Moths: Our Nighttime “Butterflies”

I guess we all know that there are insects we call butterflies and insects we call moths. Are they the same or are they different? It turns out that they are both in the same insect order, Lepidoptera, which means they both have tiny scales covering their wings.

And because we probably notice more butterflies than moths, I suspect many folks assume the former are more numerous. But the reverse is true. In North America, there are about 14,000 species of butterflies and 150,000 moths, and on the planet as a whole there are even a greater predominance of moths.

So what is the difference between a moth and a butterfly? Generally, and there are a few exceptions, moths fly at night and butterflies fly in the daytime. Moths bodies have more scales than butterflies and this makes them appear fuzzier. When resting, butterflies hold their wings open, exposing all four wings, while moths fold their forewings over their hindwings, giving many moths a triangular appearing shape. The antennae of butterflies have either hooks or clubs at the end, while moth antennae are either feathery or tapered to a tip.

Some might be tempted to conclude that butterflies are the ones with bright colors and patterns, and moths tend to be dull brown or gray. And while there is some truth to that, there are some really attractive moths, like the striking large, light green luna moth.

I suspect most of us encounter moths most often in one of three ways. We find them attached to the walls of our house of other structure in the morning, where they have chosen to rest for the day and unless we disturb them they are pretty much immobile throughout the day but are gone again the next morning.

Another way we see moths is when we see one of the few moths that actually fly in the daytime; such as one of several hawk moths. These moths are the ones we see from time to time flitting from flower to flower in a way that we may mistake for a hummingbird. They are similar in size and indeed fly in a very similar manner to hummingbirds and can in fact hover and fly backwards just like the bird.

The other way we see moths we probably don’t know for sure what they are because they are the caterpillars, and we may not know what kind of insect they are the larva form of.

Humans are probably more inclined to dislike insects than any species other than snakes, and to think they are a nuisance at best and a real pest or outright destructive at worst. When I hear folks express those sentiments about any living creatures, I tell them they have to think about the role those species play in the ecosystem.

For example, insects in general play a crucial role in pollination, and I am not thinking just about wildflowers but lots of fruits and vegetables that we all like to eat. When I Googled foods that are pollinated by insects, I found a list of 98 foods! Of course bees

are a major pollinator, but so are butterflies and moths. So these insects do us a favor in addition to being beautiful and fun to watch.

But these same insects can also be pests, not so much the adults that we see so often, but the larva stages of their lives; that is the caterpillars. The same beautiful insects we see flying around thus have life stages in which they eat a lot of vegetation, some of which we very much want not to be eaten.

But before we decide that the damage caused by the larva outweigh the pollination benefits by the adults, we need to remember a very important function all of these caterpillars preform—they feed our birds. Even seed-eating birds and hummingbirds need insects to feed their young, for the proteins and other nutrients they could not otherwise obtain. While flycatchers catch flying insects, it is the caterpillar stages of insects that most birds consume. Thus the birds help to control the insect populations while they are feeding their young. The same can be said for bats.

So there are checks and balances, pros and cons in the natural world that have been operating for literally thousands of years, and we humans should do all we can to make sure we don't upset these interactions too much.

Until next time…

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