

NOTES ON THE FLORA OF CAPE BRETON ISLAND

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IN LATE August, 1937, immediately after the meetings of the American Society of Botany at Wolfville, Mr. John Adams and I, accompanied by Mr. Chalmers Smith, graduate student of Acadia University, and Mr. Harry Grant of Dalhousie University spent four days on Cape Breton Island. The following are some of the typical areas which we examined.

The first night was spent in Mabou, and early the next morning we went to Glen Dyer at Hillsborough. This was a deep, shady glen in a limestone area, bordered with hardwood trees and with a small stream at the bottom. Giant ostrich ferns grew along the edge of the stream; and the sides of the glen were covered with the long, delicate fronds of the bulblet fern, *Cystopteris bulbifera*. *Thelypteris Filix-mas* was found in one corner. *Polystichum Braunii* was not seen; but we were told that it grew everywhere in the near-by woods, and we later encountered it in different places further north along the coast.

Of the flowering plants *Geranium Robertianum* was the most abundant here, as we had earlier seen it on the sides of Cape Blomidon in Kings County, the dominant plant upon the talus slopes and on the rocky cliffs. *Impatiens biflora* bordered the stream and mixed with it was the rarer *Impatiens pallida*; while along the bank grew such typical plants of a hardwood forest area as *Ranunculus abortivus* and *Agrimonia striata*. In all a profusion of forms that would be met with only on the richest and most alkaline soils.

As we returned up the side of the glen we encountered one of the rarities of the trip, *Triosteum aurantiacum*, one of the rarest of Nova Scotian plants, but here growing on the open banks and over four feet in height.

We spent the rest of the day in making a circuit of Lake Ainslie. At the very head of the lake a tiny brook flows in through a meadow. Here on the sandy shore grew *Ranunculus reptans*, *Galium Claytoni*, *Phalaris arundinacea*, *Potentilla palustris*; and along the banks *Mimulus moschatus*, and other plants typical of the colder parts of Nova Scotia. Further round the lake and in fact everywhere upon the most sterile soils was found *Gnaphalium sylvaticum*.

At the outlet of the South-west Margaree River was found a number of the water plants:

Scirpus, *Acorus*, *Sparganium*, etc., each species covered with a good growth of its own particular rust. While two of us were laying in a good supply of the rusts Smith came over with a dripping handful of a peculiar water plant he had found in the slowly-flowing water further down. This proved to be *Megalodonta Beckii*, reported by Fernald in 1922 from Digby County for the first time east of the Penobscot River, Maine.

All along the shore we had been running into typical seashore plants — at Inverness, at Margaree Harbour, and again at Cheticamp, so that a single enumeration of the species will suffice: *Ammophila breviligulata* and *Elymus mollis* upon the dunes; *Xanthium* and *Salsola* upon the sandy shores; and behind the sand bars *Scirpus validus* or *Leersia oryzoides*. Along the headlands *Potentilla tridentata* grew everywhere. In Nova Scotia this seems to be the most typical plant, either of the exposed headlands, or wet barrens, or of the sandiest plains such as are found in the Annapolis Valley.

Above Cheticamp and just before the sharp ascent that leads over the mountain, a stop was made for a few minutes by the rocky shore. *Ligusticum scoticum* and *Campanula rotundifolia* grew in profusion along the cliffs; while everywhere along the shore and up over the hills was the common catnip, *Nepeta Cataria*. On the sandy shore we found *Potentilla pectinata*, a plant unknown from Nova Scotia, and rare even in Newfoundland; while further back *Potentilla fruticosa*, much dwarfed by the wind, was now in full bloom. Growing with it were numerous bushes of *Shepherdia canadensis*; and at the very edge of the cliffs trailing vines of *Juniperus horizontalis* were common. This is a characteristic enough group of plants for northern Cape Breton, but it is one both novel and thrilling for a collector used to the plants of the more acid and inland soils of the mainland.

Next morning in Pleasant Bay we awoke to the fact that one of the commonest weeds of the settlement, competing with the *Anaphalis margaritacea* which grew white upon the recently cleared pastures and hillsides, was the introduced *Achillea Ptarmica*. Flowers and cultivated plants were few or none; and in front of one of the houses was a single specimen of the

green foxtail, *Setaria viridis*, carefully transplanted and cared for.

At the upper end of the settlement is one of the finest growths of virgin hardwood to be found in the province, unspoiled and with a variety of ferns and typical plants of the forest floor. We passed through this and over the mountain until we descended again, this time into the big interval at Cape North with the Bay of St. Lawrence and St. Paul's Island off in the distance. Here at the very tip of Cape Breton is one of the few agricultural districts — a place of broad fields, and barns, and even of plum orchards.

At this place the white cliffs of gypsum again attracted us. In the meadows were the common northern plants; the ever-present *Sanguisorba canadensis*, *Heracleum lanatum*, *Cornus americana*, *Triglochin maritima* in the damper spots; and upon the white cliffs, making a perfect covering, was a growth of *Erigeron hyssopifolius*, a relic species known in Nova Scotia only in the northern part of Cape Breton and on the gypsum cliffs of Hants County.

The following are some of the more interesting collections and observations made in the short time available: Specimens are in the herbarium of the Nova Scotia Agricultural College, Truro, — or at Acadia University, Wolfville, N.S.

Thelypteris Filix-mas (L.) Nieuwl. Inverness County, shady glen, Hillsborough.

Juniperus horizontalis Moench. Inverness County, base of cliffs, north of Cheticamp. Victoria County, common, roadsides, Ingonish.

Sagittaria graminea Michx. Inverness County, shallow water, sandy shore at the head of Lake Ainslie.

Leersia oryzoides (L.) Sw. Inverness County, behind the sea-beach, Margaree Harbour. The typical form with the panicle exserted.

Phalaris arundinacea L. Inverness County, abundant in the wet meadow at the head of Lake Ainslie. Reported from Whycocomagh by Macoun and probably common.

Suaeda americana (Pers.) Fern. Sandy sea-beach, North Sydney.

Spergularia leiosperma (Kindb.) F. Schmidt. Reported by Nichols as characteristic of brackish pools. Inverness County, sandy sea-beach, Cheticamp.

Potentilla fruticosa L. Common and much stunted along the sea-coast north of Cheticamp.

Potentilla pectinata Raf. Known in eastern Quebec and from Newfoundland, but here reported for the first time from Nova Scotia. Inverness County, sandy seashore, base of cliffs north of Cheticamp.

Acer rubrum L. var. *tridens* Wood. Inverness County, mixed woods behind the railway station, Mabou.

Impatiens pallida Nutt. Inverness County, shady glen, Hillsborough.

Shepherdia canadensis (L.) Nutt. Inverness County, common on hillside along the coast, north of Cheticamp.

Nepeta Cataria L. Inverness County, one of the commonest weeds above Cheticamp and at Pleasant Bay.

Limosella subulata Ives. Inverness County, sandy and muddy flat back of the beach, Margaree Harbour. Formerly reported from Sydney Mines and southwestern Nova Scotia.

Triosteum aurantiacum L. Inverness County, side of ravine, Hillsborough. Reported by Nichols from northern Cape Breton, but otherwise unknown in Nova Scotia.

Erigeron hyssopifolius Michx. Victoria County, covering a gypsum cliff, Cape North. Long known from northern Cape Breton and Hants County.

Gnaphalium sylvaticum L. Widely distributed in the eastern part of the province on dry sterile soil, or in open woods. Inverness County, sterile ground around Lake Ainslie. Victoria County, in open pasture woods, Beinn Breagh; dry ground, Cape North. Also on the mainland in Guysborough County, open woods, Pirate's Cove.

Xanthium echinatum Murr. Common on the sandy seashore at least from Cumberland County to Inverness County and also known from the Bras d'Or Lakes. Inverness County, sandy seashore, Margaree Harbour; sandy shore, Iona. Also on the mainland in Antigonish County sandy seashore, Bayfield Road.

Megalodonta Beckii (Torr.) Greene. Inverness County, below the bridge, outlet from Lake Ainslie on the South-west Margaree River. New to Cape Breton and the second station for Nova Scotia.

Achillea Ptarmica L. Inverness County, introduced and common about Pleasant Bay.

Artemisia Stelleriana Besser. Reported by Fernald in 1921 for the first time from Nova Scotia. It is, however, widely distributed around the coast; and especially common in northern Cape Breton. Shelburne County, crest of stony

sand beach, Villagedale. Digby County, sandy shore, Sandy Cove. Halifax County, along the North West Arm, Halifax. Cape Breton County, common on the beach at North Sydney. Inverness County, scattered on a sandy bar at Cheticamp.

The following species do not appear to have been recorded previously as occurring on Cape Breton Island.

Equisetum limosum L. Lake Ainslie.

Sparganium acaule (Beeby) Rydb. Vicinity of Margaree.

Potamogeton perfoliatus L. Lake Ainslie.

Alopecurus aristulatus Michx. Margaree Harbour.

Hordeum jubatum L. Sydney.

Panicum capillare L. Sydney.

Heleocharis acicularis (L.) R. & S. Lake Ainslie.

Cypripedium acaule Ait. Pleasant Bay.

Comptonia asplenifolia Gaertn. Ingonish.

Rhus hirta Sudw. Whycocomagh.

Ribes oxycanthoides L. Ravine beyond Cheticamp.

Hypericum boreale (Britt.) Bicknell Kilmuir Place.

Rubus hispidus L. Margaree.

Oenothera pumila L. Mabou.

Aralia hispida Vent. Pleasant Bay.

Coelopleurum actaeifolium (Michx.) Coult. & Rose. Margaree Harbour.

Hydrocotyle americana L. Kilmuir Place.

Ambrosia artemisiaefolia L. Englishtown Ferry and other localities.

Lactuca spicata (Lam.) Hitchc. Ravine beyond Cheticamp.

Erigeron annuus (L.) Pers. Hillsborough.

Erigeron philadelphicus L. Hillsborough.

Solidago juncea Ait. Railway bank beside gypsum cliffs, Iona.

FURTHER ADDITIONS TO THE OTTAWA LIST OF MOLLUSCA

By A. LA ROCQUE



INCE the publication of the writer's first paper¹ bringing the Ottawa list as nearly up to date as possible, a few papers have been published and much new material collected and studied; together, these add a few species and varieties to our list and correct some old records.

It is the intention of the writer to publish a catalogue of the species of the region with localities and synonymy as soon as it is felt that the data accumulated are sufficiently complete to set up a more or less permanent list. In the meantime, a guide for the beginner, without synonymy but with notes on the identification of the species has been prepared and will appear shortly in *The Canadian Field-Naturalist*.

In the changes listed herewith, it is understood that the 1890 list of Taylor and Latchford² is used as a basis. Mere changes in names or generic references are not discussed here but will be incorporated in the catalogue.

ADDITIONS AND CORRECTIONS

Lampsilis radiata borealis (Gray) — Chief Justice Latchford has often expressed the opinion that this form is not entitled to specific rank but is merely a variety of *radiata*. Comparison of specimens of *borealis* from the type locality (Duck Island, Ottawa River) and specimens of typical *radiata* will show that his opinion is well founded and that the form should

indeed have only varietal rank. Mr. Oughton and the writer have so treated it in a recent paper on Ontario Naiades³ and it should appear on our list as a variety of *radiata*. The typical form of *radiata* is found at Britannia Bay and other localities in the Ottawa River above the Chaudière Falls and therefore should be retained on our list.

Valvata lewisi Currier. — Specimens are in the National Museum of Canada from the Ottawa River, where it is fairly abundant in Britannia and Graham Bays, and in the Fairbairn collection from the Rideau River at Billings' Bridge, rare.

Somatogyrus subglobosus Say. — Over ten specimens of a *Somatogyrus* were collected at Duck Island early in October, 1936. Specimens were submitted to Mr. Elmer Berry of the Museum of Zoology, University of Michigan, who identifies them as this species. *S. subglobosus* has been recorded for Lake Erie and Baker gives it the following distribution: "Ohio Valley; Ohio and Iowa, Michigan and Wisconsin, south to Kentucky". How this species came to the Ottawa river it is impossible at present to say.

Helisoma campanulatum wisconsinense (Winslow). — This variety is found in many lakes of the Gatineau Valley. It was recorded by Winslow⁴ from Blue Sea



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