



NATURE SCRAPBOOK

Workin' the late shift

Moths are the underrated pollinators of cottage country

The blinded sphinx moth gets its name from the blue eyespots on its hindwings; with no dark "pupil" marking, they appear unseeing.

AS THE SUN sets at the end of a long summer day across cottage country, the same scene plays out on porches and decks: exterior lights flick on, and the air stirs as moths loop in, drawn to the vortex of light. The night shift begins. We often think of moths as dusty, drab, annoying anti-butterflies, prone to eating sweaters and defoliating our forests. But with thousands of species in Canada, there's a fascinating moth-o-sphere beyond the clichés.

Spot the difference
Butterflies and moths belong to the order Lepidoptera,

the fourth-largest insect group. The name comes from Greek for "scale wing," a nod to the overlapping scales that cover a moth's wings. (Those scales are the "dust" you might notice if you touch a lepidopteran.) With their flamboyance and daytime flitting, butterflies tend to hog the stage, but they're bit players in this group of insects—for every butterfly species, there are about 10 species of moths.

"Butterflies are just moths that are afraid of the dark," says Christian Schmidt, a research scientist with Agriculture and Agri-food Canada. Canada hosts 305

known butterfly species and more than 5,000 moths—and almost half are micro-moths, not much larger than a Tic-Tac. In contrast, the cecropia silk moth—one of the "big snazzies" says Schmidt—has a wingspan the width of a salad plate.

Most distinctions between moths and butterflies focus on colours and flight schedule (day for butterflies, night for moths), but with such a diversity of moths, there are many exceptions. Some species fly during the day, and some flash pink, lime green, golden-yellow, or scarlet and charcoal stripes, which are hardly drab.

Facts & folklore



Although many moths feed on nectar, there are some species that eat fur, hair, and feathers. *Uhh, yum?*

PHOTO, JOHN FLANNERY; ILLUSTRATIONS, FLORENCE RIVEST

If you can get a close look, the antennae provide one of the best clues as to what lepidopteran you might be seeing. Butterflies primarily have antennae that are clubbed at the tip, while most moths' are feathery. The fine threads increase the surface area of the antennae, allowing moths to detect pheromones—chemicals used for sexual attraction—from great distances and in the dark.

Guess who's coming to dinner?

Adult moths are the most visible, but this life stage is fleeting at an average of two weeks. That's just long enough for the adults to mate and lay their eggs. The winged stage is also where moths disperse, with most travelling less than a kilometre.

Moths are most invisible to us in the larval stage, yet this life stage comprises most of their lives. For upwards of 75 per cent of their time on earth, moths are caterpillars. Here, they are largely hidden, using a mash of shape, colouration, adornments, and camouflage, such as false eyes, and even disguise—resemblance to twigs, thorns, or bird droppings—to blend into their environment.

But it's as larvae, when they're mostly consuming plants, that moths pack an incredible punch. Like the lady who swallowed a fly, birds (and frogs and mice and even bears) swallow the caterpillars that ate the plants that—by their voracious noshing—increase their body weight anywhere from 1,000- to 10,000-fold over their lifetime. As herbivores, caterpillars convert plants into fat and protein,



Spot these seven moths this season! ID note: members of the giant silkworm family (luna, cecropia) often rest with wings outstretched; their huge wingspans are a clue to their identity.

<p>1 Blinded sphinx <i>Paonias excaecata</i> Body length: 35–50 mm</p>	<p>2 Painted lichen <i>Hypoprepia fucosa</i> Body length: 16 mm</p>	<p>3 Hickory tussock <i>Lophocampa caryae</i> Body length: 20–28 mm</p>
<p>4 Luna <i>Actias luna</i> Wingspan: 75–105 mm</p>	<p>5 Virgin tiger <i>Apantesis virgo</i> Body length: 24–37 mm</p>	<p>6 Isabella tiger <i>Pyrrharctia isabella</i> Body length: 24–33 mm</p>
<p>7 Cecropia <i>Hyalophora cecropia</i> Wingspan: 110–150 mm</p>		

making them like energy pills for the next level in the food chain—especially songbirds.

The night is right

Planting for pollinators is all the rage, but the emphasis is usually on insects such as butterflies and bees. But moths, it turns out, are also significant pollinators—it's

just that they largely work the night shift. They visit flowers for their nectar—an important energy source for their brief time as adults—and, in the process, help to disperse pollen.

The best thing we can do for moths is to ensure they have plenty of food in the form of native plants, says

Schmidt. Most species are dietary specialists, feeding on a specific plant or group of plants. Even building habitat, one native plant at a time, helps. You can't get pollinators or songbird food if you don't feed the caterpillars, says Schmidt. "Moths need to raise their kids first."
—ADRIENNE MASON