

BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

Sphinx Moths

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We are currently in the middle of National Pollinator Week! The purpose of this week is to promote pollinators and offer ways to support the variety of pollinating species around the world. Bees get a lot of attention during this week (rightfully so!), but there is another group of important pollinators that goes mostly unseen! Our Bogdiversity Thursday post this week features sphinx moths.

Moths in the family Sphingidae, known as hawk moths or sphinx moths, are widespread and tremendously diverse in wing shape, color, and behavior. They have unique caterpillars, with spine-like projections toward their rear, giving them the colloquial name of "hornworm." All life stages have fascinating predator defenses, from false eyespots on adults, to caterpillars that hiss when disturbed! Most diversity in this family is found in the tropics, but to date, we have documented 20 species of sphinx moth in the Sax-Zim Bog. Most excitingly, we have documented two rare species of sphinx moth that will get a special post later in this series!

Of the sphinx moths, the clearwing and hummingbird moths get much attention as pollinators. These species groups are primarily day flying and are easily seen, but most sphinx moths are primarily nocturnal pollinators. As pollinators, sphinx moths are not the most efficient. They lack hairy legs to capture pollen and their bodies usually do not contact flowers when nectaring. Even if sphinx moths are not efficient pollinators, there are special relationships with certain plants to be noted.

Two very rare US orchids, Western Prairie Fringed Orchid and Ghost Orchid, both rely on night-flying sphinx moths for pollination. It was only recently discovered that sphinx moths pollinate Ghost Orchid, but a number of studies from Canada have found that sphinxes are the primary, if not the only, pollinators of Western Prairie Fringed Orchid. The sticky orchid pollen grains stick to the proboscis of the sphinx moths as they nectar and get easily transferred to other plants. There are a number of other orchid/sphinx moth relationships globally, with some relationships even resulting in interesting co-evolution!

Even if we don't see these nocturnal pollinators doing their work, you can still support them by planting native species in your gardens. If you are interested in learning more about National Pollinator Week, check out the link here:

<https://www.pollinator.org/pollinator-week>.

More information about the sphinx moths with the photos below!
(Photos by Head Naturalist Clinton)



Small-eyed Sphinx is extreme! Few moths are as dramatically colored as this species, with bright oranges and purples. It also does something unique within moths. At rest, it's hindwings project in front of it's forewings! If you look closely, those top most orange knobs are actually part of the hindwing!



Whether you call this species Fawn Sphinx or Laurel Sphinx, it is pretty typical for the genus *Sphinx*: long-winged and cryptic. This large sphinx is fairly common in the Sax-Zim Bog.



Blinded Sphinx, like Small-eyed Sphinx, is one of the eyed sphinxes. These moths get their names from the eye-spots on their hindwings. When disturbed, these moths flash their hindwings, startling would-be predators with bright colors and false eyes.



Hummingbird Clearwing is one of four species of clearwing sphinx in Minnesota and the Sax-Zim Bog. While there are number of sphinxes called hummingbird moths, only the genus Hemaris have wings that can be seen through.



Azalea Sphinx is an amazing moth! The pink and orange hues of this species are not likely to be confused by any other moth with this shape. Speaking of shape, most sphinxes are quite triangular at rest, with long forewings and typically short hindwings.