

# Sandy Hook Plants and Wildlife Series

National Park Service  
U.S. Department of the Interior  
Gateway National Recreation Area



## Monarch Butterfly



With the arrival of autumn, migration season begins. Birds fly south to warmer climates in the fall, and so do Monarch butterflies.

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### Migration

Midwestern and eastern Monarchs head south from their summer habitat in the Great Lakes and New England, seeking goldenrod plants for energy to continue south through the Mid- Atlantic, Mid- West and Southern states.

Their destination is the Sierra Madre mountaintop of central Mexico where they spend the winter clustered in the tens of millions on the native oyamel fir trees, sometimes covering whole trees and bending the branches back with their combined weight.

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### Transformation

There are four stages in the life of every butterfly.

A Monarch Butterfly begins life with a single yellow egg, often laid on the underside leaf of the host milkweed plant. Eggs develop and hatch into caterpillars in nine to fourteen days. Over a lifetime the female Monarch lays about 400 eggs.

The larva of a butterfly is often called a caterpillar. A newborn caterpillar (about 2 millimeters long) eats day and night using sharp nippers in its jaws to cut holes in milkweed leaves. On the first day of life, it consumes its own weight in food and by the time it is an adult, a caterpillar's size is about 2 inches long and weighs about 2,700 times more than when it hatched! It will molt (shed) its skin five times. When the caterpillar prepares to pupate, it weaves a small silk button and attaches itself underneath a leaf or branch.

The pupa stage is a sleepy state for the developing butterfly as it changes shape and color.

The outer layer hardens into an emerald green "J" shaped "chrysalis," decorated with golden dots. After about two weeks, you can begin to see a butterfly through the transparent chrysalis. When it emerges, the new butterfly clings to the casing of the chrysalis while fluid is pumped into the veins of its wings, expanding them. After a few hours, the wings are dry. The animal has changed from a crawling insect to a butterfly capable of flying over 2,000 miles. Monarchs live for only about 9 months so the generation we see here at Sandy Hook in the summer may be the individuals making that long journey to the southern U.S. and Mexico. The cycle starts again in the spring as these same Monarchs take flight to find the milkweeds and lay eggs once again.

All butterflies have six legs and feet that are taste sensors. The adult body is divided into the head, thorax, and abdomen. The head has eyes (made up of thousands of photoreceptor cells to sense light and images), two antennae (feelers), two palpi (its sense of smell) and a proboscis (to suck nectar and water).



Monarch larva



A Monarch after emerging from its chrysalis

<b>Food</b>	<p>The Monarch follows a major migration route taking full advantage of many milkweed plants. The milkweed leaf contains a poison providing the Monarch with an intriguing form of protection. While the poison doesn't hurt the butterfly, it makes them taste bad. The orange color remains a strong warning signal for many predators such as birds to keep away.</p>	<p>Monarch butterflies are able to obtain energy for flying from the nectar of flowers they visit as they travel along their migration route. Sandy Hook is a feeding stop due to the native Seaside Goldenrod that grows here. In autumn, their bright golden flowers can be seen blooming across Sandy Hook.</p>
<b>Habitat</b>	<p>The range of locations that fit the Monarch's requirements has dwindled over time. Deforestation has taken place in Mexico to make way for agricultural land. Both international and Mexican efforts have established butterfly reserves to protect the</p>	<p>millions of Monarchs that overwinter in Mexico. Saving the habitat of the Monarch Butterfly will serve to allow future generations of visitors to enjoy the beautiful flight of the "King" of butterflies during its fall migration.</p>
<b>What can you do?</b>	<p>Recent concerns about global warming may have an affect on total monarch population. Scientists have found while the temperatures of the fir forests in Mexico are unlikely to change much, it will rain more, and more butterflies will freeze to death. What may be needed is a little help by humankind</p>	<p>thinking ahead to the future, and preserving sites that are suited for overwintering Monarchs. Planting non-invasive Goldenrod, Blazing Star (Purple Gayflower) and New England Aster in your garden will encourage Monarchs to stop along their migration and feed.</p>
<b>Fast Facts</b>	<p>Scientific Name: Genus: <i>Danaus</i>, Species: <i>plexippus</i>          Size: Wingspan: 3 ½ to 4 inches, body one inch long          Identification: Bright, burnt- orange with black veins and black margins sprinkled with white dots          Breeding: Season: Spring          Eggs: 3/64" height x 9/256" width pale green, ribbed and pitted, shaped like lemon with flat base          Pupa to butterfly: 2 to 3 weeks          Food: Caterpillar host plant is milkweed          Butterfly: largely goldenrod nectar in autumn migration          Lifespan: Up to 8- 9 months          Range: Southern Canada south through the United States, Central America, Mexico and most of South America          Conservation: Overwintering sites in Mexico and California should be protected          Management needs: Develop conservation and management plans for wintering sites, migration corridors and principal breeding areas</p>	

<b>For More Information</b>	<p>Sandy Hook, Gateway National Recreation Area, PO Box 530, Fort Hancock, NJ 07732</p> <p>Web address: <a href="http://www.nps.gov/gate">www.nps.gov/gate</a></p>	<p>Text by: Conrad Wisniewski</p> <p><b>EXPERIENCE YOUR AMERICA</b></p>
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