

BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

Bee Flies

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On the afternoon of our final Winter Webinar of the 2022-23 winter season which will be considering bees in Minnesota (recording can be found here: <https://saxzim.org/videos-of-sax-zim/archived-webinars/>), let's consider a group of flies that have a specific relationship with those native bee species! Today, let's talk about the lesser known group of flies called Bee Flies!

Bee flies, in the family Bombyliidae, are a weird group of flies! They have tiny heads, with huge eyes and very long, often intricately patterned wings. Most flies have flatish, telescoping mouthparts, but bee flies have a pointed, incredibly long proboscis. During the day, you can often find these flies hovering over sandy patches of soil or nectaring on flowers. Although their mouthparts might look nefarious, they are harmless.

The name bee fly comes from their superficial resemblance to bees, as many bee flies are black and yellow. However, the bee fly name could also refer to their relationship to bees and wasps. Bee flies are opportunistic nest parasites of bees, wasps, beetles, and

grasshoppers. Further, some species parasitize caterpillars of butterflies and moths. Females that are ready to lay eggs will often hover near bees excavating their nest chambers. When the female bee is finished excavating her nest, female bee flies will launch their eggs one by one into the nesting tunnel of the bee. The eggs hatch and the bee fly larvae predate the eggs or bee larvae that have hatched in the nest.

Little is known about the life history of many species of bee fly. Some species have very specialized relationships with their targeted hosts, but many species are generalists with multiple host species. You can find bee flies flying most of the season, from May through August. These flies are active fliers and very seldom stay in one place. A wide range of flowers are used by bee flies, so search for these flies in open areas, near open soil.

More information on these weird flies can be found in the photos below!

(Photos by Head Naturalist Clinton)



Greater Bee Fly is commonly seen nectaring on spring wildflowers. This species parasitizes mining bees in the genus *Andrena*.



Lesser Bee Fly is a really beautiful fly! The spotted, bicolored wings are quite distinct, as is the black, white, and yellow striped body. If you look closely in this photo, you can see a recently excavated bee nesting burrow!



Poecilianthrax tegminipennis has a name much longer than its body! Note the rather large eyes on the small head, with long, lobed wings typical of bee flies.



Another beautiful bee fly, this is Spotted Bee Fly. The black and silver body is quite different from other species of bee fly in our area.