

SFI Biodiversity Species Fact Sheet

Serpentine Aster (*Symphotrichum depauperatum*)

Pennsylvania Plant Species; State Rank: S2 (imperiled) Global Rank: G2 (imperiled)

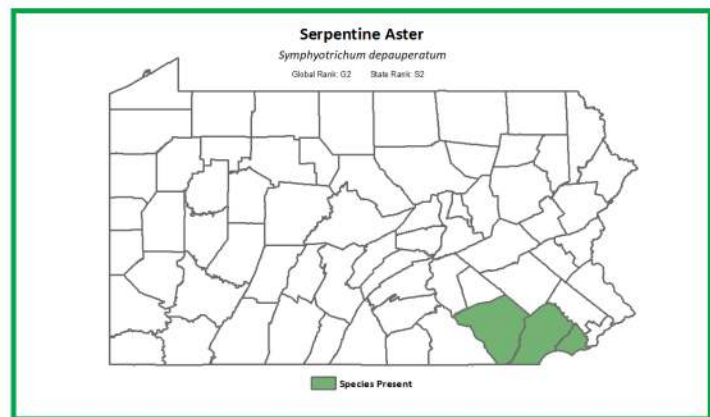
Identification

Serpentine aster has daisy-like flowers with 7 to 14 white petals that form a ray around a center of tiny yellow flowers. Flowers are attached to slender, smooth wiry stems about 16 inches in length. These perennial plants overwinter with a rosette of leaves circulating at ground level. Basal leaves are about 1 ½ inches long and vary from oblong to egg shaped.



Biology-Natural History

These plants grow on thin soils that are susceptible to drought and poor in nutrients, but rich in toxic metals like nickel and chromium. The toxic metals come from the serpentine rock underlying the surface. These harsh conditions can stunt plant growth, giving rise to another common name for this plant—starved aster. Because these plants are found in open areas free from trees, and these barrens were historically burned to maintain grasslands, periodic fire may be needed to maintain their populations. These plants grow in spreading clumps, and the small flowers blossom from August through October. The basal leaves are not present when the plant is flowering. The flowers are often in small, branched clusters and may have many flower heads.



Distribution & Habitat

These plants are restricted to the serpentine barrens found along the Pennsylvania-Maryland border with the exception of a disjunct (or separate) population in North Carolina. Within the serpentine barrens, plants can be frequently found in open or sparsely forested areas.

Conservation Concerns

A narrow geographic range limited to barrens overlying serpentine bedrock confines the distribution and abundance of serpentine aster. Serpentine barrens were sometimes mined for the nickel, magnesium, and chromium; likewise, development of housing and industry also resulted in habitat destruction. Disruption of historical grazing and fire cycles have led to the encroachment of woody trees and shrubs that shade-out the light loving serpentine aster. Today, invasive species and tree encroachment are the greatest threats to serpentine asters.

Management Practices

Because serpentine asters are intolerant of shade, burning and other controls are sometimes used to remove encroaching cedars, pitch pine, Virginia pine, autumn olive, Japanese honeysuckle, and cat brier. Continued monitoring and active management is necessary to ensure that serpentine aster habitat remains open and protected. Serpentine aster is limited to serpentine barrens and blooms in the fall; common and widespread daisies also have white petals and yellow centers but bloom in spring and summer. If anyone observes this species they should call the jurisdictional agency, DCNR Bureau of Forestry at 717-787-3444.