

# *Polymnia uvedalia* (L.) L.

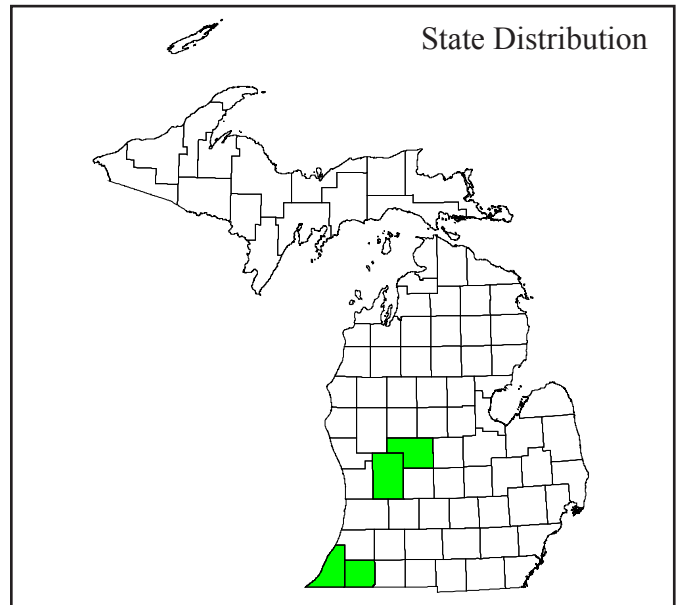
# yellow-flowered leafcup



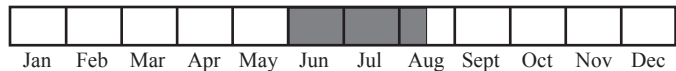
Photo by Ryan P. O'Connor



Photo by Bradford S. Slaughter



Best Survey Period



**Status:** State threatened

**Global and state rank:** G4G5/S1

**Other common names:** leafcup, large-flowered leafcup, hairy leafcup

**Family:** Asteraceae (aster family, also known as the Compositae)

**Synonyms:** *Osteospermum uvedalia* L., *Polymnia uvedalia* (L.) L., *Polymnia uvedalia* (L.) L. var. *densipilis* S.F. Blake, *Polymnia uvedalia* (L.) L. var. *floridana* S.F. Blake

**Taxonomy:** Long known in the genus *Polymnia*, this species has now been referred to the genus *Smilacanthus* (Flora of North America 2006), including the three varieties formerly recognized (Wells 1967).

**Range:** Leafcup is distributed from southern New York to Florida, ranging into the Midwest through Illinois, Missouri, and Nebraska, and occurring south to Texas. It is considered rare in Delaware, Kansas, New Jersey, and West Virginia, and is known only from historical records in New York.

**State distribution:** This species has been recorded from single localities in each of six Michigan counties.

The species was originally reported for Cass County record based upon the field notes of H.S. Pepon, but a relatively recent, reliable observation was made in 2000. Only two Berrien County records date since 1940 and those from Montcalm and Kent Counties are pre-1900. The Montcalm County station was searched without success in 1984.

**Recognition:** Leafcup is a **tall plant, ranging to 3 m or more in height**, with **furrowed, purple-spotted stems** up to 3 cm thick. The **large, opposite, ovate to deltoid leaves** (to 39 cm wide and 68 cm long) have **3-5 palmate lobes** and are **stalkless or abruptly narrowed to a winged petiole**. The upper leaf surfaces are smooth to somewhat rough and lower leaf surfaces are smooth to resin-dotted and **finely hairy**. Upward the leaves become successively smaller and shallowly lobed to only slightly toothed. The stem is terminated by an open leafy inflorescence consisting of several flower heads on **glandular to glandular-hairy stalks, the heads composed of 7-13 yellow ray flowers (to 3 cm long) spreading from a yellow disc ca. 1.5 cm wide**. The fruits are ovoid achenes (4x6 mm) that are slightly laterally compressed and longitudinally grooved with several fine striations.

*P. canadensis* (small-flowered leafcup) is a related species more widely distributed in southern Lower Michigan. In addition to being a much smaller, less



robust plant, it can be distinguished by its more deeply lobed to somewhat dissected leaves and much smaller flowers, with rays only up to 1.5 cm long that are very pale-yellow to white in color. The fruits are ovoid, 2 by 4 mm, and 3-sided.

**Best survey time/phenology:** This species is distinctive in sterile condition, but is best sought when in flower or fruit, from approximately June through mid-August based on Michigan's few collections and observations.

**FQI Coefficient and Wetland Category:** 10, UPL

**Habitat:** Michigan collections of leafcup were made from "swamp margins" and "rich, moist woods." In Berrien County, more than 200 clumps of this plant were found growing in moist silt loam soil at the base of a wooded slope near a small floodplain. At this site, where the overstory was dominated by *Acer saccharum* (sugar maple), *Quercus alba* (white oak), and *Q. rubra* (red oak), plants more than 2 m in height were observed. A relatively new occurrence discovered in 2000 was found on a spoil bank following the dredging of an irrigation pond within a sedge meadow; the pond was originally constructed in the 1960s, and this population may have originated from disturbance of the seed bank. The associated species, observed, some of which are prairie taxa, included *Eupatorium maculatum* (spotted Joe-pye-weed), *Vernonia missurica* (ironweed), *Asclepias verticillata* (whorled milkweed), and *Ratibida pinnata* (yellow coneflower). Elsewhere in its more southerly range, large-flowered leafcup inhabits moist, mostly shaded sites with slightly acid soils (the pH at southeastern U.S. localities ranges from 5.3-6.7) according to Wells (1967) and generally occurs in wet sites, including thickets and forest margins (Flora of North America (2006). In southern Indiana, Deam (1940) reported its occurrence in open sun near the base of wooded slopes.

**Biology:** Leafcup is a perennial plant that flowers during late June or July in Michigan.

**Conservation/management:** Three colonies of yellow-flowered leaf are extant, all occurring in Berrien County. One of these sites is protected within a Michigan Nature Association preserve.

**Research needs:** Status surveys are a primary need, including searches of historical sites where potential

habitat remains. Monitoring of the few known extant occurrences may provide insight on potential management strategies for perpetuating colonies.

**Related abstracts:** Southern hardwood swamp, mesic southern forest, Blanding's turtle, red-shouldered hawk, hollow-stemmed Joe-pye-weed, showy orchis, and numerous additional species of these natural community types (see MNFI Rare Species Explorer for a comprehensive list of related species).

#### Selected references:

- Deam, C. C. 1940. Flora of Indiana. Dept. Conservation, Indianapolis.
- Flora of North America Editorial Committee. 2006. *Flora of North America, North of Mexico*. Volume 21: *Magnoliophyta: Asteridae*, part 8, *Asteraceae*, part 3. Oxford Univ. Press. New York, NY. 616 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).
- Wells, J. R. 1965. A taxonomic study of *Polymnia* (Compositae). *Brittonia* 17: 144-159.
- Wells, J. R. 1967. The genus *Polymnia* (Compositae) in Michigan. *Mich. Bot.* 6: 94-96.
- Wells, J. R. 1971. Variations in *Polymnia* pollen. *Amer. J. Bot.* 58: 124-130.

#### Abstract citation:

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