

Notes

Arrow Arum, *Peltandra virginica*: A Nationally Rare Plant in the Ottawa Valley Region of Ontario

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Arrow Arum, *Peltandra virginica* (L.) Schott & Endl., a nationally rare plant, is reported in Lanark County, Ontario. This is the first occurrence of Arrow arum reported in the Ottawa Valley region and beyond the climatically more moderate parts of southern Ontario. As such, it suggests a more extensive range in the Canadian Shield region of southern Ontario than previously suspected.

Key Words: Araceae, Arrow Arum, *Peltandra virginica*, Canadian Shield, Lanark County, nationally rare, Ontario, Ottawa Valley, range extension.

Arrow Arum, *Peltandra virginica*, a nationally rare plant (Argus and Pryer 1990), was found in Lanark County, Ontario (45°05'N, 76°14'W) by Cathy Keddy on 1 October 1994. The discovery is significant because it extends the known range of the species in eastern Ontario and Quebec northward by 90 km into the Ottawa valley region, and beyond the climatically milder parts of southern Ontario where it has been previously found.

Three clumps of Arrow Arum were found close together at the waterline of a large beaver pond, in association with Purple Loosestrife, *Lythrum salicaria*, Pickerel-weed, *Pontederia cordata*, Marsh Fern, *Thelypteris palustris*, and Sensitive Fern, *Onoclea sensibilis*. The plants appeared healthy, despite having begun to senesce. The shore, at this site, was covered by a dense stand of White Cedar, *Thuja occidentalis*. Leaves, spathe, spadix and seeds were collected from a single plant (leaving the rhizome intact), and were placed in the herbarium at the University of Ottawa (OTT). A report of the find was filed with the Natural Heritage Information Centre, Peterborough, Ontario. The NIHC has no record of any other discoveries more recent than those reported by Keddy (1984). The location of these occurrences are shown in Figure 1.

Arrow Arum is a member of the family Araceae. It is found in swamps and shallow waters, from eastern Canada and southern Maine to Florida, and west to Michigan, Missouri and Louisiana (Gleason 1952). It is rare in both Maine and Missouri (Gleason 1952), as well as in Canada (Argus and Pryer 1990), where it has been reported only in

restricted sites near the Great Lakes and the St. Lawrence River. In Quebec, it has been reported in the Richelieu and Chateauguay river systems, and at sites along the St. Lawrence River between Montréal and Trois Rivières (Bouchard et al. 1983). In Ontario, it has been reported at Gananoque, the Bay of Quinte near Belleville, Wolfe Island, Long Point, in several sites in Welland County and the Niagara area, on the Severn River near Georgian Bay, on the Bruce Peninsula and on Manitoulin Island (Keddy 1984).

The pond in which the plants were found lies on the eastern edge of the Madawaska Highlands, on the Precambrian shield, at an elevation between 150 and 160 m. This is the only site of Arrow Arum to lie north of the 120 frost-free days isotherm. The Manitoulin Island sites average between 120 and 140 frost-free days per year, and all the other sites average greater than 140 frost-free days per year (Energy, Mines and Resources 1985). The production of seeds indicates that the growing season is long enough to allow completion of the plant's life cycle, but whether the seeds produced are viable is unknown. In addition, the high local abundance of Arrow Arum in St. Lawrence River and Lake Ontario sites (Dore 1966; Garwood 1965; Laking 1951) suggests that these populations are still significantly south of this species' potential northern limit.

The disjunct nature of this small population of plants strongly suggests that they were transported as seeds by waterfowl, which are protected and numerous on the property during migration. The property is private and relatively inaccessible, so that

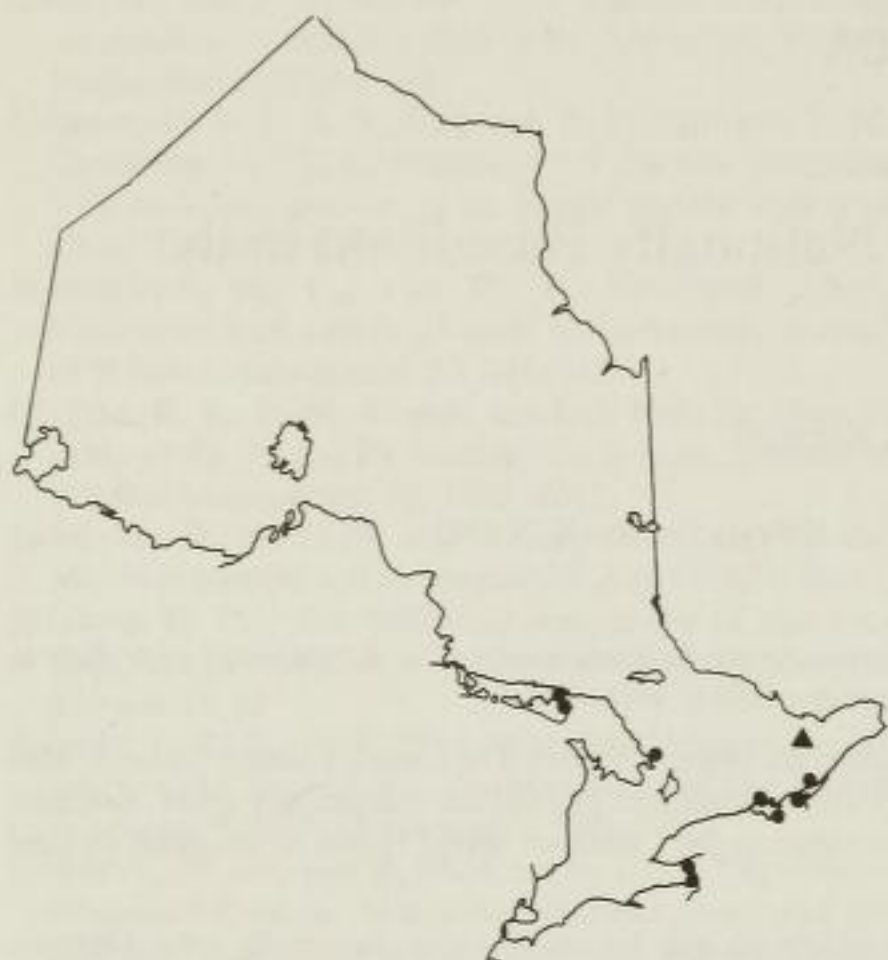


FIGURE 1. Map of Ontario showing location of recent discovery of Arrow Arum (triangle) in relation to previously reported discoveries (circles). Adapted from Keddy (1984).

human introduction is unlikely. Moreover, the seeds of Arrow Arum are reported to be eaten by waterfowl, particularly the Wood Duck, *Aix sponsa* (Fasset 1957). The introduction of Arrow Arum is believed to have occurred only recently, as the pond is regularly surveyed by the owners, who are experienced botanists. It has been suggested, however, that this species may be more common and wide-ranging in eastern Ontario than has actually been reported, due to possible confusion with Pickerel-weed (*A. Crowder*, personal communication). The two species are superficially similar and occupy similar habitats. Whether Arrow Arum is expanding northward or is simply overlooked, its discovery in the Ottawa Valley region suggests a potentially much more

extensive range in the Canadian Shield region of southern Ontario than previously suspected.

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