

Kingston on the 25th of June 1946". The plant was common. This specimen is in the Herbarium of St. Anselm's College. Also in 1946 *Hottonia* was observed, but not collected because its casual nature was not at that time suspected, in the Pow-wow River in Hampton and at Cub Pond in Sandown. Another locality, also in Sandown, New Hampshire, was reported several years ago by the senior author.<sup>1</sup>

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A MODEL FLORA OF NOVA SCOTIA.—The recently published Flora of Nova Scotia by Professor A. E. Roland<sup>2</sup> is a most welcome addition to the local floras of eastern North America. Provided with practical keys, characteristic drawings of many species and detailed maps of the occurrence in the province of most indigenous species, it is bound to be a much used volume. The introductory pages contain a clear statement of the geological and physiographic background so essential to a proper understanding of the flora, and the maps go outside in order to show the relation of the provincial flora to that of adjacent eastern New Brunswick, Prince Edward Island and the Magdalen Islands. In the statement of local ranges there is evidence that the author has made a canvass of some of the more inclusive herbaria where plants of his region have been assembled, though, from the occasional omission of species enumerated by Macoun as found by him within the province, one wonders if the National Herbarium at Ottawa was checked. Often the old identifications under which plants have been recorded are shown to need correction, a valuable phase of such a work. There is an evident attempt to keep up-to-date on nomenclature and the latest published revisions are often followed, with the result that this is one of the most up-to-date local floras of eastern America. Whether some recent revisions are of equal value with more careful predecessors may, however, be questioned. For instance, the present reviewer can not maintain as a good species the recently described *Suaeda Fernaldii*; this evaluation paralleling Dr. Roland's own decision that the still more recently described *Aster Rolandii* is not worthy recognition!

When a piece of work which has obviously been done with care comes out it may seem to some inappropriate to note points which, in another edition of the book, might be improved. This the present writer does in all friendliness, especially since the greater share of his field-work has been prosecuted in eastern Canada or Newfoundland. In some cases localized species or varieties are taken into the new book and given regular numbers as if they are part of the provincial flora, although in the discussion the author states that they are to be watched for, not that they there occur. To this group belong one of the

<sup>1</sup> RHODORA 46: 143, 1944.

<sup>2</sup> A. E. ROLAND. *The Flora of Nova Scotia*. Reprinted from Proc. N. S. Inst. Sci. xxi, pt. 3 (1947). Repr. 1948. 552 pp., 127 figs. (each of more than one species) and 477 maps. Truro Printing and Publishing Co., Truro, Nova Scotia.



varieties (by some considered a species) of *Ruppia maritima* "found on the Magdalens and on P. E. I., but not yet in N. S."; *Carex sterilis*, unknown in eastern Canada from south of calcareous marshes of the Magdalens; and *Atriplex sabulosa* Rouy (*A. maritima* E. Haller, not Crantz), a remarkable species, isolated from the region of the Baltic and the North Sea, as are *Polygonum oxyspermum* Meyer & Bunge, which, before the identity was recognized, was supposed to be endemic to the Bras d'Or Lakes (as *P. acadiense* Fern.), and as are *Polygonum Raii* Babington and several other species. The strikingly disjunct range of *Atriplex sabulosa*, known with us only from the coastal sands of the Magdalen Islands, Prince Edward Island and northeastern New Brunswick, was discussed at length and shown in maps on pp. 1503 and 1504 of Proc. Internat. Congr. Pl. Sci. ii (1929). Another case, a little different (because the species is of broad and continuous range), is *Galium labradoricum* "apparently overlooked". This species delights in mediacid to calcareous soils in moss under arbor-vitae and larch and in such habitats in Gaspé and northern Maine it is difficult to overlook because of its clear white inflorescences. So far as we yet know, its southern limit in the Maritime Provinces is on Prince Edward Island and in New Brunswick.

If such plants, actually unknown in Nova Scotia, are to be included, many scores of others which occur on Prince Edward Island or the Magdalens or in adjacent New Brunswick have the same claim as prospective Nova Scotians. A few wide-ranging species, like *Cryptogramma Stelleri*, *Carex vaginata* or *Pilea pumila*, are likely to be found there; but Prince Edward Island, the Magdalens or the recently unglaciated northeastern corner of New Brunswick support a surprising series of isolated "relict" plants or endemics remotely isolated from their closest allies, plants which give these areas floristic individuality. If such distinctive plants as *Potamogeton filiformis* var. *Macounii* Morong (western North America), *Ruppia maritima* var. *brevirostris* Agardh or *R. brachypus* J. Gay (Europe and North Africa), *Montia rivularis* K. C. Gmel. (se. Newfoundland and Europe); *Myriophyllum magdalenense* Fern. (endemic), *Pterospora andromedea* Nutt. (chiefly western American), *Aster laurentianus* Fern. (endemic representative of a western species) and *Bidens heterodoxa* Fern. & St. John (endemic, with vars. in southern Connecticut) and many others are not included as plants we hope sometime to find in Nova Scotia, then *Atriplex sabulosa* (*maritima*) and several others should be excluded<sup>1</sup>. Would it not be better in such cases to note them as desired "prospects", either in smaller type or in brackets? As between Prince Edward Island and Nova Scotia the "wires sometimes get crossed". Thus, *Pyrola asarifolia*, as the text correctly states, occurs from Cape Breton to Kings County, Nova Scotia; but *P. asarifolia*, var. *incarnata*, unknown in Nova Scotia, occurs in Kings County, Prince Edward Island (*Fernald, Long & St. John*, no. 7891).

<sup>1</sup> One is reminded of summers spent on Prince Edward Island, where it was impossible to get away from the current conviction among the untravelled and most conservative residents, that "the Island" is the Dominion of Canada, if not the British Empire; and of a similar local belief about Nova Scotia often met in older residents there. However, not all interesting plants of Prince Edward Island or the Magdalen Islands belong to Nova Scotia.



Yet the map indicates the latter as true *P. asarifolia*, and true *P. asarifolia* (Nova Scotian) as var. *incarnata*! Such things happen to us all.

Another point which may well be altered in a future issue is one which very few botanists seem to understand. This is the citation of so-called *sensu* names, *i. e.* names under which plants have erroneously passed. In the synonymy one too often finds citations like the following, under *Polygonum*: "*P. exertum* Small, including *P. ramosissimum* Michx." The plant of borders of saline marshes in Nova Scotia is *P. exsertum* (described in 1894); whereas *P. ramosissimum* Michx. (described in 1803) is a wholly different and nearly transcontinental species (s. Quebec to Washington and southward). What was obviously meant in the quotation was: *P. ramosissimum sensu* someone or local records, not Michx. As stated, this differentiation between wrongly applied and correctly applied names is too often not made clear. In fact, authors can not be too clear if they wish to avoid misinterpretation. In RHODORA, xv. 68-73 (1913), the present reviewer discussed at some length the several North American plants which have erroneously passed as the quite different European *Polygonum maritimum* but, unfortunately, he did not summarize the conclusions in concrete differentiating paragraphs or keys. The plant on the sands along the coast from Massachusetts southward is *P. glaucum* Nutt.; that on the coast of the Maritime Provinces the very different *P. Raii* Bab.; yet, possibly due to the obscurity of the article cited, the southern *P. glaucum* appears in the new Flora as "a variant of the European *P. maritimum* [which it is not] . . . found along the coast of eastern New Brunswick". The plant of eastern New Brunswick is *P. Raii*.

Happily the author of the new Flora has drawn together many recent records of species not ordinarily recognized as Nova Scotian. Unfortunately, among these is another stoloniferous *Hieracium*, *H. Auricula* L., which, unless promptly choked off, will add to our aggressive weed-population. In some cases he has found only one collection which can be cited, although others are known, their records perhaps lost in the fire which destroyed his original notes; and, quite understandably, in the going over of large herbaria some species have been missed. These will doubtless be added in a future issue. As a slight contribution toward such an appendix, the following, all (unless noted) before me in the Gray Herbarium, may be listed.

**LUZULA LUZULOIDES** (Lam.) Dandy & Wilmott. Forming mats in a lawn at Pictou, *Fernald & St. John*, no. 10,989. Sterile but with typical base and foliage. A weedy species from Europe, known westward into Ontario and in the northeastern states.

**SMILACINA STELLATA** (L.) Desf., var. **CRASSA** Victorin. A strongly marked thick- and broad-leaved variety following the seacoast from southern Labrador to the lower St. Lawrence, south to Long Island Sound. Dry barren, Trinity Cove, St. Paul Island, *Perry & Roscoe*, no. 149; sand-dunes, West End, Sable Island, *St. John*, no. 1183; dry rocky headlands, Central Port Mouton, *Fernald et al.*, no. 2074 in part.

**RUMEX PERSICARIOIDES** L. Local in Queens County: moist cobble-beach near mouth of Broad River, *Fernald & Bissell*, no. 21,056; Central Port Mouton, *Fernald et al.*, no. 21,057. Dr. Roland says it "may occur along the North Shore of N. S.". It probably does, but the South Shore won the competition.



*CERASTIUM ARVENSE* L., var. *VISCIDULUM* Gremli. Edge of Granite Cliffs, Trinity Cove, St. Paul Island, *Perry & Roscoe*, no. 203. Only North American station known from east of North Dakota.

*AMELANCHIER INTERMEDIA* Spach. From Cape Breton to Yarmouth, common. Very many nos.

*RUBUS ARENICOLA* Blanchard. On railroad east of station, Granville, Annapolis Co., August 1, 1909, "very characteristic of this species", *Blanchard*, no. 730.

*R. RECURVICAULIS* Blanchard. Very common from St. Paul Island and Cape Breton to Digby, Yarmouth and Shelburne Counties; many numbers collected by Howe & Lang, Blanchard and their successors.

*R. TRIFRONS* Blanchard. Common from Canso (coll. *Fowler*) to Digby and Yarmouth Counties.

*R. TRIFRONS* var. *PUDENS* (Bailey) Fernald (*R. pudens* Bailey). Louisburg, 1898, *Macoun*, no. 19,072 (as *R. hispidus*); sphagnous swamp, North Sydney, 1901, *Howe & Lang*, no. 684 (as *R. hispidus*).

*R. TARDATUS* Blanchard. Common from Hants and Halifax Counties to Yarmouth and Shelburne Counties; many collections from Blanchard and others.

*R. MULTIFORMIS* Blanchard. Very common from Kings and Queens Counties westward; many collections by Blanchard and others.

*R. VERMONTANUS* Blanchard. Common from Annapolis and Digby Counties to Shelburne County.

*R. UNIVOCUS* Bailey. Dryish thickets, Sand Beach, Yarmouth Co., *Fernald & Long*, no. 21,544 (as *R. vermontanus*).

*R. AMICALIS* Blanchard. Several collections by Blanchard from Kings County to Yarmouth County.

*R. ALUMNUS* Bailey. Annapolis, June 24, 1924, *J. G. Jack*, no. 3335.

*R. GLANDICAULIS* Blanchard. Several collections by Blanchard and others from Hants, Annapolis and Shelburne Counties.

*TRIFOLIUM PRATENSE* L. (typical). See *RHODORA*, xlv. 331 (1943). Scattered collections from St. Paul Island to Yarmouth County, mostly from waste places or neglected fields.

The larger cultivated plant is var. *SATIVUM* (Mill.) Schreb.

*T. HYBRIDUM* L., var. *ELEGANS* (Savi) Boiss. See *RHODORA*, l. c. Weed, Sable Island, *St. John*, no. 1264; roadsides and borders of fields, Yarmouth, *Bissell, Pease, Long & Linder*, no. 21,693.

*MELILOTUS INDICA* (L.) All. Ballast-heaps, Pictou, July 24, 1883, *Macoun*, no. 65, cited by *Macoun* (Cat.) as *M. parviflora* Desf.

*EPILOBIUM HORNEMANNI* Reichenb. Big Intervale, Cape Breton, July 14, 1898, *Macoun*, no. 19,137.

*FRAXINUS EXCELSIOR* L. Escaped to roadsides, railroad-embankments, etc., Pictou, *Fernald & St. John*, no. 11,160; waste ground, railroad-ballast and roadsides, Dartmouth, *Fernald, Bartram, Long & St. John*, no. 24,347; naturalized, Lahave River, Bridgewater, *J. G. Jack*, no. 3518.

*MENTHA GENTILIS* L. Border of cultivated field, Harper Lake, Shelburne County, *Fernald & Long*, no. 24,431.

*LINARIA DALMATICA* (L.) Mill. Fields and roadsides, South Ingonish, *Edith Scamman*, no. 4430.

*DIGITALIS PURPUREA* L. Grassy roadside, Baddeck, *Fernald & Long*, no. 22,431. *Macoun*, Cat. 360, says "Apparently naturalized" on Cape Breton. It is too much so in southwestern Newfoundland.



*PLANTAGO MAJOR* L., var. *SCOPULORUM* Fries & Broberg (*P. halophila* Bicknell). See Pilger in Engler, *Pflanzenr.* iv<sup>269</sup>. 51 and 52, fig. 8 (1937).—A very distinct maritime plant, so distinct as to have been three times separated as a species. Beach, Ingonish, August 5, 1904, *J. R. Churchill*; gravelly shore, Canso, *Roussau*, no. 35,458; brackish rocky shore of Eel Lake, Belleville, *Fernald & Long*, no. 24,510.

*SOLIDAGO TENUIFOLIA* Pursh. Perfectly characteristic *S. tenuifolia* from gravelly beach of Feindel's Lake, west of Bridgewater, *Fernald & Long*, no. 24,608; boggy margin of Wile's (Oakhill) Lake, Lunenburg Co., no. 24,609; Harper's Lake, Shelburne County, no. 24,604; Mistake Lake, Digby Co., no. 24,605. Numerous collections from Yarmouth County, making clear transitions to var. *pynoccephala* Fern. = *S. galetorum* (Greene) Friesner (not simply Greene, who published it as *Euthamia galetorum*). Similar transitions are quite apparent on eastern Cape Cod.

*GNAPHALIUM MACOUNII* Greene (*G. decurrens* Ives, not L.). Since only a single specimen from Windsor is cited, with "no other collection . . . known for the province", it is worth noting two made in 1921: dry clearings, North Mt., Granville, Annapolis County, *Bartram & Long*, no. 24,674; dry clearings and burns near Five-River (Morris) Lake, Shelburne County, *Fernald & Long*, no. 24,675.

*ACHILLEA LANULOSA* Nutt., a native American species, differs in several characters from the introduced *A. Millefolium* L. In the latter the stems are 3–10 dm. high, either arachnoid or glabrescent. Its corymbs are *flattish-topped* and 0.6–3 dm. broad; its ligules short-oblong. *A. lanulosa* is mostly lower (up to 6 dm. high), densely woolly, the relatively few leaves silky-lanate; the *round-topped or convex corymbs* only 2–10 cm. broad; the ligules narrow and short. It is transcontinental, following south along the coast or in open ground to southern New England. Clearing, St. Paul Island, *Perry & Roscoe*, no. 404; sand-dunes, Sable Island, *St. John*, no. 1346; roadside in dry soil, Windsor Junction, *Howe & Lang*, no. 434; low sand-dunes, Central Port Mouton, *Graves, Long & Linder*, no. 22,884; sand-hills, Villagedale, *Fernald, Long & Linder*, no. 22,883.

This brief enumeration of additions to the recorded flora indicates that there is plenty yet to do for the alert field-botanist. If species quite clear to those who have long known their diagnostic characters, *Scirpus acutus* and *S. validus*, for example, were included, the new list would be longer. If the collections made by John Macoun and often recorded by him were checked a considerable addition both of species and localities would follow. On page 169 of the *Ottawa Naturalist*, xiii. (1899) the late J. M. Macoun recorded his father's two localities for *Carex Crawei* Dewey on Cape Breton, a species with which John Macoun was perfectly familiar. A citation on the same page of *Scirpus rufus* from Cape Breton (*Macoun* in 1898) would give the earliest record for the province. All of which sums up to the conclusion that there is still much to be done in carefully checking old collections. There is more to do in making new discoveries. The present writer and his companions thought it a poor day if they did not bring in two to several species new to the province; Mr. Weatherby, venturing into slightly different areas, has made extraordinary additions and other plants are waiting discovery. The new and very useful Flora should stimulate new exploration. The reviewer regrets that he can not join in it.—M. L. F.



Fernald, Merritt Lyndon. 1948. "A Model Flora of Nova Scotia." *Rhodora* 50, 211–215.

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