



Focus on MONARCHS

Probably the best known and most recognizable butterfly species in North America, the monarch (*Danaus plexippus*) is in trouble. Researchers continue to learn reasons for its declining numbers. Major threats are from loss of habitat and host plants. Monarchs return to the same rapidly disappearing forests in the southwestern U.S. and Mexico to overwinter each year. Efforts are underway to preserve those sites but climate change threatens to render the habitats unsuitable by the end of the century.



A monarch feeding on Carolina wolfberry (*Lycium carolinianum*)
photo: Larry Woodward

Milkweed, the monarch's only host plant, has been devastated by increased herbicide spraying in conjunction with genetically engineered corn and soybean crops that tolerate direct

spraying. It is estimated that 165 million acres of milkweed breeding habitat in the United States has been lost. Well-intentioned gardeners sometimes plant non-native tropical milkweed, *Asclepias curassavica*, that doesn't die back in the winter. This tropical milkweed can harbor a fungus that infects monarchs, causing them to be too weak to migrate.

The 54,000-acre Refuge is a pesticide-free, native milkweed oasis for monarchs which are often seen there during migration in spring and fall.



The commonly seen queen butterfly (*Danaus gilippus*) closely resembles a monarch. However, queens have a darker brown background color.

photo: Anne Lindgren

Learn More

Free brochures available at the Refuge visitor center:

- Florida Wildflowers and Butterflies
- Monarchs & Milkweeds
- LSNWR Butterfly Species Checklist

Online resources:



Florida Museum Wildflower and Butterfly search
(floridamuseum.ufl.edu/wildflowers)



Butterflies and Moths of North America
(butterfliesandmoths.org)



Primer on North Florida Butterflies by Barbara Woodmansee
(friendsofrefuges.org)



Florida Fish and Wildlife Conservation Commission (myfwc.com)

www.FriendsofRefuges.org

As a membership organization, and through voluntary action, the Friends supports the Refuges and their work to conserve the region's wildlife and the places they need to thrive. We invite you to enjoy this pristine and primitive beauty with us.

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DRIVE

WALK

BUTTERFLIES

of the

Lower Suwannee National Wildlife Refuge

Spicebush Swallowtail (*Papilio troilus*)
photo: Larry Woodward



Common Refuge butterflies by family:

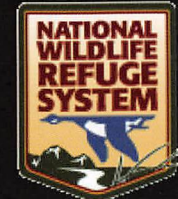
Swallowtails- Eastern Tiger, Palamedes, Zebra

Brushfoots- Monarch, Viceroy, Queen, Zebra Longwing, Gulf Fritillary, White Peacock, Common Buckeye

Hairstreaks- Gray, Red-banded

Sulfurs- Cloudless, Little Yellow

Skippers- Horace's Duskywing, Long-tailed, Byssus



To enjoy butterflies along any of the secondary Refuge roads, visitors are welcome to walk or ride bicycles around the yellow Refuge gates that are closed to prevent vehicular access.

Why the Refuge:

The well-managed land in the Lower Suwannee National Wildlife Refuge, with its high habitat diversity, supports large numbers of butterflies year-round. Few other forms of wildlife can be as easily observed. They can even be enjoyed from your car as you slowly drive along the Nature Drive or Dixie Mainline Road. With a little knowledge and a sunny day you could spot at least 15 species, and with experience, you might identify an astounding 54 species.



The zebra swallowtail (*Eurytides marcellus*) is Florida's only native kite swallowtail.
photo: Barbara Woodmansee

The Refuge's 54,000 acres of native plants, animals and insects are a haven for both migrating and resident butterflies. Large numbers can be seen during peak wildflower season—late summer to early fall. The role of the Refuge is increasingly important as butterfly numbers continue to decline due to habitat loss and climate change. Home butterfly gardens are helpful and provide excellent observation opportunities but they cannot replace the abundant, diverse, year-round host plants and nectar sources found in the Refuge.



Experts search host plants for signs of butterfly or caterpillar use.

- identify butterflies with the unaided eye.
- The usual outdoor comforts like bug spray, sunscreen, hat, water, and tick protection.
- Please, no nets. A butterfly's wings are protected by delicate scales that do not re-grow. Butterflies should never be touched or netted.

How to look:

- Drive slowly and stop when you find likely plants or habitat. Often, you can observe from your car.
- Approach slowly and cautiously. Butterflies have good eyesight and are easily startled by quick movements. Tramping through tall grass and shrubs causes more movement than walking on a mowed or graded area.
- Approach from a low angle. Butterflies are wary of potential predators attacking from above. If a butterfly is perched at eye level or above, it is often possible to get very close.

What to bring:

- Wear dull greens and browns that blend with the area you are searching.
- A camera, binoculars or both can help. A long camera lens with the ability to focus 10 feet or less and binoculars with 8x or 10x magnification are ideal but you can also



Gray hairstreaks (*Strymon melinus*) have small tails and eyespots that are animated by shifting their wings. Predators are fooled into biting the tail, not the head.
photo: Anne Lindgren

- Mind your shadow. Quick changes in light signal danger, such as an approaching predator.
- Some butterflies sense sound but they aren't disturbed by quiet noises and voices, so share your observations.

When to look:

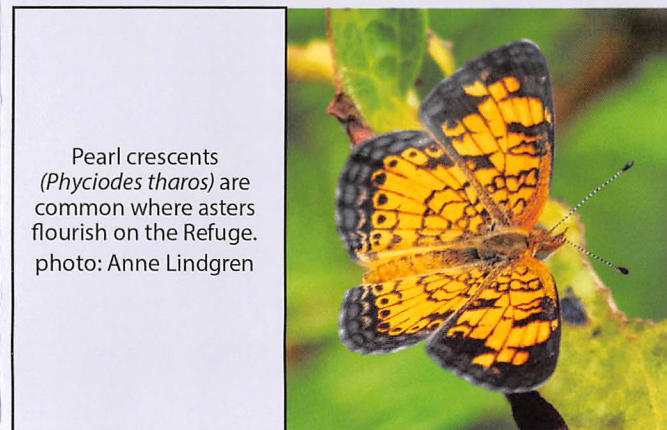
- No need to get up early, butterflies are most active between 10 a.m. and 5 p.m.
- Warm, sunny days are the most rewarding.
- Butterflies are seen throughout the year in the Refuge but the abundance of flowering plants in spring and fall are peak times.



Byssus skippers (*Problema byssus*) can be difficult to identify due to a lot of variability in appearance.
photo: Barbara Woodmansee

Which Plants

Each butterfly species relies on specific host plant species to complete their life cycle and they can often be found near one of these. Good field guides list butterfly host plants.



Pearl crescents (*Phyciodes tharos*) are common where asters flourish on the Refuge.
photo: Anne Lindgren