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THE CANADIAN DISTRIBUTION OF LITHOSPERMUM CROCEUM FERN.*

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IN 1935 Fernald (*Rhod.* 37: 329-331, pl. 376) segregated the northern inland element from *Lithospermum caroliniense* (Walt.) MacMill, as a new species *L. croceum* Fern. This northern species is chiefly distinguished from the southern coastal plain species by the harsh, papillose-based pubescence of the stem and leaves, by the keeled and stiffly ciliated calyx lobes and by the smaller corolla (limb 1.5 - 2.0 cm. broad rather than 2.0 - 2.5 cm. in *L. caroliniense*). The northern species had previously passed in Ontario as *L. hirtum* (Muhl.) Lehm. or *L. Gmelini* (Michx.) Hitchc.

Fernald stated the distribution of *Lithospermum croceum* as "Sands, gravel, and sandy woods, thickets and bluffs near the Great Lakes from western New York and Ontario westward, thence to Montana, South Dakota, Nebraska and Kansas". In June, 1921, Macnamara collected this species at Constance Bay, Ontario. As the citations below indicate it has frequently been collected there since that time and examination during the present summer showed it to be abundant over a considerable area. Constance Bay is an expansion of the Ottawa River about twenty-six miles north-west of Ottawa, Ontario. Constance Bay and adjacent Buckham Bay are the mouths of a former channel of the Ottawa River. The area between these two bays is filled with glacial and late marine deposits, the exposed portions being alluvial sand. This sandy region of open second growth woods forms a habitat for *L. croceum* quite similar to the sandy stretches along Lake Erie and Lake Huron.

In addition to Fernald's account, the occurrence of this species in western Ontario has been reported as follows: Faull (*Ont. Nat. Sci. Bull.* 4: 102, 1908) reported *L. hirtum* from the upper beach at Rondeau Park, (Kent County). Dodge (*Ott. Nat.* 24: 45-52, 1910) described *L. Gmelini* as plentiful in spots in Lambton County and later (*Can. Geol. Surv. Mem.* 54:84, 1914) cited this species as frequent at Point Pelee (Essex County) in open sandy ground and the sandy upper beach about Windsor (Essex County). Zenkert in the "Flora of the Niagara Frontier Region" (*Bull. Buffalo Soc. Nat. Sci.* 16, 1934) describes *L. Gmelini* (Michx.) Hitchc. as occurring along Lake Erie at Fort Erie, Windmill Point and "abundant at intervals from Point Abino into Humberstone and Wainfleet townships" (Welland County). Among the stations listed by Macoun (*Cat. Can. Plants* 2: 352, 1884) for *L. hirtum* Lehm. are the following from which no specimens have been seen: Bosanquet, shore of Lake Huron, Ont. (*McGill Coll. Herb.*); Vicinity of Toronto (*Fowler*).

In western Quebec, Carrier in his catalogue of the flora of Montreal Island (*Bull. de l'Acad. Intern. Geographie Botanique* 13: 268-281, 1904) cites *L. hirtum* Lehm. as occurring in dry places. Marie-Victorin's "Flore Laurentienne", 1935, does not include this species and no specimen has been seen to substantiate Carrier's record. Fletcher in Flora Ottawenis (*Ott. Nat.* 3 Suppl. 56, 1889) recorded *L. hirtum* Lehm. as follows:

"Riverside in sand. On the banks of the Ottawa above Aylmer. Rare (Mrs. Chamberlain)." While no specimen has been found to support this record the region cited is almost directly across the Ottawa River from Constance Bay, Ontario, so the report may be valid.

The Canadian distribution of this species is set forth in the collections cited below. It will be seen that the Constance Bay station represents the extreme north-eastern limit of the range being 125 to 325 miles east of the nearest authentic stations. In the following citations specimens not otherwise designated are in the herbarium of the Division of Botany and Plant Pathology, Science Service, Department of Agriculture, Canada. Other herbaria are design-

ated as follows:

CAN—National Herbarium of Canada
T—University of Toronto Herbarium

I am grateful to the curators of these herbaria for the loan of specimens and to Mr. James Soper of McMaster University for the opportunity of examining his Turkey Point collections.

Bruce County: Bruce Peninsula, Sauble Beach, *Taylor* 8175, 8209 sandy dunes (T); Saugeen, *Burgess s.n.* dry shifting sand, July 24, 1884.

Georgian Bay: Grant's Tomb, *"A.G.W." s.n.* Aug. 17, 1904, (CAN);

Lambton County: River St. Clair, Point Edward, *J. M. Macoun* (17180) sandy soil, Sept. 13, 1884, (CAN):

Essex County: Lake Erie, Pelee Point, *John Macoun* (23963), dry woods, July 23, 1892, (CAN);
Lake Erie, Pelee Point, *John Macoun* (17181), sand banks on dunes along lake, June 30, 1882, (CAN);
Lake Erie, Pelee Point, *John Macoun* (54342), May 27, 1901, (CAN);
Point Pelee, *Burgess s.n.* sand shore, July 30, 1882, (T);
Pelee Island, *Botham s.n.* June 6, 1938.

Norfolk County: Lake Erie, east end of Long Point, *John Macoun* (17179), on blown sand, July 21, 1892 (CAN);
Long Point, *Boughuer s.n.*, June 14, 1892, (T);
Lake Erie, Long Point, *Senn & Soper* 521, dry sandy ridges;
Turkey Point, pine woods, *Soper* 223;
Turkey Point, open grassland, sandy soil, *Soper* 47;

Welland County: Shore of Lake Erie, Pt. Abino, *McCalla* 407, (CAN);

Prince Edward County: Wellington Beach, *John Macoun* (17176), dry soil, July 1868, (CAN);

Carleton County: Constance Bay, *Macnamara s.n.* June 1921;
Constance Bay, *Groh s.n.*, Aug. 10, 1927;
Constance Bay, *Groh s.n.*, sand ridges, June 17, 1930;
Constance Bay, *Minshall s.n.*, June 28, 1934;
Constance Bay, *Adams s.n.* June 12, 1938;
Ottawa River, Constance Bay, *Senn* 401, sandy soil in second growth woods; Ottawa River, Buckham Bay, *Groh s.n.*, in fruit, Aug. 6, 1938.

MOLLUSCA OF THE OTTAWA REGION

(*CLAMS, SNAILS AND SLUGS*)

By A. LA ROCQUE

(*Concluded from Page 115*)

Genus *Oxychilus*

A group of introduced snails reminding one of the ramshorns. One species (*O. alliarium*) has never been found outside of greenhouses and therefore is not included in the main list. The other (*O. cellarium*) is well-established. It resembles *Mesomphix inornatus* (see below) but may be distinguished from it by its wider umbilicus. It might also be confused with the next species which it resembles slightly but *Haplotrema concavum* has a much wider umbilicus and a more thickened lip.

O. cellarium Müller

Genus *Haplotrema*

A shell of medium size (15 to 21 mm. wide) flatly coiled, widely umbilicated, greenish-horn when alive. These snails are carnivorous and should not be left in the same box with *Succinea* or *Vitrina*. Our specimens are sometimes referred to the variety *minus* Ancey.

H. concavum Say

Genus *Mesomphix*

Another flatly coiled shell, but with a much narrower umbilicus than the preceding two. Rather scarce in this region.

M. inornatus Say