

Checklist of the Butterflies, Dragonflies and Damselflies of Carolina Sandhills NWR and vicinity.

Observer(s): _____

Date: _____

Time: _____

County: _____

Location: _____

Species total: _____

Papilionidae

Swallowtails (Papilioninae)

- ___ Pipevine Swallowtail - *Battus philenor*
- ___ Black Swallowtail - *Papilio polyxenes*
- ___ Eastern Tiger Swallowtail - *Papilio glaucus*
- ___ Spicebush Swallowtail - *Papilio troilus*
- ___ Palamedes Swallowtail - *Papilio palamedes*
- ___ Zebra Swallowtail - *Eurytides marcellus*

Pieridae

Whites (Pierinae)

- ___ Cabbage White - *Pieris rapae*

Sulphurs (Coliadinae)

- ___ Clouded Sulphur - *Colias philodice*
- ___ Orange Sulphur - *Colias eurytheme*
- ___ Southern Dogface - *Zerene cesonia*
- ___ Cloudless Sulphur - *Phoebis sennae*
- ___ Little Yellow - *Pyrisitia lisa*
- ___ Sleepy Orange - *Abaeis nicippe*

Lycaenidae

Hairstreaks (Theclinae)

- ___ Great Purple Hairstreak – *Atlides halesus*
- ___ Red-banded Hairstreak - *Calycopis cecrops*
- ___ Juniper Hairstreak - *Callophrys grynea*
- ___ Brown Elfin - *Callophrys augustinus*
- ___ Eastern Pine Elfin – *Callophrys niphon*

- ___ Frosted Elfin - *Callophrys irus*
- ___ Henry’s Elfin - *Callophrys henrici*
- ___ Gray Hairstreak - *Strymon melinus*

Blues (Polyommatainae)

- ___ Eastern Tailed-Blue - *Cupido comyntas*
- ___ Spring Azure - *Celastrina ladon*
- ___ Summer Azure - *Celastrina neglecta*

Nymphalidae

Heliconians and Fritillaries (Heliconiinae)

- ___ Gulf Fritillary - *Agraulis vanillae*
- ___ Variegated Fritillary - *Euptoieta claudia*

True Brush-foots (Nymphalinae)

- ___ Mourning Cloak – *Nymphalis antiopa*
- ___ American Lady - *Vanessa virginiensis*
- ___ Painted Lady - *Vanessa cardui*
- ___ Red Admiral - *Vanessa atalanta*
- ___ Common Buckeye - *Junonia coenia*
- ___ Pearl Crescent - *Phyciodes tharos*

Admirals (Limenitidinae)

- ___ Red-spotted Purple – *Limenitis arthemis astyanax*
- ___ Viceroy – *Limenitis archippus*

Emperors (Apaturinae)

- ___ Hackberry Emperor - *Asterocampa celtis*

Satyrs (Satyrinae)

- ___ Southern Pearly-eye - *Lethe portlandia*
- ___ Carolina Satyr - *Hermeuptychia sosybius*
- ___ Little Wood-Satyr - *Megisto cymela*

Milkweed Butterflies (Danainae)

- ___ Monarch - *Danaus plexippus*

Hesperiidae

Spread-wing Skippers (Pyrginae)

- ___ Silver-spotted Skipper - *Epargyreus clarus*
- ___ Long-tailed Skipper - *Urbanus proteus*
- ___ Hoary Edge - *Achalarus lyciades*
- ___ Southern Cloudywing - *Thorybes bathyllus*
- ___ Northern Cloudywing – *Thorybes pylades*
- ___ Confused Cloudywing - *Thorybes confusis*
- ___ Sleepy Duskywing - *Erynnis brizo*



Gulf fritillary open wing view



Gulf fritillary closed wing view



Painted lady on Buttonbush



Palamedes swallowtail



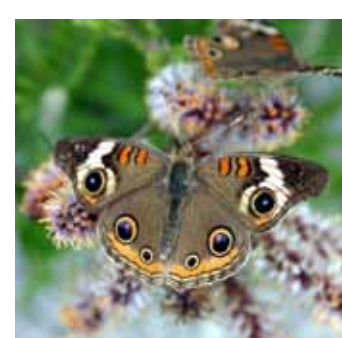
Spicebush swallowtail on Butterfly weed



Zebra swallowtail on Butterfly weed

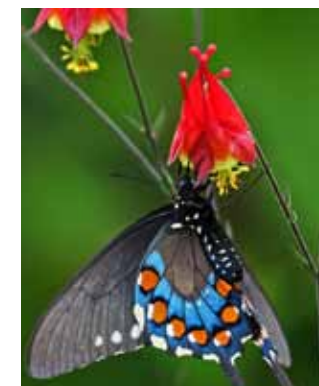


Tiger swallowtail on Joe-pye weed



Buckeye on Leadplant

photos: ©Will Stuart



Pipevine swallowtail



Monarch on Aster flower

- ___ Juvenal’s Duskywing - *Erynnis juvenalis*
- ___ Horace’s Duskywing - *Erynnis horatius*
- ___ Zarucco Duskywing - *Erynnis zarucco*
- ___ Wild Indigo Duskywing – *Erynnis baptisiae*
- ___ Common Checkered-Skipper - *Pyrgus communis*

Grass Skippers (Hesperiinae)

- ___ Swarthy Skipper - *Nastra lherminier*
- ___ Clouded Skipper - *Lerema accius*
- ___ Least Skipper - *Ancyloxypha numitor*
- ___ Southern Skipperling - *Copaeodes minimus*
- ___ Fiery Skipper - *Hylephila phyleus*
- ___ Dotted Skipper - *Hesperia attalus*
- ___ Meske’s Skipper - *Hesperia meskei*
- ___ Tawny-edged Skipper - *Polites themistocles*
- ___ Crossline Skipper - *Polites origenes*
- ___ Whirlabout - *Polites vibex*
- ___ Southern Broken-Dash - *Wallengrenia otho*
- ___ Northern Broken-Dash - *Wallengrenia egeremet*
- ___ Sachem – *Atalopedes campestris*
- ___ Yehl Skipper - *Poanes yehl*
- ___ Dion Skipper - *Euphyes dion*
- ___ Dun Skipper - *Euphyes vestris*
- ___ Lace-winged Roadside-Skipper – *A. aesculapius*
- ___ Reversed Roadside-Skipper - *Amblyscirtes reversa*
- ___ Common Roadside-Skipper - *Amblyscirtes vialis*
- ___ Eufala Skipper – *Lerodea eufala*
- ___ Ocola Skipper - *Panoquina ocola*

Developed by Brian G. Scholtens, PhD and Dennis M. Forsythe, PhD (2011)



photo: J.A. Louten, Calico pennant

Dragonflies

Aeshnidae - darners

- Anax junius* common green darner **pond/lake**
- Anax longipes* comet darner **pond/lake**

Gomphidae - clubtails

- Gomphus lividus* ashy clubtail **pond/lake**

Libellulidae - skimmers

- Celithemis amanda* amanda’s pennant **pond/lake**
- Celithemis bertha* red-veined pennant **pond/lake**
- Celithemis elisa* calico pennant **pond/lake**
- Celithemis fasciata* banded pennant **pond/lake**
- Celithemis ornata* faded pennant **pond/lake**
- Erythemis simplicicollis* eastern pondhawk **pond/lake**
- Erythrodiplax miniscula* little blue dragonlet **pond/lake**
- Libellula auripennis* golden-winged skimmer **pond/lake**
- Libellula axilena* bar-winged skimmer **pond/lake**
- Libellula (Ladona) deplanata* blue corporal **pond/lake**
- Libellula incesta* slaty skimmer **pond/lake**
- Nannothemis bella* elfin skimmer **pond/lake**
- Pachydiplax longipennis* blue dasher **pond/lake**
- Tramea carolina* carolina saddlebags **pond/lake**

Habitat

Damselflies

Calopterygidae - broad-winged damselflies

- Calopteryx dimidiata* sparkling jewelwing **lg streams**
- Calopteryx maculata* ebony jewelwing **sm streams**

Coenagrionidae - pond damselflies

- Argia bipunctulata* seepage dancer **sm streams**
- Argia f. fumipennis* variable dancer **streams/ponds**
- Enallagma daeckii* attenuated bluet **pond/lake**
- Enallagma divagans?* turquoise bluet **pond/lake**
- Enallagma doubledayi* atlantic bluet **pond/lake**
- Enallagma dubium* burgandy bluet **pond/lake**
- Enallagma geminatum* skimming bluet **pond/lake**
- Enallagma sp?* **pond/lake**
- Enallagma traviatum* slender bluet **pond/lake**
- Ischnura hastata* citrine forktail **pond/lake**
- Ischnura posita* fragile forktail **pond/lake**
- Nehalennia integricollis* southern sprite **pond/lake**

Lestidae - spreadwings

- Lestes vidua* carolina spreadwing **pond/lake**

Developed by J.A. Louten and J.E. Louten (2011)



photo: J.A. Louten, Ebony jewelwing

Carolina Sandhills National Wildlife Refuge

Butterflies and Dragonflies



photo: A. Askins, USFWS, Longleaf pine ecosystem

The longleaf pine and wiregrass ecosystem is the characteristic habitat of Carolina Sandhills National Wildlife Refuge. Established in 1939, the refuge sits astride one of the most remarkable sections of longleaf pine range: the Sandhills. The uneven topography is responsible for a diverse group of plant communities that developed in the Sandhills. Botanists have identified more than 750 species of plants on the refuge, including plants from the Piedmont, Sandhills and Coastal Plain. None of this remarkable diversity would exist without certain natural processes that drive the entire longleaf pine ecosystem, the most important of which is fire.

The plant diversity on the refuge supports an equally diverse collection of pollinators, including native bees, dragonflies, damselflies, birds and butterflies.

In recent years, as numbers and species of pollinators worldwide declined, many scientists began to inventory and monitor these species as indicators of the overall health of ecosystems. On the refuge, scientists from universities, museums, and research agencies have developed lists of species, which previously had not been cataloged. For many species, this documentation represents a state record – the first time a species was recorded in the state. At the same time that scientists were beginning to look at pollinators, wildlife



photo: D. M. Forsythe, Frosted Elfin

watchers began to enjoy searching for and watching colorful butterflies, dragonflies and damselflies as much as bird watching. Please feel free to stop by the Refuge Headquarters and show us your photographs or post your sightings in the guest register and sightings journal.

Butterfly Watching

Butterflies are like “flying wildflowers” from April through October. Butterfly watching is similar to birding. The refuge has several trails and areas that offer wildflower-viewing opportunities and thus, good butterfly viewing. Items that you may find helpful to bring with you on your excursion include a hand lens, notebook and pencil, camera, and wildflower guide. Please remember that all plants and butterflies on the refuge are protected. Good areas to explore include woodland trails, wetlands or ponds, and the fields of the Oxpen area.

Binoculars allow viewing from a distance. Binoculars most suitable for butterflies are able to focus closely - 15 feet or less. Another good technique is to slowly approach butterflies until you get very close. Most people are amazed at how close you can get - just inches away! You can photographically “collect” a butterfly with a 35mm camera and macro lens. Macro photography allows you to see a butterfly in stunning detail. The best type of macro lens has a 100mm focal length and focuses to “life-size” without an adaptor.

Field Guides

As in birding, a field guide is useful in learning the species of butterflies regularly found in South Carolina. Once you have learned to recognize butterflies, you may want to keep a “life list.” For the East Coast, the field guide *Butterflies through Binoculars* by Jeffrey Glassberg is a good choice.

Habitats

As with real estate, the key to finding butterflies is location, location, location! What type of habitat are you in and what time of year is it? To see a variety of butterflies, visit varied habitats in different parts of the state during the wildflower-growing season, typically April through October on the refuge.



photo: Irvin Pitts, Dotted skipper

Butterfly Behaviors

Butterfly watchers can observe a wealth of behavior as well as splendid color patterns. Often a pair will spiral upwards in a courtship “whirlabout.” You will see butterfly aggression, defense of territory, migration, mating, nectaring at flowers, basking in sunshine, socializing at puddles, predator evasion, egg laying, patrolling, and more.

Butterfly Life Cycle

Nearly everyone is familiar with one of nature’s most striking transformations: the metamorphosis of caterpillar to butterfly. The life cycle of butterflies and moths is marked by four very distinct-looking stages: egg, larva, pupa (or chrysalis), and adult. Together, these four stages constitute a single generation, which may last anywhere from three weeks to two years. The number of generations produced each year varies from species to species and even within species according to the lengths of regional growing seasons.

Butterfly - Host Plant Relationships

Among the many rewards of studying butterflies is the opportunity to observe the direct ecological relationship between insect and plant. Butterflies, like many other insects, interact closely with plants throughout their life cycle, beginning with the adult female’s selection of a host plant on which to place her eggs. This is a crucial choice since the hungry caterpillars, upon hatching, will immediately begin devouring the food plant. This will continue until they are fully-grown and ready to pupate.



photo: R. Askins, USFWS, Oxpen seepage bog



photo: USFWS, Red-spotted purple among summer wildflowers

Most butterflies have strong larval food plant preferences. Some species feed on just one species of plant. More often, a species’ caterpillars will eat a few closely related plant species and in some cases, large taxonomic groups of butterflies feed almost exclusively on a single plant family. A small proportion of butterflies will eat a broad range of plants from unrelated families. A dramatic example is the wide-ranging painted lady, for which more than 100 host plants from various families, including the asters, legumes, and mallows, have been recorded.

Dragonfly Watching

Dragonflies have been referred to as “the birders insect”. This is because so many people who birdwatch have become dragonfly watchers. Dragonflies come in all shapes, sizes, colors, and color patterns. Only recently have people begun to observe them, give them common names, and learn their habits and habitats. Viewing dragonflies can be done with the naked eye, but a pair of close focusing binoculars will make the job easier. Dragonflies can be seen perched, either for long or short periods. Most perch close to water, hanging on twigs or floating vegetation, or flat on the ground or rocks. Others will soar to great heights or patrol rapidly over the water and are almost impossible to observe. Each species tends to have its own unique set of behaviors. Dragonflies are very aware of movement. They have the ability to see in many directions at the same time due to their large compound eyes. However, their ability to see behind them is limited. If you need to approach one, you should approach from the rear. Your quiet presence will usually not disturb the dragonfly’s normal behavior.

Carolina Sandhills
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<http://www.fws.gov/refuges>

1800/344 WILD

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