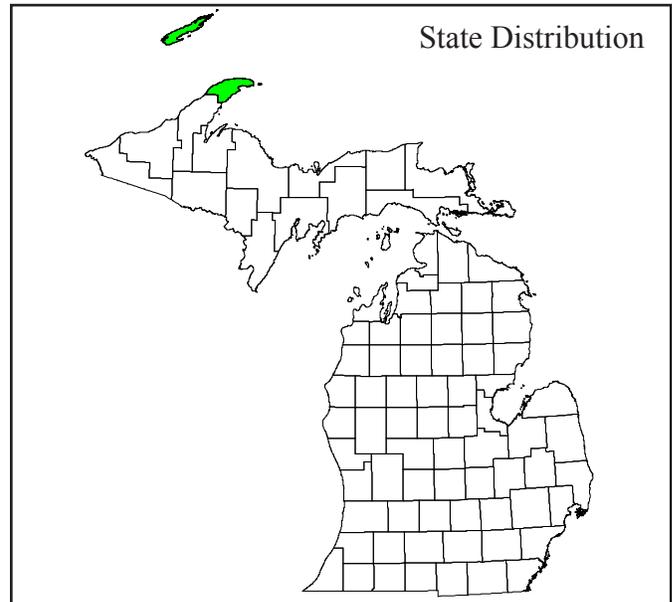
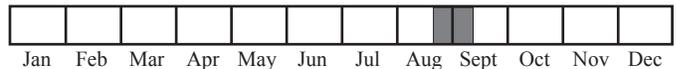




Photo by John C. Semple



Best Survey Period



**Status:** State threatened

**Global and state rank:** G5/S1

**Other common names:** Canada aster, giant mountain aster

**Family:** Asteraceae (aster or daisy family); also known as the Compositae

**Synonyms:** *Canadanthus modestus* (Lindley) G.L. Nesom, *A. major* (Hook.) Porter, *A. modestus* var. *major* (Hooker) Muenscher, *A. sayianus* Nuttall, *A. unalaschensis* Lessing ex Bongard var. *major* Hooker, *Weberaster modestus* (Lindley) Á/ Löve & D. Löve (Flora of North America)

**Taxonomy:** Long placed in the genus *Aster*, *A. modestus* is segregated in *Canadanthus* as noted above. The name applied here is solely to conform to the current state Technical List, to be updated to this modern treatment following the next biennial review.

**Range:** Great northern aster is a boreal species ranging from Alaska through most of Canada to Quebec and Newfoundland, occurring south in the United States to the Pacific Northwest and disjunctively to the Midwest in the upper Great Lakes region and Ontario. It is considered rare in New Brunswick, Quebec,

Saskatchewan, and the Yukon Territory (NatureServe 2007).

**State distribution:** In Michigan, this species is known from several collections at Isle Royale, where the precise number of occurrences (the delineation of specific geographic sites or implied populations) is uncertain, and from a single locality at the tip of the Keweenaw Peninsula.

**Recognition:** Stems of *Aster modestus* arise singly from the creeping rhizome, **bearing both hairs and, toward the summit, stalked glands**. The elongate, sparsely toothed leaves are **stalkless and clasp the stem**, becoming smaller and bract-like below the flower heads. The flower heads, which terminate the stem but also arise from the lower leaf axils, have an involucre (the green subtending bracts) 7-11 mm in length, and about **20-40 deep purple ray flowers (1-1.5 cm long)**, and yellow disc flowers. The fruits (achenes) are hairy and have several conspicuous ribs. This aster most closely resembles the common New England aster (*A. novae-angliae*), a species occurring predominantly in southern Lower Michigan, that can be distinguished by a number of characters, including its clustered stems, more strongly clasping (auriculate) leaves, purplish involucre, and densely hairy achenes (Voss 1996).



**Best survey time/phenology:** This species has been collected in flower during late August to early September in northern Michigan.

**FQI Coefficient and Wetland Category:** 8, FAC+

**Habitat:** There are few data about this species, other than minimal notes about the general community type or context. *Aster modestus* was collected on Isle Royale from a rocky shore, an open field, and in one site from at the edge of a streamside alder thicket, near a young boreal forest and a northern shrub swamp ecotone dominated by paper birch and tag alder. At the sole mainland locality, it was found along a grassy area near a road backed by a cedar and shrub swamp. Throughout its range, this species inhabits wooded or open, moist places. In the Pacific Northwest and Alaska, it prefers streambanks and moist woods (Hultén 1968, Hitchcock and Cronquist, 1973), often in cold, wet soils that are calcareous, lake shores, alder thickets, open fields, cedar swamps, and montane and boreal forests (Flora of North America 2006).



Photo by John C. Semple

**Biology:** Great northern aster is a perennial that arises from creeping rhizomes. In Montana it has been shown to be a source of browse for mule deer as evidenced in rumen samples (Wilkins 1957).

**Conservation/management:** The current status of most *Aster modestus* populations in Michigan is unknown, although the species is presumed to be secure on Isle Royale, where all but one state population occurs. Inventory to determine the status of the mainland occurrence, as well as to detect additional colonies, is of high priority. As a scarce boreal disjunct, this species is potentially useful as a biomonitor for climate warming.

**Research needs:** Status surveys are the primary need for this species at the present time.

**Related abstracts:** Volcanic bedrock glade, volcanic bedrock lakeshore, land snail, northern blue butterfly, Alpine bluegrass, black crowberry, calypso, heart-leaved arnica, pale Indian paintbrush, Franklin's phacelia, ram's head orchid, small-flowered wood rush (see MNFI Rare Species Explorer for a comprehensive listing of species related to these two natural community types).

**Selected references:**

Flora of North America Editorial Committee. 2006. *Flora of North America, North of Mexico*. Volume 20: *Magnoliophyta: Asteridae*, part 7, *Asteraceae*, part 2. Oxford Univ. Press. New York, NY. 666 pp.

Hultén, E. 1968. *Flora of Alaska and neighboring territories*. Stanford Univ. Press, Stanford, California. 1008 pp.

NatureServe. 2007. NatureServe Explorer: an online encyclopedia of life [web application]. Version 6.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: September 11, 2007).

Voss, E.G. 1996. Michigan Flora. Part III. Dicotyledons (Pyrolaceae-Compositae). *Bull. Cranbrook Inst. Sci.* 61 and *Univ. of Michigan Herbarium*. xix + 622 pp.

Wilkins, B.T. 1957. Range use, food habits, and agricultural relationships of the mule deer, Bridger Mountains, Montana. *J. Wild. Mgt.* 21: 159-169.

**Abstract citation:**

Penskar, M.R. and S.R. Crispin 2009. Special Plant Abstract for *Aster modestus* (great northern aster). Michigan Natural Features Inventory. Lansing, MI. 2 pp.

Copyright 2009 Michigan State University Board of Trustees.

Michigan State University Extension is an affirmative-action, equal-opportunity organization.

Funding for abstract provided by Michigan Department of Transportation.

