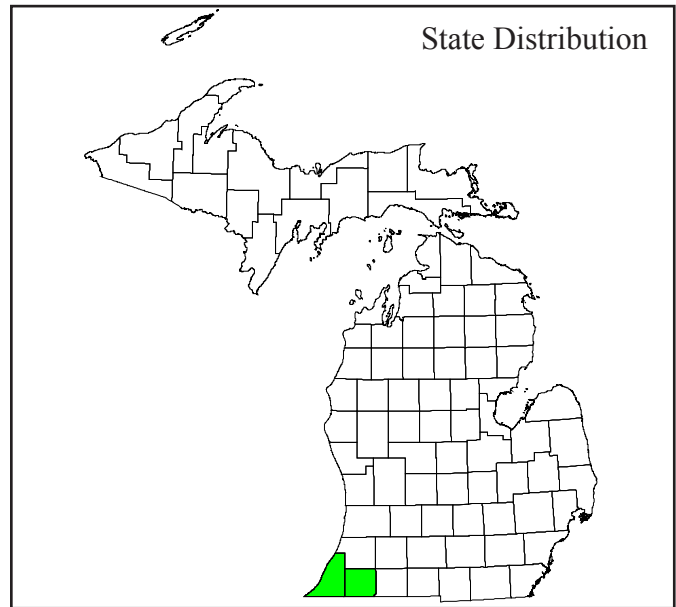
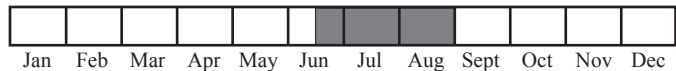




Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database



Best Survey Period



Status: State threatened

Global and state rank: G5/S1

Other common names: roundfruit hedgehyssop, Virginia hedgehyssop

Family: Scrophulariaceae (snapdragon family)

Synonyms: *Gratiola sphaerocarpa* Elliott, *G. mesochora* Peattie

Taxonomy: Crow and Hellquist (2000) note that estuarine plants of *G. virginiana* have been described as var. *aestuariorum* Pennell.

Range: *G. virginiana* is distributed over much of the eastern United States, ranging from New Jersey to Iowa (classified as adventive in the latter) and occurring south to Florida and Texas. It is considered rare in Kansas, New Jersey, Ohio, and Rhode Island (NatureServe 2007).

State distribution: Only three occurrences of annual hedge hyssop are known for the state, all reported from southwestern Lower Michigan; these consist of two localities in Berrien County and one in Cass County. The Cass County record is based on a reliable report for

which a specimen was to be submitted, and thus must be considered a provisional record until it can be verified.

Recognition: *G. virginiana* is an annual forb, ranging from ca. 1-4 dm in height, with opposite leaves and small, snapdragon-like flowers borne from the upper leaf axils. **The stems, which are typically thick below, are mat-forming via reclining lower branches, which root at the nodes**, and the leaves, which are highly variable, are elliptic to roughly **diamond-shaped and obscurely-toothed**, occasionally having fine, sharp, well-spaced teeth. The flowers, which are tubular and white to cream-colored or pale yellow, **are borne on pedicels no more than 1.5 times as long as the calyx (sepals)**. *Gratiola neglecta* is a widespread and very similar species that could potentially occur with *G. virginiana*, and can be distinguished by its longer pedicels, which are at least twice as long as the calyx. Voss (1996) also notes that the pedicels in *G. virginiana* are thicker than in *G. neglecta*, and that the capsules of *G. virginiana* are larger and rounder than the more ovoid fruits of the latter.

Best survey time/phenology: This species flowers and fruits over a relatively long period. Michigan collections of this species indicate that flowering occurs from at least mid-June to mid-August, whereas elsewhere this plant is known to flower from May to August. Flowering or fruiting plants are sufficient for



identification, thus the best survey period is considered to be from about mid-June through August, though this estimate may be somewhat conservative.

FQI Coefficient and Wetland Category: 5, OBL

Habitat: Little information is provided for Michigan localities. One of the two Berrien County occurrences only notes that the specimen was collected from a “prairie marsh”; the other occurrence was collected from a seasonally flooded sand flat where it was associated with *Panicum spretum* (panic grass), *Juncus canadensis* (Canada rush), *Juncus effusus* (soft-stemmed rush), and *Triadenum virginicum* (marsh St. John’s-wort). Elsewhere in the Chicago region, this species is known from sites where the more common and related *G. neglecta* can be found, though more often occurring in standing water where it may be associated with such species as *Callitriche heterophylla* (large water-starwort), *Carex lacustris* (sedge), *Penthorum sedoides* (ditch stonecrop), *Potamogeton diversifolius* (pondweed), *Proserpinaca palustris* (mermaid-weed), and *Sagittaria graminea* (grass-leaved arrowhead) (Swink and Wilhelm 1994). Mohlenbrock (1960) recorded *G. virginiana* as an associate of *Isoetes melanopoda* where an extensive colony of the latter was discovered in a wet ditch in southern Illinois. Throughout its range, annual hedge-hyssop is known to occur in woodland streams, seepage areas in woodlands and swamps, vernal pools, alluvial outwash areas, and in wet ditches (Godfrey and Wooten 1981). Crow and Hellquist (2000) also cite tidal habitats, including estuaries, for this species.

Biology: As indicated by the common name, *G. virginiana* is an annual forb. Little is known of the natural history of this species. Stevens (1932) included annual hedge-hyssop in a study of seed productivity, finding that *G. virginiana* produced more than 46,000 seeds per clump (an individual plant or a distinct clump of stems), with a calculated dry weight of 0.11 grams per 1000 seeds.

Conservation/management: One occurrence of this species lies near a weigh station managed by the Michigan Department of Transportation (MDOT), whereas the ownership of the other two state occurrences is not known. The Berrien County localities have not been observed in 20 and nearly 30 years, respectively, and thus surveys should be

conducted to determine their status. The Cass County report still requires verification.

Research needs: In addition to the necessary status surveys noted above, further inventory is desirable to identify additional populations and better elucidate the state status of this species. This obscure species may be overlooked, owing to its small habit, ephemeral appearance, and/or its similarity to the more common and widespread *G. neglecta*.

Related abstracts: Intermittent wetland, American bittern, black rat snake, Blanding’s turtle, eastern box turtle, northern harrier, short-eared owl, spotted turtle, black-fruited spike-rush, dwarf bulrush, northern appressed clubmoss, whorled mountain-mint, rose-pink, panicked screw-stem.

Selected references:

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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).

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