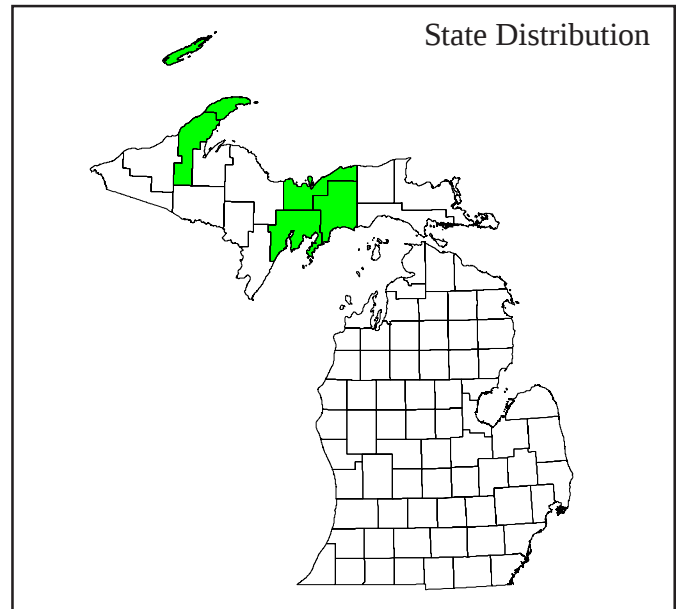
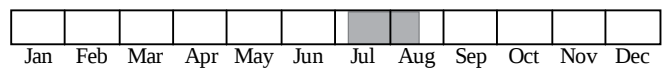




Photo by Janet Marr



Best Survey Period



Status: State threatened

Global and state rank: G5/S1

Other common names: Rayless mountain butterweed, plains ragwort, elegant groundsel

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

Synonyms: This species is now widely accepted as *Packera indecora* (Greene) Å. Löve & D. Löve and considered synonymous with *Senecio burkei* Greenman, *S. idahoensis* Rydberg, and *S. pauciflorus* Pursh subsp. fallax Greenman (Flora of North America 2006).

Taxonomy: The treatment *Senecio*, a large, complex, and wide ranging genus with numerous North American species, has changed significantly in recent decades through molecular research and modern phylogenetic analyses (e.g. Bain and Jansen 1995). Several species formerly included in *Senecio* are now considered to form a segregate under the genus *Packera*, representing the species long referred to in the literature as the “aureoid senecios” (see D. Trock overview of *Packera* in Flora of North America 2006). Realignment under *Packera* and many other changes indicate a markedly different systematic arrangement since the well known work of Barkley (1964, 1963) and others.

Range: This boreal plant ranges throughout most of the Canadian provinces and territories, from Labrador through the northern territories and Nunavut to Alaska, ranging southward in the Western cordillera to California and Wyoming and in the Midwest to the Great Lakes region. It is considered rare in California, Minnesota, possibly Quebec (S2?), Wisconsin, and Wyoming (NatureServe 2007).

State distribution: There are nearly 30 localities for this species, the majority of sites occurring in the western Upper Peninsula, with Keweenaw County alone accounting for 24 records, 18 of which are in Isle Royale National Park. Of the mainland sites, five are known from the Keweenaw Peninsula, with one site each reported for Alger, Delta, Houghton, and Marquette counties. Eight occurrences, including several localities in Isle Royale, are known only from historical records. The Delta County record may be questionable, as it is not mapped in Voss (1996) and thus should be re-examined. Few data are known for most sites, and only one Isle Royale locality—on Passage Island—is known to support a sizeable population.

Recognition: *S. indecorus* is a fibrous-rooted perennial that ranges from 3-8 dm in height. The **thin, hairless leaves**, which are ca. 6 cm long and 4 cm wide, are **mostly basal and have oval, toothed blades with truncate (abruptly contracted) bases and stalks of**



about equal length. The leafy stems, which have **fewer stem leaves on the upper portion than the lower, bear leaves that are narrow, sharply-toothed and pinnatifid (comb-like),** becoming reduced in size upwards. **Yellow flower heads,** numbering as few as 6 to as many as 40, are borne on long stalks in a flat-topped, terminal inflorescence. **A row of purplish tipped bracts** (collectively the involucre) occurs at the base of each head (i.e. subtends). The **heads often lack ray flowers** in this species, as exhibited by many Michigan specimens. However, specimens from Wisconsin tend to have some weak rays developed (Barkley 1964) and plants recently found on Isle Royale exhibit this characteristic also. This species is most likely to be confused with the more common and widespread *S. aureus* (golden ragwort) or *S. pauperculus* (Northern ragwort). *S. aureus* can be distinguished by the presence of ray flowers that are at least 6.5 mm long or longer, versus rays that are absent in *S. indecorus* or when present are shorter, and at least some basal leaves that are strongly cordate (heart-shaped). *S. indecorus* is perhaps most likely to be confused with *S. pauperculus*, which can be distinguished principally by its basal leaves, which have blades that are lance-shaped and taper toward the base without being abruptly contracted.



Photo by Janet Marr

Close-up of rayless heads in *Senecio indecorus*

Best survey time/phenology: This species must be observed in flower for positive identification, thus based on occurrence records, a somewhat conservative estimate of blooming period would be from early July through approximately mid-August.

FQI Coefficient and Wetland Category: 10, FACW

Habitat: *S. indecorus* has been collected in Michigan most often on rocky or gravelly and often relatively calcareous Great Lakes shores. A few specimens, however, have come from high, wooded ridges, thicket margins or swamps where they were associated with alder. In Isle Royale National Park, the species grows in the humus-filled crevices of basaltic outcrops near the Lake Superior shore, where groundcover associates include such species as *Poa glauca* (bluegrass), *P. tridentata* (three-toothed cinquefoil), *Campanula rotundifolia* (harebell), and *Aster macrophyllus* (big leaf aster). On Passage Island, where it is most abundant, at least locally, it grows in an old disturbance opening or “meadow” on hummocky ground in fibrous organic soil with *Anaphalis margaritacea* (pearly everlasting), *Clintonia borealis* (bluebead lily), *Linnaea borealis* (twinflower), *Draba arabisans* (rock whitlow-grass), *Cornus canadensis* (bunchberry), *Oryzopsis pungens* (narrow-leaved rice grass), *Castilleja septentrionalis* (pale Indian paintbrush), and *Achillea millefolium* (yarrow). In the main portion of its range, *S. indecorus* inhabits moist meadows, open wet woods, and stream banks. Fernald (1924) reports its habitat in Quebec as “thickets and woodland-swamps or on talus and cool ledges of limestone.”

Biology: *S. indecorus* is a perennial which grows from a caudex, an enlarged, stout stem base characteristic of many composites. There is virtually no published literature on the biology and ecology of this species, with the exception of noting it as an associate allied with certain vegetation associations (e.g. Patten 1963).

Conservation/management: This species is probably relatively secure — although rare — in Isle Royale National Park, which contains the majority of extant populations. Its existence and status at mainland localities in the state is still unknown, however, since efforts to relocate it there have failed. A putative collection of this species in the Huron Mountain Club in the early 1990s needs verification. Observations of the habitat in Isle Royale National Park suggest that this ragwort is restricted to open, sunny sites maintained by either natural disturbances (e.g., along the Lake Superior shore) or slow succession following human disturbance, such as in a meadow on Passage Island. Periodic fire may also have been a factor in regenerating habitat for



this plant. Populations are so few that care should be taken to avoid human disturbances to surviving colonies. It should continue to be sought on the mainland, especially in Keweenaw County, and in other central and western Upper Peninsula counties with potential bedrock habitat.

Research needs: Owing to the paucity of literature on this species, virtually any kind of life history study would provide information relevant for conservation and management.

Related abstracts: Volcanic bedrock lakeshore, alpine bluegrass, alpine bistort, squashberry

Selected references:

- Bain, J.F. and R.K. Jansen. 1995. A phylogenetic analysis of the aureoid *Senecio* (*Asteraceae*) complex based on ITS sequence data. *Pl. Syst. Evol.* 195: 209-219.
- Barkley, T. M. 1964. Preliminary reports on the flora of Wisconsin No. 49. *Compositae II - Composite Family II. The genus Senecio - The Ragworts - in Wisconsin.* *Trans. Wisconsin Acad.* 52: 343-352.
- Barkley, T. M. 1963. A revision of *Senecio aureus* L. and allied species. *Trans. Kans. Acad. Sci.* 65: 318-408.
- Fernald, M. L. 1924. Some *Senecios* of eastern Quebec. *Rhodora* 26: 1-122.
- Flora of North America Editorial Committee. 2006. *Flora of North America, North of Mexico*. Volume 20: *Magnoliophyta: Asteridae, part 7, Asteraceae, part 2.* Oxford Univ. Press. New York, NY. 666 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: October 15, 2007).
- Patten, D.T. 1963. *Vegetational* pattern in relation to environments in the Madison Range, Montana. *Ecol. Mon.* 33: 375-406.

Abstract citation:

Penskar, M.R.. 2008. Special Plant Abstract for *Senecio indecorus* (rayless mountain ragwort). Michigan Natural Features Inventory. Lansing, MI. 3 pp.

Copyright 2008 Michigan State University Board of Trustees.

Michigan State University Extension is an affirmative-action, equal-opportunity organization.

This project was funded, in part, by:

The Michigan Coastal Management Program,
Michigan Department of Environmental Quality

and the

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

