



UNIDENTIFIED OPHRYDIUM

Specimens numbered *Habeeb* 10585 and 10743 are deposited in the Cryptogamic Herbarium, Chicago Natural History Museum and in the collections of Herbert Habeeb. The Cryptogamic Herbarium, Chicago Natural History Museum, will distribute the duplicates.

It may be of interest to note that *Zoochlorella parasitica* has been reported from southern Quebec by C. W. Lowe in the Proceedings and Transactions of the Royal Society of Canada. III, 31 (sV): 291-316. 1927. Dr. Francis Drouet informed us that there are specimens labelled *Z. parasitica* in the Cryptogamic Herbarium, Chicago Natural History Museum, from our general vicinity. MAINE: edge of Wood's Pond, vicinity of Blue Hill, Hancock Co., *Wm. R. Maxon* 11235, 25 Aug. 1946. QUEBEC: small woodland pond, west branch of Mont Louis River, *M. L. Fernald*, *C. W. Dodge*, and *L. B. Smith* 2250, 30 July 1923.

GRAND FALLS, NEW BRUNSWICK.

AN ABBREVIATED FLORA OF MAINE.—The Josselyn Botanical Society of Maine has just issued a very handy Check-list of the Vascular Plants of Maine¹. "Responsibility for the groups included are: Steinmetz for the grasses and sedges, Hyland for the woody plants, Edith B. Ogden for the ferns, and Ogden for the other groups." Such a division of responsibility leads, naturally, to different standards and divergent treatments. What some would call distinct others, with different outlook, will not; groups which some admit others, in parallel cases, exclude. For instance, "Plants now

¹ E. C. OGDEN, STEINMETZ, F. H. AND HYLAND, F. Check-list of the Vascular Plants of Maine. Josselyn Bot. Soc. Me., Bull. no. 8. 70 pp., Orono, Me., August, 1948. To be obtained for 50c from DR. F. H. STEINMETZ, Coburn Hall, Univ. of Me., Orono, Maine.

considered to be a part of our flora, whether native or naturalized, are indicated by plus (+) signs in the column for each county where found. Those plants growing on wool-waste, ballast, abandoned gardens, and other habitats where they may not yet be part of our flora but show indications of becoming so are indicated by minus (-) signs." That is well as a principle; but, having spent all or parts of his summers botanizing in Maine for at least 30 years, the present writer finds, unfortunately, that it cannot be applied without pretty full understanding, which here seems sometimes not complete. The entries in the Check-list total 2702, but, somewhat surprisingly, this total includes the PLANTED TREES, such as *Gingko biloba*, *Abies concolor*, *Pinus Mugo*, *Sciadopitys verticillata*, *Gymnocladus dioica*, etc., etc. To most people foreign plants purposely planted and not usually spreading into the wild would seem out of place in what the first line of the Foreword calls the "native and adventive" plants of the state. If the planted trees belong in such a list, surely planted *Philadelphus*, *Weigelia* and other popular shrubs of the garden-border, the scores and scores of hardy perennials (*Crocus*, *Delphinium*, *Paenonia*, *Digitalis*, etc.) and the "short and simple annuals of the poor" (*China-Aster*, *Cosmos*, *Eschscholzia*, etc.) should not be excluded.

The attempt in a brief summary in columns for the 16 counties to say what is "a part of our flora", what merely casual on "wool-waste", etc., while in the main logical, in practice often leads to some disappointments. Thus *Cynoglossum boreale* is entered as a species which "may not yet be part of our flora". It is, however, a woodland type, occurring in Canadian forest across the continent. The labels of specimens in the Gray Herbarium and that of the New England Botanical Club, from Maine and adjacent regions, which indicate habitats, read as follows: sandy alluvial woods, beneath larches (TYPE); coniferous woods; alluvial soil (Fort Kent); roadside (Houlton); woods (Orono); open woods, sandy soil (South Chesterville); dry soil on an esker (Chesterville); gravelly soil (Chesterville Ridge); woods; rich woods. Again, the very definite *Populus tremuloides*, var. *magnifica*, with so many characters that it surprises one that someone has not called it a species, is entered in this category of doubtfully established plants. Try to uproot it! When the present writer first met it, as an extensive grove of the largest trees he had ever seen of *P. tremuloides*, on the north bank of the Aroostook River, he made special notes on its unusual bark, branchlets, etc., as something noteworthy. In fact, all the labels of Maine material in the two herbaria before him indicate the collectors' belief that the tree is both indigenous and firmly established: river-bank (Fort Fairfield); river-bank (Orono); open woods and fields (Deer Isle); mixed woods (Lincolnville); shore and roadside (Isle au Haut—many sheets from several stations collected as something noteworthy); wooded river-bank (Bowdoinham). The firm status in the flora of *Bromus Kalmii* and *Triplasis purpurea* is doubted, although both of them have been collected in their typical habitats at one or more stations which connect very closely with their more extensive areas farther west or south. The habitats of the *Bromus*, as given on the labels, are "sandy woods, Oxford" and "Sand-plain, Newfield", such statements of habitat coinciding with those of specimens from New Hampshire and other parts of interior New England: "sandy wooded terrace", "rocky woods", "dry, thin woods", "dry rocks", "sand-plain" "dry soil of thicket", etc. Similarly, *Triplasis*, characteristic of coastal sands and abundant wherever found from the South to southern Maine, was collected by the late Walter Deane, "prostrate in sand, 4½ feet in diam.", at York Harbor. A few miles away, at Rye, Little Harbor (repeatedly collected), thence via Salisbury Beach and Ipswich, it abounds on maritime sands to all points south. Why are not these two native species reaching their natural eastern or northern limits in southwestern Maine, just as do scores of other plants?

While on this slippery subject of deciding what is really a part of the flora, what perhaps not, we may check some plants which are admitted without question to the dignity of a + sign. Most so dignified plants are unques-

tioned; but the plus-sign for such species as *Deschampsia elongata*, *Chenopodium graveolens* and *Collomia linearis* might, by those who know their broad natural ranges, be seriously questioned. The *Deschampsia* is native from the Rocky Mts. westward; the *Chenopodium* of the southwestern United States, Mexico and South America; the *Collomia* of the Gaspé region and western North America. It is, then, quite as one would expect to find that the + for *Deschampsia elongata* is based on a collection made by Parlin in 1896 and labeled "wool-waste, local, North Berwick"; *Chenopodium graveolens* marked "North Berwick, Sept., 1903"; and *Collomia linearis* from "ballast", Presque Isle, and from "wool-waste" and from "old field: plant probably originating from wool-waste", North Berwick. Surely if any species qualify as "growing on wool-waste, ballast" and meriting the "minus (-) sign" these seem perfect cases.

Incidentally, one notices, just before *Triplasis*, the entry, under *Tragus*, *T. racemosus* from York County. The very trifling representation of the genus in the state could have been doubled. One year Parlin got *T. racemosus*; another year, *T. Berteronianus* Schultes, also from "around wool-waste" at North Berwick.

In fact, in spite of the evident effort to see and check everything, to the point that names published in RHODORA as late as August 16, 1948, won their places, further search in RHODORA and elsewhere will reveal many additions to the Check-list. These need not here be recorded but memoranda will be supplied to the authors, who ask for such coöperation. On the other hand, some entries may need dropping or alteration. There are about 50 of these which, it is hoped, will be reconsidered before the publication of the projected state-flora. Four cases will make clear such need.

OPHIOGLOSSUM VULGATUM. The plant of acid to mediacid peat or wet sand in Maine is var. *pseudopodum* (Blake) Farwell, discussed in detail and illustrated in RHODORA, xli. 495 et seq., pl. 572 (1939). This eastern North American var. *pseudopodum* is very unlike the true Eurasian plant (see discussion, l. c. and plate 571). If it is felt that no recognition of geographic varieties in this semicosmopolitan species should be made (following the belief of Clausen, rather than that of Nuttall, Gray, Beck, E. G. Britton, Christensen, Clute, Hultén and others), then the varieties and forms of *Botrychium*, *Athyrium* and other wide-ranging and variable species should be omitted.

PUCCINELLIA PUMILA (Vasey) Hitchc. In RHODORA, xxxvi, 346-348 (1934), it was shown that this combination rests upon a wholly inadequate basis. The plant of the Maine coast is *P. paupercula* (Holm) Fern. & Weath., var. *alaskana* (Scribn. & Merr.) Fern. & Weath.

SALIX PETIOLARIS Sm. In RHODORA, xlviii. 47, 48 (1946), it was shown that, following Pursh (a notorious drunkard who made scores of confusions), American botanists have been misapplying this name. Smith's species (or hybrid) was a tree or coarse shrub of Europe, well illustrated by him and others of his time, which has nothing to do with our slender shrub, *S. gracilis* Anders. The facts that Pursh blundered and that some present-day students put greater emphasis on what they erroneously learned than upon careful typification of names do not alter the fundamental points.

POLEMONIUM VAN-BRUNTIAE Britton. The record entered is for Knox County. In the herbarium of the New England Botanical Club there is a thoroughly characteristic specimen from Matinecus, Knox County, collected by the late C. A. E. Long, of old-fashioned Jacob's-ladder, correctly identified as the European *P. caeruleum* L. and labelled "spreading in old cemetery". Was this the basis of the record? The very different *P. Van-Bruntiae* is a localized native in bogs, wet woods and mountain-ravines from Vermont and New York to Maryland and West Virginia.

These four cases out of twelve times as many indicate that there is yet a great deal of work to be done in rechecking many entries. It is also evident

that in this, as in all other state-lists, it is important that the authors understand the broad natural ranges of the species which extend into the local area from north, south, east or west. Without the broad natural ranges in mind the local occurrence of less usual plants is likely to be misinterpreted. Cases of this kind have been noted. Another, which perhaps needs investigation, is that of *Sisyrinchium albidum*, entered with a plus-sign. The natural range of the species is from Georgia to Louisiana, north to North Carolina, southern Ontario, Ohio, southern Michigan, southern Wisconsin and Missouri; but in 1898 the late Kate Furbish picked a flowering tip of it on Drake's Island in Wells. Is it truly a fixed element in our flora or a casual adventive?

The authors of the projected Flora have undertaken a man-sized task, for the reconciliation of divergent views and the deduction from them of satisfactory solutions requires close study of many contradictory treatments and fully authentic specimens. Perhaps the use of only two signs (+ and -) to cover many different categories is not enough. In any state we have the abundant and dominating natives (*Lycopodium clavatum*, *Abies balsamea*, *Calamagrostis canadensis*, *Nymphaea odorata*, etc.); indigenous but localized species (*Botrychium Lunaria*, *Potamogeton confervoides*, *Agropyron pungens*, *Pedicularis Furbishiae*, etc.); other indigenous plants not clearly established or but once found and now unknown (*Carex rariflora*, collected by Goodale on Mt. Katahdin in 1862 and *Anemone parviflora*, recorded in 1862 by Goodale from Fort Kent but apparently not seen there by others—presumably a *lapsus* for *A. multifida*); intentionally introduced plants which are now well naturalized (*Arrhenatherum elatius*, *Trifolium pratense*, *Pastinaca sativa*); intentional introductions as yet but slightly naturalized (*Echinochloa frumentacea*, *Setaria italica*, *Dianthus plumarius*); garden-plants spreading out of bounds (*Iris pumila*, *Dianthus barbatus*, *Sempervivum tectorum*); purposely introduced plants only casual and not persisting in the wild (*Zea Mays*, *Solanum tuberosum*); adventive or foreign plants arriving without man's wish but thoroughly naturalized (*Digitaria sanguinalis*, *Rumex Acetosella*, *Chenopodium album*); similarly adventive but only slightly naturalized (*Hibiscus Trionum*, *Abutilon Theophrasti*); viatical adventives, travelling largely along railroads and highways (*Eragrostis multicaulis* Steud. = *E. peregrina* Wieg., *Erysimum inconspicuum*, *Lepidium ruderales*, *Linum usitatissimum*); adventive but mostly casual, soon vanishing weeds of wool-waste (*Bouteloua gracilis*, *Cenchrus longispinus*, *Medicago laciniata*, *Erodium moschatum*, *Artemisia ludoviciana* var. *Brittonii* and an endless stream of others).

In view of the very many groups, as to their status in the region into which a local flora naturally divides itself, would it not be well to recognize at least some of these groupings (and perhaps others)? As the new Check-list now stands there is no indication as to whether the plants are native, intentionally introduced or adventive. The emblematic tree of Maine, *Pinus Strobus*, has the same sign as the most pestiferous of adventive weeds, like *Rumex Acetosella* or *Hieracium aurantiacum*; the beautiful and relatively rare native *Cynoglossum boreale*, the "fossil species", *Gingko biloba*, planted in a few door-yards, species of *Madia* coming up in someone's hen-yard from imported hen-feed, and the miserable *Cenchrus pauciflorus*, sprouting from burs clipped out of wool imported from Mexico or our Southwest, all have their status indicated by the same minus-sign. Surely some more realistic method of classifying the floristic elements would be useful.

These critical memoranda are made in the utmost friendliness. The present writer, born and brought up in Maine and for many years returning there, is, perhaps, so fond of the "State of Maine" and its flora as to be a bit disturbed when a publication upon them, which has been prepared with much evident close work, shows at many points neglect or oversight of many details which would have made it wholly authoritative. The projected Flora, we may be sure, will eliminate such questionable points.—M. L. F.



Fernald, Merritt Lyndon. 1949. "An abbreviated Flora of Maine." *Rhodora* 51, 5-8.

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