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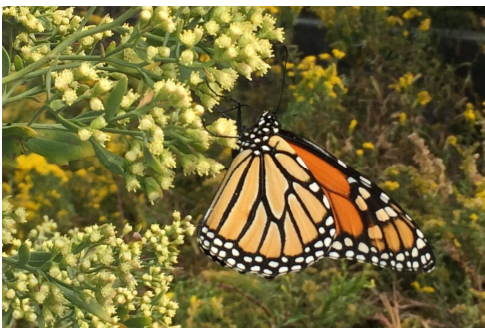
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# Conserving South Carolina's At-Risk Species:

## *Species facing threats to their survival*

### Monarch butterfly

(*Danaus plexippus*)



Monarch butterfly / Photo credit: Jennifer Koches

### Description

The Monarch butterfly is a large orange butterfly that is similar in appearance to the smaller Viceroy (*Limenitis archippus*), flies using shallower wingbeats, and has a black post-median line on the hindwing. The upperside of the male is bright orange with wide black borders and black veins and the hindwing has a patch of scent scales. The upperside of the female is orange-brown with wide black borders and blurred black veins. Both sexes have white spots on borders and apex.

### Range

The species is widespread in the U.S., except for the high Rockies, and in southern Canada, with the overall range extending through Central America and the Caribbean to South America. Monarchs also occur in Hawaii, Australia, and several Pacific islands, as well as parts of Asia, Africa, and southern Europe.

### Habitat

The Monarch butterfly occurs in a variety of habitats where it searches for milkweed, its host plant. In South Carolina, females have been observed laying eggs on Gulf Coast Swallow-wort or Marsh Swallow-wort (*Seutera angustifolia*), a close relative of true milkweeds. Overwintering

habitats are high altitude Mexican conifer forests, coastal California conifers, or Eucalyptus groves. In South Carolina during the fall, winter, and early spring, Monarchs can be found basking or roosting on evergreen trees and shrubs such as: Southern red cedar (*Juniperus virginiana* var. *silicicola*), Wax myrtle (*Morella cerifera*), Red bay (*Persea borbonia*), and Leyland cypress (*Cupressus x leylandii*).

### Status

The Monarch population has recently declined to a fraction of its previous size. In the 1990s, estimates of up to one billion Monarchs overwintered in the oyamel fir forests northwest of Mexico City, and more than one million Monarchs overwintered in forested groves on the California coast. In the winter of 2013-2014, estimates from overwintering sites in Mexico suggest that only about 33 million Monarchs overwintered, representing a 90% drop from the 20-year average. The U.S. Fish and Wildlife Service was petitioned to list the species in August 2014 and issued a 90-day finding in December 2014 that listing the species may be warranted.

### Threats

Three factors appear most important to explain the decline of Monarchs: loss of milkweed breeding habitat, logging at overwintering sites, and climate change and extreme weather. In addition, natural enemies such as diseases, predators, and parasites, as well as insecticides used in agricultural areas may also contribute to the decline.

### Management/Protection Needs

Recommendations for management and protection of remaining Monarch populations are: protection and restoration of milkweed breeding habitat; protection and restoration of overwintering sites; and

engaging citizen scientists in monitoring Monarchs during their migratory, breeding, and overwintering seasons. Additionally, more research needs to be conducted to better document the distribution of wintering Monarchs along the South Carolina coast. Monarchs that winter along the Atlantic coast, the extent of which is not yet determined, may provide a reserve of wintering Monarchs that could become extremely valuable to the long-term survival of the eastern migratory population of North American Monarchs.

### References

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