata* Ach. are rather frequent, especially near Cwm-y-glo. *R. subfarinacea* is occasional.

Parmelia subconspersa Nyl. On wall near Llanberis Church.

P. omphalodes f. *cæsiopruinosa* Nyl.

Usnea florida Web. Llanberis and Baddgelert.

Alectoria nigricans Nyl. Near summit of Glyder Fawr with *Parmelia corniculata*, *P. pubescens*, *Cladonia gracilis* form *amaura*, *C. degenerans* f. *pleolepidea* and *C. lepidota* f. *hypophylla* near it.

Placodium murorum DC. On wall.

Callopisma citrinum Krb. On mortar and surrounding rock. *C. ferrugineum* v. *festivum* Mudd. On hard rock near Llanberis waterfall.

Lecanora subfusca Nyl., *L. intumescens* Krb., *L. pallida* Schær., and *L. conizæa* Nyl. are occasional on trees. *L. campestris* Nyl. is apparently rare. *L. intricata* Ach. On rock near Hebron. *L. gaulgaleoides* Nyl. and *L. subtartarea* Nyl. On rock, Snowdon, 2500 ft. *L. umbrina* Mass.

Hæmatomma ventosum Mass. Snowdon.

Pertusaria communis f. *rupestris* DC. *P. wulfenii* DC., *P. dealbata* f. *corallina* Cromb. Snowdon, 2500 ft.

Urceolaria scruposa Ach. Walls, Nant Peris.

Umbilicaria pustulata Hoffm. Fairly common.

Gyrophora proboscidea Ach. and f. *fimbriata* Mudd. Snowdon, 1600 ft.

Bæomyces rufus v. *prostii* Harm. On rock near Llanberis waterfall.

Icmadophila æruginosa Trév. Snowdon, about 2500 ft.

Cladonia pyxidata v. *pocillum* Fr. Rare. *C. gracilis* v. *hybrida* Schær. *C. squamosa* v. *polychonia* (Flk.), *C. subsquamosa* Nyl.

C. furcata v. *spinosa* Hook., v. *palamæa*, Nyl. Beddgelert. *C. rangiformis* Hoffm. Llanberis and Beddgelert. *C. coccifera* v. *pleurota* Schær. Glyder. *C. flærkeana* f. *brachypoda* Nyl. Not uncommon on peaty ground, Snowdon. *C. sylvatica* f. *grandis* Oliv.

Lecidea granulosa f. *viridula* Cromb. *L. sorediza* Nyl. *L. protrusa* Fr., *L. latypea* Ach. *L. contigua* f. *calcarea* Leight. On rocks, Bwlch-cwm-Mas, var. *platycarpa* Fr. Snowdon. *L. leucophæoides* Nyl. and *L. griseoatra* Schær. On boulders 2000 ft. Snowdon. *L. parasema* v. *elæochroma* Ach. Frequent on trees.

Biatorina lenticularis v. *erubescens*. On rocks near Llanberis waterfall.

Bilimbia sabuletorum B. & R. Frequent on decaying bryophytes on walls; var. *obscuratum* A. L. Sm. Nant Peris.

Bacidia inundata Krb. On rocks by the side of Llyn Peris. A dark form from the same locality agrees fairly well with *B. caligans* A. L. Sm.

Buellia æthalea Ach. On rocks near waterfall, Llanberis.

Rhizocarpon alboatrum v. *epipolium* A. L. Sm. *R. obscuratum* Mass. *R. geographicum* v. *atrovirens* Krb. *R. confervoides* f. *dispersum* (Leight.). On rocks near Llanberis waterfall.

Opegrapha atra Pers. and v. *denigrata* Schær.

Graphis elegans Ach. Cwm-y-glo. *G. scripta* Ach.

Dermatocarpon miniatum Th. Fr. Llanberis, Snowdon, Glyder; v. *complicatum* Th. Fr. and f. *decipiens* A. L. Sm. On damp precipitous rocks from the Glyder, near Pass. *D. lachneum* A. L. Sm. Clogwyn, Snowdon.

Verrucaria æthiobola Wahl. In stream, Llanberis and Y Garn (2500 ft.). *V. submersa* Schær. In stream. *V. maculiformis* Kremp. Frequent on slaty rocks, Llanberis, Dinorwic, Bwlch-cwm-Mas.

Thelidium microcarpum A. L. Sm. On wall of old house, Hebron.

Acrocordia bififormis Oliv.

Arthopyrenia fallax Arn.

Pyrenula nitida Ach.

Botrydina vulgaris Bréb. Common.