

Creature Feature: Summer 2018

By W. Scott Douglas

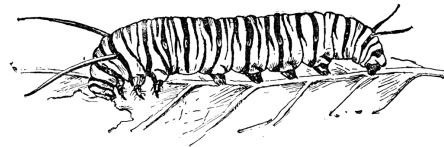
Monarch Butterfly (*Danaus plexippus*)

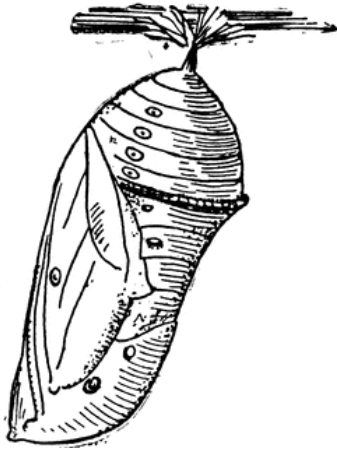


Every month or so I receive a memo from the Fish and Wildlife Service outlining the actions the agency is considering under the Endangered Species Act. Most folks think of the Endangered Species Act as a law and program that protects the iconic or unusual, like bald eagles and wolves, or snail darters. Obviously it does much more than that, but many of the animals and plants listed are so localized in their range that most people have never even heard of them, much less seen them. So I was shocked when I read in this month's memo that the Monarch Butterfly was being considered for listing as Endangered. The Monarch Butterfly? Perhaps the most widely recognized insect in the US is endangered? How could that be?

When I looked into it further I found out that overwintering Monarch populations east of the Rocky Mountains have dropped 90% since 1995. It is estimated that there are more than a billion fewer Monarchs in North America since 1990. That's a lot of butterflies. What's going on? As usual, the reasons are complex, but the greatest pressure is loss of habitat. The vast expanses of fallow farm fields that typified much of the rural US has either grown over to shrubs or reforested, or been developed for residences. The farms that are left apply modern pesticides like glyphosate to control or eliminate the only source of food that Monarch caterpillars can use, the equally iconic Milkweed.

As I tell my Scouts, understanding conservation starts with understanding natural history. While I, like most of us, learned about metamorphosis by studying the Monarch's life cycle, it is important that we are all on the same page. The Monarch's habitat ranges from southern Canada to northern South America, with most of the population being in the US and Mexico. Monarchs have multiple generations, sometimes as many as four every year. They are marathon migrants too, with some adults traveling thousands of miles in their lifetime.





Every Monarch starts out as a 1-mm long conical cream-green egg laid singly on the underside of a milkweed leaf. After 3-8 days it hatches into a caterpillar that immediately starts to eat the leaf it is born on. Monarch caterpillars are only able to survive on milkweed leaves. There are many species of milkweed, but there needs to be enough in close proximity to the hatch site to sustain the caterpillar through 5 instars, or molts. After its last molt it will be 25-45 mm long and 5-8 mm wide, with white, yellow and black transverse stripes and two sets of long thin tentacles. When it is ready to pupate it will climb under the milkweed and hang upside down and molt one more time into a pale green and gold chrysalis. After 8-15 days as a pupae, the adult emerges and flies away. The whole process takes 1-2

months at most. The adult feeds on nectar from milkweeds and a variety of other plants including Joe Pye Weed, asters, black-eyed Susans and goldenrods. Planting these will help Monarchs and other native pollinators.

Unlike many endangered species, there is actually a lot that an individual can do to help. And it's not that hard. Planting native species, like the milkweed, in your garden or on the edge of your yard is a good way to fight invasive plants and encourage birds, bees and butterflies at the same time. In time, you may be privileged to host some adults during their fall migration, or some caterpillars during the summer. Some folks feel that raising and releasing Monarchs is an easy way to help the species, but this is actually not true. Keeping many butterflies in close contact encourages parasites and other health problems, so best thing to do is to open up your garden as a butterfly B&B. One other cautionary note is that the very popular (and invasive) butterfly bush can actually harm Monarchs. The butterfly bush has been cultivated to contain nectar that is too high in glucose and too low in other essential nutrients. It's butterfly junk food!

Most of us can recognize the common milkweed with its wide fuzzy pale green leaves, milky sap and pendulous pink flower clusters (pictured). Not to mention the fall seed pods full of silky white parachutes. There are many different species of *Asclepias* milkweeds and there is probably one native to every habitat in the US. The most common in our area are common milkweed, swamp milkweed and butterfly weed (orange flowers, not pink). All three are native to our Watershed, but the swamp milkweed can only grow in wetland soils. While milkweeds can be transplanted, most nurseries carry milkweed varieties, especially if they cater to rain gardens or native plants. For more information on how to build a butterfly garden, or a rain garden containing milkweeds, check out Project Milkweed at xerces.org.

