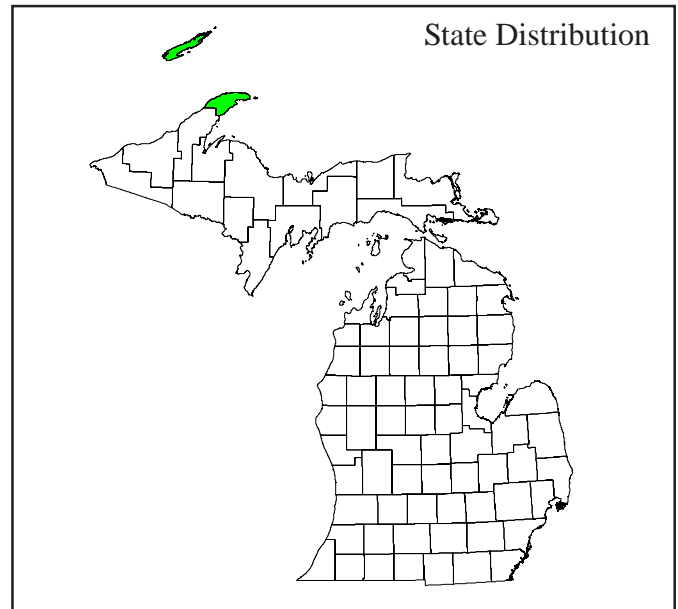
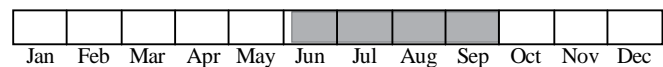




Photo by Susan R. Crispin



Best Survey Period



Status: State threatened

Global and state rank: G5/S2S3

Other common names: mooseberry, pimbina

Family: Caprifoliaceae (honeysuckle family)

Synonyms: *Viburnum pauciflorum* La Pylaie

Taxonomy: Evolutionary and systematic relationships in the genus *Viburnum* and allied groups (e.g. *Sambucus*, the elderberries) have been the focus of detailed molecular studies by Donoghue et al. (2001) and others, who have proposed an extensive taxonomic revision of the Caprifoliaceae, resulting in the realignment of *Viburnum*, *Sambucus*, and the genus *Adoxa* within the Adoxaceae (the moschatel family) and merger of the Caprifoliaceae with the Morinaceae, Valerianaceae, and the Dipsacaceae (Winkworth and Donoghue 2004).

Range: *V. edule* is a North American boreal forest species, distributed across Canada from Newfoundland Island through the Northwest Territories to Alaska, ranging south to the Northwest U.S. and in the western mountains to Colorado, occurring in South Dakota and the Great Lakes region, and in the Northeast ranging southward through New England to Pennsylvania. It is

considered rare in Colorado, New York, Nova Scotia, South Dakota, Vermont, Wisconsin, and Wyoming (NatureServe 2007).

State distribution: Seventeen occurrences have been documented, all within Keweenaw County, consisting of 16 localities on Isle Royale National Park, ranging from the main island to Passage Island, and a single large population first discovered in 1996 on Manitou Island just east of the tip of the Keweenaw Peninsula. *V. edule* may occur elsewhere in the Upper Peninsula in a mainland area, according to some recent reports, with such sites remaining to be verified.

Recognition: *V. edule* is a medium-sized, erect to somewhat straggling shrub that ranges to between 2-3 m in height, with smooth to obscurely glandular branches. The leaves (as in all other Michigan viburnums) are opposite and have **reddish-orange dots on the mostly glabrous underside**, and are **somewhat roundish (suborbicular)** and coarsely-toothed, **as well as lobed and palmately-veined**. The leaf lobing is obvious to somewhat obscure or absent in leaves that are elliptical in shape. **The white flowers are produced in umbel-like clusters (cymes) borne from lateral shoots with only one pair of leaves and produce fruits that are yellowish to red at maturity**. This species is most likely to be confused with the wide-ranging and variable



V. opulus (highbush-cranberry or Guelder-rose) or *V. acerifolium* (maple-leaved viburnum). *V. opulus*, represented by native and non-native varieties in Michigan, can be distinguished easily by several characters, including its leaves, which are more prominently lobed and lack dots beneath, its petioles, which have prominent glands and stipules, and its fruits, which are borne terminally and are bright red at maturity. *V. acerifolium* can be distinguished by its terminal inflorescences and dark purple-black fruits, as well as leaves that are densely pubescent on the underside.

Best survey time/phenology: According to collection records, this species has been observed in flower from about mid-June to early July, and in fruit from early July through late September and thus can be sought from approximately early June through September. Experienced botanists would likely be able to reliably identify this species earlier and possibly up to leaf drop.

FQI Coefficient and Wetland Category: 10, FACW

Habitat: Although squashberry may persist in the understory, it appears to thrive best in disturbance gaps and openings, thickets, forest edges, on hillsides, and along trails and shoreline areas. On Isle Royale it has been reported from thickets, rocky and pebbly shores, and in woods dominated by *Abies balsamea* (balsam fir) *Sorbus* spp. (mountain-ash), *Picea glauca* (white spruce), *Betula papyrifera* (paper birch), Other reported associates include *Juniperus horizontalis* (horizontal juniper) and *Alnus* sp. (alder). On Manitou Island, *V. edule* was observed in thickets near the rocky shoreline and occurring along the upper vegetated edges of cobble beach areas, growing in partial light on gentle north-facing slopes; there the associates included *Acer spicatum* (swamp maple), *Sorbus decora* (mountain-ash), *Rubus parviflorus* (thimbleberry), *Physocarpus opulifolius* (ninebark), *Thuja occidentalis* (northern white cedar), and *Acer rubrum* (red maple).

Biology: In a study of *Betula papyrifera* forests in wilderness areas of southeastern Labrador, Foster and King (1986) found *V. edule* to be a dominant component of the understory. Since the development of this forest type is strongly related to the occurrence of wildfire, it is likely that fire as well as other types of disturbance, such as windthrow, play an important role in the natural history of *V. edule*. Vegetation studies in Alaska and British Columbia further demonstrate the strong

association of *V. edule* with fire-dependent forest communities (Klinka et al. 2002, Youngblood 1995).

Conservation/management: Owing to the concentration of virtually all of Michigan's populations in remote or generally inaccessible areas, this species has few threats. Continued inventories are warranted, including surveys to determine the status of historical populations, as well as to ascertain the status of new populations reported elsewhere in mainland localities.

Comments: According to Fernald (1950) the fruit of this species is reportedly sought and highly valued for making jam.

Research needs: There are few known studies of this species with the exception of molecular research concerning evolutionary and taxonomic relationships in the genus *Viburnum*. General natural history investigations on virtually any aspect of life history, genetic diversity, population structure, and the like would assist in conservation and management activities.

Related abstracts: Volcanic bedrock lakeshore, alpine bluegrass, alpine bistort, small-flowered wood rush, squashberry

Selected references:

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