From colorful to camouflaged, nature's masters of metamorphosis deserve a closer look.

Caterpillar Curiosities

Story and Photos
By Susan E. Dees

For some reason I never outgrew a child's excitement about nature, especially caterpillars. For many decades I have continued to take home those caterpillars, which still live on my kitchen counter in gallon glass jars so I can keep an eye on them while fixing dinner. Over the years people have learned to call me to identify caterpillars and it seems like the same species keep cropping up. Here's a "top 10 caterpillar" list for those curious about nature.

Banded Wooly Bear

My brother and I walked about a mile to grade school each day. Being young, low-to-the-ground and curious, we noticed fuzzy caterpillars crossing the sidewalks. About an inch or two long and black on each end with a cinnamon band in the middle, we couldn't resist picking up these caterpillars and taking them home. Mother gave us cardboard shoeboxes and we lined them with grass and dry leaves. Using the old standby, Mitchell and Zim's Golden Nature Guide "Butterflies and Moths," we learned that these common caterpillars belonged to the Isabella tiger moth, were called banded wooly bears caterpillars and that they liked sweet gum leaves and herbaceous weeds, such as dandelion or plantain.

These caterpillars are most common in the fall when you see them crossing roadways and sidewalks in their search for a suitable winter hibernation place. Hibernating over the winter, caterpillars come out on January thaw days to root around for dandelion leaves, then spin their cocoons among the fallen leaves, incorporating hairs from their coats into the silken cocoon wall. The gold-and-black moth has a wingspan of about 2 inches and is often seen at night around lights.

Emerging from an egg laid on a parsley leaf, the newly hatched black swallowtail caterpillar is brown with a white band.

Black Swallowtail Butterfly

Familiar to herb gardeners who grow parsley, dill, fennel and other umbelliferous plants, each stage of the black swallowtail caterpillar's life cycle is colored differently: brown saddle-banded with white as a young hatchling to black-

striped with yellow dots on a smooth green background as a 2-inch adult. One fascinating characteristic of swallowtail caterpillars is their defense mechanism: when disturbed they extrude a stinky, orange, Y-shaped fleshy organ called an osmeterium and wave it around vigorously.

This species has several broods in Illinois, and many gardeners plant extra herbs, hoping female swallowtails don't find them all.

Monarch Butterfly

Larva of Illinois' state butterfly eat leaves and flowers of milkweeds. It is tiger-striped in black, white and yellow with two fleshy filaments at each end and is about 2 inches in length when mature.

Monarchs are the only officially migratory butterfly species in Illinois, with the first butterflies arriving in Illinois in mid-April from southern states. (Their parents or grandparents began the migration from Mexican wintering grounds.) Monarchs have several

As they mature, black swallowtail larvae develop black stripes with yellow dots.

broods, with the last adults leaving Illinois as late as October. The best time to find monarch larvae is August and September when migrating adults are dropping eggs on every available milkweed plant. After several weeks as a caterpillar, a breath-taking, aqua-rimmed-in-gold chrysalis is formed. About 10 days later the adult emerges.

A fun activity for children is tagging monarchs in the fall and seeing where they end up (see www.monarchwatch.org).

Tomato or Tobacco Hornworm

The infamous caterpillars stripping your tomato plants—green with oblique, white stripes, a horn at the rear and 5 inches long when mature—is the tomato or tobacco hornworm. Body markings serve to break up their body outline and make it amazingly easy to overlook on tomato plants.

Some caterpillars are covered in the tiny, white parasite cocoons of the braconid wasp. Eggs laid in a young hornworm become larva that carefully and slowly eat the insides of the caterpillar so that both insects mature at the same time. The wasp larvae exit to the skin of the hornworm, spinning their own white cocoons, when the hornworm dies. Horn-

The black, white and yellow monarch caterpillar can be found feeding on the leaves and flowers of milkweeds.

worms that aren't parasitized bury themselves in the ground to pupate, emerging in the spring as an impressive hawkmoth with five or six pairs of yellow abdominal spots and a 5-inch wingspan camouflaged in tree-bark patterns. Hawkmoths feed on flower nectar at dusk.

Tomato hornworm caterpillars are well-camouflaged and often difficult to find on their namesake plant food.

In the fall, imperial moth larvae (above) bury themselves in the ground, emerging in the summer as golden-yellow adults (right).

Knobby, colorful cercropia caterpillars (above) transform into the largest moth in the United States (below).

Cecropia Moth

The largest moth in the U.S., the cecropia has a 7-inch wingspan and is richly colored in redwoods, browns, whites and greys in intricate patterns that include several eyespots. Mature larvae are impressive, 4-inch-long, green caterpillars ornamented in knobs and bumps of yellow, red and blue. These caterpillars eat the leaves of 50 species of deciduous trees, especially maple, sweet gum, birch and fruit trees. Moths emerge in May and June and are attracted to lights, but with a lifespan of only a week (this moth lacks a digestive system so it doesn't feed), they are seldom seen.

Great Leopard Moth

Related to the banded woolly bear, tiger moth caterpillars are fuzzy with robust, stiff, black hairs and red intersegmental rings that show when the caterpillar is disturbed and rolls into a ball. Larva eat plantain or dandelion leaves and hibernate over the winter to spin cocoons in the spring. The impressive moth lives up to its name: It is one of the largest tiger moths having a 3-inch wingspan. It has soft, white wings with black-ringed markings and a black body with iridescent, dark-blue markings.

Imperial Moth

Each August imperial moth caterpillars madly race across your yard or driveway searching for a place to bury themselves and pupate underground, especially if you have sweet gum, birch, oak or pine trees in your yard. About 5 inches long and either dull brown or green, imperial moth caterpillars have just enough hair to make it appear as if it is going bald. Next summer, a beautiful, golden-yellow moth with lavender-brown markings on its 6-inch wingspan will emerge from the soil.

Interesting Books and Websites

- "Butterflies and Moths," Golden Nature Guide, by Robert T. Mitchell and Herbert S. Zim, 1962. This compact guide is invaluable to the grade school student and adult alike.
- "Caterpillars," Peterson First Guide, by Amy Bartlett Wright, 1993, ISBN 0-395-56499-9. This is the first caterpillar book written for the U.S. and is excellent for young folk and adults.
- "Caterpillars of Eastern North America," by David L. Wagner, 2005, ISBN 0-691-12144-3. This is the best and most thorough caterpillar book, with beautiful, clear, photographs and detailed information in an easy-to-use format.
- www.butterfliesandmoths.org/gallery - excellent images and distribution, etc.
- www.npwrc.usgs.gov/resource/insects/cateast/index.htm - excellent resource; more technical than the others and very thorough.

Luna Moth

Ethereally beautiful and an image often used in advertising, the wings of luna moths are pale, sea-foam green and edged in lilac all the way down their long hind-wing tails. Golden antennae, lilac legs and a furry, white body are additional identification characteristics. On wings with a 4-inch span, its floating flight is unusual and bat-like. Larva are green with a white longitudinal stripe and about 3 inches long when mature. Caterpillars eat hickory, walnut, sweet gum, persimmon and birch leaves. Pupa can be heard wriggling in thin, papery cocoons.

Long tails and a sea-foam green color make for easy identification of the luna moth.

Green with a white stripe down its body, the Luna moth caterpillar feeds on the leaves of a variety of woodland trees.

Prominent Moth

The prominents are a group of generally colonial caterpillars that may strip small trees (or branches of larger trees) of their leaves. They vary in appearance from being longitudinally striped with some hairs to having a forked, tail-like appendage at the rear or a saw-toothed appearance on top that mimics leaves. When disturbed, they raise both their front and rear ends en masse, or they may shoot out a noxious chemical from their body. The yellow-necked caterpillar eats apple and oak leaves. The sumac caterpillar, or spotted datana, eats sumac leaves.

Reddish-brown with numerous spines, elm leaves are a preferred food of the question mark caterpillar.

Question Mark

This caterpillar belongs to a butterfly that has a silvery question mark on the underside of its hind wing. Question mark caterpillars eat elm leaves and elms with many missing leaves may tip you to the location where a question mark butterfly laid her groups of eggs. These caterpillars are colorful and spiny but that will not hurt you if you touch them, although you shouldn't touch any spiny caterpillar without knowing the species as some caterpillars have stinging spines.

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