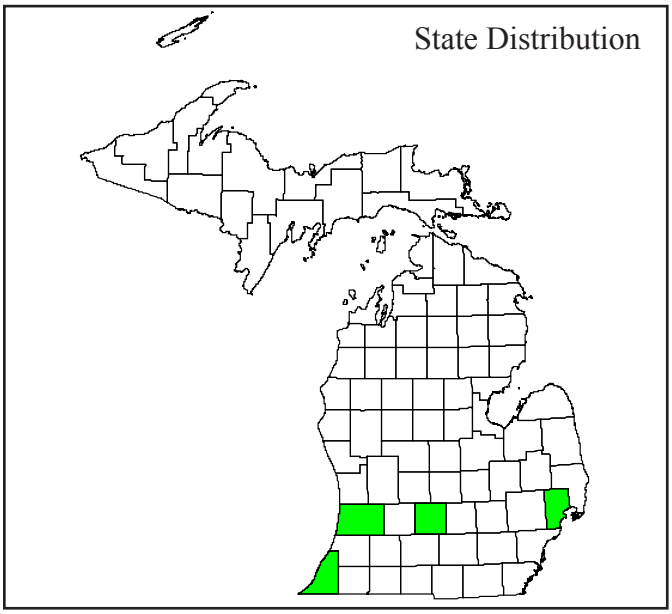
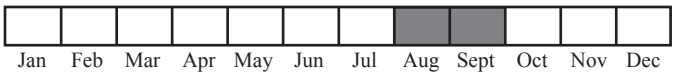
# *Hieracium paniculatum* L. — panicled hawkweed

smith @ USDA-PLANTS Database




Best Survey Period




**Status:** State special concern

**Global and state rank:** G5/S2

**Other common names:** Allegheny hawkweed

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

**Range:** Panicled hawkweed is a species of eastern North America, ranging from Nova Scotia through Quebec into Ontario in the north and extending south to Alabama and Georgia in the southern end of its range. It is considered rare in New Brunswick, Nova Scotia, Ontario, and Quebec (NatureServe 2006).

**State distribution:** *H. paniculatum* is restricted to the bottom three tiers of counties in southern Lower Michigan, with approximately 10 occurrences currently known, distributed from Berrien and Allegan counties in the west part of the state to Oakland, Macomb, and Washtenaw counties in the eastern portion of the state range.

**Recognition:** Panicled hawkweed is a perennial species arising from a short caudex (a persistent stem base at or just beneath the surface of the soil surface, which overwinters and produces the following season's stems). The leafy stems are largely **solitary, producing mostly cauline (stem) leaves up into the inflorescence, with few or none basally**. In addition to being **hairless**, or at best having a few long hairs beneath, the **leaves are thin, have an irregularly toothed to entire margin, and are glaucous (whitened) on the underside. The hairs at the base of the stem and on the lower leaves are 3-10 mm long or longer**. Flowering stems are terminated by a relatively broad, open inflorescence with **very slender, flexuous (curving or sinuous), mostly smooth branches and small flowering heads less than 1.5 cm long that contain fewer than 20 florets.**

This species is mostly likely to be confused with the common and wide-ranging *H. scabrum* (rough hawkweed), which can be distinguished from *H. paniculatum* by its non-glaucous leaves, the stouter and hairy to glandular-hairy inflorescence branches, and flowering heads that contain many florets (more than 20). While noting that *Hieracium* is rightfully considered a very difficult genus taxonomically, Voss (1996) notes that *H. paniculatum* is particularly distinctive among the Michigan's hawkweeds taxa, owing to the character combination of small flowering heads with very slender stalks and thin, smooth, glaucous leaves.

**Best survey time/phenology:** All collections of this species have been obtained from early August through

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late September, and thus these two months constitute the optimal period for seeking and identifying this hawkweed.

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

**Habitat:** Few specific data on habitat and associates are available for most Michigan occurrences. In Berrien County, this species has been found on wooded dunes, where it occurred with *Acer nigrum* (black maple), *Carpinus caroliniana* (blue-beech or musclewood), *Carya cordiformis* (bitternut hickory), *Fagus grandifolia* (American beech), *Hamamelis virginiana* (witch hazel), *Hepatica americana* (hepatica), *Ostrya virginiana* (hophornbeam), *Quercus rubra* (red oak), and *Sassafras albidum* (sassafras), among other species characteristic of mesic to dry-mesic forest communities (Swink and Wilhelm 1994). In the only other voucher site for which some ecological data are provided, a small colony was observed on the edge of recently cleared logging trail on the terrace of a high slope above a river, where the soils were noted as being dry to moist gravelly sand. Elsewhere, the habitat is simply referred to as "woods" or "dry woods".

**Biology:** *H. paniculatum* is a fibrous rooted perennial arising from a short crown or caudex. Gustafson (1933) conducted cytological studies of *Hieracium*, focusing on meiotic irregularities, to better understand the extensive taxonomic variability within the genus, which is widely know for its numerous hybrids, forms, and tendency to reproduce through apomixis (the production of vegetative buds within seeds without fertilization). Gustafson found that chromosomes in *H. paniculatum* differed widely in size but that the meiotic processes were regular and the pollen grains were morphologically "perfect".

**Conservation/management:** At least one site for this species is protected within a private nature preserve, although a follow-up survey of this locality failed to detect any plants and noted that vigorous succession was taking place. Since little can be done to conserve this species without more detailed information, status surveys are the primary conservation concern at present, as the state status is poorly known. In addition to inventories of previously documented sites, surveys of potential habitat, such as oak barrens and savanna remnants and dry southern mesic forests in former oak savanna regions, should take place. Ultimately, this species will be best perpetuated through management to restore and maintain oak savanna communities, which have been lost both through land conversion and ecological succession leading to closed canopy forests.

**Comments:** *H.* X*allegheniense* Britton is the hybrid between *H. paniculatum* and *H. gronovii* (Gleason and Cronquist 1991).

**Research needs:** In addition to much needed status surveys, virtually any aspect of life history research or experimental restoration management would be of benefit to the conservation of this species.

**Related abstracts:** Oak barrens, oak openings, black rat snake, culver's root borer, dusted skipper, Eastern massasauga, frosted elfin, Karner blue, leadplant flower moth, red-legged spittlebug, Alleghany plum, dropseed, Gattinger's gerardii, Hill's thistle, prairie smoke, Richardson's sedge, smooth beard tongue, whiskered sunflower.

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