



## **Brunswick Wildlife Monarch Miracles**

North America's most famous butterfly, the Monarch, has begun its miracle migration. They have completed their annual northward dispersal and are now heading south!

The Monarch, a member of the milkweed subfamily of Brushfoots, ranges across the country and into Southern Canada. There are two major populations, divided by the Rocky Mountains. Monarch larvae feed on milkweeds and adults feed on milkweed nectar plus nectar of other flowering plants.

While Monarchs west of the Rockies migrate to coastal California to overwinter, millions from the eastern side of the Rockies migrate, via flyways that merge in Central Texas, to the Sierra Madre Mountains of Central America. There are also two non-migratory populations in south Florida and south Texas that breed all year.

Monarchs move north in spring, stopping to breed where they find milkweed. In turn, their young disperse farther north, breeding as they go. Up to five or six new generations follow older generations so that by summer's end they have repopulated their entire range.

The last brood of summer, like the above male photographed on Bald Head Island in early November, migrates south. This brood does not reproduce. It is not capable of reproduction until the following spring when they breed as they migrate north.

The miracle? No individual makes the round trip so the last brood is migrating to their winter home...a location they have never been.

About one hundred species of milkweed grow in North America and approximately twenty-five are preferred hosts. Chemicals from milkweeds make Monarch caterpillars and adults very distasteful or poisonous to potential predators, including causing nausea and vomiting in birds. Remarkably, birds learn after one try not to eat Monarchs!

How about a second miracle? Metamorphosis is a miracle transformation shared with other butterflies. The Monarch's life cycle begins with a very small egg laid one at a time under the leaves of a host milkweed. The caterpillar or larva is then hatched into an "eating machine" that will devour so much that they must shed their outgrown skin five times. The final shed yields the pupa or chrysalis from which the flying adult will emerge.

Metamorphosis, the transformation from caterpillar to adult...the stages shown in the photos...takes approximately three weeks depending on temperature. Except for the last brood, adults live from four to five weeks before producing eggs for the next generation.

Monarchs and butterflies in general may be found on nectar-bearing plants, in mud, and on animal dung and rotten fruit. Other good observation strategies are to stakeout larval food plants and fields on top of hills.

Dung? Unfortunately, my first memory of the Monarch migration, in the Great Smoky Mountains National Park, is seeing them totally covering a pile of "road apples".

Peninsulas have a "migrant trap" effect on butterflies (as well as birds), concentrating butterflies at their tip. Monarchs roost close together to conserve body heat and roosts may be found during fall migration in cedar trees, including those at Buchanan Battery, Fort Fisher.

Interested in learning more or participating in monitoring the migration? A new educational website about Monarch butterflies was recently released, covering their life cycle, protection, and migration: <http://www.fs.fed.us/monarchbutterfly/index.shtml>.

Also, if you are interested in developing your own milkweed patch, I recommend *Milkweed, Monarchs and More: A Field Guide to the Invertebrate Community in the Milkweed Patch* by Rea, Oberhauser, and Quinn.

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