

RANDOM BOTANICAL NOTES.

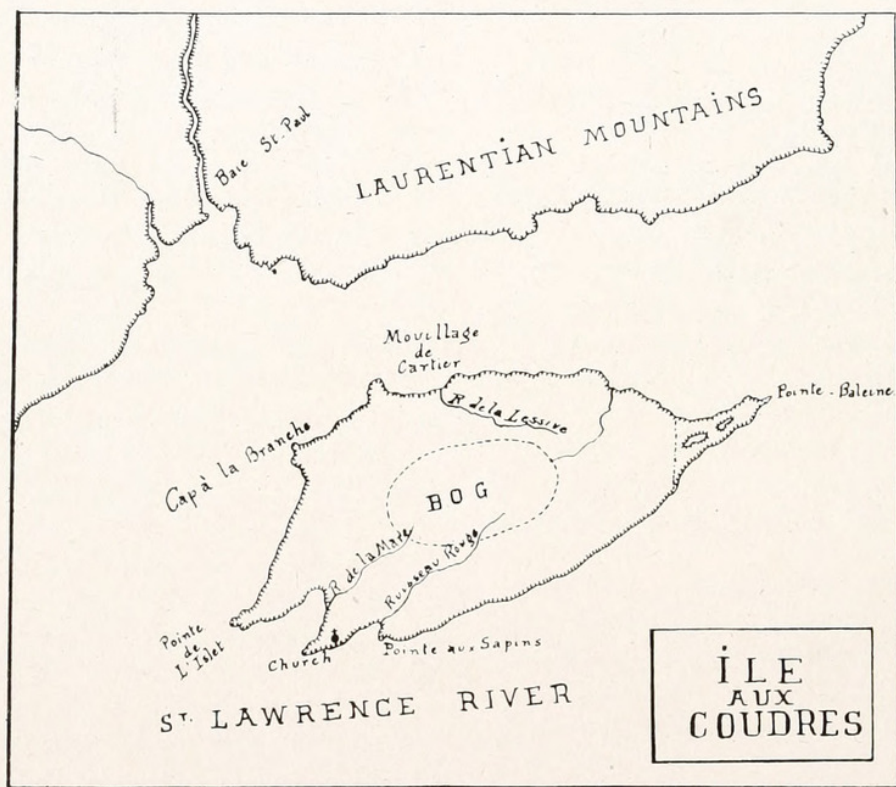
III. ISLE-AUX-COUDRES, QUE.

BY BRO. M. VICTORIN, LONGUEUIL COLLEGE, QUE.

For the purpose of furthering phytogeographical researches bearing upon the semi-halophytic section of the St. Lawrence river, and with the special aim of collecting specimens of *Carex* for monographical work, we alighted by noontide on June 22, 1917, on the Baie St. Paul wharf; our plant-press and other botanical outfit, though not imposing too much on the sturdy shoulders of the natives, nevertheless excited their curiosity to the utmost.

ically and botanically. We have given elsewhere¹ the impressions gathered from that quaint romantic spot which has preserved to an almost incredible degree, the language, customs and traditions of the 17th century and which, moreover, retains the most remarkable originality of not being spoiled by tourists. The following lines intend only to record briefly the botanical data collected.

Isle-aux-Coudres is of about fifteen miles' cir-



Like most of the members of the botanical fraternity, we have never succeeded in making clear to the average guide, driver or paddler, the point of view of the botanist. Notwithstanding this failure and through the good offices of François Bouchard, we crossed the channel and landed on Isle-aux-Coudres towards four o'clock. At the west end of the island, there is no other sort of wharf than François Bouchard's back, but this is as sure as a cantilever bridge. One who takes a strong hold about the fellow's neck crosses the wide expanse of mud and *Fucus* stretching at low tide between the water and the shore proper without injury to his boots.

A full week was spent visiting the island histor-

cumference and lies in the course of the St. Lawrence river about fifty miles below Quebec city. Though the inspection of a map would make one think that it belongs to the north shore, from which it is separated only by a relatively narrow channel, yet, like most—probably all—of the St. Lawrence islands it is on the southeastern side of Logan's fault, and is really a detached part of the south shore, showing the same inclined strata of shale and limestone as the near-by Cambrian Sillery of L'Islet. The whole island is an upland of from 50 to 100 feet elevation surrounded by a narrow alluvial

¹Fr. Marie-Victorin, *Croquis laurentiens: Isle-aux-Coudres. Le Parler Français*, Vol. XVI, No. 4, pp. 164-171. 1917.

prairie. The centre is slightly depressed and occupied by an extensive bog which suggests that the place was, in geologically recent times, somewhat atoll-shaped. The river waters are decidedly fresh, less so at the lower end. The wave action—very powerful, save on the northern side sheltered by the high Laurentian cliffs of the mainland—has produced a noticeable bar of sand and gravel behind which has developed a continuous lagoon generally transformed into a marsh by the invasion of halophytes.

The leading plant in this particular habitat is the polymorphic *Carex acuta* L. (= *C. goodenoughii* J. Gay); the abundant rhizomes form a felted entanglement about as troublesome to farmers as the familiar couch grass. It is locally called "teigne," a very expressive word with the French Canadians, indicating something not easy to get rid of. Various sedges and flowering plants help *C. acuta* in filling the lagoons: *Carex recta* Boott, *Carex canescens* L., var. *disjuncta* Fernald, *C. Tuckermanni* Dewey, *C. crinita* Lam., *C. maritima* Müell., *Caltha palustris* L., *Spathyema foetida* (L.), Raf., which occurs also in dry ground, *Menyanthes trifoliata* L., *Taraxacum officinale* Weber, var. *palustre* (Sm.) Blytt., *Cardamine pennsylvanica* Muhl., *Pedicularis palustris* L., *Sisyrinchium angustifolium* Mill., *Galium palustre* L., *Triglochim maritima* L. *Myosotis laxa* Lehm., and true *Viola cucullata* Ait., a name regarding which there has been some confusion in recent years.

No botanist would neglect a favorable opportunity to visit a northern bog. So, we started one fine morning with a party of barefooted youngsters roused to a high pitch of enthusiasm by trout prospects in the "Rouisseau Rouge." "Rouisseau Rouge," which derives its name from the dark color of the acid waters, is a brook discharging the bog waters into the St. Lawrence.

The Isle-aux-Coudres bog does not seem to differ materially from those of Rimouski and Temiscouata. As far as we have been able to see there is no free water in it. At this early season the water table was so high that we were able to inspect only the outer zone. With the usual *Kalmia angustifolia* L. *Kalmia polifolia* L. and *Ledum groenlandicum* Oeder, we were glad to see for the first time the fine flowers of *Rubus Chamaemorus* L. The amber-colored fruits are known everywhere in this district as "blackbières" an obvious corruption of the English word "blackberry." All those who have seen the ripe fruit of this plant will, no doubt, wonder at such a linguistic feat.

The genus *Carex* is always worthy of investigation in northern bogs. Here were found *C. trisperma* Dewey, a small form of *C. pauciflora* Lightf., and a new variety of *C. paupercula* Michx., which

Mr. M. L. Fernald of the Gray Herbarium has recently described² as follows:

"*Carex paupercula* Michx., var. *brevisquama* n. var., squamis 3-4 mm. longis perigynium subaequantibus. Scales 3-4 mm. long, about equalling the perigynium. Quebec: Isle-aux-Coudres, Charlevoix Co., June, 1917, Bro. M. Victorin, No. 4021 (type in Gray Herbarium).

Remarkable for its very short scales which give the plants a distinctive aspect, the long-acuminate scales of typical *C. paupercula* being 5-8 mm., in length and much exceeding the perigynium. M. L. Fernald, Gray Herbarium."

The departure from the typical form is indeed striking and in the light of more abundant material might prove specific. The plant grew in a dense mass forming a small tussock.

Mr. M. L. Fernald had already made a detailed study of *C. paupercula* and its allies,³ indicating clearly that the plant described by Michaux⁴ is in reality a northern extreme of the *C. irrigua* of J. E. Smith.⁵ Consequently, Michaux's name has priority. Furthermore, Michaux's plant, collected at Lake Mistassini has been shown to be of restricted boreal distribution, the species being represented southward by three distinct variations which may be summarized as follows:

CAREX PAUPERCULA AND ALLIES.

Pistillate spikes short-oblong, 4-10 mm. in length.

Pistillate scales 2-3 times as long as the perigynium.

1. *C. paupercula*.

Pistillate scales about equalling the perigynium.

2. *C. paupercula* var. *brevisquama*.

Pistillate spikes cylindric, 10-18 mm. in length.

Pistillate scales dark, castaneous; culms glabrous.

3. *C. paupercula* var. *irrigua*.

Pistillate scales green with brown border; culms scabrous.

4. *C. paupercula* var. *pallens*.

Carex paupercula Michx.—Northern Quebec; Lake Mistassini and the Shikshocks Mountains of Gaspé.

Carex paupercula Michx., var. *brevisquama* Fernald—Quebec; known only from the type locality, Isle-aux-Coudres.

Carex paupercula Michx., var. *irrigua* (Wahlb.) Fernald—Boreal and alpine Europe, sub-arctic regions and cold bogs of America: Quebec, Ontario, Nova Scotia, Massachusetts, Pennsylvania, Utah.

Carex paupercula Michx., var. *pallens* Fernald—Nova Scotia, Maine, New Hampshire, Massachu-

²Rhodora XX: 152, 1918.

³Rhodora VIII: 73, 1906.

⁴Flora Boreali-Americana II: 172, 1803.

⁵Hoppe, Caric. Germ.: 72, 1826.

setts, Connecticut, New York, Michigan, Vermont, Minnesota, British Columbia, Ontario.

To finish with the sedges, we will mention *C. stipata* Muhl., *C. brunescens* (Pers.) Poir., and *Carex angustior* Mackenzie found here and there on the island, giving a total of thirteen species met with—a rather small number.

In June very few grasses are suitable for collecting and only *Poa pratensis* L. and *Poa alsodes* Gray were gathered.

Among early-flowering genera, the often associated *Viola* and *Antennaria* hold an important place. The collection of true *Viola cucullata* Ait. in damp ground has already been mentioned. In the woods outside the bog zone, *Viola renifolia* Gray, var. *Brainerdii* (Greene) Fernald, is abundant. On shaded ledges near the water, *Viola septentrionalis* Greene was growing profusely with the snow-white *Antennaria canadensis* Greene. No other *Antennaria*—not even the ubiquitous *A. neodioica*—was detected on the island.

Nobody who has read the history of this country can leave Isle-au-Coudres without paying a visit to Cap à La Branche where in the times of Wolfe, Nicette Dufour and François Savard captured the grandson of Admiral Durrell. Cap à La Branche is naturally but a low cliff covered with bushes and with a few white cedars which are supposed to have been Dufour and Savard's hiding-place—a snug one indeed. A brooklet runs down and supplies sufficient moisture to induce a gorgeous growth of *Saxifraga virginensis* Michx. and *Draba arabisans* Michx.

At the Pointe-de-L'Islet, on exposed ledges facing the sea, the short grass was strewn with the innumerable white flowers of *Cerastium arvense* L., and the strict rose-tinted inflorescences of *Arabis brachycarpa* (T. and G.) Britton.

Close observers have already remarked that the older settlements in Quebec exhibit unusual floristic features which should be attributed to historical factors. The first settlers, the missionaries, the "Médecins du Roi," the nuns, were far from being *minus habens* and the gardens inside the palisade usually contained the best drug plants in favor at the time. When cultivation happened to cease on that particular spot, the plants had very often gained a strong foothold and were able to persist for centuries. A striking example of this is the abundance and persistence to date of *Serapias helleborine* L., on Mount Royal, Montreal Island, the only instance of an introduced orchidaceous plant that I know of.

On Isle-aux-Coudres we have observed an extraordinary abundance of Boraginaceae: *Echium vulgare* L., *Cynoglossum officinale* L., *Echinosper-*

mum Lappula Lehm., *Myosotis laxa* Lehm., *Lithospermum arvense* L. and others. The peculiarity can be noted about Quebec city and Mr. M. L. Fernald finds the same to be true of the old Gaspé settlements.

Hyoscyamus niger L. which we found rooted in the beach gravels on the southern side is evidently another introduction traceable to the drug-garden of early days. Singularly enough our field experience with this plant in Quebec has shown it to occur mainly on island beaches of historical fame: Ile des Soeurs (Chateauguay), Ile Sainte-Hélène (Montreal), Isle-aux-Coudres. Moreover, it has been noted that this weed introduced into New England by early settlers and recorded there as far back as 1672, has almost completely disappeared. It is a remarkable fact, adds Mr. M. L. Fernald,⁶ that in Quebec, all along the St. Lawrence river, it is maintaining its own and its weed-character.

Tragopogon pratensis L. is common about buildings at Isle-aux-Coudres. It seems to be an introduction of the same class. The only other locality I know of in Quebec is about the base of Beloeil Mountain where it thrives in the old orchards.

Owing to the lack of sodium chloride in the surrounding waters the halophytes are few. *Fucus vesiculosus* L., however, is very abundant on the slanting rocks of the tidal shores, and is almost wholly relied upon as a fertilizer for potato fields. A scanty colony of *Cañile edentula* (Bigel) Hook., and a few bluish rosettes of *Mertensia maritima* (L.) S. F. Gray, were found among purpose offal at the Pointe-de l'Islet.

We have as yet said nothing of the trees and shrubs; these have intentionally been kept for the end. The first thing a botanist is likely to look for when setting foot on Isle-aux-Coudres is the Hazelnut (*Corylus rostrata* Ait.) from which the place (l'ysle ès Coudres of Cartier) has derived its name. And yet, we have searched in vain for it all around. My friend, Jean-Baptiste Desgagné—a most important man, simultaneously farmer, postmaster, captain and sexton—informs me that he faintly remembers having seen one small bush in his youth . . . but he is not sure! There is some difficulty to reconcile this fact with Jacques Cartier's assertion which runs thus: . . . *et entre autres il y a plusieurs coudres franches fort chargées de noisilles aussi grosses et d'une meilleure saveur que les nôtres, mais un peu plus dures. Et par cela nommasmes ysle-es-coudres.*⁷

Abbé Casgrain, presumably solely on Cartier's authority reasserts the same: "Comme au temps

⁶Fernald, M. L., Notes from the Phaenogamic Herbarium, I. *Rhodora* XII: 191, 1910.

⁷Cf. Brief récit et succincte narration, etc., of Cartier, 1545. Manuscript in the British Museum.

jadis, cette plage est encore pleine de beaux et grands arbres de plusieurs sortes, et il n'y a qu'à étendre la main pour cueillir sur les coudres franches, les grappes de noisilles."^s

Cartier's landing place, the so-called "Ruisseau à la lessive" is yet in its natural state, and it is very hard to believe that ecological conditions have changed enough in four centuries to expel the hazelnut from the island. Were it not for the express mentioning of the fruits, our opinion would be that Cartier was simply mistaken as to the identity of the shrub, and that his hazelnut was nothing else than the Common Northern Alder [*Alnus incana* (L.) Moench] which is very abundant in the damp places about "Ruisseau à la lessive." The European Hazelnut is taller than ours and in this respect much like our Alder.

The sloping gravels that lead from the tableland to the beach are occupied by an association of trees and shrubs very likely—as hinted above—in their natural state. At the time of our visiting the white corymbs of a thorn (*Crataegus flabellata* (Bosc.) K. Koch.) were to be seen all over together with the ripe catkins of *Salix rostrata* Richardson var. *luxurians* Fernald. Others were *Nemopaathes mucronata* (L.) Trel., *Amelanchier sanguinea* (Pursh) DC., var. *gaspensis* Wiegand, and the northern variety of the Balsam Poplar (*Populus balsamifera* L., var. *Michauxii* Henry). This interesting tree exhibited its peculiar short cordate leaves.

Pointe-à-la-Baleine, the lower end of the island,

^sCasgrain, Abbé R. H., Excursion à l'Île-aux-Coudres.

is occupied by a flat and low gravel barren where only isolated patches of *Juniperus siberica* Burgsd., and stunted white spruce have been able to maintain their own. Not a blade of grass, not a weed, not a dandelion. The dwarfed trees assume the peculiar short conical shape and the densely felted habit observed on Anticosti. Sometimes the lower branches have developed and lie flat on the ground, and in a few instances, the tree, after ending in a point spreads anew giving to the whole the appearance of two superposed trees. This restricted growth and accompanying modifications is no doubt due to the continuous stress of the prevailing wind, the well-known *nord-est* of the lower St. Lawrence region.

One of the most puzzling things we collected during our short stay at Isle-aux-Coudres was a striking seminal variation of the Sugar Maple (*Acer saccharum* L.) It is known as distinct by the natives and Mr. Desgagné calls it "*Erable blanche*." There is a grove of these trees at the Pointe-aux-Sapins, past "Ruisseau Rouge" and not far from the church. While taking a walk over there after supper in search of sunset effects, we noticed the peculiar appearance of the thin leaves, glaucous underneath some of which are perfectly three-lobed, and the remarkable fruit with wings curving inwards. The tree is clearly the var. *glaucum* of Sargent in its essential characteristics. We do not think it is necessary, however, in the absence of material from somewhere else, to impose upon the plant a new name, as it may be but a freak of a teratological instance.

NOTES AND OBSERVATIONS.

BREEDING OF MOURNING DOVE NEAR OTTAWA, ONTARIO.—On the afternoon of July 3, 1919, it was reported to me that a Passenger Pigeon was nesting in the orchard of Mr. R. T. Richardson, of Woodroffe Farm, near Britannia. I went out in the evening and Mr. Richardson showed me the nest, on a horizontal branch of an apple tree, on the northeast side, about six feet from the ground. The bird remained quietly on the nest and allowed us to examine her from all sides, first from a distance with field glasses, and later from a distance of only three or four feet. The bird had the typical light buffy grayish head and neck, with paler throat, and a small dark spot on each side of the head; wings with some dark spots—an undoubted specimen of the common Mourning Dove, *Zenaidura macroura carolinensis* (Linnæus). The lack of slaty blue on head and upper throat and the small size easily proved that the bird was not the Pas-

senger Pigeon. The Mourning Dove is rare this far north in the east, although it ranges well to the northward in the prairie provinces. Mr. Richardson said that the dove had been sitting on eggs for about two weeks, and when she finally fluttered off to the ground and away over the grass, we saw two blackish pin-feathered squabs on the scanty platform of a nest. The Passenger Pigeon is now believed to be extinct, but all of the many supposed occurrences of this species which have been investigated carefully have proved to be Mourning Doves. The two species have a general resemblance to each other, in shape, color, and proportions, and may be confusing when seen alone. The observer who will remember that the Mourning Dove averages only about 12.5 inches in total length while the Passenger Pigeon averages 17.0 inches as well as being fully twice the bulk of the former



Marie-Victorin. 1919. "Random Botanical Notes III. Isle-aux-Coudres, Quebec." *The Canadian field-naturalist* 33(6), 114–117.

<https://doi.org/10.5962/p.337919>.

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