

You will need:

- White cardstock (8 sheets)
- Printer
- Scissors

Directions:

1. Print two copies of the following pages.
2. Save one set as your master list to make sure you match up the correct caterpillar, butterfly and host plant.
3. Cut apart the second set to make 36 cards.
4. Shuffle your cards and try to match up the correct caterpillar with its butterfly and host plant.



American lady eggs
on host plant leaf
(magnified)

Butterfly Survival Skills

Host plants: most butterflies have very specific host plants such as the monarch and milkweed. But some butterflies have multiple host plant options. Some butterflies have trees, some have vines and others have wildflowers as their host. The host plant is what the butterfly lays her eggs on, and the caterpillars feed on the plant.

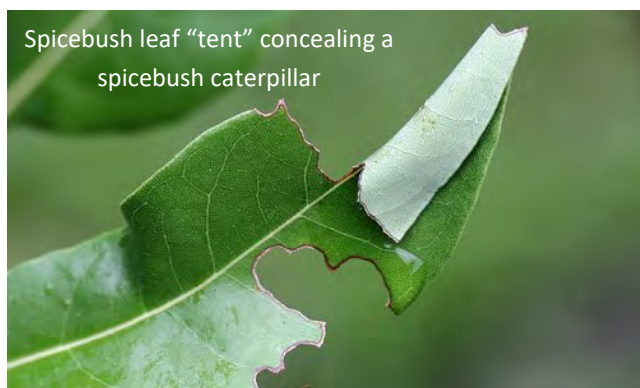
Nectar plants: butterflies (and all of our native pollinators such as bumble bees and carpenter bees) get their energy from sipping nectar that is a sweet liquid located deep in flowers. They have specialized tongues that are hollow tubes that are unrolled to reach the nectar. The tongue is called a **proboscis** and is curled up during flight. Butterflies can sip nectar from many different plants and need flowering plants that bloom all throughout the butterfly season (spring, summer and fall). In addition, it is important to not use any chemicals (especially insecticides) on your nectar and host plants. Allow nature's natural pest control to work. Aphids are tiny mites that like milkweed. Lady bugs love to eat the aphids. Neither will harm your monarch caterpillars.

Aposematism: refers to organisms that deploy bright flashy colors to warn off predators. Monarchs are bright orange with bold black stripes. Their caterpillars feed exclusively on milkweed which is toxic to many birds (the main predator of most caterpillars and butterflies). The warning color says that the butterfly will taste bad so do not try to eat.

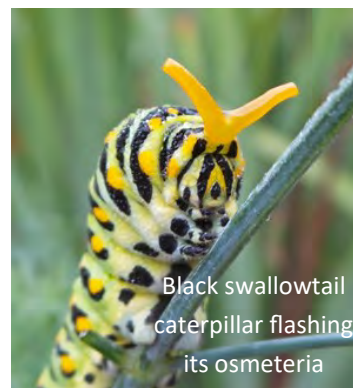
Batesian mimicry: describes nature's use of copy cat tactics. Look at the viceroy and monarch caterpillars. Can you tell them apart? Imagine trying to look at them flying from flower to flower. It is a little tricky. The viceroy caterpillars feed on wild plum tree leaves which are not toxic to birds. (But please humans only eat the fruit and not the seeds because they do contain a bit of cyanide which is toxic to us!) The viceroy is counting on birds to think they are monarchs and will be avoided as food for them.

Camouflage: means that creatures use colors and patterns to help blend into their surroundings thus making them hard to see. The American lady butterfly has camouflage colors on the underside of her wings so that when she is at rest on a tree, she blends in and is hard for birds to see. She also has **ocelli** or large, false eye spots that birds may think are owl eyes.

Disguise: when all else fails, pretend to be something yucky like bird poop. Look at the red spotted purple caterpillar. It pretends to be bird poop on a leaf so birds will not eat it. Now look at the spicebush caterpillar. It has large ocelli on its back like a snake. The spicebush caterpillar has another neat trick. It builds a tent over itself with a host leaf. The black swallowtail has a cool defense too: it has retractable orange horns that emit a foul odor when they are flashed called **osmeteria**.



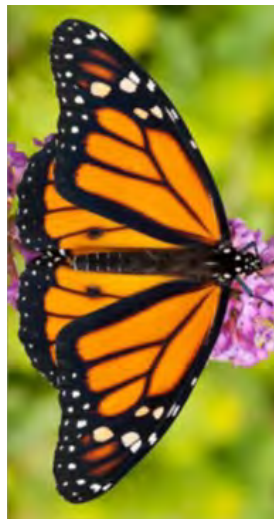
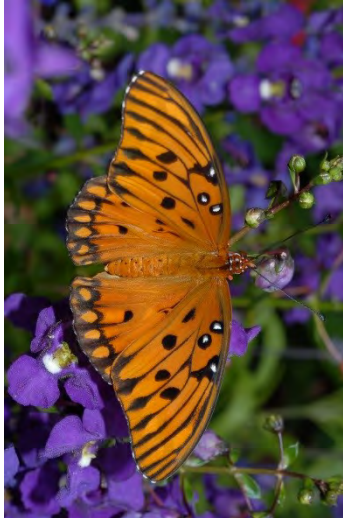
Spicebush leaf "tent" concealing a
spicebush caterpillar



Black swallowtail
caterpillar flashing
its osmeteria



1. American lady caterpillar, butterfly and rabbit tobacco
2. Black swallowtail caterpillar, butterfly and fennel
3. Eastern tiger swallowtail caterpillar, butterfly and yellow poplar (tree)



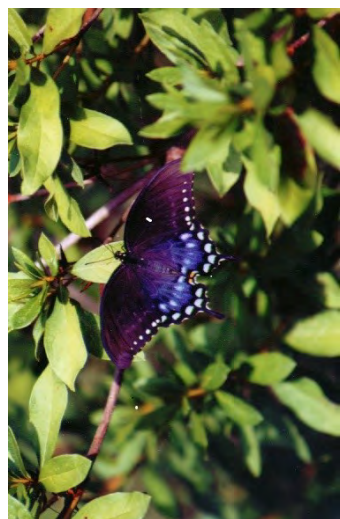
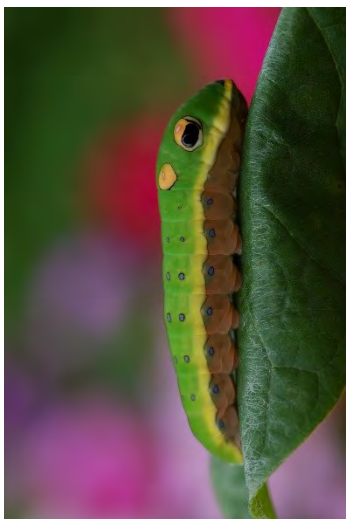
5. Gulf fritillary caterpillar, butterfly and passion flower (vine)
6. Monarch caterpillar, butterfly and butterfly weed (milkweed)
7. Painted lady caterpillar, butterfly and thistle



A question mark butterfly caterpillar.
Photo by Lacey L. Hyche, Auburn University, Bugwood.org



7. Pipevine caterpillar, butterfly and dutchman's pipe (vine) (please don't eat any part of this plant)
8. Question mark caterpillar, butterfly and hackberry (tree)
9. Red admiral caterpillar, butterfly and stinging nettle (please don't touch the nettle!)



10. Red spotted purple caterpillar, butterfly and cottonwood (tree)
11. Spicebush swallowtail caterpillar, butterfly and sassafras (tree)
12. Viceroy caterpillar, butterfly and wild plum (tree)