

A Prairie Calling

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FRIENDS OF
NACHUSA
GRASSLANDS

Creatures of the Night

Butterflies get all the attention, but it is the moths whose numbers dominate our prairies, savannas, and woodlands. A 2019 survey identified 276 species of moths compared to only forty species of butterflies observed in 2017. Since lepidopterists say that only 20% of a site's moths are captured in the first season of collecting, there are likely at least 1,100 more to be discovered. These "creatures of the night" have far greater impact on the preserve than do butterflies, but their lack of notoriety is probably due to the nocturnal lifestyle of many species.

2019 SURVEY

The Nachusa moth survey found species from 20 different families, ranging in length from less than 1/4 inch to over 5.5 inches and from drab gray and brown to brilliant green and gold. Three species were from the family of giant silk moths, Saturniidae. These large and strikingly beautiful moths include the long-tailed green luna moth (photo above) and the polyphemus moth with its large, sparkling eyespots.

Sixteen species of underwing moths were collected, 15 in Stone Barn Savanna's woodlands, where their larvae munch on the leaves of oaks, hickories, and walnuts.

Ten of the more familiar sphinx moths were collected at Stone Barn Savanna. These fat-bodied, narrow-winged moths are often mistaken for hummingbirds as they hover over flowers probing for nectar with their long proboscises (tongues). One of Nachusa's sphinxes has yellow and black body bands, mimicking a bumblebee. □



Luna moth



Cecropia moth



Sphinx moth caterpillar

Hidden Color

Underwing moths flash brilliantly banded hindwings when startled, but when landing on a tree they close their wings, and their gray forewings camouflage them against the tree bark. □

Photos: © Dee Hudson





AUTHOR:
Wayne Schennum, 1949-2021

Wayne was a revered ecologist in Illinois, spending much of his career with McHenry County Conservation District. He conducted many botanical surveys for the Illinois Natural Areas Inventory. He was knowledgeable about many natural history topics including plants, insects, birds, and more. Over the years, Friends of Nachusa Grasslands awarded grants for Wayne to survey remnant-dependent butterflies, moths, chrysomelid beetles, and orthopterans. □



Sphinx moth

Remnant-Dependent Moths

One of the principal reasons for conducting biological surveys, especially in prairies and wetlands, is to look for relationships between herbivorous insects and native vegetation. For example, moths whose larvae feed only on one or more prairie plants are restricted to



remnant prairies. Such moths are considered “remnant-dependent” (r-d). Prairies with many r-d insect species would be considered more valuable, at least faunistically, than those with few. Larger prairies with higher numbers of prairie plants are expected to have more remnant-dependent moths and other insects. A prairie like Nachusa Grasslands, then, should have many r-d moths. In the 2019 survey we found 11 different r-d moths. □

The marked noctuid moth caterpillar feeds on stiff goldenrod.



Virginia tiger moth

Lead Plant-Dependent Moths

Among the most interesting genera are *Papaipema* (stem borers) and *Schinia* (flower moths), both of which have many species restricted to prairies and native wetlands because of their larval hosts. Two of the most noteworthy and rare moths are found on Nachusa’s dry prairies—Whitney’s underwing and the lead plant flower moth—the larvae of which feed only on lead plant. The latter was found on four different prairies!

Despite our having found only 11 r-d moths in 2019, the outlook for Nachusa’s moths is very encouraging. In 1987–88, Ron Panzer found only two r-d species, compared to 11 this year. In scanning the 2019 results table, there are at least nine, and possibly 25, additional species that are tied to prairie during their life cycle. Finally, it is likely that only 20% of Nachusa’s moth fauna have been collected so far. Imagine what the scientists will find when they return for more surveys! □



Lead plant flower moth
Photos: © Dee Hudson

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