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LIVING

The gentle art of mothing

In the realm of insect observation, finding and identifying butterflies is a rather active endeavour, especially if you enjoy stalking the insects and scooping them up in a net for a closer look.



OUR CHANGING SEASONS
Drew Monkman

Moth watching, on the other hand, is a much more sedentary pursuit. In fact, moth fanciers could be called the trappers of the entomological world. They spend most of their time getting the insects to come to them. This makes the study of moths a very gentle art, often requiring no more effort than leaving the porch light on in the evening and checking periodically to see what is clinging to the screen door.

Moths are common just about everywhere there are trees and shrubs. This makes the Kawarthas a veritable moth paradise. In fact, there are at least 10 times as many moth species in the Kawarthas as butterflies. More than 1,000 species have been identified in Peterborough County alone, but they are probably many more. The total provincial list is between 2,500 and 3,000 species.

As with butterfly watching, learning about moths is a great way to become more knowledgeable about nature in general. For example, different types of moths are attracted to different species of plants on which to lay their eggs. These plants are the food source for the larva (caterpillar) stage. Learning to identify these "host" plants, most often shrubs or trees, can greatly increase your chances of finding a given moth species or at least its larvae.

Distinguishing between moths and butterflies is fairly straightforward. Butterflies usually perch with their wings held upwards and have club-like knobs on the ends of the antennae. Moths, on the other hand, perch with their wings outspread and have antennae that closely resemble bird feathers. The male moth's antennae are much larger than those of the female. Unlike butterflies, most moths are nocturnal. Only a handful of moth species is active during the day. A well-known daytime species is the hummingbird clearwing moth. Closely resembling a small hummingbird, the clearwing is most often seen nectaring at the flowers of plants and tree blossoms.

On the moth watcher's calendar, June is the month of the spectacular giant silk moths. From the bright yellow of the male Io and the delicate green of the luna, to the bold, eye-like markings of the polyphemus and the huge size of the cecropia, these moths are truly exceptional in their proportions, colour and patterning. Giant silk moths take their collective name both from their impressive size — sometimes as large as the palm of a man's hand — and from the fine silk (yes, it is real silk) that they use to spin their cocoons. The commercial silkworm moth, *Bombyx mori*, is from a different family.

Probably the best known of our silk moths is the cecropia. Its body is red with a white collar. Beautiful white bands circle the abdomen. The wings are dark brown with red at the base of the forewings. Each wing has a beautiful red and white crescent spot. Cecropias emerge from their silken cocoons on warm, late spring nights and ride the June breezes in search of romance. The females almost immediately release an airborne sexual attractant called a pheromone. Although pheromones are emitted in infinitesimally small quantities — literally billionths of a gram — they are still sufficiently potent to attract males from great distances. The male's large, feather-like antennae are covered with sophisticated olfactory sensors that sift the sweet night air for the female's scent. Each of the 1,700 hairs on the male's antennae harbours a staggering 2,600 olfactory sensors. If the breeze is right, males can follow a female scent plume for several kilometres. This



Clockwise, from top left: Male Io moth; Polyphemus moth; luna moth; big poplar sphinx; and cecropia moth.

gives a whole new meaning to the movie title *Scent of a Woman*. It is interesting to note that adult silk moths exist for the sole purpose of reproduction; in fact, they have no mouth parts and don't even eat.

When male and female finally meet, the happy couple will join at the abdomen and remain attached for up to 24 hours. The female will then begin to deposit 100 or more eggs on the undersides of leaves of trees such as cherry, birch and maple.

The cecropia caterpillar, too, is a spectacular insect. It is bluish-green and has a pair of yellow, ball-like projections on each body segment. It will reach a length of 10 centimetres (four inches) by mid-August, and then fashion a spindle-shaped cocoon in which to spend the winter.

Sphinx moths are also on the wing in late spring. The largest and most common species in our area is the big poplar sphinx. Its wingspan can reach up to 12 centimetres (five inches). With wings closed at rest, this attractive moth almost looks like a fighter jet. The two-toned grey of the forewings hides a beautiful red-purple and blue pattern on the hind wings.

According to Tim Dyson, a local naturalist, writer and photographer with a special interest in moths and owls, our pervasive use of outdoor lighting is doing considerable harm to moth populations. Because of their nocturnal lifestyle, moths are very vulnerable to bright lights, especially those that are left on all night. When out on an egg-laying

mission after dark, a female moth will often be pulled in by the allure of a light. Confused by all of the illumination, she eventually finds a nearby resting place where she will spend the night. However, when dawn arrives, she is usually so dazed by the artificial light that she does not notice the arrival of daylight. Doom strikes at about 5 a.m., when birds appear on the scene and recognize an easy breakfast. This happens at every light that is left on all night long where there are moths. Although it is natural for birds to eat moths, finding a dazed, pregnant adult female moth beneath a light at dawn is not natural. It leads to the removal of hundreds of "caterpillar potentials" from the environment in one gulp and is an important reason why giant silk moths have become much less common. Dyson recalls that as recently as the 1980s, it was commonplace to see upwards of a dozen luna moths in a single night at one of the lights he'd visit. Today, at the same light, he's lucky to see three lunas over the course of the entire flight period. Whenever possible, we must assure that outdoor lights are not left on all night long. Once we have enjoyed the moths coming to our own private lights for a few hours, we should turn them off.

The peak flight period for most of the silk moths is mid-June, although some species may linger into early July. If the weather has been particularly warm in April and early May, as was the case this year, it is not uncommon to see the first giant silk

moths by the Victoria Day weekend. They can turn up just about anywhere, but are more common in rural areas. Silk moths are most active after 10 p.m., especially on warm, still nights. One of the best places to look for them are large buildings with bright lights that shine onto walls. Schools, marinas, roads department garages and similar buildings are excellent "mothing" locales. You should, however, get permission ahead of time before going onto private property at night. Don't forget to bring along your camera.

To help you sort out moth species you find, the best English-language field guide available is *A Field Guide to Moths of Eastern North America* by Charles Covell. It is part of the Peterson Field Guide Series. On the Web, check out the "Moth Photographers Group of Eastern North America." With thousands of images, it is a superb resource for identification.

Later in the summer I'll look at a fascinating group of moths called "underwings" and some special techniques for attracting them with using bait.

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Tim Dyson, special to The Examiner