

# Shale-barren Evening-Primrose

## *Oenothera argillicola*

### Description

Shale-barren evening-primrose is a showy biennial herb that can reach 60 inches (1.5 m) in height. Its erect or ascending stems are smooth and grow from strong, fleshy roots. The leaves grow both basally and alternately along the stem. Stem leaves are narrowly lance-shaped, and up to  $\frac{3}{8}$  of an inch (1 cm) wide by 7 inches (18 cm) long. Leaves are glossy, dark green and sometimes finely hairy. The flowers are yellow and usually last only one day. Each flower has a round ovary and 4 overlapping petals that are  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches (2-4 cm) long. Flowers are displayed in July and August in a spike-like cluster that droops at the top.



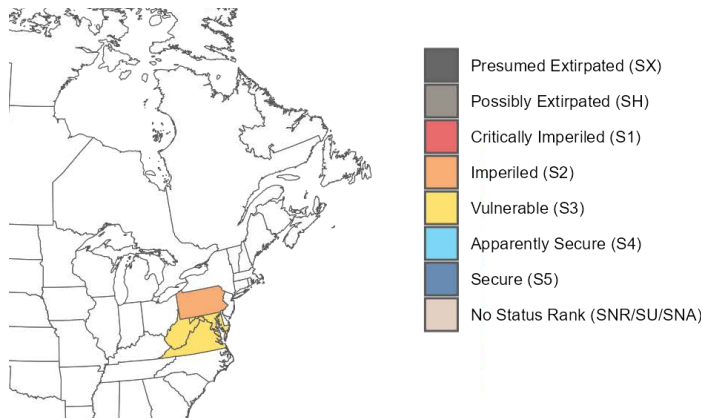
Photo source: John Kunsman (PNHP)

### Distribution & Habitat

Shale-barren evening primrose has a relatively small distribution in the Appalachians, from southern Pennsylvania south into Virginia and West Virginia. In Pennsylvania, the occurrences are restricted to a few southcentral counties. The species tends to grow on “shale barrens”, which occur on dry, open, usually steep slopes, banks, and cliffs, with shale substrate, typically on southerly or westerly aspects overlooking streams.

### North American State/Province Conservation Status

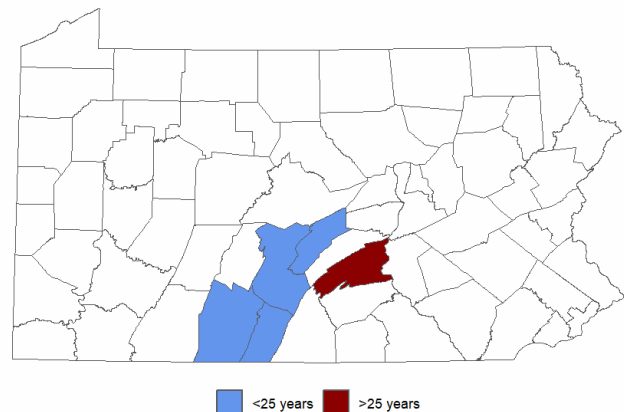
Map by NatureServe 2025



### Current State Status

The PA Biological Survey (PABS) considers the shale-barren evening-primrose to be a species of special concern, based on the relatively few occurrences that have been recently confirmed and the very specialized habitat. It has a PA legal rarity status and a PABS suggested rarity status of Threatened.

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### Conservation Considerations

Conservation of shale-barrens evening primrose will depend on the protection of existing populations and shale barrens habitat. Many shale barrens may require no active management, although some sites that are more susceptible to woody encroachment may benefit from prescribed fire. Ending gypsy moth pesticide spraying in shale barrens, as well as creating unsprayed buffers around shale barrens, may be necessary to protect this species' insect pollinators. Quarrying may also be a threat to this species. Herbicides along roads & railroads.

### NatureServe conservation status ranks

G3G4 – Globally vulnerable; S2 – Imperiled in Pennsylvania

### References

- NatureServe. 2025. NatureServe Explorer [web application] NatureServe, Arlington, Virginia. Available at <https://explorer.natureserve.org> (Accessed: May 8, 2025)
- Pennsylvania Natural Heritage Program. 2025.
- Rhoads, A.F. and W.M. Klein, Jr. 1993. The Vascular Flora of Pennsylvania: Annotated Checklist and Atlas. American Philosophical Society, Philadelphia.
- Rhoads, A.F. and T.A. Block. 2000. The Plants of Pennsylvania: An Illustrated Manual. University of Pennsylvania Press, Philadelphia.