

# The Swamp Saxifrage, *Saxifraga pensylvanica*, a Rare Plant in Canada, Newly Discovered in Saskatchewan

VERNON L. HARMS

Biology Department and W. P. Fraser Herbarium, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0

Harms, Vernon L. 1983. The Swamp Saxifrage, *Saxifraga pensylvanica*, a rare plant in Canada, newly discovered in Saskatchewan. Canadian Field-Naturalist 97(1): 91-93.

*Saxifraga pensylvanica*, the Swamp Saxifrage, is reported as newly discovered in the Saskatchewan Pasquia Hills. The Canadian records for this rare species are reviewed.

Key Words: *Saxifraga pensylvanica*, Swamp Saxifrage, Saskatchewan, rare plant.

In June 1981, during a botanical foray in the Saskatchewan Pasquia Hills, we made the rather startling discovery of Swamp Saxifrage, *Saxifraga pensylvanica* L. ssp. *pensylvanica* [about 1.2 km west of Km 21 (Mile 13) of the Fir River Road north of Veillardville (Sect. 2, Twp. 47N, Rge. 5N2M; 53°01'N, 102°38'W; elev. 1825'), very scarce on sedge hummocks in an open, marshy bog-fen; Harms et al. #29416 (SASK), see Figure 1]. Besides myself, the members of the field party included Patricia Sky, the Fraser Herbarium Technician, and local naturalists, Donald F. Hooper of Somme and Les Baker of Carragana, the latter actually being the first to sight this different-appearing plant. Some of the plant associates in the fen community were the codominant sedges: *Eriophorum viridi-carinatum* (Engelm.) Fern., *E. gracile* W. J. D. Koch, *Carex prairea* Dewey, *C. tenuiflora* Wahl., *C. lasiocarpa* Ehrh., *C. magellanica* Lam. var. *irrigua* (Wahl.) B.S.P., *C. diandra* Schrank, *C. canescens* Dewey, and *C. interior* Bailey; the dominant shrubs: *Betula glandulifera* (Regel) Butl., *Salix candida* Fluegge, *Salix* spp., and *Chamaedaphne calyculata* (L.) Moench; the more common forbs: *Menyanthes trifoliata* L., *Potentilla palustris* (L.) Scop., *Galium trifidum* L., *Lysimachia thyrsiflora* L., *Equisetum fluviatile* L., *Triglochin maritima* L., and *Caltha palustris* L. Other Saskatchewan rare plants found at the boggy Black Spruce treed borders of the same fen were *Pedicularis parviflora* Sm., *Cardamine pratensis* L. var. *palustris* Wimm. & Grab., and *Cypripedium calceolus* L. var. *pubescens* (Willd.) Correll.

The known range of *Saxifraga pensylvanica*, as extrapolated from Burns (1942) and a combination of current floras, has been from southeastern Manitoba, western and southern Ontario, and southern Maine, south to southeastern Minnesota, northern Missouri, Illinois, and western North Carolina. It is considered rare at least in most of the peripheral areas of its range.

This species has been listed as rare in Canada (L. Kershaw, J. K. Morton, and J. Venn. 1976. Inventory of Rare and Endangered Vascular Plants of Ontario: Computer printout, Department of Biology, University of Waterloo, Ontario; Argus and White 1977; White and Johnson 1980). Canadian records appear



FIGURE 1. *Saxifraga pensylvanica* L. Collection from the Pasquia Hills, Saskatchewan.



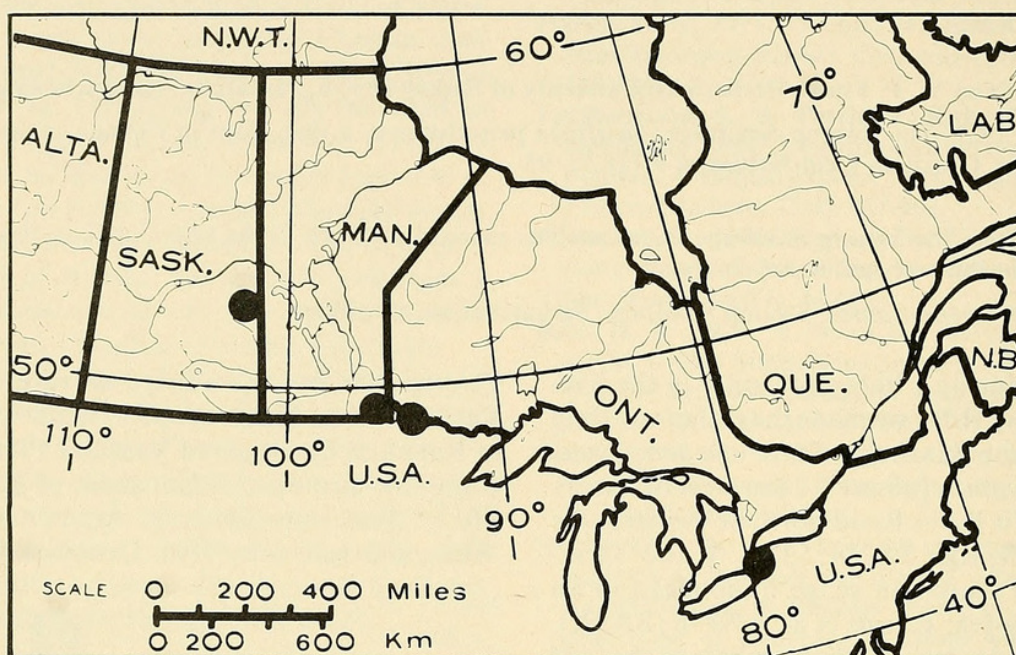


FIGURE 2. Canadian Distribution of *Saxifraga pensylvanica*.

quite limited for the plant, and it is reportedly scarce wherever found in this country. Macoun (1886) cited an early Ontario collection by David F. Day from "low places, near Fort Erie" (in Welland Co., 42° 54'N, 78° 56'W), but Looman (1973) indicated that a herbarium search by Dr. Bernard Boivin had failed to locate the Day specimens to substantiate that report. According to Looman, Boivin's (1966) inclusion of the species for Ontario was based only on the more recent collections by Ward and C. E. Garton from the Rainy River area of far western Ontario. Scoggan (1978) further cites it, however, from Long Beach in Welland County, Ontario (42° 52'N, 79° 23'W), based on a report by Zenkert (1934). I am unaware of any other Ontario records for the Swamp Saxifrage.

Looman (1973) recorded it from the Moose Lake area (49° 12'N, 95° 19'W), southeastern Manitoba, a location just across the Lake-of-the-Woods within 50 miles of the Rainy River station in Ontario. The recent White and Johnson (1966) listing of the Manitoba rare plants cites only this single locality for the species in Manitoba. It was omitted for any of the Prairie Provinces by Breitung (1957), Scoggan (1957), Budd and Best (1964), Boivin (1968), and even Scoggan

(1978). Figure 2 shows the widely separated Canadian stations thus far recorded for the species.

The present record from the Saskatchewan Pasquia Hills represents a surprising and phytogeographically quite interesting find, marking a 640 km (about 400 mile) northwestward extension of the species' known range in Canada. The Saskatchewan Pasquia Hills, along with the Porcupine Hills and Duck Mountain upland, are parts of the Manitoba Escarpment, representing highlands that bordered the south shores of former Glacial Lake Agassiz. These hills are phytogeographically interesting for including northwestern outlier stations (relict populations?) of a number of plant species belonging to the Eastern Deciduous Forest Element (e.g. *Anemone nemorosa* L. var. *bifolia* (Farw.) Boivin, *Cypripedium arietinum* R.Br., *Mimulus ringens* L., *Polygala pauciflora* Willd., *Prunus pumila* L., *Trillium cernuum* L.). The new record of *Saxifraga pensylvanica*, while more disjunctly isolated, and thus a more striking example, than others in the above group, seems phytogeographically classifiable with them. It probably represents a persistent relict from the post-Pleistocene Climatic Optimum. At that time, associates of the present eastern deciduous forest appear to have extended their ranges con-



siderably farther northwestward than at present, but have subsequently been largely eradicated by climatic deterioration. According to the hypotheses of Love (1959), and in apparent agreement with the more recent findings of Ritchie (1966, 1976) and other modern workers, this maximum northwestward extension of the eastern forest element into Saskatchewan is probably referable to the earlier, more moist part of the "Hypsithermal Period", dated at about 9000-6000 years B.P.

### Literature Cited

- Argus, G. W., and D. J. White.** 1977. The Rare Vascular Plants of Ontario. Syllogeus (14) National Museums of Canada, Ottawa.
- Boivin, B.** 1966. Enumeration des Plantes du Canada. III -Herbidées, 1<sup>o</sup> partie: Digitatae: Dimerae, Liberae. Le Naturaliste Canadien 93: 583-646.
- Boivin, B.** 1968. Flora of the Prairie Provinces. Part II - Digitatae, Dimerae, Liberae: Provancheria 3 (Reprinted from Phytologia 17).
- Breitung, A. J.** 1957. Annotated catalogue of the vascular flora of Saskatchewan. The American Midland Naturalist 61: 510-512.
- Budd, A. C., and K. F. Best.** 1964. Wild Plants of the Canadian Prairies. Agriculture Canada, Ottawa. 519 pp.
- Burns, G. W.** 1942. The taxonomy and cytology of *Saxifraga pensylvanica* L. and related forms. American Midland Naturalist 28: 127-160.
- Looman, J.** 1973. Some new and interesting plant records for the Prairie Provinces. The Blue Jay 3(3): 176-179.
- Looman, J., and K. F. Best.** 1979. Budd's Flora of the Canadian Prairie Provinces. Agriculture Canada publication no. 1662.
- Love, D.** 1959. The postglacial development of the flora of Manitoba: a discussion. Canadian Journal of Botany 37: 547-585.
- Macoun, J.** 1886. Catalogue of Canadian Plants. Part III - Apetalous Exogens: Additions and Corrections to Parts I-II, p. 523. Geological and Natural History Survey of Canada. 425 pp.
- Ritchie, J. C.** 1966. Late-Pleistocene History of the Canadian Flora. Pp. 66-80. In The Evolution of Canada's Flora. Edited by R. L. Taylor and R. A. Ludwig. University of Toronto Press, Toronto. 137 pp.
- Ritchie, J. C.** 1976. The late-Quaternary vegetational history of the Western Interior of Canada. Canadian Journal of Botany 54: 1793-1818.
- Scoggan, H. J.** 1957. Flora of Manitoba. National Museums of Canada Bulletin 140: 619 pp.
- Scoggan, H. J.** 1978. The Flora of Canada. Part 3 - Dicotyledoneae (Sauraceae to Violaceae). National Museums of Canada, Ottawa.
- White, D., and K. L. Johnson.** 1980. The Rare Vascular Plants of Manitoba. Syllogeus (27) National Museums of Canada, Ottawa.
- Zenkert, C. A.** 1934. The Flora of the Niagara Frontier Region: Ferns and Flowering Plants of Buffalo, N.Y., and Vicinity. Buffalo Society of Natural Sciences Bulletin 16: 1-328.

Received 5 October 1981

Accepted 30 September 1982

## Small Game Hunting Behaviour of Polar Bears, *Ursus maritimus*

GARY D. MILLER<sup>1</sup> and DONALD R. WOOLDRIDGE<sup>2</sup>

<sup>1</sup>Biology Department, University of New Mexico, Albuquerque, New Mexico, 87131

<sup>2</sup>Quintette Coal Ltd., 1508 102nd Ave. Dawson Creek, British Columbia V1G 2E2

Miller, Gary D. and Donald R. Wooldridge. 1983. Small game hunting behaviour of Polar Bears, *Ursus maritimus*. Canadian Field-Naturalist 97(1): 93-94.

An adult female Polar Bear (*Ursus maritimus*) was observed catching a small rodent and a subadult Polar Bear was observed hunting and catching a Willow Ptarmigan (*Lagopus lagopus*).

Key Words: Feeding behaviour, hunting behaviour, Polar Bear, *Ursus maritimus*.

The major prey of Polar Bears (*Ursus maritimus*) throughout the Arctic is seals. Polar Bears are most successful hunting seals on sea ice (Stirling 1974), but can also hunt seals in ice-free water (Furnell and Ooloooyuk 1980). Each year the bears along the western coast of Hudson Bay are faced with three to four months of little or no ice cover (Stirling et al. 1977), and based on scat analysis, their diet shifts to include

carrion, berries, grass, birds, and microtine rodents (Russell 1975). Polar Bears also encounter Porcupines (Jonkel 1968), but it is not known if they consume them. Polar Bears are known to take Canada Geese (*Branta canadensis*) on land, but most of their bird hunting is probably confined to open water (Russell 1975).

During field observations of bear deterrent and





Harms, Vernon L. 1983. "The Swamp Saxifrage, *Saxifraga pensylvanica*, a rare plant in Canada, newly discovered in Saskatchewan." *The Canadian field-naturalist* 97(1), 91–93. <https://doi.org/10.5962/p.354938>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/89042>

**DOI:** <https://doi.org/10.5962/p.354938>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/354938>

#### **Holding Institution**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

#### **Sponsored by**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

#### **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Ottawa Field-Naturalists' Club

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.