

Polygala incarnata L.

pink milkwort



Photo by Ryan P. O'Connor

Status: State extirpated

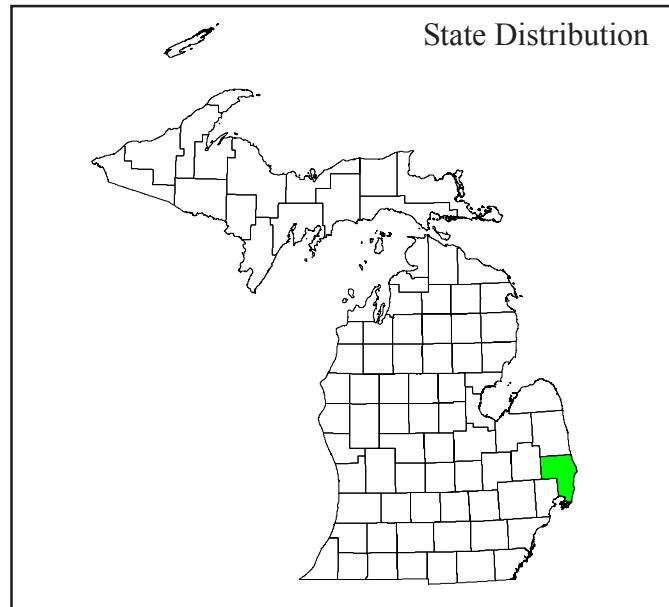
Global and state rank: G5/SX

Other common names: milkwort, polygala

Family: Polygalaceae (milkwort family)

Total range: A plant primarily of the southeastern United States, pink milkwort reaches its northern extent from New York to Wisconsin and ranges west to Nebraska, eastern Texas, and south into Mexico. It is considered rare in Delaware, Illinois, Indiana, Iowa, Maryland, Ohio, Ontario, and Wisconsin. It is known only from historical records in New Jersey and New York and is considered extirpated in New York (NatureServe 2003).

State distribution: Pink milkwort is known only from 1896 collections by C.K. Dodge in St. Clair County, where this species was found near Harsen's Island, and apparently discovered in a second locality "near Port Huron", the latter based on a specimen in the Gray Herbarium. The sole Canadian populations occur in the same region, where this species is known from Squirrel and Walpole islands, adjacent to Harsen's Island in the extensive St. Clair River delta.



Best Survey Period

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recognition: Ranging from ca. 2-6 dm in height, the **very slender, glaucous stems** of this annual are simple or bear a few erect branches. The **5-12 mm long, well spaced and somewhat scale-like leaves** (absent basally and often deciduous by flowering time) are alternate, linear, and ascending, ending in sharp, awl-like points. The stems terminate in **dense cylindrical racemes** (1-4 cm long and 10-15 mm thick) of **tiny, bright pink to rose-purple flowers**. Each flower, which bears a pair of petal-like wings at the base, has **its three petals united into a long corolla tube that much surpasses the basal wings**, the lower or keel-shaped petal bearing a fringed apex. The fruits consist of small roundish capsules that produce **hairy, 2 mm long seeds with fleshy appendages** (arils) about half as long as the seed body.

The relatively common field milkwort, *Polygala sanguinea*, which may occur with *P. incarnata*, is a stouter plant, with longer, wider leaves that persist during flowering, with globose (roundish) inflorescences, and petals that are not united into long floral tubes (the corollas about half as long as the wings).

Best survey time/phenology: According to Gillett (1968) flowering occurs from approximately mid-June into July, with fruiting from about mid-July onward.



However, flowering has been reported from August to November in Wisconsin (Wisconsin DNR, 1981), and a flowering specimen was collected on Squirrel Island (Ontario) in mid-September. The meager Michigan data suggest July and August to be the primary blooming period. This species could conceivably be sought in fruit but is likely to be very obscure when not in flower.

Habitat: No specific habitat data have been reported for Michigan collections of this plant; however, it probably occurred in remnant lakeplain prairie habitat. On Harsen's Island, *P. incarnata* was simply noted as occurring in "dry ground". On adjacent Walpole and Squirrel islands pink milkwort grows in wet-mesic to dry, sandy prairies. In the Chicago region, where Swink and Wilhelm (1994) regard this species as one of the rarest prairie plants, it occurs with such species as *Andropogon scoparius* (little bluestem), *A. gerardii* (big bluestem), *Cassia fasciculate* (cassia), *Euphorbia corollata* (flowering spurge), *Helianthus mollis* (downy sunflower), *Petalostemum purpureum* (purple prairie clover), *Silphium integrifolium* (rosinweed), *Solidago rigida* (stiff goldenrod), and *P. sanguinea* (field milkwort). Elsewhere within its range, pink milkwort is known to inhabit lake margins, meadows, and sites with peaty soils (Miller 1971).

Biology: In contrast to several other *Polygala* species in Michigan, *P. incarnata* does not produce cleistogamous (closed) flowers at its base. The fleshy seed appendages are a mechanism for dispersal, typically inducing ants to carry off the seeds for the harvest of their nutritious arils (sometimes referred to as "food bodies").

Conservation/management: Although widespread in eastern North America, much of this species' habitat has been severely degraded and diminished through farming, grazing, and widespread urbanization. Little habitat remains on the Michigan side of the St. Clair River, though if the species cannot be relocated there, prospects for habitat restoration/management and re-introduction from adjacent Canadian populations is good. This species was sought without success during an inventory of a remnant lakeplain wet prairies being actively managed within Algonac State Park. Although it was not discovered, it is possible that it may yet be found as restoration of a significant lakeplain wet prairie complex continues.

Comments: Unless in bloom, this slender plant is extremely inconspicuous and would not be easily found in the tallgrass prairie habitat it is likely to inhabit.

Research needs: The primary need for this species at present is to continue monitoring of an active lakeplain wet prairie restoration where it could potentially emerge. A few significant lakeplain prairie remnants persist in southeastern Michigan where this species may occur, and thus selective inventory still has merit.

Related abstracts: Lakeplain oak opening, lakeplain wet-mesic prairie, lakeplain wet-mesic prairie, oak barrens, blue-eyed grass, Gattinger's gerardia, Leiberg's panic grass, meadow-beauty, northern appressed clubmoss, prairie buttercup, eastern prairie fringed orchid, purple milkweed, short-fruited rush, Skinner's gerardia, Sullivant's milkweed, three-awned grass, eastern fox snake, blazing star borer, culver's root borer, eastern box turtle, red-legged spittlebug, *Silphium* borer

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