
**Protocol
for
Incidental Take Authorization**

Phlox Flower Moth (*Schinia indiana*)

Note

If carrying out a given protocol is not feasible, or multiple listed species in a given management area pose conflicts, contact the Bureau of Endangered Resources at 608/264-6057. Staff in BER will work with Integrated Science Services (Research) staff, species experts and managers to establish an acceptable protocol for a given site that will allow for incidental take without further legal Consultation or public notice

I. Species Background Information

A. Status

State Status: Endangered.

USFWS (Region 3) Species of Management Concern: Yes

Number of Known Sites in Wisconsin: 22 sites total in the counties of Burnett, Menominee, Eau Claire, Jackson, and Monroe.

Global Range: Documented from Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Arkansas.

B. Habitat

Host plant: Prairie phlox (*Phlox pilosa*).

Habitat: Sandy dry to dry-mesic savannas (black/Hill's oak or Jack pine barrens) and small dry-mesic prairie openings with large numbers of host plants.

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C. Life History

Number of generations per year: One.

Over-wintering stage: As pupae.

Over-wintering location: Most likely an inch or two into the soil, for this is the typical over-wintering location of pupae in the genus *Schinia*. But, this has not yet been confirmed specifically for the phlox flower moth (*S. indiana*).

Adults active: Mid-May to mid-June.

Single-season dispersal ability: Unknown, but suspected of being low.

Immatures active: Early June to late July.

II. Management Protocol For Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining, or improving the grassland, prairie, or savanna ecosystems that include habitat for phlox flower moths, then incidental take is allowed if these conditions are followed:

A. Burning

1. If burning between August 1 and April 20,

Then it is assumed there will be no take, thus unless evidence is presented to the contrary, there is no need for incidental take authorization.

2. If burning between April 21 and July 30th, and

- a. If no monitoring of phlox flower moth is occurring,

Then you may burn up to 1/5 of the site's entire host plant population, **as long as** at least 3/4 of the entire host plant population has remained unburned between April 21 and July 30th for at least the 4 previous growing seasons, and there is no more than 50 ft separating burned and unburned host plant populations.

- b. If monitoring of phlox flower moth is occurring¹,

Then other burn regimes may be employed under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

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¹At least 2 years of baseline monitoring must occur before burning begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.

B. Mowing/Haying

1. If mowing between August 1st and April 20,

Then it is assumed there will be no take, and unless evidence is presented to the contrary, there is no need for incidental take authorization.

2. If mowing once between April 21 and July 30th, and

a. If no monitoring of phlox flower moth is occurring,

Then you may cut up to 1/4 of the site's entire host plant population, **as long as**, at least 2/3 of the entire host plant population has remained unmowed for at least 3 consecutive growing seasons, and there is no more than 50 ft separating mowed and unmowed host plant populations.

b. If monitoring of phlox flower moth is occurring¹, and

Then other mowing regimes may be employed under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

¹At least 2 years of baseline monitoring must occur before mowing begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.

C. Selective Tree/Brush Cutting

As long as the cutting is done between August 1st and May 1st and the host plants are not buried under cut material, then there are no restraints on this activity.

D. Grazing

Allowed only under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

E. Herbicide Use

As long as prairie phlox is not being affected, there are no restraints on the use of herbicide.

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Presence/Absence Survey Protocol

Personnel conducting the monitoring must be adequately trained in the use of sampling techniques and phlox flower moth identification. The training must include field experience.

Surveying of Adults

Sampling period: May 20 to June 15.

Weather conditions: Air temp between 60 F and 72 F - best
Air temp over 72 F and overcast/rainy - good
Air temp below 60 F and sunny is less desirable
Wind speed: < 15mph

Time of day: Early morning (before 8:30 AM) and evenings are most productive. After 8:30 AM and before 5:30 PM if the temperature is below 72 F or weather is overcast/rainy. Avoid hot, sunny middays.

Number visits per site: 3 visits per season, with not less than 5 days between visits.

Sampling effort per site visit: 5 minutes search time for a dense patch of phlox at about 20 blossoms/sq.ft. or about 10 sq. ft.

Sampling methods: Walk along the edge of the phlox patch outside of the patch to avoid disturbing the plants but close enough to be able to see the petals well. In some cases, a close-focus binocular is useful to scan a group of plants from one perspective. If it is necessary to enter the phlox patch, walk only through those flowers that have already been surveyed. It may be necessary to carefully bend the plants to see all the flowers in the inflorescence. Under ideal weather conditions, the moths are unlikely to flush simply by the presence of humans.

Definitions

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Site: Any contiguous patch of prairie/savanna vegetation or clusters of patches of prairie/savanna vegetation not separated from one another by more than 200 ft. of open (non-prairie) cover or by more than 50 ft. of dense brush or tree cover. If the area straddles a property line, the different ownerships must be considered different sites, unless phlox flower moth survey/management agreements exist between the owners.

Late-Spring: Starting in the last week of April to the first week of May (depending upon latitude in the state and the phenology of the spring) through June 20TH.