BUTTERFLIES OF NORTH CAROLINA

Twenty-fourth Approximation

Compiled by Harry E. LeGrand, Jr.
Graphics by Thomas E. Howard, Jr.

March 2017

The enclosed material is an accounting of the species of butterflies of North Carolina, updated annually for the past 23 years. It is not considered to be a "publication". It is intended to be a guide or "handbook" for butterfly watchers and others interested in butterflies, as there is, as yet, no published book on the butterflies of North Carolina.

The county maps for each species represent a mix of specimens, photographs, and unconfirmed sight records. We have taken an unpublished set of county distribution maps for each species in the Carolinas, compiled by Jeff Nekola and Paul Opler in the 1980's, and added records from the past 23 years from many sources, mainly sight records, such that the reader cannot tell which county records refer to specimens or to sightings only. They include records known to the NC Natural Heritage Program and the NC Division of Parks and Recreation (DPR) through the end of 2016. The maps are certainly not complete. However, they should give the reader a general feel for the range of a species in the Carolinas. The vast majority of the over 169,400 records (from North Carolina) were entered by me (from e-mails and other correspondence) on computer from 1995-2016, and the remaining several thousand records were entered by DPR biologists into their agency's natural resources database. Tom Howard has formatted the butterfly data into the county dot maps and flight charts portrayed in the pdf version of this approximation. A feature starting with the 15th approximation is the splitting out of North Carolina county dots into those that are reasonably recent (solid dot), versus those with the last date either prior to 1980 or not known to us (open dot). This feature should show the reader the species, or portions of their ranges, that are clearly in decline. The South Carolina dot map is primarily that as taken from the Nekola - Opler atlas, but we have been adding new county records from that state in recent years with contributions from Dennis Forsythe and Brian Scholtens. Thus, the dot maps for South Carolina are becoming more "complete" than they were previously, but they are still somewhat below those from North Carolina in terms of thoroughness. Because there are now over 169,400 records in the database, we feel that the range maps and flight charts are fairly concise for most species in North Carolina.

The species are arranged in taxonomic order, and information about the life history — based mostly on my field experience — is given for each of the 177 species found in North Carolina. However, the material on food plants is not based on my experience, but on a number of references; Opler and Krizek (1984), Heitzman and Heitzman (1987), Opler and Malikul (1992), and Allen (1997) were the chief sources. The common names are taken from the Checklist & English Names of North American Butterflies (North American Butterfly Association, 2001 with a few exceptions noted in the species account). The scientific names are taken from the Butterflies of America website (2012). Other common and scientific names are listed beneath the county maps. Also included in this manuscript is a set of flight date charts (histograms) for each species for each of the three physiographic provinces (Mountains, Piedmont, and Coastal Plain) in North Carolina. One purpose of this document is to encourage the reporting of sightings or other records of rare species to the Natural Heritage Program. We keep computerized records on these rare species, in hopes of arranging protection for them. Rare species are noted by the "NC and US Status" line beneath the map; see Page v of this document for rarity codes. Rare species are also denoted in the Table of Contents (Pages i - iv).

Because locational information for many species is still relatively sparse for the state, we would appreciate any lists, such as county lists of even the common butterflies. From the list in Appendix B, it is easy to pick out the counties that have had little field work. Please contact Tom Howard or myself about the preferred format, if you plan to provide your lists on computer.

You should also note, in looking at range maps in field guides, that a number of butterflies are found very close to the North Carolina border, but which have yet to be found in the state (see Appendix A). This is particularly true in the mountains of Virginia, and another butterfly has been found on the Virginia side of the Dismal Swamp but has yet to be reported (to my knowledge) from North Carolina. Of the five species of butterflies found in South Carolina but not in North Carolina (see Appendix A), the Eastern Pygmy-Blue and the Bell's Roadside-Skipper are each resident species that have been recorded in counties adjacent to North Carolina but still have yet to be found in our state. (South Carolina also has a record for European Peacock, but we feel that this represents an escape and thus is not included in Appendix A.) In summary, we need more investigative field work in North Carolina, especially in the mountains and in the southeastern corner of the Coastal Plain.

If you have not already done so, we would encourage you to join the North American Butterfly Association, which began in 1993. It publishes American Butterflies, a quarterly journal on the watching of and conservation of butterflies in North America. Of course, also make sure that you have joined the Carolina Butterfly Society, which began in 1995.

In this document, we make mention of a handful of references. We strongly urge you to have a butterfly guide that contains both range maps and color photos of living butterflies. Glassberg's Butterflies through Binoculars: The East was published in 1999; this is the single best guide for butterfliers to obtain in the Carolinas, as it contains color range maps and color photos, plus excellent text containing key field marks, for all Eastern species. The Brock and Kaufman (2003) guide treats all butterflies of the United States and Canada. It contains color digital photos of all species, with text and range maps on facing pages. This is another "must" to have. Pyle has color photos of both eastern and western butterflies, but no range maps, whereas Opler and Malikul contains black-and-white range maps but few photos. Scott, Shull, and Heitzman and Heitzman have good color photographs of specimens. Allen also has color photos of specimens (of adults), plus excellent color photos of living caterpillars on their hostplants. Cech and Tudor (2005) contains color photographs of all NC species, as well as range maps and excellent text on habitat, life history, and other interesting facts about each species. A new guide by Glassberg (2012) contains color photos of all butterfly species of North America, including species occurring in adjacent Mexico. Though the text is sparse, there are range maps for all species. These, and other uncited references used in this compilation, are listed below.

• SUGGESTED REFERENCES •

Allen, T.J. 1997. *The Butterflies of West Virginia and Their Caterpillars*. University of Pittsburgh Press, PA

Allen, T.J., J.P. Brock, and J. Glassberg. 2005. *Caterpillars in the Field and Garden: A Field Guide to the Butterfly Caterpillars of North America*. Oxford University Press, New York.

Brimley, C.S. 1938. *The Insects of North Carolina*. N.C. Department of Agriculture, Division of Entomology, Raleigh.

Brock, J.P., and K. Kaufman. 2003. *Butterflies of North America*. Houghton Mifflin Co., New York.

Cech, R., and G. Tudor. 2005. *Butterflies of the East Coast: An Observer's Guide*. Princeton University Press, Princeton, NJ.

Daniels, J.C. 2003. *Butterflies of the Carolinas – Field Guide*. Adventure Publications, Inc., Cambridge, MN.

Emmitt, R. 2005. *Butterflies of the Carolinas & Virginias: Interactive CD*. [Note - privately published by Randy]

Glassberg, J. 1993. *Butterflies through Binoculars*. Oxford University Press, New York. (now out of print)

Glassberg, J. 1999. *Butterflies through Binoculars: The East*. Oxford University Press, New York.

Glassberg, J. 2012. *A Swift Guide to Butterflies of North America*. Sunstreak Books, Inc.

Glassberg, J., M.C. Minno, and J.V. Calhoun. 2000. *Butterflies through Binoculars: Florida*. Oxford University Press, New York.

Gochfeld, M., and J. Burger. 1997. *Butterflies of New Jersey*. Rutgers University Press, New Brunswick, NJ. Harris, L., Jr. 1972. *Butterflies of Georgia*. University of Oklahoma Press, Norman.

Heitzman, J.R., and J.E. Heitzman. 1987. *Butterflies and Moths of Missouri*. Missouri Dept. of Conservation.

Howell, W.M., and V. Charny. 2010. *Butterflies of Alabama*. Pearson Custom Publishing.

Iftner, D.C., J.A. Shuey, and J.V. Calhoun. 1992. *Butterflies and Skippers of Ohio*. Ohio Biological Survey Bulletin New Series. Vol. 9, Number 1.

Klots, A.B. 1951. *A Field Guide to the Butterflies of Eastern North America*. Houghton Mifflin Co., Boston.

Nielsen, M.C. 1999. *Michigan Butterflies and Skippers: A Field Guide and Reference*. Michigan State University Cooperative.

North American Butterfly Association. 2001. *Checklist & English Names of North American Butterflies; Second Edition*. NABA, Morristown, NJ.

Ogard, P.H., and S.C. Bright. 2010. *Butterflies of Alabama: Glimpses into their Lives* (Gosse Nature Guides). University of Alabama Press, Tuscaloosa.

Opler, P.A., and G.O. Krizek. 1984. *Butterflies East of the Great Plains: An Illustrated Natural History*. Johns Hopkins University Press, Baltimore.

Opler, P.A., and V. Malikul. 1992. *A Field Guide to Eastern Butterflies*. Houghton Mifflin Co., Boston.

Opler, P.A., and A.D. Warren. 2004. *Scientific Names for Butterfly Species of North America, North of Mexico*. Gillette Publications, Fort Collins, CO.

Opler, P.A., and A.B. Wright. 1999. *A Field Guide to Western Butterflies*. Houghton Mifflin Co., Boston.

Pavulaan, H. 1996. *Virginia Butterfly Atlas*. Unpublished.

Pyle, R.M. 1981. *The Audubon Society Field Guide to North American Butterflies*. Alfred A. Knopf, New York.

Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2011. *Rare, Declining, and Poorly Known Butterflies and Moths (Lepidoptera) of Forests and Woodlands of the Eastern United States*. Forest Health Technology Enterprise Team.

Scott, J.A. 1986. *The Butterflies of North America*. Stanford University Press, Stanford, CA

Shull, E.M. 1987. *The Butterflies of Indiana*. Indiana Academy of Science, Bloomington

Wagner, D.L. 2005. *Caterpillars of Eastern North America*. Princeton University Press, Princeton, NJ.

Wright, D.M. 1995. *"The American Azures: Our Blue Heaven"*. American Butterflies 3:20-30.

• WEBSITES •

Atlas of Rare Butterflies, Skippers, Moths, Dragonflies & Damselflies of Virginia. This site provides county range maps for all species considered as rare by the Virginia Department of Conservation and Recreation, Natural Heritage Program. Information on the life history of each of the rare species is also provided. <http://www.vararespecies.org>.

Butterflies and Moths of North America [BAMONA]. This site has changed since 2010 and is now more involved with on-line data entry. Thus, it is useful for entering one's personal butterfly sightings into a continental database, which will portray locations, dates, and other data for each of the sightings onto a Google-type map, to generate range maps. The website retains textual information for each species, but the shaded county range maps for each species have been removed. <http://www.butterfliesandmoths.org>.

Butterflies of America. This site provides an interactive listing of both the common and scientific names of butterflies of all species and subspecies, from Alaska to Panama and the Caribbean. A number of other features, such as photos, are available on this website. <http://www.butterfliesofamerica.com>.

Butterflies of North Carolina. This document, county species lists, and a searchable database are available on-line at <http://dpr.ncparks.gov/nbnc/index.html>.

NatureServe Explorer. This site was developed by The Nature Conservancy, whose science branch was split off and became a separate organization (formerly Association for Biodiversity Information and now named NatureServe). This website gives species-specific information on nearly all plants and animals in North America. <http://www.natureserve.org/explorer>.

North Carolina Butterfly Photos – Personal Websites. Individuals with websites with many dozens of species photographed in the state: **Will Cook** <http://people.duke.edu/~cwcook/> **Randy Emmitt** <http://www.rlephoto.com> **Jeff Pippen** <http://www.jeffpippen.com>.

• ORGANIZATIONS •

Carolina Butterfly Society - P.O. Box 18771, Greensboro, NC 27410 <http://www.carolinabutterflysociety.org>

North American Butterfly Association - 4 Delaware Road, Morristown, NJ 07960 <http://www.naba.org>

Southern Lepidopterists' Society - <http://www.southernlepsoc.org>

The Lepidopterists' Society - <http://www.lepsoc.org>

• ACKNOWLEDGMENTS •

A number of people have graciously contributed their butterfly records and photographs to help make this compilation more complete. The authors especially wish to thank: Salman Abdulali, Doug Allen, Betty Anderson, Richard Anderson, George Andrews, Tim Armstrong, Parker Backstrom, Kristy Baker, Nancy Baldwin, Allen Belden, Kevin Bischof, Lucas Bobay, Brian Bockhahn, Bret Boyd, Ken and Luann Bridle, Beth Brinson, Jason Brown, Dennis Burnette, Jeff Cagle, Kevin Caldwell, Charles Cameron, Jamie Cameron, David Campbell, Lori Carlson, Derb Carter, Bob Cavanaugh, Rick Cavasin, Bob Cherry, Ron Clark, Kim Coffey, John Connors, Will Cook, Ed Corey, Nancy Cowal, Evelyn Dabbs, Sudie Daves, Matthew Daw, Tony DeSantis, Greg Dodge, John Dole, Randy Emmitt, Elisa Enders, John Ennis, Nick Flanders, Duane Flynn, Dennis Forsythe, Jules Fraytet, John Fussell, Carl Ganser, Shay Garriock, Ron Gatrelle, Robert Gilson, Nick Haddad, Steve Hall, Sven Halling, Paul Hart, Scott Hartley, Chris Helms, Florence High, Daniel Hueholt, Ali Iyoob, Mark Johns, Doug Johnston, Samuel Jolly, Mark Jones, Peter Jones, Clyde Kessler, Kathy King, Kyle Kittelberger, Alan Kneidel, Leroy Koehn, Mark Kosiewski, Tom Krakauer, Shawn Lane, Gail Lankford, Lennie Lampel, Jonathan Lelito, Jason Love, Loretta Lutman, Jonathan Mays, Owen McConnell, Lillian McElrath, Kevin Metcalf, Joe Mickey, Susan Mitchell, Jim Monroe, Randy Newman, Jim Nottke, Matt Orsie, Lori Owenby, Jim Parnell, Dave Patton, Harry Pavulaan, Hunter Phillips, Taylor Piephoff, Jeff Pippen, Joe Poston, Ralph Preston, Dorothy Pugh, Jim and Liz Pullman, Lloyd Ramsey, Roger Rittmaster, Shelley Rutkin, Tom Sanders, Paul Scharf, Gene Schepker, Greg Schneider, Ed Schwartzman, Don Seriff, Eric Shaw, Ray Simpson, Sue Smith, Jim Springer, Richard Staniforth, Richard Stickney, Tom Stock, Pat and Clay Sutton, Chris Talkington, Simon Thompson, Mike Turner, Rob Van Epps, Billy Weber, Bud Webster, Ted Wilcox, Dan Williams, Floyd and Signa Williams, Logan Williams, Sparrel Wood, John Wright, Mary Wyant, Jane Wyche, and Ruth Young. We also thank Don DeFoe, Dana Soehn, and Keith Langdon for providing us with records from the Great Smoky Mountains National Park butterfly database. Additionally, Salman Abdulali has been very helpful in reviewing websites, museum collection records, and literature references to provide us data (e.g., collector, date, and location) for many old specimen records.

Harry E. LeGrand, Jr. 1109 Nichols Drive Raleigh, NC 27605 (919) 832-3202 hlegrandjr@gmail.com	Thomas E. Howard, Jr. 701 Parker Street Fuquay-Varina, NC 27526 (919) 552-2976 tom.howard@ncparks.gov

TABLE OF CONTENTS

Species	Page	Status *	
PAPILIONIDAE - 8 species in NC		**State**	**Global**
Pipevine Swallowtail -- *Battus philenor*	1	S5	G5
Zebra Swallowtail -- *Eurytides marcellus*	2	S5	G5
Black Swallowtail -- *Papilio polyxenes*	3	S5	G5
Giant Swallowtail -- *Papilio cresphontes*	4	SR - S2S3	G5
Eastern Tiger Swallowtail -- *Papilio glaucus*	5	S5	G5
Appalachian Tiger Swallowtail -- *Papilio appalachiensis*	6	S4	G4
Spicebush Swallowtail -- *Papilio troilus*	7	S5	G4?
Palamedes Swallowtail -- *Papilio palamedes*	8	S4	G4
PIERIDAE - 16 species in NC			
Checkered White -- *Pontia protodice*	9	SR - S1S2	G4
West Virginia White -- *Pieris virginiensis*	10	S3S4	G3?
Cabbage White -- *Pieris rapae*	11	SE	G5
Great Southern White -- *Ascia monuste*	12	SA	G5
Olympia Marble -- *Euchloe olympia*	13	SR - S1	G4G5
Falcate Orangetip -- *Anthocharis midea*	14	S4S5	G4G5
Clouded Sulphur -- *Colias philodice*	15	S4S5	G5
Orange Sulphur -- *Colias eurytheme*	16	S5	G5
Southern Dogface -- *Zerene cesonia*	17	SZN	G5
Cloudless Sulphur -- *Phoebis sennae*	18	S5	G5
Large Orange Sulphur -- *Phoebis agarithe*	19	SA	G5
Orange-barred Sulphur -- *Phoebis philea*	20	SA	G5
Barred Yellow -- *Eurema daira*	21	SA	G5
Little Yellow -- *Pyrisitia lisa*	22	S4	G5
Sleepy Orange -- *Abaeis nicippe*	23	S5	G5
Dainty Sulphur -- *Nathalis iole*	24	SZN	G5
LYCAENIDAE - 29 species in NC			
Harvester -- *Feniseca tarquinius*	25	S4	G4
American Copper -- *Lycaena phlaeas*	26	S4	G5
Great Purple Hairstreak -- *Atlides halesus*	27	S4	G4G5
Coral Hairstreak -- *Satyrium titus*	28	S4	G5
Edwards' Hairstreak -- *Satyrium edwardsii*	29	SR - S2	G4
Banded Hairstreak -- *Satyrium calanus*	30	S4S5	G5
Hickory Hairstreak -- *Satyrium caryaevorus*	31	SR - S1	G4
King's Hairstreak -- *Satyrium kingi*	32	W - S3S4	G3G4
Striped Hairstreak -- *Satyrium liparops*	33	S3S4	G5
Oak Hairstreak -- *Satyrium favonius*	34	SR - S3	G4G5
Brown Elfin -- *Callophrys augustinus*	35	S4	G5
Frosted Elfin -- *Callophrys irus*	36	SR - S2	G3
Henry's Elfin -- *Callophrys henrici*	37	S4	G5
Eastern Pine Elfin -- *Callophrys niphon*	38	S4	G5
Juniper Hairstreak -- *Callophrys gryneus*	39	S4	G5
Hessel's Hairstreak -- *Callophrys hesseli*	40	SR - S3	G3G4
White-M Hairstreak -- *Parrhasius m-album*	41	S4	G5
Gray Hairstreak -- *Strymon melinus*	42	S5	G5
Red-banded Hairstreak -- *Calycopis cecrops*	43	S5	G5
Early Hairstreak -- *Erora laeta*	44	SR - S2S3	G2G4
Cassius Blue -- *Leptotes cassius*	45	SA	G5

TABLE OF CONTENTS

Species	Page	Status *	
LYCAENIDAE - 29 species in NC		**State**	**Global**
Ceraunus Blue -- *Hemiargus ceraunus*	46	SA	G5
Eastern Tailed-Blue -- *Cupido comyntas*	47	S5	G5
Spring Azure -- *Celastrina ladon*	48	S4S5	G4G5
Holly Azure -- *Celastrina idella*	49	S4	G4G5
Summer Azure -- *Celastrina neglecta*	50	S5	G5
Appalachian Azure -- *Celastrina neglectamajor*	51	W - S3S4	G4
Dusky Azure -- *Celastrina nigra*	52	SR - S2	G4
Silvery Blue -- *Glaucopsyche lygdamus*	53	W - S2S3	G5
RIODINIDAE - 1 species in NC			
Little Metalmark -- *Calephelis virginiensis*	54	SR - S2	G4
NYMPHALIDAE - 50 species in NC			
American Snout -- *Libytheana carinenta*	55	S5	G5
Gulf Fritillary -- *Agraulis vanillae*	56	S4	G5
Zebra Longwing -- *Heliconius charithonia*	57	SZN	G5
Variegated Fritillary -- *Euptoieta claudia*	58	S5	G5
Diana Fritillary -- *Speyeria diana*	59	W - S3S4	FSC - G3G4
Great Spangled Fritillary -- *Speyeria cybele*	60	S5	G5
Aphrodite Fritillary -- *Speyeria aphrodite*	61	S4	G5
Regal Fritillary -- *Speyeria idalia*	62	SR - SX	FSC - G3
Meadow Fritillary -- *Boloria bellona*	63	S4	G5
Gorgone Checkerspot -- *Chlosyne gorgone*	64	SR - S1?	G5
Silvery Checkerspot -- *Chlosyne nycteis*	65	S5	G5
Texan Crescent -- *Anthanassa texana*	66	SA	G5
Phaon Crescent -- *Phyciodes phaon*	67	W - S3	G5
Pearl Crescent -- *Phyciodes tharos*	68	S5	G5
Northern Crescent -- *Phyciodes cocyta*	69	W - S3?	G5
Tawny Crescent -- *Phyciodes batesii*	70	SR - S2	FSC - G4
Baltimore Checkerspot -- *Euphydryas phaeton*	71	SR - S2	G4
Question Mark -- *Polygonia interrogationis*	72	S5	G5
Eastern Comma -- *Polygonia comma*	73	S5	G5
Green Comma -- *Polygonia faunus*	74	SR - S1S2	G5
Gray Comma -- *Polygonia progne*	75	SR - S1	G4G5
Compton Tortoiseshell -- *Nymphalis l-album*	76	SA	G5
Mourning Cloak -- *Nymphalis antiopa*	77	S5	G5
Milbert's Tortoiseshell -- *Aglais milberti*	78	SA	G5
American Lady -- *Vanessa virginiensis*	79	S5	G5
Painted Lady -- *Vanessa cardui*	80	SZB	G5
Red Admiral -- *Vanessa atalanta*	81	S5	G5
Mimic -- *Hypolimnas misippus*	82	SA	G5
Common Buckeye -- *Junonia coenia*	83	S5	G5
White Peacock -- *Anartia jatrophae*	84	SZN	G5
Red-spotted Purple -- *Limenitis arthemis astyanax*	85	S5	G5
Viceroy -- *Limenitis archippus*	86	S5	G5
Goatweed Leafwing -- *Anaea andria*	87	SA	G4G5
Hackberry Emperor -- *Asterocampa celtis*	88	S5	G5
Tawny Emperor -- *Asterocampa clyton*	89	S4	G5
Southern Pearly-eye -- *Lethe portlandia*	90	S4	G4

TABLE OF CONTENTS

Species	Page	Status * State	Status * Global
NYMPHALIDAE - 50 species in NC			
Northern Pearly-eye -- *Lethe anthedon*	91	S4	G5
Creole Pearly-eye -- *Lethe creola*	92	S3S4	G3G4
Appalachian Brown -- *Lethe appalachia*	93	S4	G4
Gemmed Satyr -- *Cyllopsis gemma*	94	S5	G4G5
Carolina Satyr -- *Hermeuptychia sosybius*	95	S5	G5
Intricate Satyr -- *Hermeuptychia intricata*	96	W - SU	G?
Georgia Satyr -- *Neonympha areolatus*	97	SR - S2	G3G4
Helicta Satyr -- *Neonympha helicta*	98	SR - S1?	G3G4
Mitchell's Satyr -- *Neonympha mitchellii*	99	SR - S1	E - G2
Little Wood-Satyr -- *Megisto cymela*	100	S5	G5
Common Wood-Nymph -- *Cercyonis pegala*	101	S5	G5
Monarch -- *Danaus plexippus*	102	S4	FSR - G4
Queen -- *Danaus gilippus*	103	SZB	G5
Soldier -- *Danaus eresimus*	104	SA	G5
HESPERIIDAE - 73 species in NC			
Silver-spotted Skipper -- *Epargyreus clarus*	105	S5	G5
Long-tailed Skipper -- *Urbanus proteus*	106	S4B	G5
Dorantes Longtail -- *Urbanus dorantes*	107	SZN	G5
Golden Banded-Skipper -- *Autochton cellus*	108	SR - S2	G4
Hoary Edge -- *Achalarus lyciades*	109	S5	G4G5
Southern Cloudywing -- *Thorybes bathyllus*	110	S5	G5
Northern Cloudywing -- *Thorybes pylades*	111	S5	G5
Confused Cloudywing -- *Thorybes confusis*	112	W - S3S4	G4
Hayhurst's Scallopwing -- *Staphylus hayhurstii*	113	S4	G5
Dreamy Duskywing -- *Erynnis icelus*	114	S5	G5
Sleepy Duskywing -- *Erynnis brizo*	115	S5	G5
Juvenal's Duskywing -- *Erynnis juvenalis*	116	S5	G5
Horace's Duskywing -- *Erynnis horatius*	117	S5	G5
Mottled Duskywing -- *Erynnis martialis*	118	SR - S2	G3
Zarucco Duskywing -- *Erynnis zarucco*	119	S4	G5
Funereal Duskywing -- *Erynnis funeralis*	120	SA	G5
Wild Indigo Duskywing -- *Erynnis baptisiae*	121	S4	G5
Grizzled Skipper -- *Pyrgus centaureae*	122	SR - S1	FSC - G5
Common Checkered-Skipper -- *Pyrgus communis*	123	S5	G5
White Checkered-Skipper -- *Pyrgus albescens*	124	W - SU	G5
Tropical Checkered-Skipper -- *Pyrgus oileus*	125	SA	G5
Common Sootywing -- *Pholisora catullus*	126	S5	G5
Swarthy Skipper -- *Nastra lherminier*	127	S5	G5
Clouded Skipper -- *Lerema accius*	128	S5	G5
Least Skipper -- *Ancyloxypha numitor*	129	S5	G5
Southern Skipperling -- *Copaeodes minima*	130	S4	G5
European Skipper -- *Thymelicus lineola*	131	SE	G5
Fiery Skipper -- *Hylephila phyleus*	132	S5	G5
Leonard's Skipper -- *Hesperia leonardus*	133	W - S3	G4
Cobweb Skipper -- *Hesperia metea*	134	W - S3	G4
Dotted Skipper -- *Hesperia attalus*	135	SR - S2S3	G3G4
Meske's Skipper -- *Hesperia meskei*	136	SR - S3	G3G4
Indian Skipper -- *Hesperia sassacus*	137	S3S4	G4G5

TABLE OF CONTENTS

Species	Page	Status *	
HESPERIIDAE - 73 species in NC		**State**	**Global**
Peck's Skipper -- *Polites peckius*	138	S4	G5
Tawny-edged Skipper -- *Polites themistocles*	139	S5	G5
Crossline Skipper -- *Polites origenes*	140	S5	G4G5
Long Dash -- *Polites mystic*	141	SR - S1	G5
Whirlabout -- *Polites vibex*	142	S5	G5
Southern Broken-dash -- *Wallengrenia otho*	143	S5	G5
Northern Broken-dash -- *Wallengrenia egeremet*	144	S4	G5
Little Glassywing -- *Pompeius verna*	145	S5	G5
Sachem -- *Atalopedes campestris*	146	S5	G5
Arogos Skipper -- *Atrytone arogos*	147	SR - SH	FSC - G3
Delaware Skipper -- *Anatrytone logan*	148	S4	G5
Byssus Skipper -- *Problema byssus*	149	S3S4	G3G4
Rare Skipper -- *Problema bulenta*	150	SR - S1	FSC - G2G3
Hobomok Skipper -- *Poanes hobomok*	151	S4	G5
Zabulon Skipper -- *Poanes zabulon*	152	S5	G5
Aaron's Skipper -- *Poanes aaroni*	153	SR - S1S2	G4
Yehl Skipper -- *Poanes yehl*	154	S4	G4
Broad-winged Skipper -- *Poanes viator*	155	S4	G5
Palatka Skipper -- *Euphyes pilatka*	156	S3S4	G3G4
Dion Skipper -- *Euphyes dion*	157	S4	G4
Dukes' Skipper -- *Euphyes dukesi*	158	SR - S1S2	G3
Berry's Skipper -- *Euphyes berryi*	159	SR - S1	G1G3
Two-spotted Skipper -- *Euphyes bimacula*	160	SR - S2	G4
Dun Skipper -- *Euphyes vestris*	161	S5	G5
Dusted Skipper -- *Atrytonopsis hianna*	162	S4	G4G5
Loammi Skipper -- *Atrytonopsis loammi*	163	SR - SH	FSC - G1
Crystal Skipper -- *Atrytonopsis quinteri*	164	SR - S1	FSC - G1Q
Pepper and Salt Skipper -- *Amblyscirtes hegon*	165	S4	G5
Lace-winged Roadside-Skipper -- *Amblyscirtes aesculapius*	166	S4	G3G4
Carolina Roadside-Skipper -- *Amblyscirtes carolina*	167	W - S3S4	G3G4
Reversed Roadside-Skipper -- *Amblyscirtes reversa*	168	SR - S3	G3G4
Common Roadside-Skipper -- *Amblyscirtes vialis*	169	S4	G4
Dusky Roadside-Skipper -- *Amblyscirtes alternata*	170	SR - S2	G2G3
Eufala Skipper -- *Lerodea eufala*	171	S4	G5
Twin-spot Skipper -- *Oligoria maculata*	172	S3S4	G4
Brazilian Skipper -- *Calpodes ethlius*	173	SZB	G5
Salt Marsh Skipper -- *Panoquina panoquin*	174	S4	G5
Ocola Skipper -- *Panoquina ocola*	175	S5	G5
Yucca Giant-Skipper -- *Megathymus yuccae*	176	W - S3S4	G5
Cofaqui Giant-Skipper -- *Megathymus cofaqui*	177	SR - S1?	G3G4

Appendix A (Species That Might Occur in North Carolina) A1 - A5
Appendix B (NC Butterfly Species per County) B1
Appendix C (NC Butterfly Species by Number of Counties) C1
Appendix D (NC Butterfly Species by Geographical Province) D1 - D3
Appendix E (NC Butterfly Species by NHP Rank) E1 - E3
Appendix F (Distribution of NC Butterfly Records by Year) F1 - F4

DEFINITIONS

* Status:

NC: (There is no State protection for butterflies in NC and thus no official status. SR and W are NC NHP designations only.)
SR = Significantly Rare; status given by the NC Natural Heritage Program, which tracks the species in its database.
W = Watch List; not tracked by the NC Natural Heritage Program, but species is scarce and NHP wishes to obtain records; may track at a later date.

US: E = Endangered
FSR = Federal Status Review
FSC = Federal Species of Concern

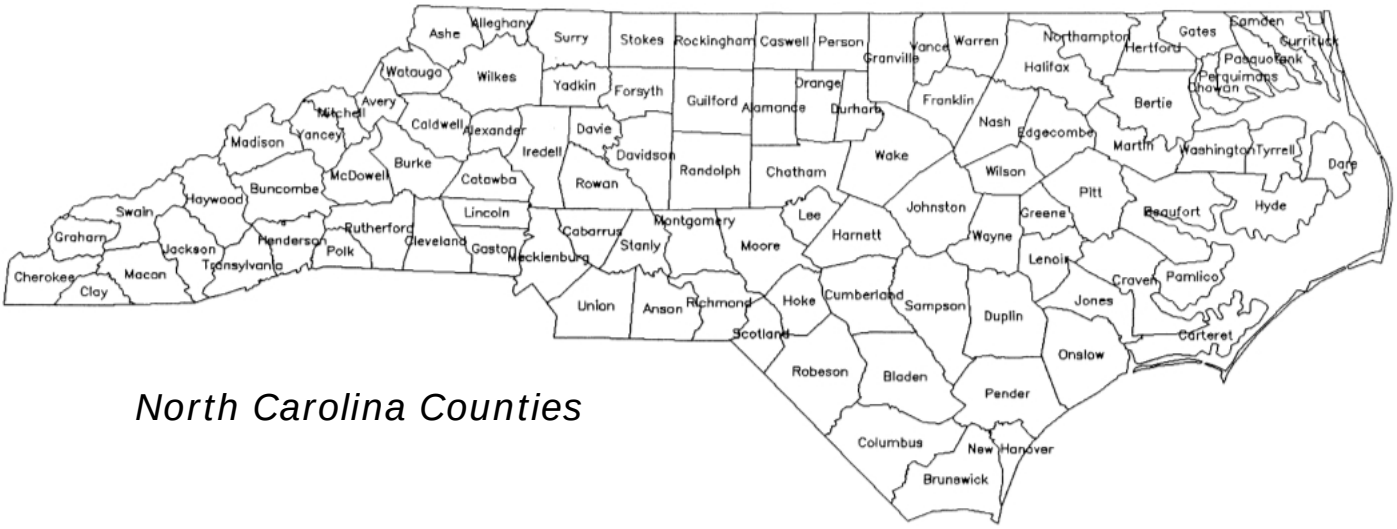
Rank: NatureServe gives each plant and animal species a global rank of rarity, and each state Natural Heritage Program gives each species occurring within its borders a state rank of rarity. Thus, each species has a global and state rank. For each species, the S# varies from state to state, depending on rarity (number of records, threats, etc.).

State:

Rank	Number of Extant Populations	
S1	1-5	Critically imperiled in North Carolina because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from North Carolina.
S2	6-20	Imperiled in North Carolina because of rarity or because of some other factor(s) making it very vulnerable to extirpation from North Carolina.
S3	21-100	Rare or uncommon in North Carolina.
S4	101-1000	Apparently secure in North Carolina, though it may be quite rare in parts of its range, especially at the periphery.
S5	1001+	Demonstrably secure in North Carolina, though it may be quite rare in parts of its range, especially at the periphery.
SA	1?	Accidental or casual; one to several records for North Carolina, but the state is outside the normal range of the species.
SH	0	Of historical occurrence, perhaps not having been verified in the past 20 years, and suspected to be still extant.
SX	0	Believed to be extirpated in North Carolina.
SU	1+	Possibly in peril in North Carolina but status uncertain; need more information.
SR	---	Reported from North Carolina, but without persuasive documentation.
SE	---	Exotic; not native to North Carolina.
SZ_	---	Population is not of conservation concern, generally because the population(s) is transitory, without any regular locales of occurrence whereby the species can be protected. A "B" modifier (i.e., SZB) indicates that the species may produce one or more broods in the state. An "N" modifier (i.e., SZN) indicates that the species does not normally breed/produce broods in the state.

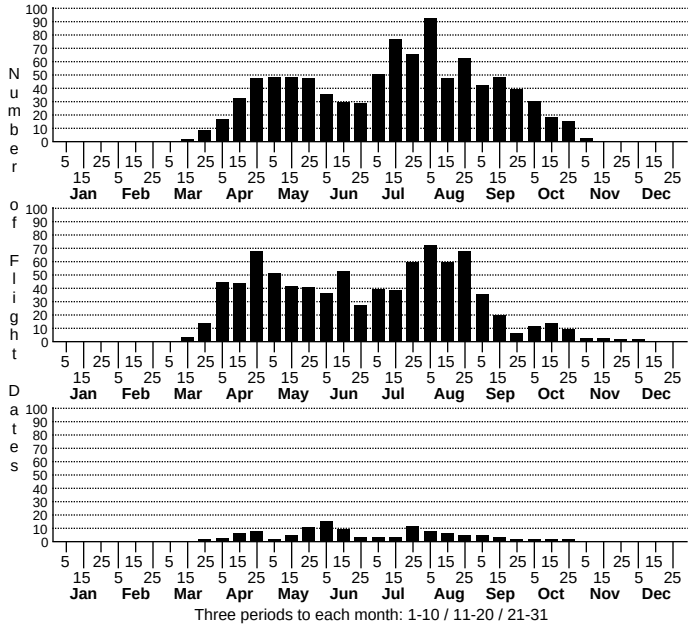
Global: Global ranks are similar to state ranks except "in North Carolina" is replaced by "globally", and "extirpation from North Carolina" is replaced by "extinction". An additional global rank is:

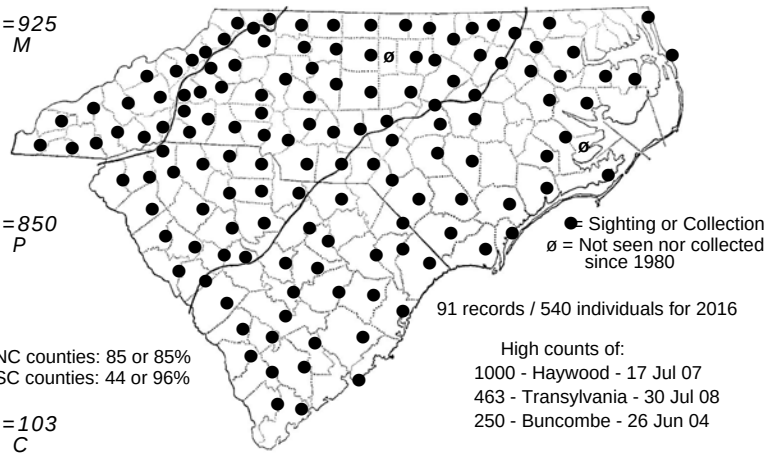
G_Q --- Questionable taxonomic assignment.



North Carolina Counties

Pipevine Swallowtail *Battus philenor*





Earliest date: Wake 13 Mar 2016
Latest date: Wake 6 Dec 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Blue Swallowtail

DISTRIBUTION: Nearly statewide; more numerous in the mountains than in the other provinces. Possibly absent in a few counties near the coast. Only one record from north of Albemarle Sound or from the eastern "Pamlimarle" Peninsula, and just one record for the Outer Banks.

ABUNDANCE: Fairly common to locally abundant in the mountains; mainly uncommon in the Piedmont and upper Coastal Plain; rare in most of the Coastal Plain.

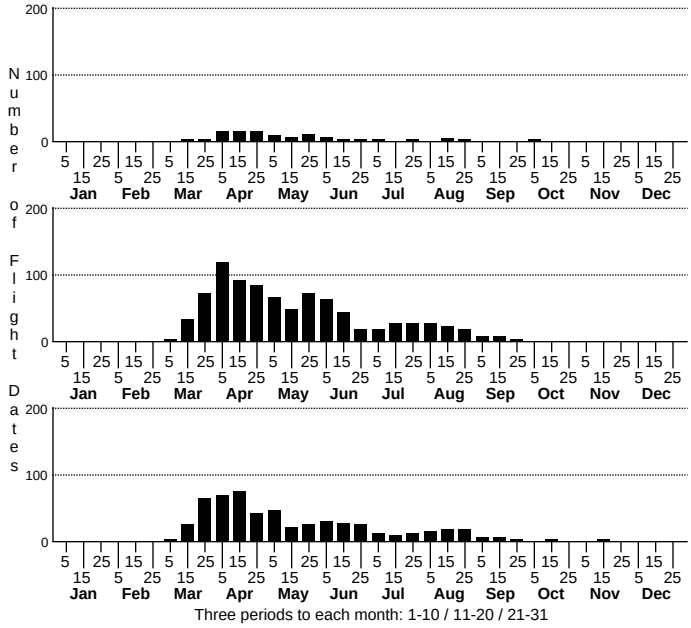
FLIGHT PERIOD: Late March to early November; sparingly from mid-March into early December. Probably three broods, but some references suggest that there are just two broods in our area. As with nearly all swallowtails, broods overlap in time such that there are no gaps in the flight period.

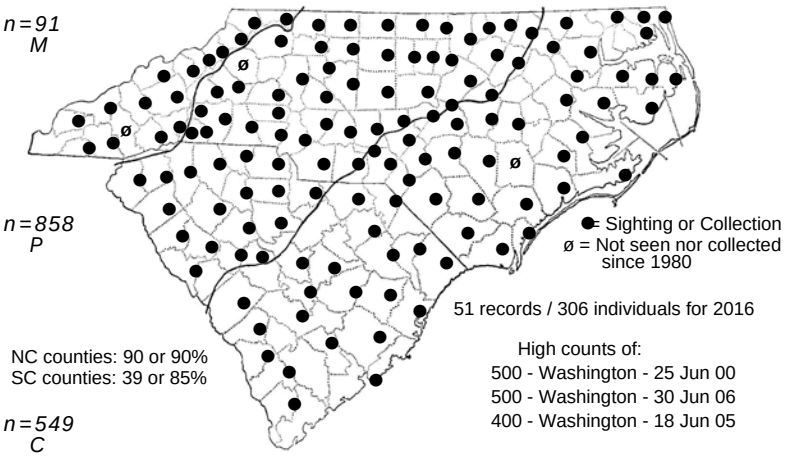
HABITAT: Typically along woodland borders, powerline clearings, roads, or wide trails through hardwoods or mixed woods. Usually seen not too far from deciduous woods, but it may occasionally be seen in weedy fields and brushy areas. Not often seen in the shade of forests, though the foodplants are forest interior species. At times seen in gardens and urban areas, and in the Piedmont and Coastal Plain it may be more often seen in such sites (gardens and arboretums) than in more remote areas.

FOOD AND NECTAR PLANTS: Native food plants are restricted apparently to Dutchman's pipe (Aristolochia durior) and Virginia snakeroot (A. serpentaria), but the species also uses exotic species of Aristolochia planted in gardens. Adults use a wide variety of flowers for nectaring; when nectaring they flutter their wings constantly, seldom remaining still for a good photograph.

COMMENTS: The infrequency of the species in the Piedmont and Coastal Plain is not unexpected, as Virginia snakeroot, its only known native food plant in these provinces, is infrequent as well. These swallowtails are encountered most frequently along dirt roads through rich montane woods where many are killed by speeding vehicles; found in the Piedmont in powerline clearings and woodland borders, in mesic situations. It has a quick, "choppy" flight like that of Black and Zebra swallowtails rather than the slower and deeper wingbeats of Eastern Tiger and Spicebush swallowtails.

Zebra Swallowtail *Eurytides marcellus*





Earliest date: Gates 7 Mar 2009
Latest date: Gates 14 Nov 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Essentially statewide, but only a few records for the northern mountains and the extreme northwestern Piedmont. Might be a migrant or vagrant to some mountain counties, as foodplants may be lacking at mid- and higher elevations.

ABUNDANCE: Somewhat local in occurrence; may be quite common in a few places where the foodplant -- pawpaw -- is abundant, such as near and in Pettigrew State Park and in the Great Dismal Swamp. Generally uncommon to locally fairly common in the Coastal Plain and eastern Piedmont, but rare to locally uncommon in the western half of the Piedmont. In the mountains, generally limited to areas below 2500 feet; even in these lower elevations, it is rare to uncommon.

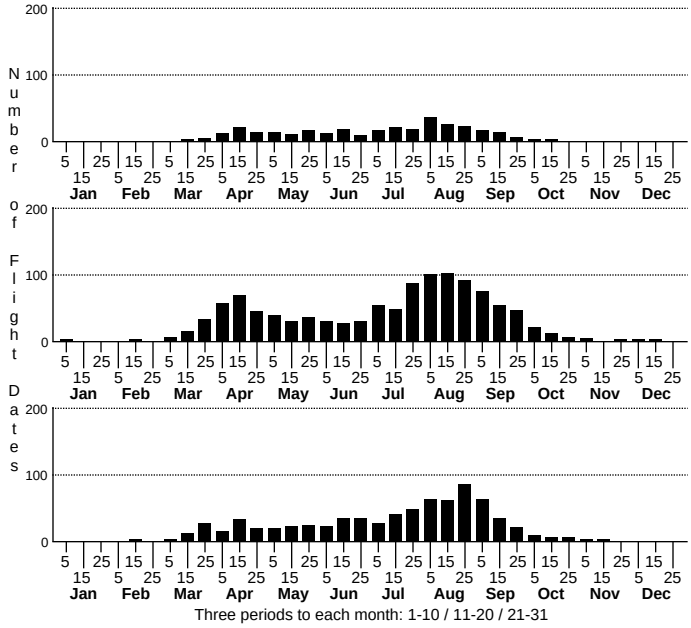
FLIGHT PERIOD: Mid-March to mid-September, and sparingly in the Coastal Plain into November; scarce after late August. Apparently three broods, at least downstate; the first brood is from mid-March to mid-May, the second brood from mid-May to early July, and a small brood from mid-July into September. Does not appear in the mountains until late March, and the flight periods are very poorly known there. The first brood is the largest in most areas (even though the state's highest counts are from the second brood).

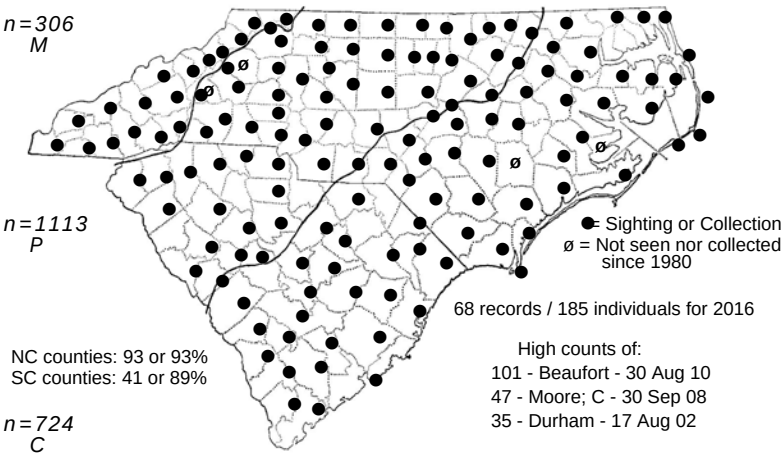
HABITAT: The species is most common where tall pawpaw (Asimina triloba) grows -- bottomlands of brownwater rivers, moist nonriverine swamps, and rich slopes. Various other moist hardwood forests provide habitat for the species. As with nearly all butterflies, it may be seen along woodland borders and other open places, and it may at times be seen in pine forests well away from pawpaw.

FOOD AND NECTAR PLANTS: Foodplants are strictly the two pawpaws in NC -- tall pawpaw (Asimina triloba) and dwarf pawpaw (A. parviflora); the latter is probably used only infrequently. I have not noted an affinity for any particular nectar plants, but as with all swallowtails, the species is often found nectaring. Zebra Swallowtails swarm on buttonbush (Cephalanthus occidentalis) when it blooms in June along canals in open fields north of Pettigrew State Park.

COMMENTS: This is one of the most striking and most easily identified of our butterflies. Usually only one or two are encountered at a time, but at a few rich forests such as Pettigrew State Park, Great Dismal Swamp, and Camassia Slopes, in the Coastal Plain, ten or more individuals can be seen per hour. Nonetheless, the species has a more restricted distribution in the Coastal Plain than most other swallowtails because pawpaws are found mainly in brownwater floodplains or nonriverine hardwood forests over mineral soils.

Black Swallowtail *Papilio polyxenes*





Earliest date: Randolph 1 Jan 2012
Latest date: Harnett; P 14 Dec 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; found in all provinces, and undoubtedly occurs in all counties.

ABUNDANCE: Overall, uncommon to fairly common. Somewhat more numerous near the coast than elsewhere, and it may be common locally in some tidewater sites. Despite it being considered a common butterfly in the eastern United States, it is not a common butterfly in NC. Interestingly, caterpillars are often seen on garden plants (in the umbel family), but adults seldom seem to be numerous.

FLIGHT PERIOD: Mid-March to mid-October; rarely to early November, with a few records until the end of December. There are apparently three broods, but the species has a continuous flight period, with no gaps in the flight season. In the Piedmont and Coastal Plain, abundance peaks in July and August.

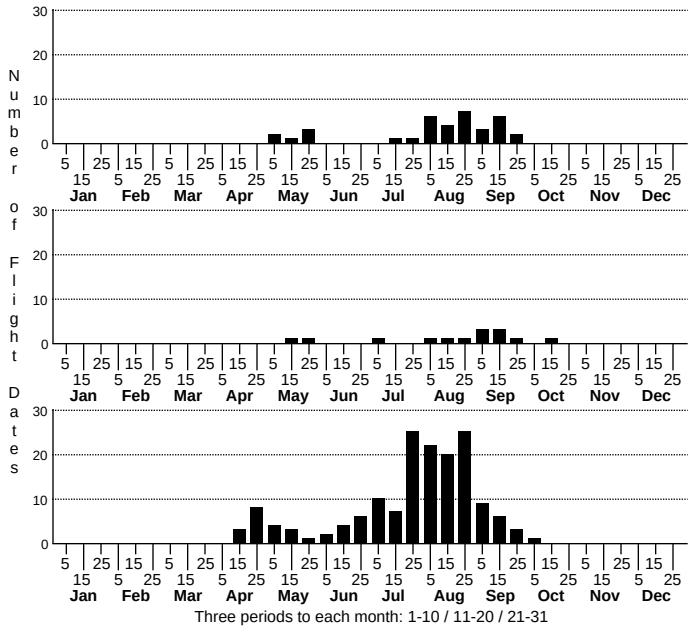
HABITAT: This species likes open country and is seldom seen in forests or even along forest edges. It prefers old fields, meadows, marshes, savannas, gardens, and other open places.

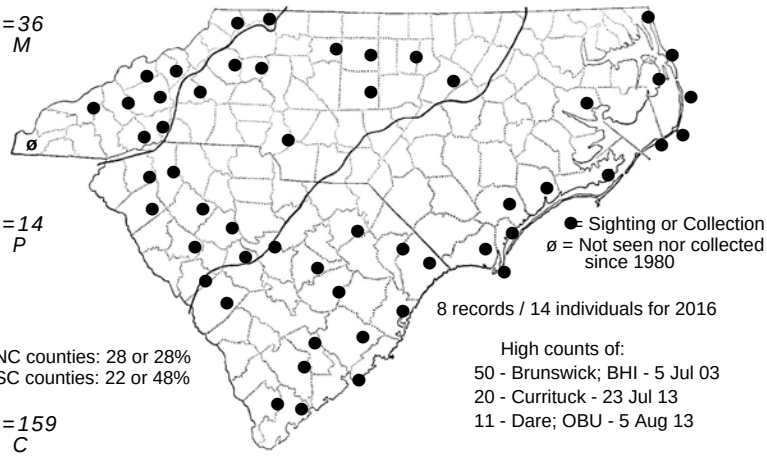
FOOD AND NECTAR PLANTS: Foodplants are species in the umbel family, such as Queen Anne's-lace (Daucus carota); both native and introduced species are used. Adults nectar on many species, such as milkweeds.

COMMENTS: This can be a difficult species to identify. First, it has a very rapid and erratic flight, making it difficult to identify on the wing. Second, it can be confused with Spicebush, Pipevine, Palamedes, and female Eastern Tiger swallowtails unless seen well when perched. This identification problem may account for its relative uncommonness -- many blackish swallowtails seen flying by the observer must be left unidentified, and it is suspected that a fair percentage of these are Blacks. Even so, it is not nearly as numerous as the Eastern Tiger, Spicebush, and Palamedes swallowtails in NC.

This is one of the few species as familiar to butterfly gardeners as to field biologists. In some areas, Black Swallowtails are most easily found in yards and gardens, thanks to plantings of non-native foodplants such as fennel (Foeniculum vulgare) and parsley (Petroselinum hortense).

Giant Swallowtail *Papilio cresphontes*





8 records / 14 individuals for 2016

High counts of:
50 - Brunswick; BHI - 5 Jul 03
20 - Currituck - 23 Jul 13
11 - Dare; OBU - 5 Aug 13

NC counties: 28 or 28%
SC counties: 22 or 48%

New for 24th: Henderson, Randolph

Earliest date: Carteret 15 Apr 2008
Latest date: Forsyth 12 Oct 2009

Status NC	Status US	Rank NC	Rank Global
SR	-	S2S3	G5

Synonym: *Heraclides cresphontes*
Other Name: Orange Dog

DISTRIBUTION: Mainly coastal, near maritime forests and thickets. However, also likely to be resident in the Brushy Mountains, the New River area in Ashe/Alleghany counties, and in a few other foothill and mountain counties. Certainly a migrant/stray in the heavily surveyed central and eastern Piedmont counties, and might well be a migrant/stray in some mountain areas.

ABUNDANCE: Uncommon and local along the coast, in and adjacent to extensive maritime forests and thickets, probably most numerous on Bald Head Island. Very rare and local away from the coast as a resident in the foothills and low mountains, and extremely rare to very rare as a migrant (nearly all of the Piedmont and the Coastal Plain away from tidal water).

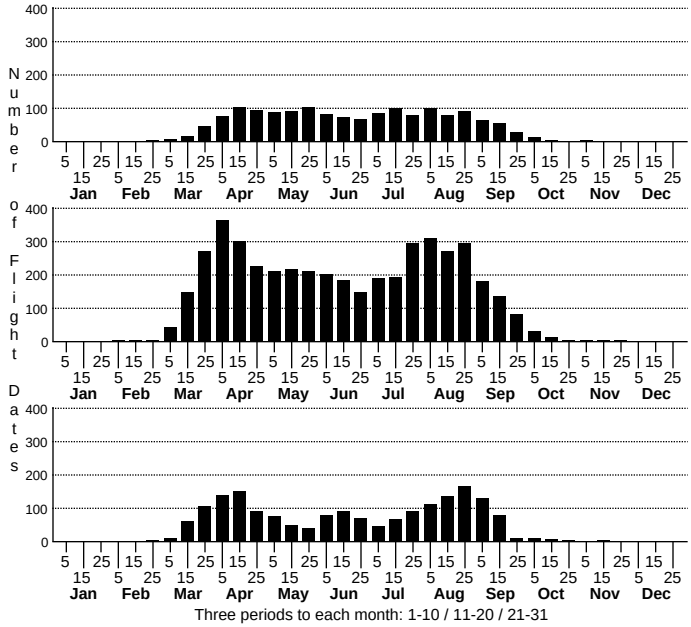
FLIGHT PERIOD: Apparently two broods. The first brood seems somewhat rudimentary, with a small flight from mid-April to late May near the coast, and throughout May well inland. The primary flight (possibly composed of two broods) occurs near the coast from mid-June to early October, with numbers peaking in July and August; in the foothills and mountains it occurs from mid-July to late September, and sparingly into October. However, much more data are needed to define the flight periods away from the coast.

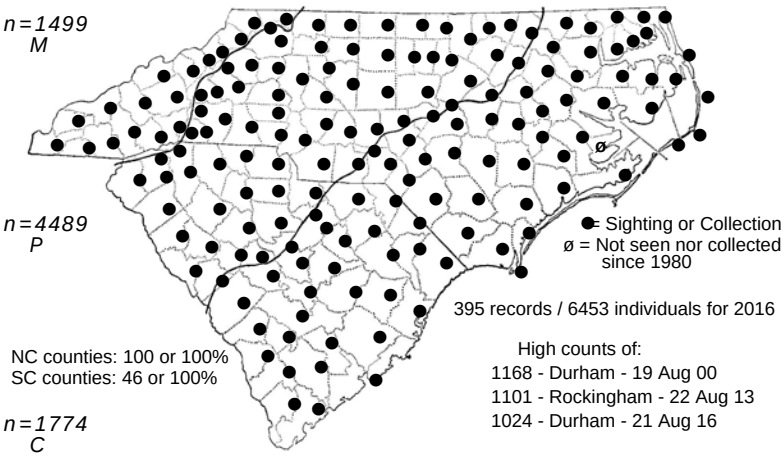
HABITAT: Along the coast, seen mainly in or near maritime forests or thickets, especially extensive, high-quality forests with prickly-ash (Xanthoxylum clava-herculis). In the Brushy Mountains and in Caldwell County, seen in upland forests with hoptree (Ptelea trifoliata). Seen along the New River in Ashe and Alleghany counties, where hoptree grows in places along this river. Migrants could be seen in most any habitat, though most are seen in gardens and arboretums.

FOOD AND NECTAR PLANTS: The foodplants are always in the rue family (Rutaceae); in NC, prickly-ash along the coast and hoptree at scattered inland sites (over mafic soil). However, in some areas, at least inland such as in Buncombe County, non-native species in this family might be used as foodplants, as the native hoptree is quite rare in most of the region. The species nectars frequently, almost always with wings rapidly flapping.

COMMENTS: It is no surprise that this is a scarce butterfly in NC. Prickly-ash is only found in scattered maritime forests along the coast, and hoptree is a rare to occasional shrub inland, both in rocky uplands and in rich woods and streambanks. It is expected that other colonies will be found in the Brushy Mountains, where hoptree is present in moderate numbers. A small colony was discovered on a mountain, apparently part of the Brushy Mountain range, in Caldwell County in May 2007. There were a number of records in several areas of Buncombe County in 2010, suggesting that small breeding populations are present in lower elevations in that mountain county. Hoptree may be numerous enough in a few other places, such as Chimney Rock, that other colonies can be intentionally searched for. Bald Head Island might be your best bet for seeing this spectacular butterfly in NC, but Ocracoke Island and other coastal sites might be more accessible. In 2013, several observers found Giant Swallowtails in double digits in a single day, along the northern portion of the Outer Banks, including 20 at the Pine Island Audubon Sanctuary in late July.

Eastern Tiger Swallowtail *Papilio glaucus*





Earliest date: Guilford 1 Feb 2013
Latest date: Randolph 28 Nov 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Synonym: *Pterourus glaucus*

DISTRIBUTION: Statewide, not obviously favoring one province over another. It is found in all 100 counties.

ABUNDANCE: Common to very common across the state; one of the most often seen butterflies in NC, and a dozen or more swallowtails can often be seen in a single day.

FLIGHT PERIOD: Early March to early October (and exceptionally to November). At least two broods, and possibly three; the broods overlap, with no gaps. In the Coastal Plain and Piedmont, flight periods are apparently early March to late May, and early June to mid-September, with the "second" perhaps being composed of two broods. Mountain flights generally are from mid-March to mid- or late June, and late June into early October.

HABITAT: Very widespread. Typically along edges of deciduous or mixed woods, old fields, and meadows, but also commonly seen in gardens and suburban habitats. Not usually seen in deep shade, but often found along openings in woods, wide trails, etc.

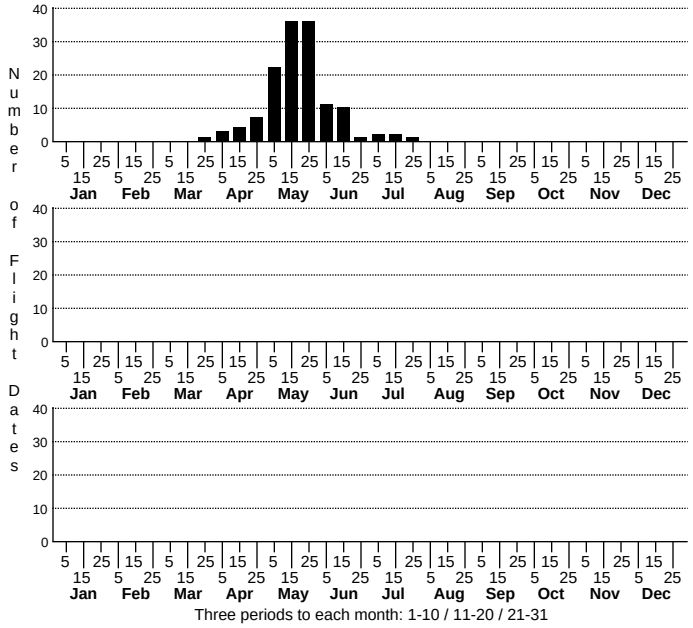
FOOD AND NECTAR PLANTS: Many tree and shrub species, but apparently tuliptree (Liriodendron tulipifera) and black cherry (Prunus serotina) are commonly used. Nectar plants are very widespread, but the species prefers tall herbs such as Joe-pye-weeds (Eupatorium spp.), ironweeds (Vernonia spp.), and milkweeds (Asclepias spp.). In fact, this is by far the most commonly seen butterfly nectaring on Joe-pye-weed.

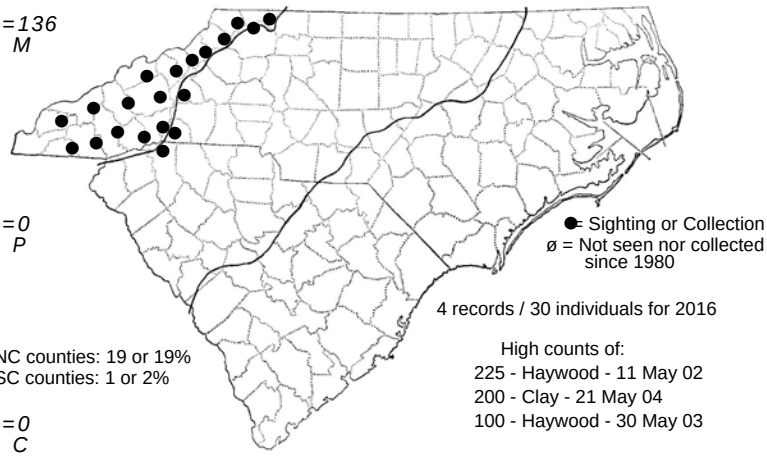
COMMENTS: This is perhaps the most familiar butterfly in NC to the novice, even though the Monarch is more famous. It is so widespread that the observer would have no idea of the foodplants of the larvae without reading about them in a book! Oddly, in 2014 the species was quite scarce over nearly all of the state, and numbers failed to rebound in the summer and fall. Most observers averaged seeing just one swallowtail every few weeks.

NOTE: A relatively new species -- Appalachian Tiger Swallowtail (Papilio appalachiensis) -- was described in 2002. As this species is locally common in the NC mountains in May and June, observers can no longer assume that a tiger swallowtail in the mountains during these months is an Eastern Tiger Swallowtail. In fact, the Eastern at times is in the minority at swallowtail "puddle parties"!

This species was approved by the N.C. State Legislature in 2012 as the "Official State Butterfly".

Appalachian Tiger Swallowtail *Papilio appalachiensis*





4 records / 30 individuals for 2016

High counts of:
225 - Haywood - 11 May 02
200 - Clay - 21 May 04
100 - Haywood - 30 May 03

NC counties: 19 or 19%
SC counties: 1 or 2%

Earliest date: McDowell; M 29 Mar 2012
Latest date: Watauga 21 Jul 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

Synonym: *Pterourus appalachiensis*

DISTRIBUTION: Appalachian Mountains, from PA to GA. Ranges over essentially all of the NC mountains, at nearly all elevations. Documented for the first time in SC in April 2010 (photo by Doug Allen in Greenville County). No known Piedmont records at present.

ABUNDANCE: Locally common to very common in the southern half of the mountains, but apparently much less common in the northern mountains. Often outnumbers Eastern Tiger Swallowtail, at least at certain periods in its brood. Abundance levels in much of the mountains are poorly known, especially in the northern counties; most of the higher counts have been in counties southwest of Asheville (Buncombe County). For some unknown reason, reports of the species were quite scarce in 2016, with only four reports.

FLIGHT PERIOD: A single spring flight. Adults normally begin emergence in late April, but in warm springs (such as 2012) can appear by the end of March. The emergence is perhaps a month after the Eastern Tiger at the same elevation. They fly well into June, and a few remain into July. Flight is completed once the main summer flight of the Eastern Tiger Swallowtail begins.

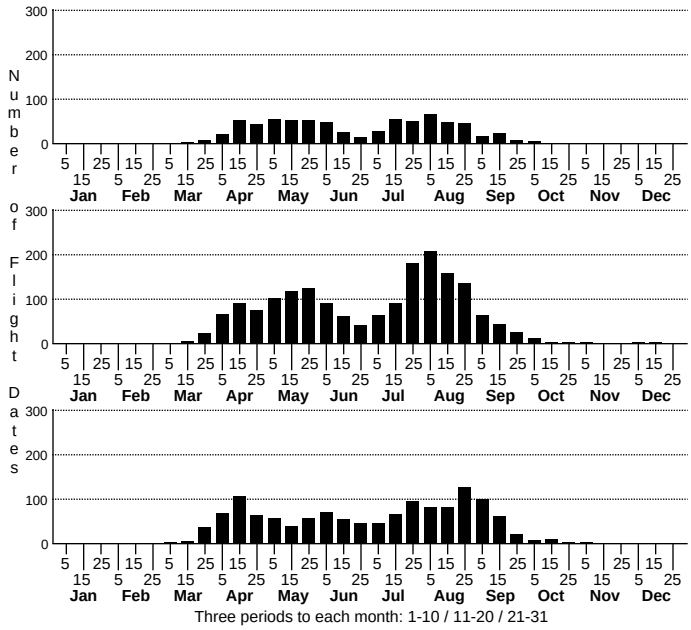
HABITAT: Rich deciduous woodlands, frequently in the same habitats as Eastern Tiger Swallowtail. Best found along roads and trails through rich woods, especially at puddles and wet spots on dirt roads.

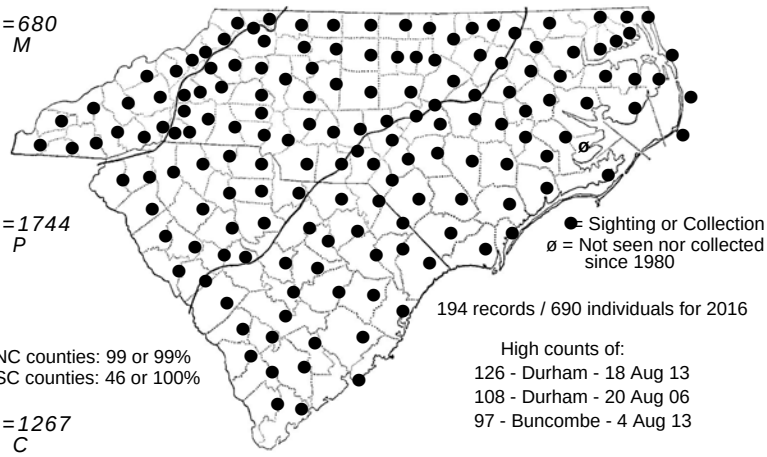
FOOD AND NECTAR PLANTS: As of 2013, the only reported foodplant is black cherry (Prunus serotina), though other trees are presumably used. Males typically are seen gathering minerals and moisture from wet areas along dirt roads, where they can be compared with males of Eastern Tiger Swallowtail (at lower and mid-elevations). Nectar sources are varied.

COMMENTS: This taxon was described in 2002 by Harry Pavulaan (who assisted with this species account) and David Wright in The Taxonomic Report. They have worked with raising various stages of the life cycle and have determined that the Appalachian is distinct from Eastern. Recent studies by Krushnamegh Kunte et al. (2011) have determined that this species evolved long ago from the interbreeding of Eastern Tiger and Canadian Tiger (P. canadensis) swallowtails. A new species -- Appalachian Tiger -- was formed with viable offspring that then has evolved on its own; interestingly, the Appalachian is much larger than either of its two original parent species! It now rarely reproduces with its parental species and is considered a good species today (i.e., it isn't proper to say that an individual Appalachian Tiger is a "hybrid", rather, its species evolved as a hybrid between two other species).

Phenotypic differences between the two species are slight. Appalachians are considerably larger than the first brood of Eastern Tiger Swallowtail; the latter species, however, has larger individuals in later broods. I have noted this size difference at puddles in May, where there are clearly large individuals (Appalachian) and "small" ones (Eastern), seemingly about 20% difference in overall size. The second important difference is that Appalachians have a yellow submarginal band on the underside fore wing, whereas the Easterns have a row of yellow crescents. Third, Appalachians have a straight, aligned black-yellow separation on the upper side of the wings, and the yellow on the hind wings extends in a deep "V"; in the Eastern, the yellow on the hind wing is more rounded (near the tail) with a convex boundary with the black border. Fourth, Eastern hind wings have a more "rounded" appearance, whereas Appalachians have more "angular", elongated and triangular hind wings. Fifth, the upper side hind wing of the female Appalachians contain very little blue, whereas the female Easterns contain considerable blue within the black of the hind wing. The black form of the female is seemingly quite rare, and it wasn't even known for several years after the species was first described. Ron Gatrelle indicates that female Appalachians are elusive, seldom seen and are much more wary than female Easterns.

Spicebush Swallowtail *Papilio troilus*





194 records / 690 individuals for 2016

High counts of:
126 - Durham - 18 Aug 13
108 - Durham - 20 Aug 06
97 - Buncombe - 4 Aug 13

NC counties: 99 or 99%
SC counties: 46 or 100%

New for 24th: Dare; OBM

Earliest date: Onslow 4 Mar 2008
Latest date: Forsyth 12 Dec 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G4?

Synonym: *Pterourus troilus*
Other Name: Green-clouded Swallowtail

DISTRIBUTION: Statewide, widespread in all three provinces; undoubtedly found in all counties.

ABUNDANCE: Widespread and generally common, though seldom seen in really large numbers; abundance is reasonably similar in each of the three provinces. It is the second-most commonly seen swallowtail (after Eastern Tiger) in the Piedmont.

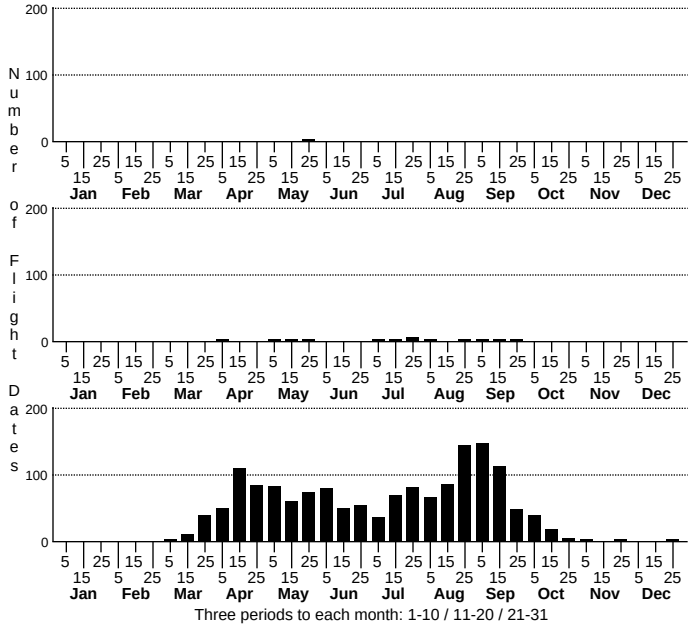
FLIGHT PERIOD: Late March to early October, and sparingly into December in mild autumns. Apparently two broods, with a possible partial third brood; main flights downstate are late March to mid- or late June, and early July to early October. September and October may represent a small third flight. The mountain flight period is late March to late June, and early July to late September.

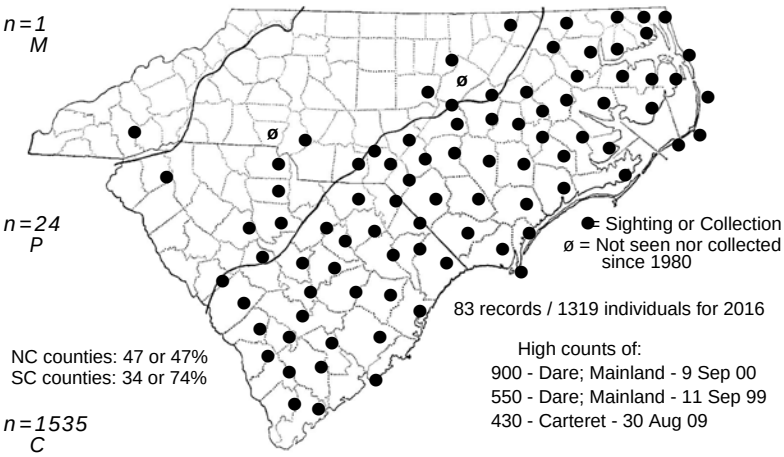
HABITAT: Generally along woodland borders and openings, both upland hardwoods and bottomlands. Prefers hardwood forests over pine or other conifer forests. Seen along wooded roads, powerline clearings, etc., but not common in deep woods. Not often seen in extensive open country, nor prone to wander to gardens and suburban areas.

FOOD AND NECTAR PLANTS: Despite the species' common name, the primary foodplant in the state is sassafras (Sassafras albidum), though spicebush (Lindera benzoin) is also used. Nectar plants are highly varied, but milkweeds are commonly used.

COMMENTS: This species flies somewhat slower or less erratically than the Black Swallowtail and is thus easier to identify in flight. This species and the dark form female Eastern Tiger Swallowtail are the most often seen dark swallowtails in the Piedmont, but the Pipevine Swallowtail may outnumber the Spicebush in many mountain sites. Despite its name being Spicebush Swallowtail, most ovipositing in NC has been observed on sassafras, which grows in full sun or partial shade, places favored by this swallowtail; the butterfly is actually not often seen in the vicinity of spicebushes, which typically grow in moderate to deep shade of forest interiors. Thus, "Sassafras Swallowtail" might be a better name for the species!

Palamedes Swallowtail *Papilio palamedes*





83 records / 1319 individuals for 2016

High counts of:
900 - Dare; Mainland - 9 Sep 00
550 - Dare; Mainland - 11 Sep 99
430 - Carteret - 30 Aug 09

NC counties: 47 or 47%
SC counties: 34 or 74%

Earliest date: Brunswick 8 Mar 1997
Latest date: Brunswick 31 Dec 2011

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

Synonym: *Pterourus palamedes*

DISTRIBUTION: Throughout the Coastal Plain, but only a stray (presumably) to the eastern edge of the Piedmont, and an accidental stray to the mountains. Occurs in practically all Coastal Plain counties in NC, but scarce in the northwestern Coastal Plain, where no records yet for a few counties.

ABUNDANCE: Common to abundant; abundant in many lower Coastal Plain counties with extensive pocosins and swamps. Dozens to over 100 individuals may be seen in a single day in some places, such as mainland Dare County, the Great Dismal Swamp, and in the Green Swamp.

FLIGHT PERIOD: Late March into mid-October; rarely in early March and even into December (in a very mild fall). It is normally the latest flying swallowtail in fall. Probably two broods; late March to late June or early July, and early July to mid-October. There is no gap, however, between the flight periods.

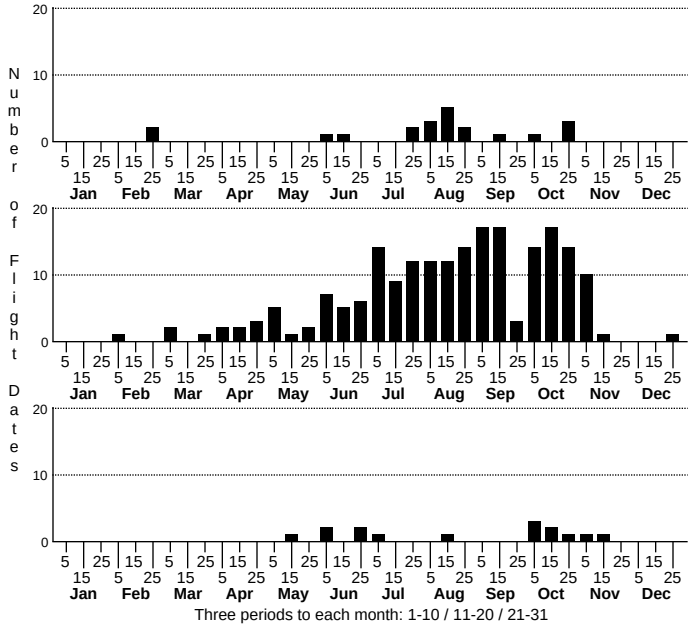
HABITAT: Very widespread, but generally near swamps, pocosins, bay forests, savannas, and other moist forests. Not as common in dry places such as xeric longleaf pine forests. Not usually seen in deep shade, but often seen flying across fields, roads, and other openings.

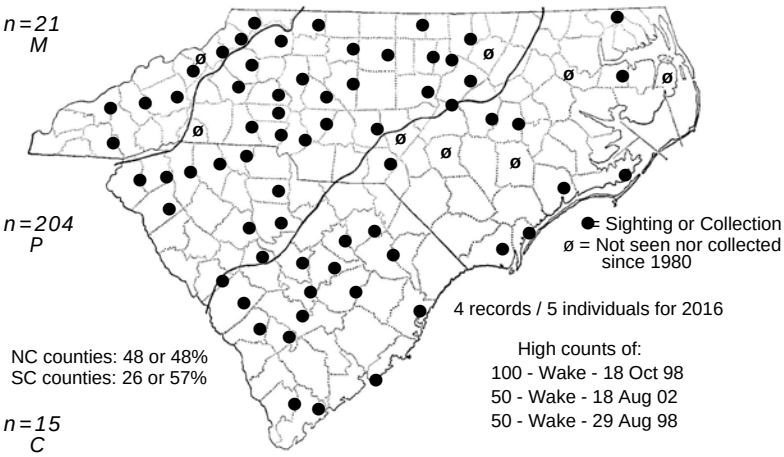
FOOD AND NECTAR PLANTS: The main foodplant is primarily redbay (Persea borbonia), and also perhaps sassafras (Sassafras albidum). Redbay is abundant in most moist forests and pocosins in the Coastal Plain. The nectar plants are widespread; common on savanna plants such as blazing stars (Liatris spp.).

COMMENTS: This is often the most common and conspicuous butterfly seen on a day's visit to savannas, pocosins, and swamp roads in the Coastal Plain. It is a tame species allowing close approach while nectaring; it is also a rather slow flying species, such that large numbers are hit and killed by cars driving through the Green Swamp and through the Alligator River National Wildlife Refuge. The most remarkable record for the state was one photographed by John Gerwin on May 23, 2010, along the Blue Ridge Parkway in Jackson County, at close to 6000 feet!

Only in the past few years has there been a disastrous die-off of redbay trees in FL, GA, and now in southern and coastal SC; and within this period scattered death of trees has been noted in extreme southeastern NC. Most such trees are now dead around Hilton Head Island, SC. An introduced beetle, native to Asia, along with a fungus, are the cause of the death, though there is some question about which organism first attacks the healthy tree. This death of large areas of redbay has caused NatureServe to upgrade the Global Rank of the Palamedes Swallowtail from G5 (demonstrably secure) to G4 (apparently secure). Even though the butterfly remains abundant in most of its range in the Carolinas (for now), and no decline has yet been noted in NC, the State Rank has been upgraded to S4 to be "in-line" with the Global Rank. Also, it is expected that the closely related sassafras may well be impacted, which could impact not only the Palamedes Swallowtail but the Spicebush Swallowtail.

Checkered White *Pontia protodice*





Earliest date: Forsyth 5 Feb 2008
Latest date: Forsyth 22 Dec 1998

Status NC	Status US	Rank NC	Rank Global
SR	-	S1S2	G4

DISTRIBUTION: Nearly statewide, but records scattered, with no records for the majority of counties; primarily in the Piedmont, at least at the present time. There is a surprising scarcity of records for the Coastal Plain, especially as the species is more numerous in the states south of NC than to the north. Several new county records in the mountains and foothills were made in 2011, though these might all relate to strays wandering from the Piedmont into these higher areas.

ABUNDANCE: Rare and declining (and easily overlooked among the widespread Cabbage White); mostly a resident in the Piedmont, but some records (especially in the mountains and near the coast) may be of migrants. Certainly more numerous 20 or more years ago. Appears to be very rare to rare in the mountains and (surprisingly) very rare in nearly all of the Coastal Plain; most numerous now in the Piedmont, where locally common until several years ago in Wake County, but a very good find in most areas. Now declining due to loss of agricultural areas to development or abandonment.

FLIGHT PERIOD: March into November (exceptionally in February and December), with three or more broods. The first brood is scarce in NC, occurring from March to late May. The primary flights (second and third broods) seem to occur between late June and early November; more data are needed in the Coastal Plain and mountains, but there is a surprising near-absence of Coastal Plain records between mid-July and the end of September.

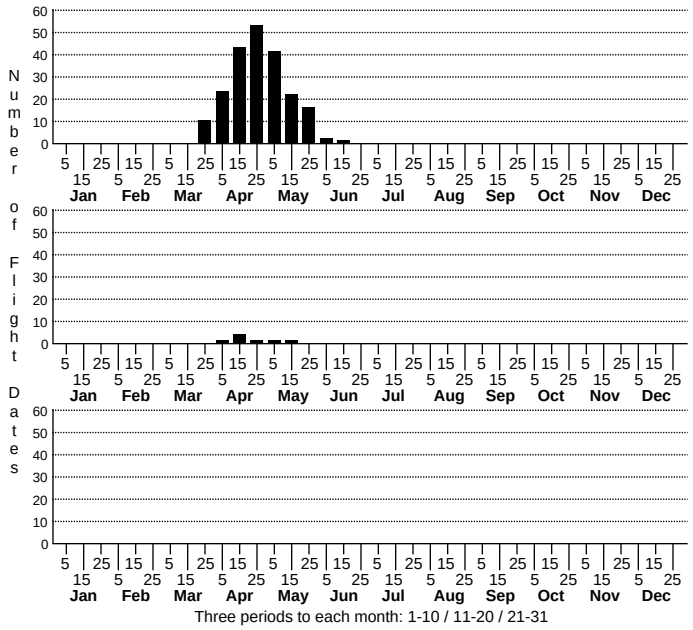
HABITAT: Open country, particularly waste lots, alfalfa fields, weedy croplands, and other brushy habitats with many flowers (often introduced species); some bare ground is often present. The Cabbage White is typically present where the Checkered White is found, but the reverse is seldom true.

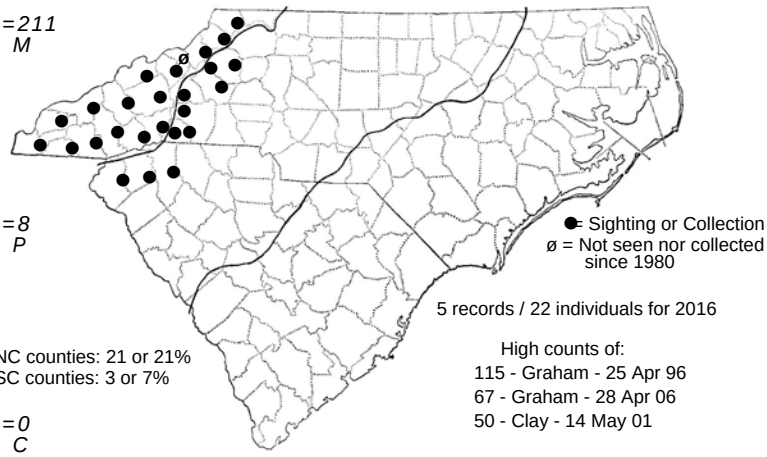
FOOD AND NECTAR PLANTS: The primary foodplants are mustards (Brassicaceae); peppergrass (Lepidium) may be an important species in NC. I have seen a female ovipositing on Lepidium campestre in Wake County. The species nectars frequently, on both native and introduced species.

COMMENTS: This is a species shrouded in mystery. It is difficult to understand the scarcity of a butterfly that feeds on plants in the mustard family. Part of the scarcity of records can be attributed to the difficulty of identifying male Checkered Whites in flight. These two whites are quite "flighty" and often do not readily perch and must be followed for many hundred yards until they land.

Butterfliers had been finding large numbers in the past 20 years in extensive croplands and pastures on NC State University property in Wake County, but some of these fields have recently been lost to development and road construction; sadly, the species has been difficult to find in this county in the past few years. As a result, the NC Natural Heritage Program started tracking the species (in 2008) at sites where it is believed to be resident. People should search the largest fields and pastures in their local area for this species.

West Virginia White *Pieris virginiensis*





5 records / 22 individuals for 2016

NC counties: 21 or 21%
SC counties: 3 or 7%

High counts of:
115 - Graham - 25 Apr 96
67 - Graham - 28 Apr 06
50 - Clay - 14 May 01

Earliest date: Haywood 21 Mar 1938
Latest date: Macon 14 Jun 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G3?

DISTRIBUTION: Restricted to the mountains (and South Mountains in the Piedmont foothills), where found from low elevations (below 2000 feet in Polk County) to over 4000 feet (Macon County) and where recorded from all but one county.

ABUNDANCE: Fairly common to common, at least locally, in the southern and central mountains. It is much less numerous, and generally uncommon, in the northern mountains. It seems to be genuinely rare near the VA border, where still not yet recorded from Alleghany County and seldom found (despite much field work) in Ashe County.

FLIGHT PERIOD: Single-brooded, with a moderately narrow flight period: late March to late May, very rarely to early June.

HABITAT: Restricted to rich forested slopes, being characteristic of cove forests, where there is an abundance of wildflowers and a scarcity of shrubs. Usually seen in the dappled shade of forest interiors, but seen at times along roads and other small openings in these forests.

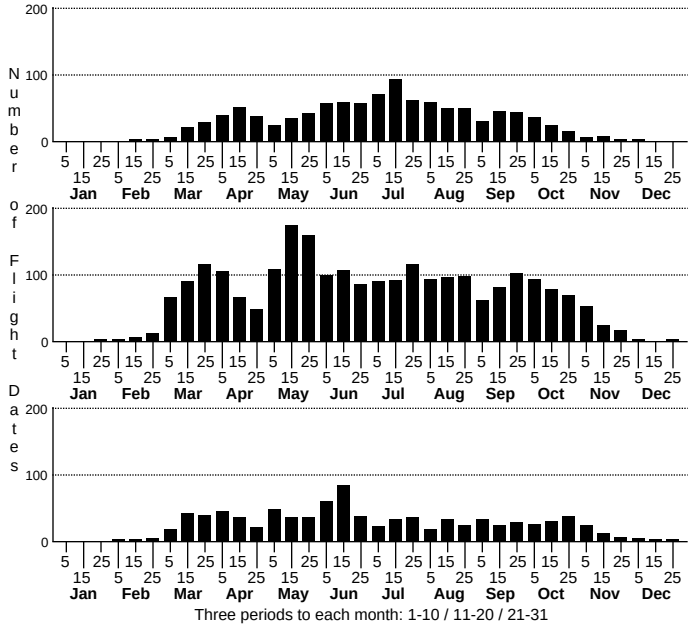
FOOD AND NECTAR PLANTS: Toothworts (Cardamine spp.) are the usual foodplants; these are common in the mountains, as well as in the Piedmont, but the butterfly is not known from the latter province, except in the South Mountains. The species nectars on toothworts as well as other cove-forest wildflowers.

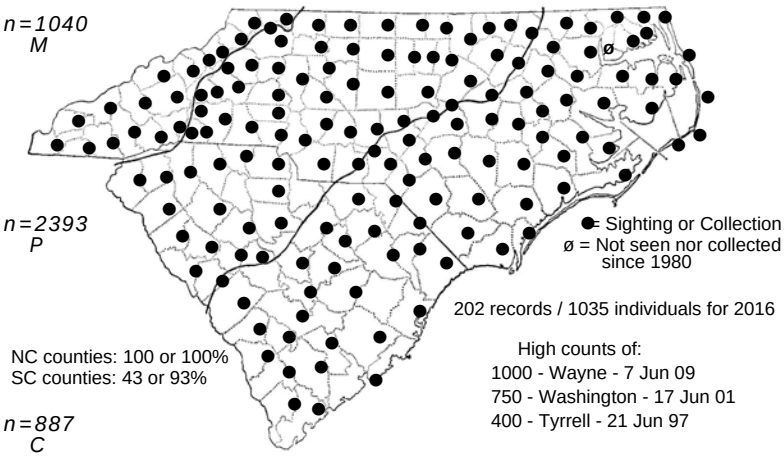
COMMENTS: This species is easily seen where and when present; white butterflies are easily detected well upslope or downslope in the open cove forests, and nearly all whites in this habitat are this species. This is a slow-flying butterfly and is easily tracked down, if the observer is willing to traverse the often steep slopes where this butterfly occurs. When you are looking at spring wildflowers in late April or early May in mountain coves such as Joyce Kilmer Memorial Forest and Great Smoky Mountains National Park, West Virginia Whites are often the most frequently seen butterfly species.

The Cabbage White is occasionally seen in cove forests. Thus, you cannot assume that a "white" in such a habitat is a West Virginia White.

This species has undergone alarming declines in the northern and central Appalachians, due mainly to the presence of the non-native garlic mustard (Alliaria petiolata), which grows in rich woods and is poisonous/lethal to caterpillars of the butterfly. Whether the butterfly has always been scarce in the northern mountains of NC, or whether it was formerly more common and has declined due to the presence of the garlic mustard, is not known. However, this plant does occur in the northern mountain counties and might be a concern to the butterfly species in NC in the future.

Cabbage White *Pieris rapae*





Earliest date: Guilford 31 Jan 2002
Latest date: Wake 26 Dec 2015

Status NC	Status US	Rank NC	Rank Global
-	-	SE	G5

Other Name: Cabbage Butterfly

DISTRIBUTION: Statewide; occurring in all 100 counties. Introduced from Europe.

ABUNDANCE: Widespread, but declining. Fairly common to locally common in the mountains and Piedmont; mostly uncommon in the Coastal Plain, and quite scarce in most coastal counties. May be locally abundant, such as in the fields near Pettigrew State Park. Formerly (20 or more years ago) one of the most numerous butterflies in the state. Numbers in the past 10 years have declined sharply nearly statewide, owing to loss of habitat to development and abandonment, drought, and perhaps other factors.

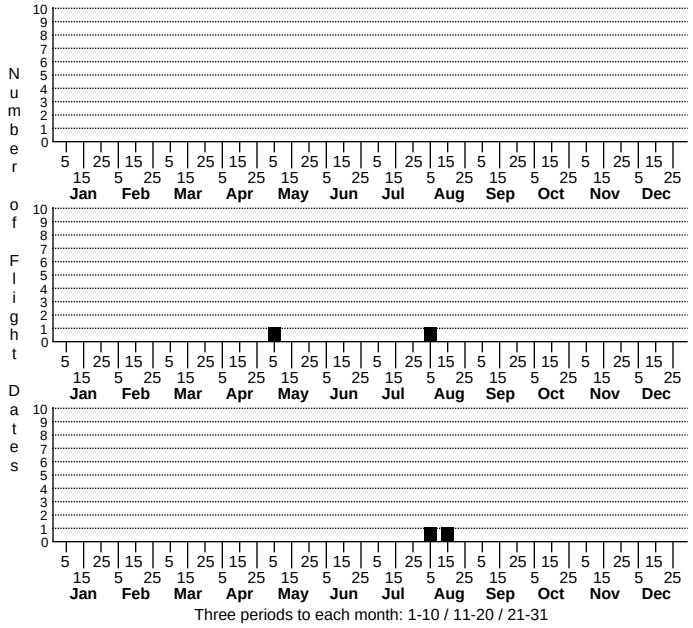
FLIGHT PERIOD: Numerous broods, perhaps as many as five or more; continuous presence in the state from late February into mid-November, and sparingly into December. The Piedmont flight chart suggests four broods.

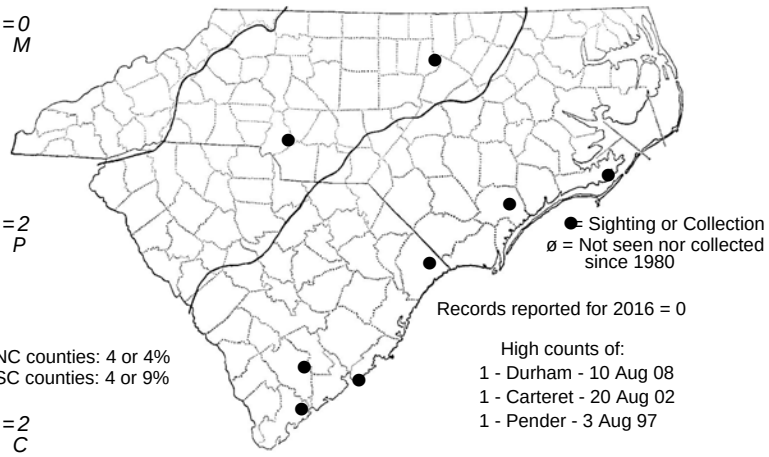
HABITAT: Most open country habitats; most frequent around cultivated fields that have flowering plants; gardens, lawns, fields, meadows, even along woodland borders and powerline clearings. It may even occur occasionally in the interior of forests.

FOOD AND NECTAR PLANTS: Foodplants are in the mustard (Brassicaceae) family; it is especially numerous in cultivated fields where mustards, radishes, etc. are planted. Nectar plants are highly varied.

COMMENTS: Drought and habitat loss are taking their toll on the Cabbage White and the Orange Sulphur, two species formerly very numerous but now sometimes missed on Fourth of July butterfly counts. With the continued loss of agricultural fields to development, numbers of Cabbage White, Checkered White, Clouded Sulphur, and Orange Sulphur, among several other species, continue to plummet in NC.

Great Southern White *Ascia monuste*





Earliest date: Mecklenburg 6 May 2008
Latest date: Carteret 20 Aug 2002

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: This is a casual visitor to NC, recorded only from two coastal counties (Carteret and Pender), and in 2008 from two Piedmont counties (Durham and Mecklenburg). It occurs primarily from FL west through the Gulf States. It is expected to occur occasionally in NC, generally close to the coast.

ABUNDANCE: Casual stray.

FLIGHT PERIOD: NC records are for May 6 (2008), August 3 (1997), August 10 (2008), and August 20 (2002). It is expected to occur mainly as a late summer or autumn stray.

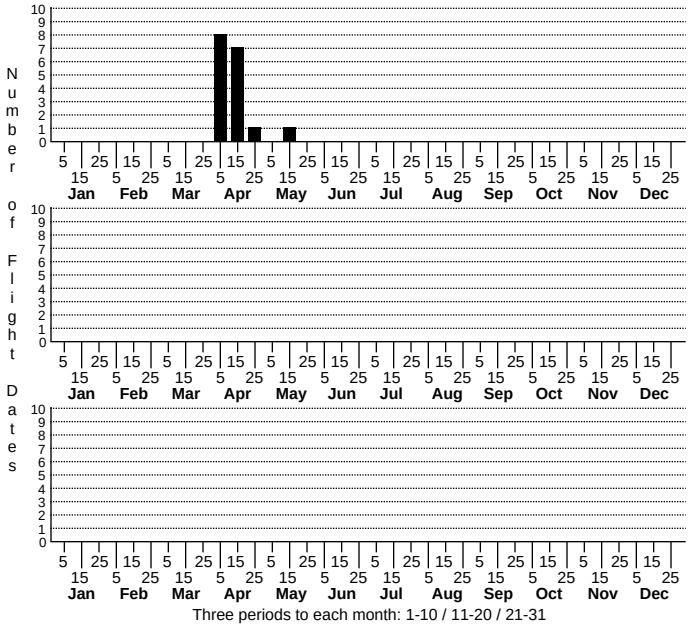
HABITAT: Open country farther to our south, but primarily coastal; to be looked for around dunes, tidal marshes, gardens, and other open places near the immediate coast. The two Piedmont reports were from fields or woodland borders, as opposed to gardens.

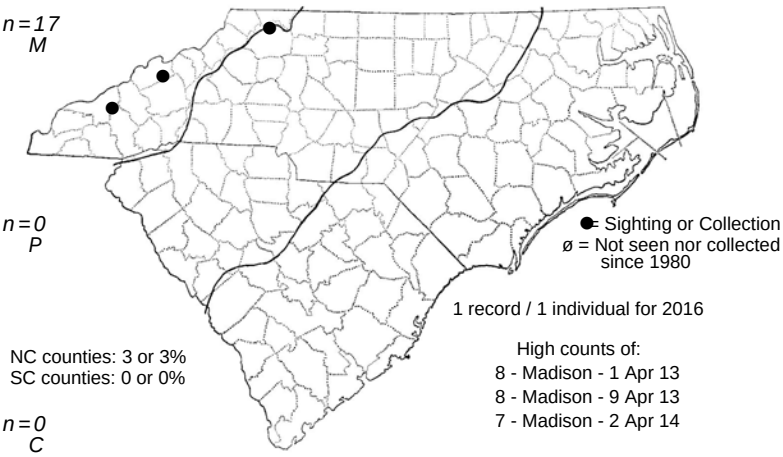
FOOD AND NECTAR PLANTS: The foodplants are mainly in the mustard family (Brassicaceae), but also includes saltwort (Batis), which does not occur in NC.

COMMENTS: Certainly any white butterfly seen along the NC coast should be checked for this native species, which is larger in size than the Cabbage White. It undergoes unpredictable northward emigrations every few years in FL and GA. The individual seen by Derb Carter in Pender County was flying in a "bee-line" northward at Holly Shelter Game Land. Thus, its behavior is somewhat like that of the abundant Cloudless Sulphur, the best known northward emigrant. The individual photographed by Bob Cavanaugh in Carteret County was nectaring on lantana in a garden.

In 1998, noticeable numbers reached the coast of GA, where usually sporadic; and several were seen in coastal SC north to Charleston. However, we are not aware of any NC reports for 1998-2001, but gratifyingly one was found in 2002. We received only one report from SC in 1999, at Charleston in October, none from 2000-2004, one in 2005, and again none in 2006-2007. A small flight was again reported in coastal SC in 2008, and there were NC sight reports (but no photographs) by Kevin Metcalf in Mecklenburg County and by Will Cook and Brian Bockhahn in Durham County in 2008. These were the first state reports outside of the coastal area, and they were made by experienced observers. The species is notably "flighty" and is infrequently seen perched; thus, obtaining photos of it can be quite difficult. Suffice to say, better documentation of Great Southern White in the state is needed.

Olympia Marble *Euchloe olympia*





Earliest date: Madison 1 Apr 2013
Latest date: Swain 15 May 2001

Status NC	Status US	Rank NC	Rank Global
SR	-	S1	G4G5

DISTRIBUTION: Known from just three sites in the mountains (Madison, Swain, and Wilkes counties). This is a more northerly species ranging south to the mountains of VA and eastern TN. In 2011, a resident colony was discovered in Madison County, for a range extension southeastward. The Swain County record, in 2001, represented a major range extension, if resident; however, some believe that this record might have been of a wind-blown stray. However, a 2009 observation, by an excellent biologist, of one just over the state line near Gatlinburg, TN, further gives an indication that there may also be resident populations in the Swain County area. A small population was discovered in Wilkes County, very close to the Blue Ridge Parkway, in 2014, to fill a big gap in the range.

ABUNDANCE: Extremely rare to very rare, and probably quite local, in NC. Even within its main range, it is very local and generally uncommon, typically found in very widely spaced colonies.

FLIGHT PERIOD: The species has a single flight in the spring. In the East, it typically flies in April and May. In NC, it flies from early April to mid-May, though in Madison County it has yet to be seen after late April. The Gatlinburg, TN, record (by Jeff Glassberg) was on April 24, 2009. Considering that eight individuals were seen on April 1, 2013, in a year when spring was not warmer than usual, the flight in NC likely begins in late March, at least at the lowest elevations.

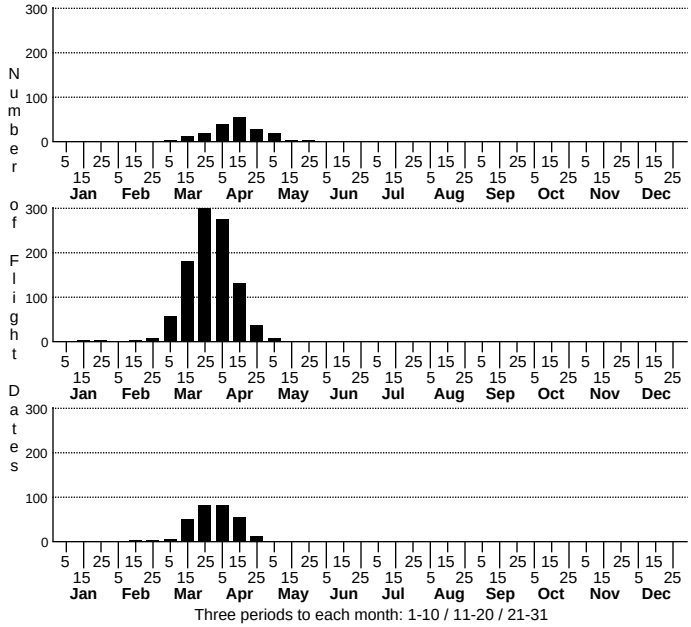
HABITAT: Throughout its range, the Olympia Marble tends to occur in high pH soil barren areas, such as limestone glades. It also is found in more acidic areas, such as shale barrens; this seems to be the favored habitat in WV (Allen 1997). The habitats are typically open woods or small openings within woods, in uplands, often on mountaintops. This is the general habitat at the site in Madison County (somewhat dry wooded slope, with rather unusual rock and soil types).

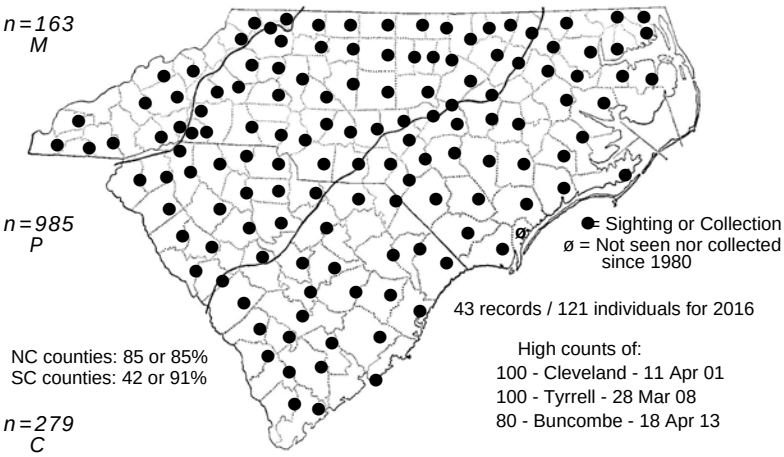
FOOD AND NECTAR PLANTS: The foodplants are strictly in the mustard family, and are generally the rock cresses in the genus Arabis. Most Arabis species in NC grow in high pH soils of rich or rocky woodlands, such as over amphibolite rock. Some Cardamine species may also be used. Various spring-blooming flowers such as violets are used for nectaring.

COMMENTS: The most significant butterfly discovery in the state in 2011 was the finding of a colony in Madison County on April 17, by Kevin Caldwell and Merrill Lynch. Interestingly, earlier that morning they were on a field trip to an Olympia Marble site in TN, and they used the quick "knowledge" of the habitat there to search in similar-looking habitat in nearby NC! That same afternoon, they were rewarded by observing four individuals. Caldwell returned several days later to catch one, and obtained numerous photos to document the species from that site. Derb Carter, Gail Lankford, and I joined Lynch on April 23 to see the species, finding four also, though there was some wear on them. In 2012, observers checked this site often, finding it on four dates, all in April; and there were three sightings in 2013, when the state's highest one-day counts were made. David Campbell observed three adults on April 2, 2014 in Wilkes County. The first state record was of one collected by accident in 2001 during a moth-trapping project (Swain County).

This species has a fast direct flight, and males are often seen in constant flight back and forth or through openings, patrolling their territories or searching for females. Thus, the species can be hard to identify and photograph, unless you are patient or lucky to have one stop. At the Madison County site, it was difficult if not impossible to separate this species in flight from female Falcate Orangetips, and West Virginia Whites were also present to add confusion.

Falcate Orangetip *Anthocharis midea*





43 records / 121 individuals for 2016

NC counties: 85 or 85%
SC counties: 42 or 91%

High counts of:
100 - Cleveland - 11 Apr 01
100 - Tyrrell - 28 Mar 08
80 - Buncombe - 18 Apr 13

Earliest date: Guilford 14 Jan 2013
Latest date: Buncombe 23 May 1996

Status NC	Status US	Rank NC	Rank Global
-	-	S4	S5 G4G5

Synonym: *Paramidea midea*

DISTRIBUTION: Occurs in all three provinces, but found primarily in the Piedmont and the Coastal Plain. In the mountains found mostly in the lower elevations, and possibly absent in a few northern mountain counties (such as Avery and Mitchell). It is spottily distributed near the coast -- no records yet for the extreme eastern counties (Currituck, Dare, and Hyde) -- and it may be absent on many coastal islands (such as the Outer Banks).

ABUNDANCE: Common, at least locally, in many Piedmont and upper Coastal Plain locales; not common in the mountains or much of the lower Coastal Plain. Very rare to absent above perhaps 2500 feet elevation.

FLIGHT PERIOD: Single-brooded; early March (rarely mid-February) to late April downstate; mainly from mid- or late March to early May, and rarely into late May, in the mountains. Peaks in late March and early April in the Piedmont, and in late March in the Coastal Plain.

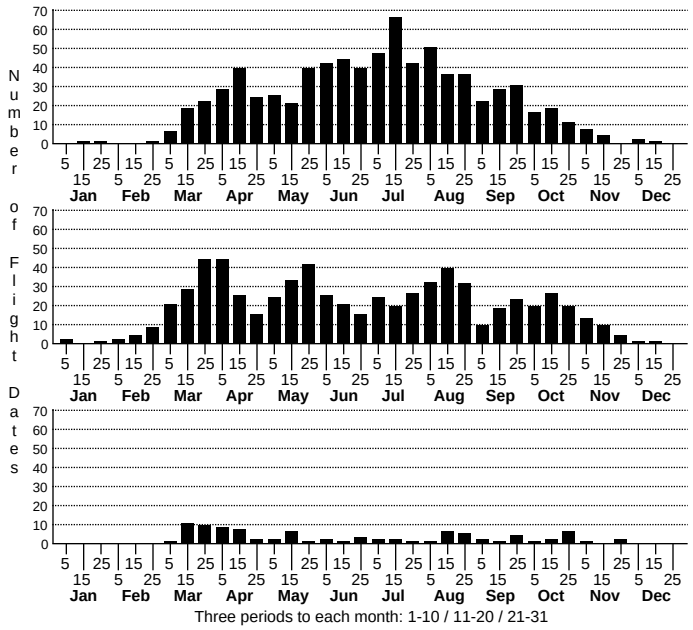
HABITAT: Typically mesic to moist hardwoods or mixed woods, including bottomlands, but it can often be seen along woodland borders and in woodland openings. It is not usually seen in large open fields or urban and suburban habitats.

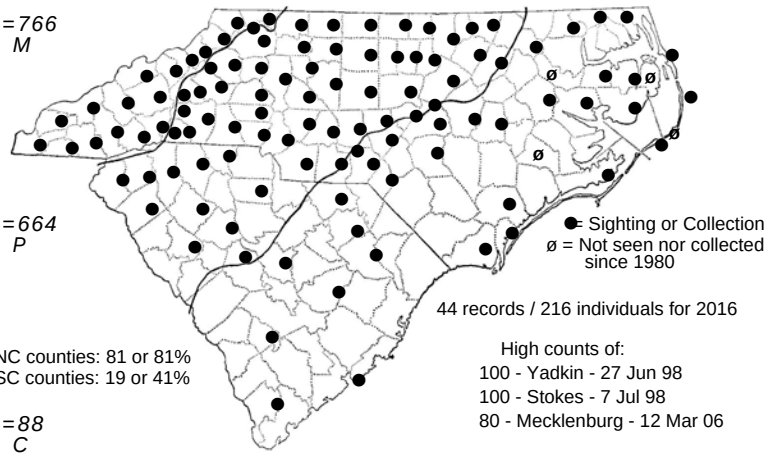
FOOD AND NECTAR PLANTS: As with other whites and sulphurs, mustard family species are the foodplants; toothworts (Cardamine spp.) are probably the primary species in NC. These butterflies often nectar on toothworts, but other spring-blooming flowers are used.

COMMENTS: As with most single-brooded species with narrow flight periods, some gaps in the county distribution maps exist. This is simply a matter of lack of coverage during the (20-30)-day flight period in any given area, as the species is not usually difficult to find in the appropriate habitat. The range, however, is not well known in parts of the mountains, where it definitely occurs at low elevations (below 2500 feet); perhaps the West Virginia White replaces this species in the middle and high elevations. Oddly, we still have no known records from Swain County, where an abundance of rich hardwood forests below 2500 feet elevation are present in Great Smoky Mountains National Park.

This species is one of the harbingers of spring, often encountered when an observer is looking for spring wildflowers along Piedmont or Coastal Plain slopes and bottomlands.

Clouded Sulphur *Colias philodice*





44 records / 216 individuals for 2016

High counts of:
100 - Yadkin - 27 Jun 98
100 - Stokes - 7 Jul 98
80 - Mecklenburg - 12 Mar 06

NC counties: 81 or 81%
SC counties: 19 or 41%

New for 24th: Richmond; C

Earliest date: Mecklenburg 4 Jan 2005
Latest date: Harnett; P 15 Dec 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S4S5	G5

Other Name: Common Sulphur

DISTRIBUTION: Primarily the mountains and Piedmont; range in the Coastal Plain needs further elucidation, owing to difficulty in identification (with Orange Sulphur). Probably absent in most counties in the southern half of the Coastal Plain (at least now), and of uncertain occurrence even in the northern half of the Coastal Plain.

ABUNDANCE: Declining. Common in parts of the mountains, at least in the northern mountains. In the Piedmont, fairly common to locally common in the northwestern counties, but rare to locally uncommon in the southern and eastern Piedmont. Generally rare in the northern half of the Coastal Plain. Difficulty in separating the species from the more common Orange Sulphur makes the abundance somewhat speculative. Populations have sharply declined (of both species) in recent years, and the range map and flight charts now give a false sense of abundance.

FLIGHT PERIOD: Occurs from late February into November, very rarely into December and January. Apparently four broods occur in the state, based on the flight charts.

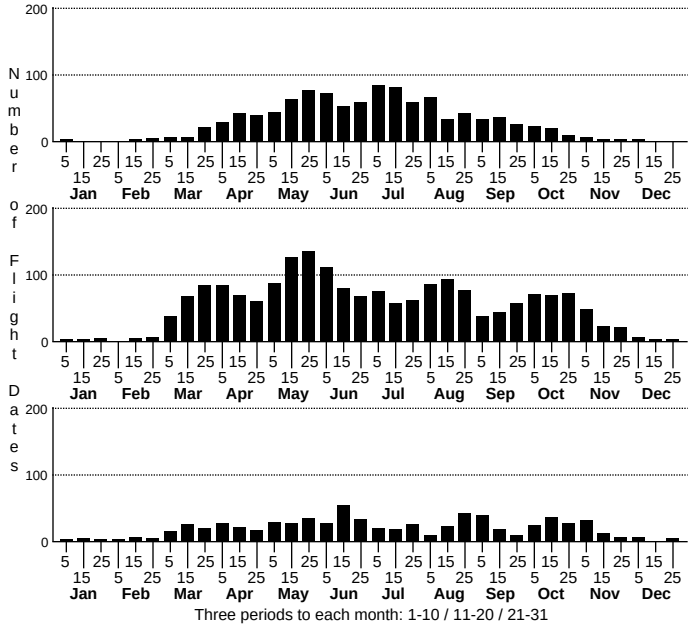
HABITAT: This species is characteristic of open fields and meadows, being numerous in parts of the state in cultivated fields where legumes, such as alfalfa, are growing. It is never seen in wooded habitats, nor does it often occur in gardens and residential areas.

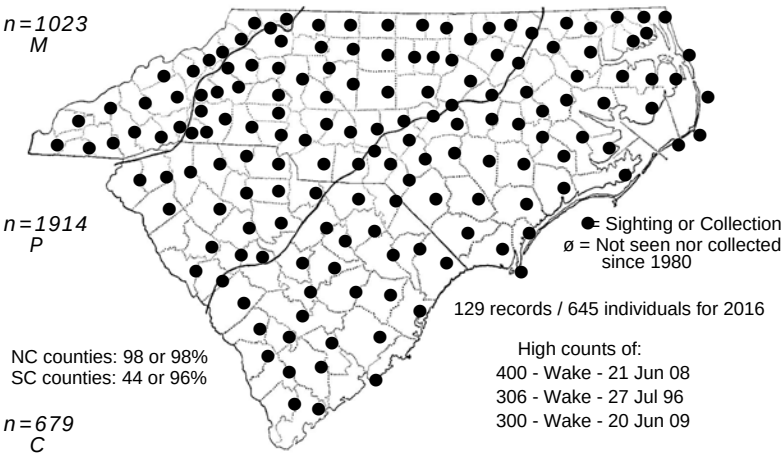
FOOD AND NECTAR PLANTS: Foodplants are in the legume (Fabaceae) family; alfalfa and clovers are commonly used in the East. Nectar plants are typically those in cultivated fields or in meadows, such as clovers and alfalfas.

COMMENTS: Details of the distribution and abundance in NC are not completely known, as it can be quite difficult to separate this species and the Orange Sulphur in flight. Even when perched, identification can be tricky, and the usually definitive upper surface is seldom exposed; the butterflies almost always perch with wings closed. Of course, the two species hybridize, and albinos or pale individuals of both species are frequently seen, making identification even more difficult. This species is "over-reported" in the state, particularly in the Coastal Plain, where nearly all Colias are likely to be Orange Sulphurs.

This species is in decline in NC, as are the Orange Sulphur and Cabbage White. Drought in recent years has hit field species very hard, and farmlands are being developed, or abandoned and re-vegetating into old fields. Except for parts of the mountains, this species can now be tough to find, and any Coastal Plain report must be treated with caution, if not skepticism.

Orange Sulphur *Colias eurytheme*





129 records / 645 individuals for 2016

High counts of:
400 - Wake - 21 Jun 08
306 - Wake - 27 Jul 96
300 - Wake - 20 Jun 09

NC counties: 98 or 98%
SC counties: 44 or 96%

Date Spread: Wake on 1 Jan 2000 to Brunswick; BHI on 31 Dec 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Alfalfa Butterfly

DISTRIBUTION: Statewide; undoubtedly occurs in all 100 counties in NC.

ABUNDANCE: Declining. Fairly common to locally common above the Fall Line; may be abundant in a few areas, but has greatly declined in NC in the past 10 years and can be uncommon now in some counties in the Piedmont and mountains. Less numerous (generally uncommon) in the Coastal Plain than elsewhere, though it may be locally common there.

FLIGHT PERIOD: Several broods, probably four or five; mainly from early March to late November, with scattered records in December, January, and February. The species has no gaps in the flight periods in the three provinces in NC.

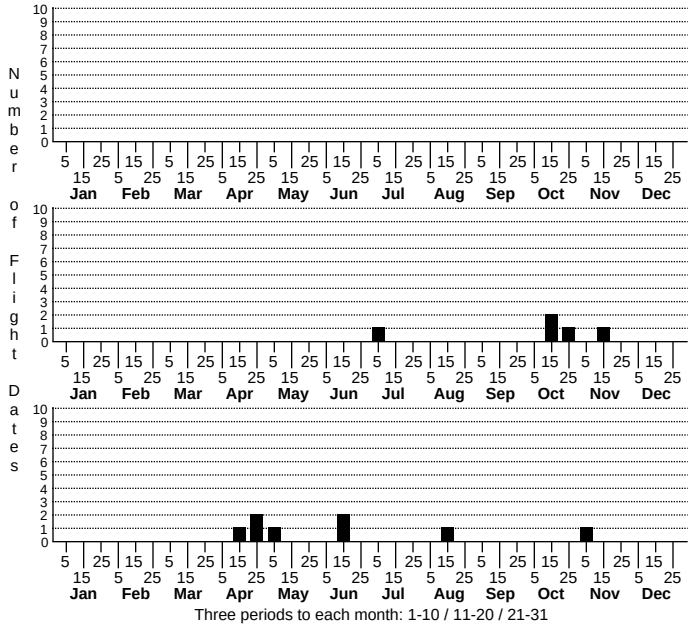
HABITAT: Open country, usually in cultivated areas. Most common in cultivated fields with alfalfa or other legumes; dozens may also be seen flying over fields and meadows. Also seen along woodland borders, gardens, etc. It is not found in the shade of forests.

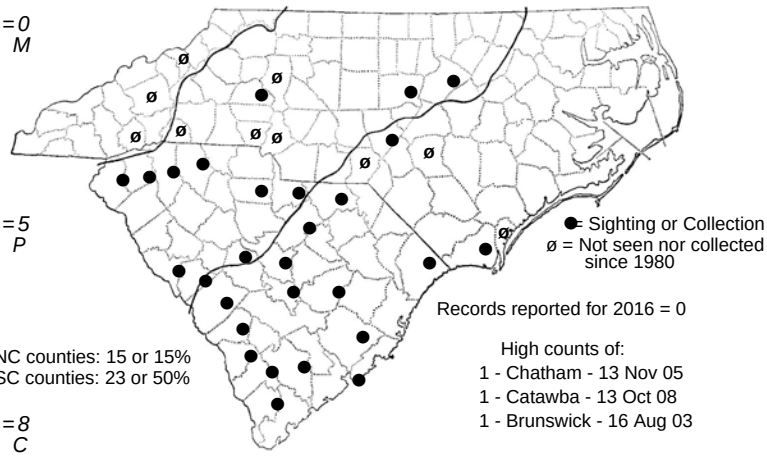
FOOD AND NECTAR PLANTS: Foodplants are legumes such as alfalfa (Medicago sativa) and clovers (Trifolium spp.). The species nectars on a wide variety of plants, particularly in croplands with flowers -- alfalfa, red clover, white clover, etc.

COMMENTS: Identification of this species versus Clouded Sulphur is often difficult. However, this species certainly outnumbers the Clouded over nearly all of the state, especially in the Coastal Plain and most of the Piedmont. The historic range of this species in North America is uncertain, but it spread in range and in numbers with the increase in croplands in the East. Despite its numbers in NC, it is usually far outnumbered in most of the Coastal Plain, especially from July onward, by the Sleepy Orange and the Cloudless Sulphur.

Numbers were severely curtailed over much of the state by cold, wet weather in spring 1999, and populations were slow to recover in 1999-2000. A drought lasting at least four years, and the continued loss of farmland to development, has sent numbers tumbling recently. Some Fourth of July counts are now having difficulty in finding this species, even in areas where formerly numerous 10 years ago.

Southern Dogface *Zerene cesonia*





Earliest date: Cumberland 16 Apr ?
Latest date: Chatham 13 Nov 2005

Status NC	Status US	Rank NC	Rank Global
-	-	SZN	G5

Synonym: *Colias cesonia*

DISTRIBUTION: Stray; scattered records in all three provinces, but mainly from the southern half of the state.

ABUNDANCE: A very rare and erratic migrant from the South and Southwest. Irregular from year to year, with the species seldom reported in recent decades. Certainly more numerous or regular formerly. We are aware of just five state reports since 1990: one seen nectaring at Weymouth Woods-Sandhills Nature Preserve in Moore County on November 2, 2001 by Scott Hartley; one seen in flight in Brunswick County in mid-August 2003 by John Dole; one seen nectaring at Jordan Lake in Chatham County on November 13, 2005 by Greg Schneider and Brock Martin; one seen perched at Riverbend Park in Catawba County on October 13, 2008 by Lori Owenby; and one seen in flight at Raleigh in Wake County on October 25, 2012 by Mike Turner.

FLIGHT PERIOD: Not known in NC; several broods in the Deep South, scattered over most of the year. As most "out of range" visitors appear in late summer and fall, it is expected to be seen mainly from July or August onward. However, there were a number of records from Fort Bragg from April to June several decades ago (fide Richard Anderson).

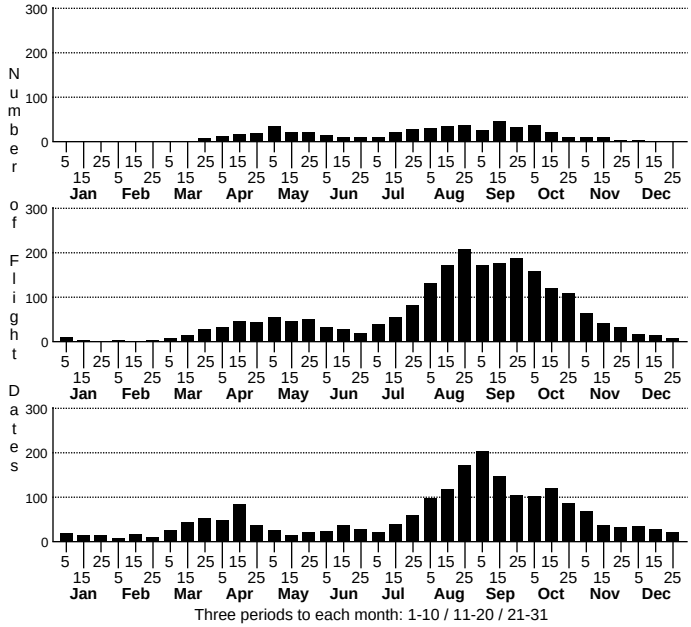
HABITAT: Relatively open brushy areas, such as weedy fields, cut-over areas, and woodland borders. Unlike most southern strays, it is not likely around gardens, cultivated areas, and other human habitation. The habitat in Florida is mostly dry scrublands.

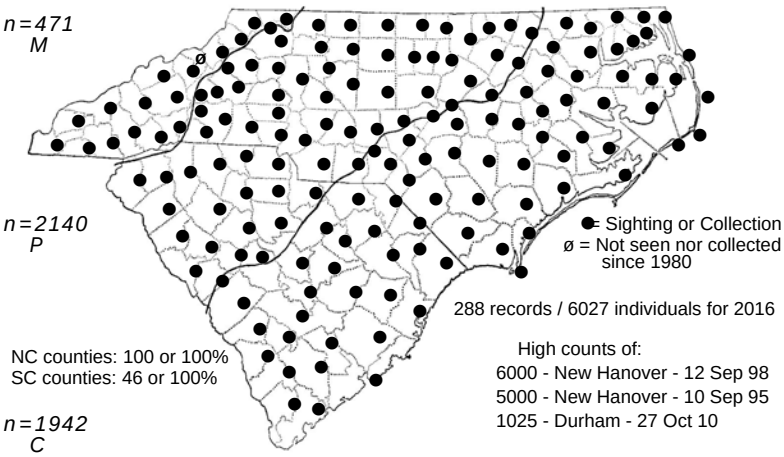
FOOD AND NECTAR PLANTS: Legumes are the primary foodplants, though this is irrelevant in NC. Nectar plants in the state are not known.

COMMENTS: Richard Anderson had six records from the Fort Bragg area in the Sandhills, from April to June, suggesting possible residency in that area, as strays from the South typically do not appear until later in summer and fall. Not surprisingly, the species has been found much more often in SC (23 counties, which is 50% of the state's counties) than in NC; as some recent records there are for spring or summer, it appears to be a rare resident in the southern part of the SC Coastal Plain. Identification is relatively easy, even in flight; thus, it is not likely to be overlooked, especially as the Clouded Sulphur is very rare in much of the area where the Southern Dogface might be expected.

NOTE: A colony of Southern Dogfaces was found in 2001 in southeastern VA. Though one might think this suggests a major flight into VA in 2001, lack of data from the Carolinas rules out such a flight. Instead, a gravid female likely reached VA during the year and produced a new generation (assuming a suitable food plant was present).

Cloudless Sulphur *Phoebis sennae*





Date Spread: Wake on 1 Jan 2000 to Brunswick; BHI on 31 Dec 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, occurring in all counties, but primarily a northbound migrant into the state in summer and fall. Small numbers of adults appear in spring from larvae that have successfully overwintered.

ABUNDANCE: Except after harsh winters, it is abundant in late summer and fall in the Coastal Plain, especially in the lower Coastal Plain. Numbers decrease inland, but generally fairly common to common in the eastern Piedmont, and uncommon to fairly common in the upper Piedmont and mountains. Numbers are typically highest in September, when over 100 individuals can be seen in a day in some Coastal Plain counties. Mostly uncommon to occasionally fairly common in spring and early summer.

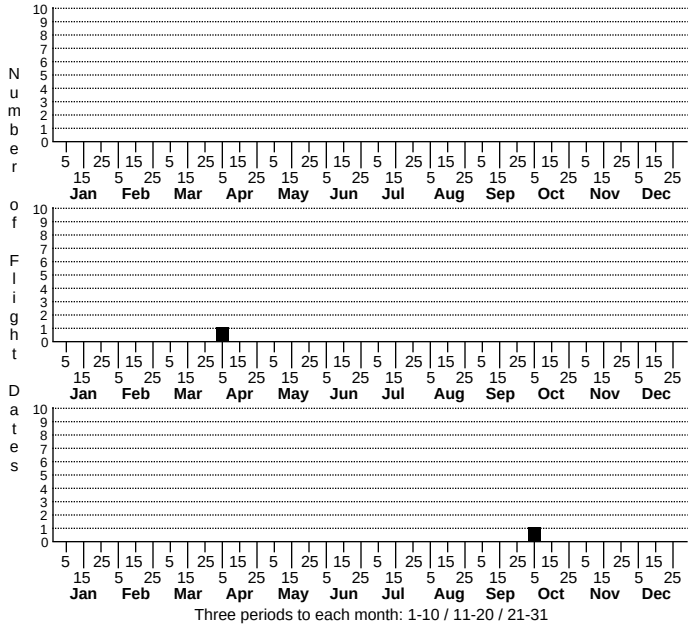
FLIGHT PERIOD: One relatively small brood from early March through June. However, one to two additional broods from July to late fall. The bulk of the butterflies are present from mid-July into November, peaking in August and September. Most of these are clearly migrants; there is an obvious north or northeast movement in August and early September. Lingering individuals can be seen flying on any day in winter if the weather is mild or warm.

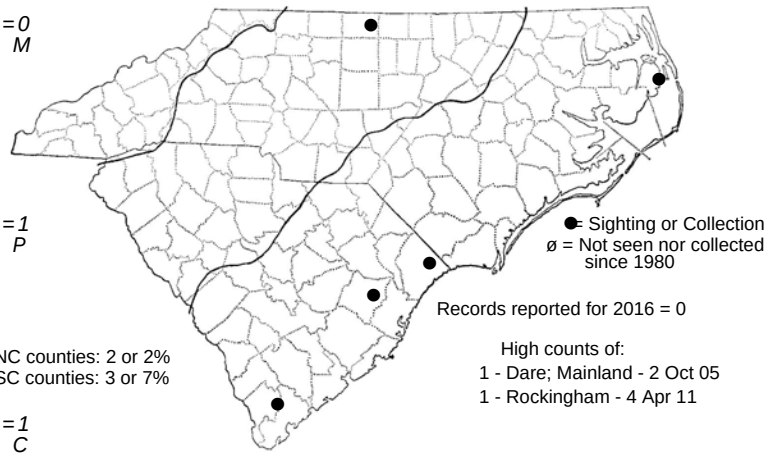
HABITAT: Widespread in open country; fields, meadows, croplands, savannas, etc. It is not a species of woodlands, but it is often seen along woodland edges.

FOOD AND NECTAR PLANTS: The main foodplants are sennas (Cassia spp.). The species nectars on a great variety of flowers.

COMMENTS: Of the southern species that migrate northward into NC in summer and fall, this is by far the most conspicuous. Dozens can be seen drifting northward in the early fall across fields and roads in the Coastal Plain. This is often the most commonly seen butterfly in the Coastal Plain in August, September, and October.

Large Orange Sulphur *Phoebis agarithe*





Earliest date: Rockingham 4 Apr 2011
Latest date: Dare; Mainland 2 Oct 2005

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: Two sight reports/records, from mainland Dare County (2005) and from southern Rockingham County (2011). This is a stray from FL, where it can be common in the southern portion of the state. There are isolated records from SC, MD, NJ, NY, and ME, based on Cech and Tudor (2005). The two SC records are from coastal or near-coastal counties, as well.

ABUNDANCE: Accidental north of FL.

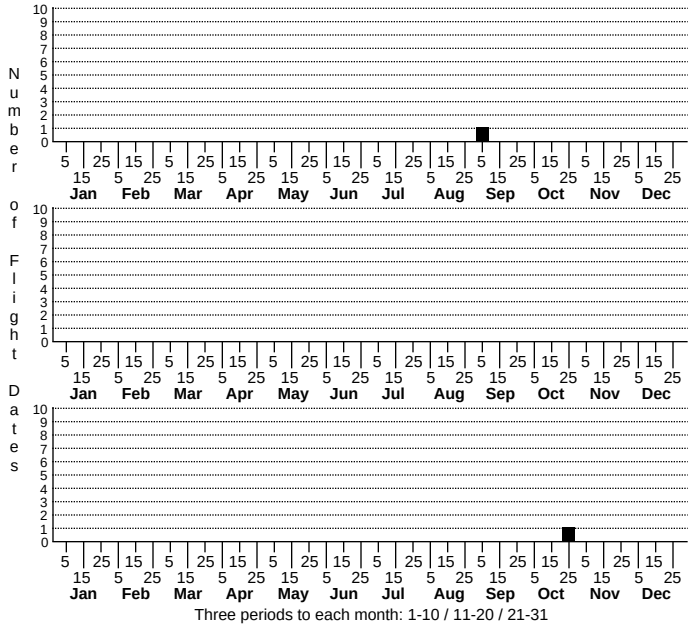
FLIGHT PERIOD: The records from NC are of single male individuals seen on April 4 and on October 2. Strays are mainly expected to occur in late summer or fall.

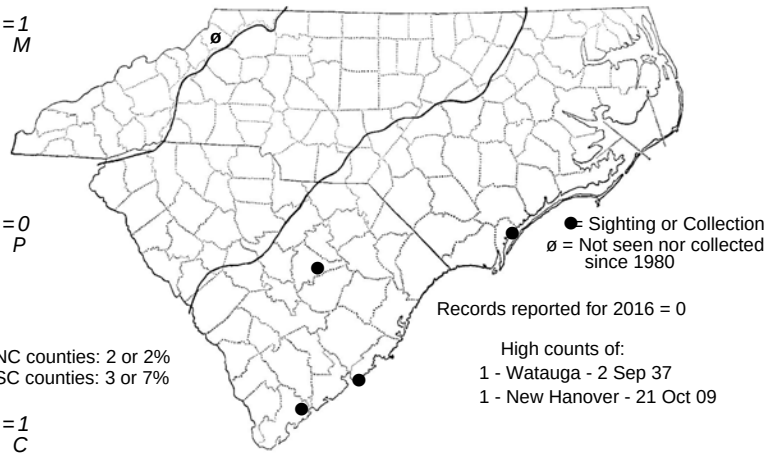
HABITAT: Strays are expected to occur wherever there are flowers, whether along a wooded edge, garden, or a savanna, as they would be "on the move" northward (presumably) and would stop to nectar in many situations.

FOOD AND NECTAR PLANTS: Foodplants in FL are various leguminous trees and shrubs (related to mimosas).

COMMENTS: Will Cook and I (Harry LeGrand) were fortunate in observing a male flying perhaps 8-10 feet high across a road at Alligator River National Wildlife Refuge in Dare County in 2005. There were numerous Cloudless Sulphurs nearby, most nectaring on Agalinis purpurea on the roadside, and one male flew up to investigate or chase the Large Orange Sulphur. We were thus able to compare the color differences -- bright golden yellow-orange of Large Orange versus bright lemon yellow of Cloudless. Unfortunately, we were not able to photograph (or collect) the Large Orange; thus, this is an unconfirmed sight record. In 2011, Greg Morris carefully observed a male in flight and perched, at Haw River State Park. Surprisingly, this was in the spring season, when a stray is much less likely to appear than in summer or fall. Certainly, a photograph or specimen is highly desired to document/confirm this species in the state.

Orange-barred Sulphur *Phoebis philea*





Earliest date: Watauga 2 Sep 1937
Latest date: New Hanover 21 Oct 2009

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: An accidental migrant only; recorded only in NC from one mountain county (Watauga) and one along the coast (New Hanover). Resident in some Gulf Coast states, but primarily in FL.

ABUNDANCE: Accidental; just two state records.

FLIGHT PERIOD: The NC records are for September 2 and October 21.

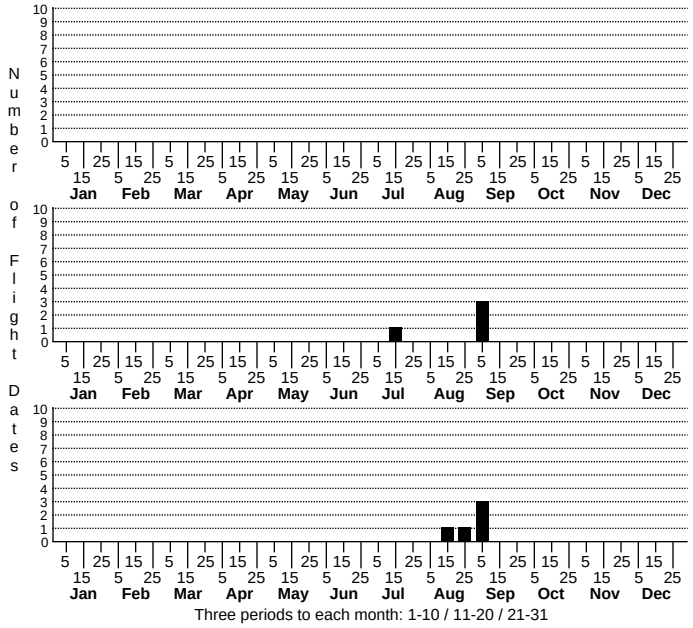
HABITAT: Presumably open country such as fields, gardens, etc.

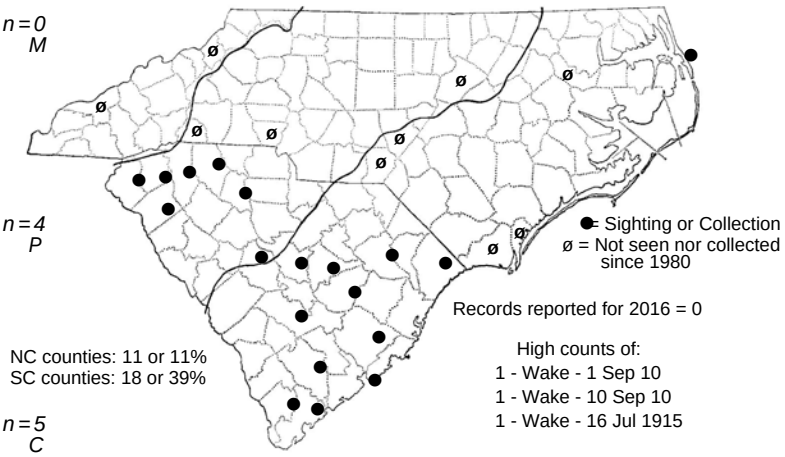
FOOD AND NECTAR PLANTS: Sennas (Cassia) are foodplants. Nectar plants not known for NC.

COMMENTS: This species is noticeably larger than the Cloudless Sulphur, but the orange color on the wings might be difficult to spot unless the butterflies are perched. SC had its first state records in 1999. A female seen in Sumter in the summer laid eggs, and Evelyn Dabbs photographed all four stages of the life cycle, including adults of the next brood! Dennis Forsythe observed a female in Charleston County on October 18.

Brimley (1938) gives the first state record as being a specimen taken at Grandfather Mountain, at 4,000 feet, on September 2, 1937. Oddly, this would seem to be about the last place a tropical butterfly species would be found in the state! Finally, a more "typical" report came in 2009, when Derb Carter observed a male in flight and perched at a golf course, along the coast at Wilmington, on October 21.

Barred Yellow *Eurema daira*





Earliest date: Wake 16 Jul 1915
Latest date: Wake 10 Sep 1910

Status		Rank	
NC	US	NC	Global
-	-	SA	G5

DISTRIBUTION: Stray; scattered records for all three provinces.

ABUNDANCE: Formerly casual, and now accidental. This is a migrant from the South, clearly more numerous as a stray 25 or more years ago. Despite it now being accidental in NC, a few records have been made in southern SC in the past few years, though it is apparently a migrant there also, with no known resident sites in the state.

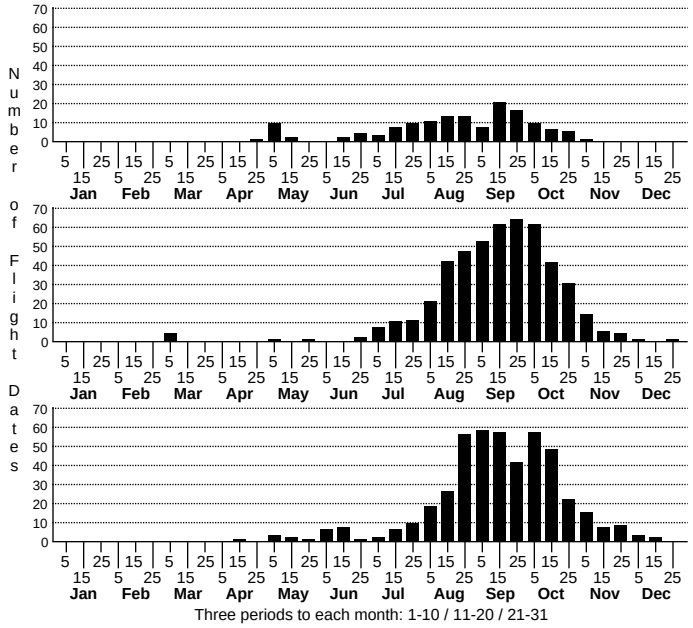
FLIGHT PERIOD: Late summer and early fall, though likely could occur well into late fall. The nine dates available fall between July 16 and September 10, which clearly suggest a migrant into the state (as there are no spring or early summer records).

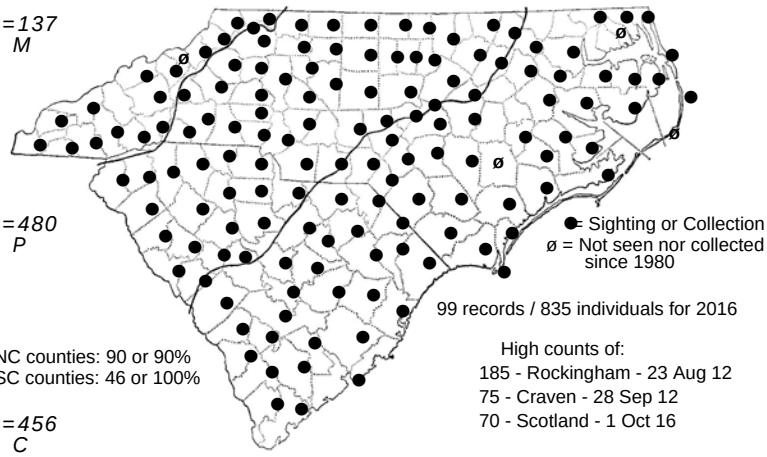
HABITAT: Open country; fields, woodland borders, roadsides, etc.

FOOD AND NECTAR PLANTS: Various legumes (Fabaceae) are foodplants; nectar plants in NC are not known.

COMMENTS: The Barred Yellow has been recorded in at least 18 counties in SC, but only in 11 counties in NC. Exactly how rare this species was historically (prior to 1990) in NC is poorly known, but the species must have been more numerous in the South in past decades, for despite records in 11 counties in NC, no reports have been made in the last 24 years. Female Barreds look very similar to both male and female Little Yellows and could easily be overlooked, especially in flight. In fact, the 1992 record was in a collection of butterflies examined by Harry Pavulaan; he identified the Barred Yellow (Pavulaan, pers. comm.). I must assume that the original collector had called it a Little Yellow. Perched Barred Yellows do not show the rusty margin spot on the hindwing that the Little Yellow shows and tend to be mostly white with a heavy sprinkling of tiny black dots.

Little Yellow *Pyrisitia lisa*





99 records / 835 individuals for 2016

High counts of:
185 - Rockingham - 23 Aug 12
75 - Craven - 28 Sep 12
70 - Scotland - 1 Oct 16

NC counties: 90 or 90%
SC counties: 46 or 100%

Earliest date: Catawba 5 Mar 2000
Latest date: Wake 24 Dec 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Eurema lisa*
Other Name: Little Sulphur

DISTRIBUTION: Statewide, but primarily found in the Coastal Plain and lower Piedmont. Very rare at higher elevations.

ABUNDANCE: Quite variable from year to year. In "good years", fairly common to occasionally common in the southern Coastal Plain, from the coast to the Sandhills. Generally uncommon in the northern Coastal Plain and the eastern half of the Piedmont. Farther westward, uncommon along the southern tier of Piedmont and mountain counties, but rare in most of the mountains and northwestern half of the Piedmont. In "off years", such as during periods of drought or perhaps after a very cold winter, it is uncommon even in the southeastern Coastal Plain, and rare to absent in other parts of the state.

FLIGHT PERIOD: Several broods in NC. The species appears to be mainly a migrant, with breeding status uncertain. Not at all common in the spring or early summer, occurring sparingly from mid-April into mid-June, at least in the Coastal Plain. However, from early July into early November the species can be numerous at times, particularly in Coastal Plain counties bordering SC. We have scattered records in late November and in December.

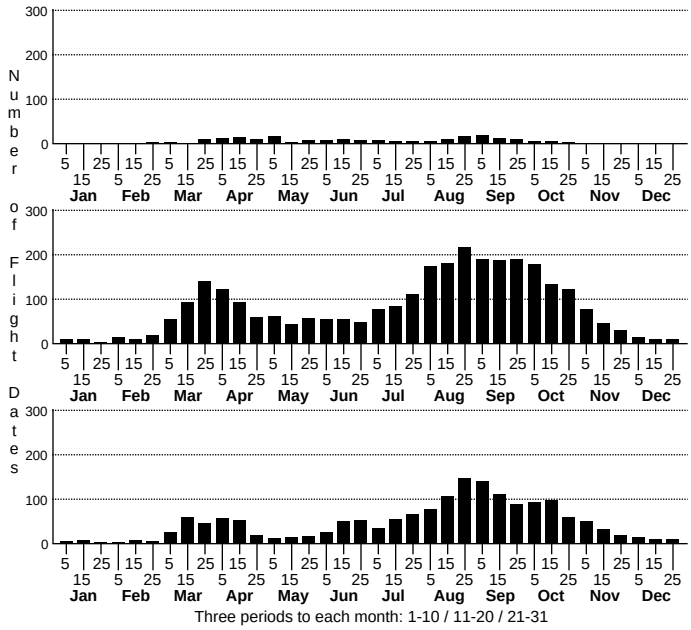
HABITAT: As with all sulphurs and yellows, the species is found strictly in open country -- fields, vacant lots, roadsides, woodland borders, etc. It is not numerous in residential areas. It is often seen in a low, directional flight along the edge of a road or woodland margin, seemingly "on the move".

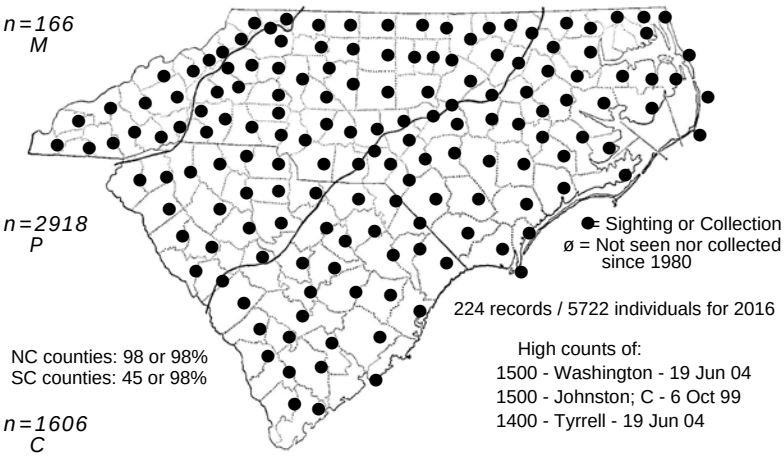
FOOD AND NECTAR PLANTS: Foodplants are mainly partridge pea (Cassia fasciculata) and wild sensitive plant (Cassia nictitans). The species uses many nectar plants, mostly flowers close to the ground (within a foot of the ground).

COMMENTS: As with many or most small butterflies, the species flies and nectars close to the ground, generally confining activities to within a foot of the ground. It especially is fond of hot, dry, sandy places, such as vacant lots and margins of dirt roads. Its status in spring and early summer is not well understood. There are alternating good years and bad years, often depending on rainfall in the Southeast -- a good flight during wet years (such as in FL, GA, and SC), and poor flights during droughts, though this is quite variable!

In 2012, there was an outstanding outbreak of the species in the state, with NC's highest one-day counts coming in this year, with a remarkable 185 tallied on a "Fourth of July" count in Rockingham County. What was shocking about 2012 was that the species first appeared in the mountains, and was often common there by midsummer before it was being seen well downstate. This pattern clearly indicated a west to east movement, starting west of the Appalachians, likely through low mountain passes. On the other hand, the flight in 2013 -- despite above normal rainfall in most of the Southeast -- was restricted mainly to the extreme southeastern coastal areas, ranging as far north as Croatan National Forest in Carteret County. In fact, our fourth highest one-day count was made in 2013, despite there being very few reports of Little Yellows away from coastal regions. In 2014, there was a late-season "push" of records into the state in fall; though numbers overall were small, there were a surprising 34 records for the Piedmont, with many fewer reports from the less well-worked mountains and Coastal Plain. Another good flight occurred in 2016, with an excellent 99 reports from across the state, including 11 reports from the mountains; our third highest one-day count also was made in 2016.

Sleepy Orange *Abaeis nicippe*





Date Spread: Durham on 1 Jan 1998 to Brunswick; BHI on 31 Dec 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Synonym: *Eurema nicippe*

DISTRIBUTION: Essentially statewide, though it might be only a migrant into many mountain counties.

ABUNDANCE: The species is clearly more common in the east than in the mountains. It is common to abundant in the Coastal Plain and lower Piedmont, common in most of the remainder of the Piedmont, and generally rare to locally uncommon in the mountains. From July to October, it is one of the most numerous butterflies in the state.

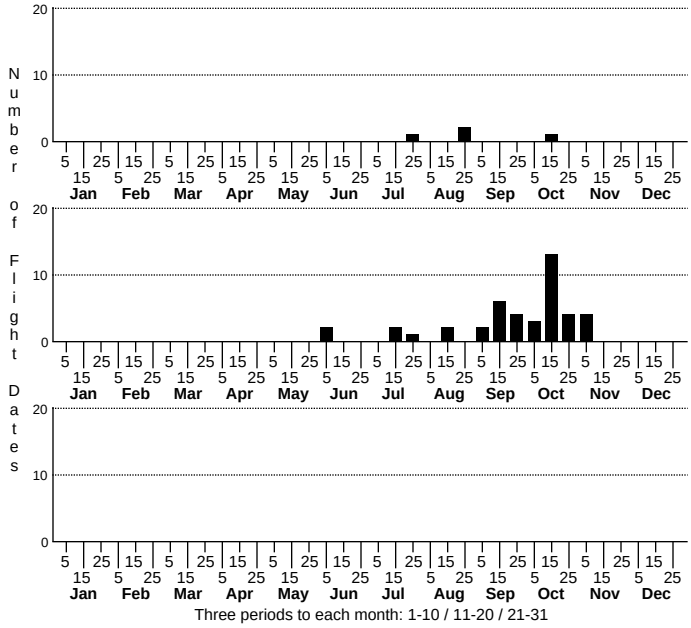
FLIGHT PERIOD: Several broods (at least three), with the species being much more common in summer and early fall than in spring. It appears by late February or early March, with the first brood finishing by late May. A second brood begins by early June. From mid-July into late October, the species is very numerous, and it is on the wing well into November; a few can be seen in winter on warm days. Whether late summer/fall populations are enhanced by migrants from the south is not clear.

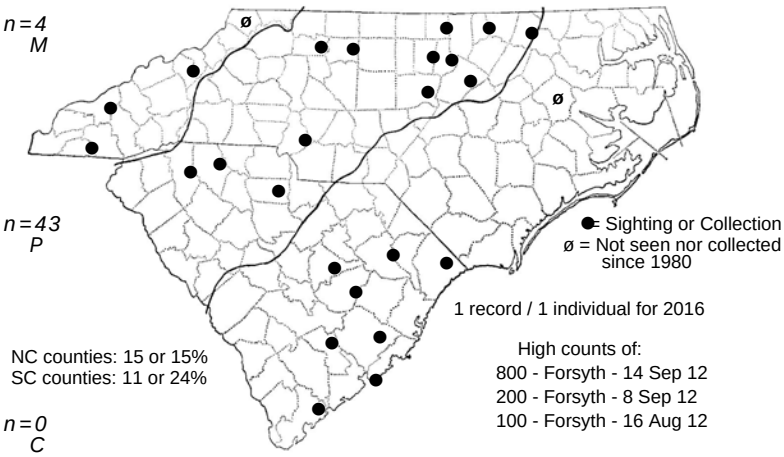
HABITAT: Widespread, primarily in open country. Usually seen around cultivated fields and other fields and meadows, but also along woodland borders and openings in woods. Unlike other sulphurs, it may be seen at times inside forests. It is most common around croplands that have been invaded by sicklepod (Cassia obtusifolia), such as soybean fields.

FOOD AND NECTAR PLANTS: Foodplants are various Cassia species. Based on its abundance around croplands, the "weedy" Cassia obtusifolia is an important foodplant. The species nectars on a wide variety of species.

COMMENTS: This is an "interesting" species. In the spring, it may be seen flying inside woods and along woodland borders alongside the Falcate Orangetip. It is not overly common at that season, and it is a welcome and colorful harbinger of spring. By midsummer and fall, it behaves almost like a different species. It abounds by the dozens around soybean fields and other cultivated fields, which in the spring are mostly plowed fields (and thus not suitable butterfly habitat). It is surprising that this is such a rare to uncommon species from Washington, DC, northward, considering its abundance in NC.

Dainty Sulphur *Nathalis iole*





Earliest date: Forsyth 2 Jun 2012
Latest date: Forsyth 9 Nov 2012

Status NC	Status US	Rank NC	Rank Global
-	-	SZN	G5

DISTRIBUTION: Stray. Widely scattered over the Piedmont and mountains, plus one county in the Coastal Plain.

ABUNDANCE: This is a casual visitor; range is the western half of the country, along with FL. However, in 2012 a colony was established at a site in Forsyth County in the spring, and this colony at a waste treatment plant exploded in summer and fall, peaking with an estimated 800 individuals in September! Individuals from this colony, and likely from other populations in the Eastern and Midwestern states, invaded NC during 2012, presumably in a west to east direction, making it as far east as Halifax and Wake counties. Not surprisingly, none of the remains of the 2012 flight carried over into 2013; no Dainty Sulphurs were seen in NC in 2013, 2014, or 2015. There was a single record in 2016, from Mecklenburg County.

FLIGHT PERIOD: Poorly known in NC. To be "expected" in summer or fall. A flurry of records in Mecklenburg County in 2002 between October 12 and November 4, and a recent (2007) record from October 15 in Person County. The numerous records in 2012 fell between June 2 and November 9.

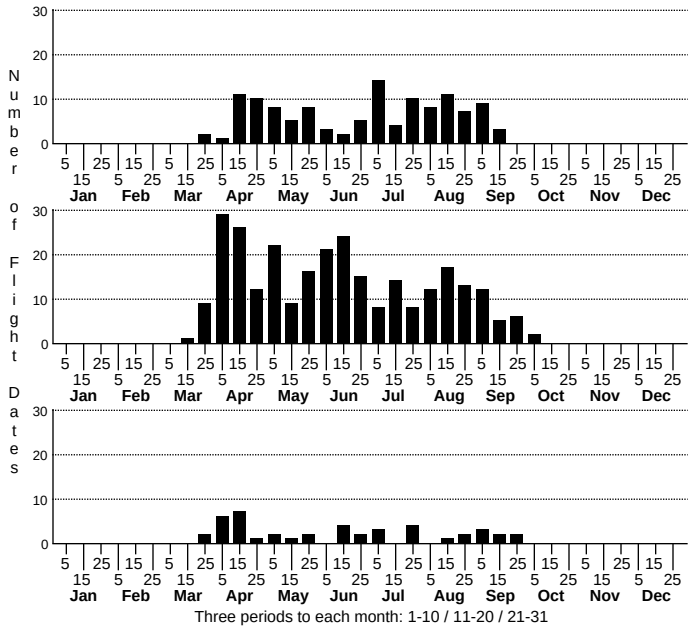
HABITAT: Dry open country -- fields, roadsides, gardens, vacant lots, etc.

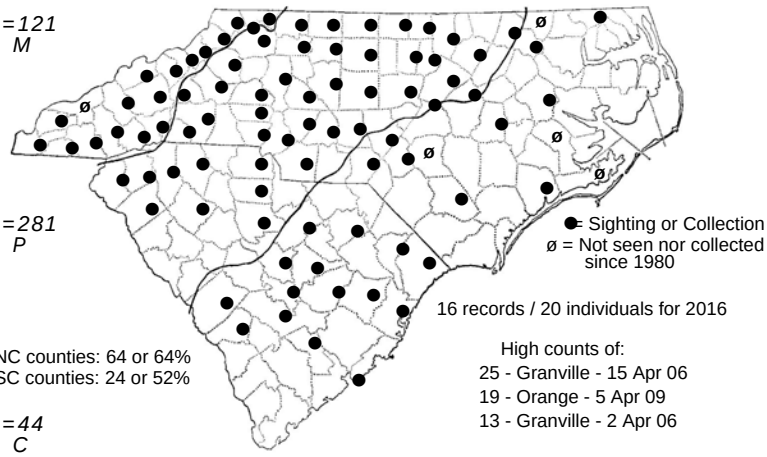
FOOD AND NECTAR PLANTS: Various species in the composite family (Asteraceae) are the foodplants. Nectar plants are poorly reported.

COMMENTS: This species migrates northward and eastward from the southwestern United States. It is accidental in most states along the mid-Atlantic seaboard; however, it has been reported from at least nine counties in SC, including seven in the Coastal Plain. Thus, it could occur anywhere in NC, and Ron Gatrelle collected one in Clay County on July 31, 2001, the first report in several decades for the state. After that record came to light, I received a report of a group of six found in Greenville (Pitt County) in 1977. (See above for comments on the remarkable 2012 outbreak.)

Somewhat remarkable was an "outbreak" of the species in Mecklenburg County in late 2002. Ken Kneidel saw one at Charlotte on October 12; but the report of at least five by Sudie Daves at McDowell Preserve on October 16, most of which were fresh, implied that this represented a brood of siblings that had recently emerged locally, rather than strays that had arrived from distant sites. Individuals of this brood were seen there by others until the end of the month. The last sighting in the county was made on November 4. Nearly as exciting was an individual seen in Person County on October 15, 2007, by Randy Emmitt. Prior to 2012, NC had only 10 records; we now have 47 known records! Though there were no reports in the state in 2013, several reports from previous years were recently obtained, including first records for Yancey and Yadkin counties.

Harvester *Feniseca tarquinius*





16 records / 20 individuals for 2016

High counts of:
25 - Granville - 15 Apr 06
19 - Orange - 5 Apr 09
13 - Granville - 2 Apr 06

NC counties: 64 or 64%
SC counties: 24 or 52%

Earliest date: Durham 16 Mar 1995
Latest date: Durham 3 Oct 2000

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

DISTRIBUTION: Present across the mountains and Piedmont, but spottily distributed over most of the Coastal Plain. Likely absent in some far eastern counties.

ABUNDANCE: Widespread, but scarce; most "numerous" in the mountains, though uncommon there. Rare to locally uncommon in most of the Piedmont, and very rare at best in the Coastal Plain. This is always a good find during the year for most butterfliers.

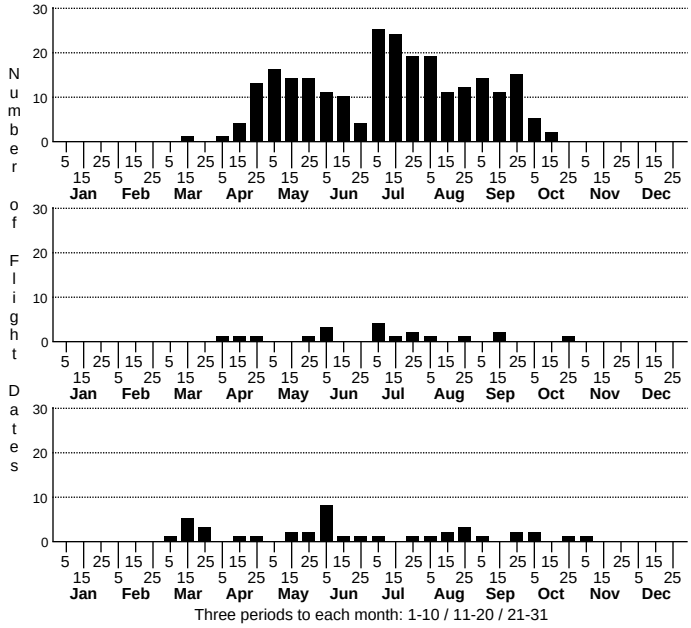
FLIGHT PERIOD: Present from the latter half of March into early October; several to many broods. This species apparently has a very short generation cycle, perhaps as short as three weeks (Allen 1997). In WV, there "may be as many as 6 or more flights" (Allen 1997). More data needed in NC to determine number of flights and flight periods, especially in the Coastal Plain.

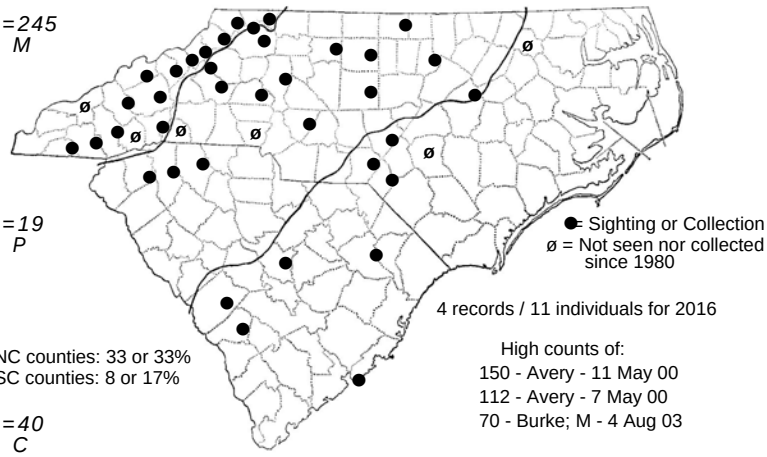
HABITAT: Favored habitats are alder-lined shores of lakes and ponds, openings along wooded creeks, and other types of alder thickets. It can also be found in openings in hardwood forests, generally near water, such as along dirt roads near creeks. It is usually not far from woolly aphid colonies.

FOOD AND NECTAR PLANTS: Caterpillars feed on woolly aphids, especially on and near alders growing along streamsides and in swampy woods. Aphids also frequently inhabit American beech (Fagus grandifolia), and a few colonies of Harvesters have been associated with this tree species. Adults do not nectar; they imbibe moisture and minerals from mud, or take aphid honeydew, dung, or carrion.

COMMENTS: This is an elusive butterfly that can be difficult to find. Harvesters often perch on leaves higher than 6' off the ground. They often remind one of an azure or a hairstreak in behavior as they typically fly at head height (or higher), with a quick and darting flight. They are most often seen on mud or wet ground, on dirt roads through hardwood forests, less often at damp spots on wooded trails. Such individuals are often ridiculously tame and can frequently be poked or enticed onto one's finger for close scrutiny.

American Copper *Lycaena phlaeas*





4 records / 11 individuals for 2016

High counts of:
150 - Avery - 11 May 00
112 - Avery - 7 May 00
70 - Burke; M - 4 Aug 03

NC counties: 33 or 33%
SC counties: 8 or 17%

Earliest date: Cumberland 10 Mar ?
Latest date: Richmond; C 1 Nov 2002

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Other Name: Little Copper

DISTRIBUTION: Throughout most of the mountains, but quite scattered in the Piedmont, with a handful of records for the Sandhills portion of the upper Coastal Plain. Apparently absent in most places in the Piedmont and Coastal Plain, though it has been recorded along the SC coast.

ABUNDANCE: Decreasing in numbers in the past few years. Formerly, fairly common to locally common in the northern mountains, but mostly uncommon to fairly common now; rare to uncommon in the central mountains, and generally rare in the southern mountains. Formerly rare and local in the Sandhills, but very few recent records, and seemingly very rare there now. Extremely rare (only 19 records) in the Piedmont. NC lies near the southeastern edge of the range.

FLIGHT PERIOD: At least three broods in NC. The Coastal Plain and Piedmont records range from mid-March to late October; the flight periods are not overly obvious from the flight charts, though a minimum of three broods seems apparent downstate (and perhaps four broods in the Sandhills). In the mountains, broods are from mid-April into late June, late June to mid-August, and mid-August to mid-October.

HABITAT: Disturbed habitats, such as vacant lots, mountain meadows, fields, powerline clearings, etc. Usually not seen near woody vegetation (shrubby fields, woodland borders).

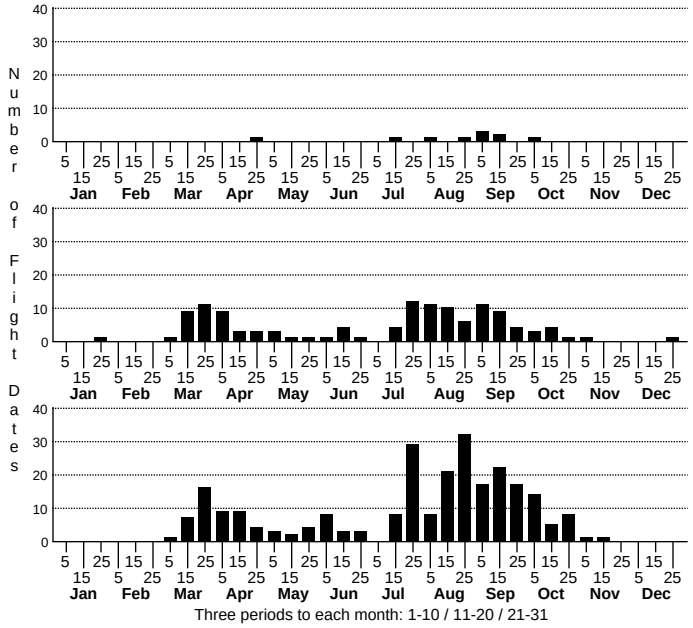
FOOD AND NECTAR PLANTS: The foodplants are introduced species of sorrel/dock (Rumex), which abound in NC in weedy, abandoned fields and pastures. The adults nectar on many low-growing flowers such as buttercups, clovers, and composites.

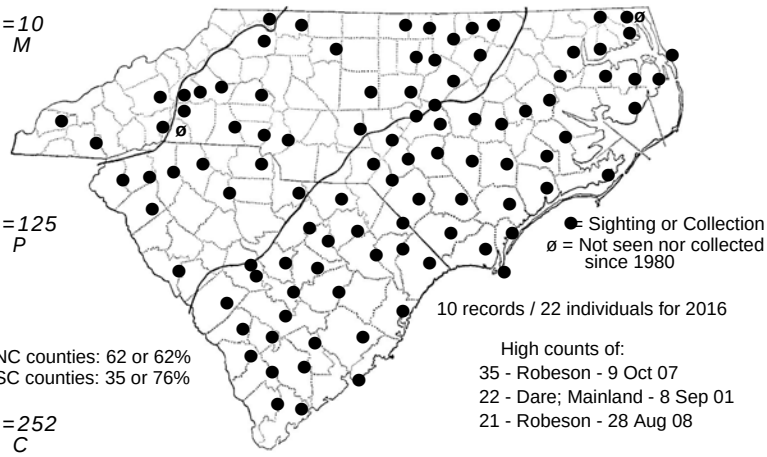
COMMENTS: This species can be easily overlooked, despite its brilliant scarlet color above. The butterflies are small and inconspicuous when the wings are folded. Waste lots with dock (Rumex) are places most butterfliers avoid. Thus, coppers are probably overlooked more than really rare.

Some authorities suggest that the eastern United States population is introduced from Europe; however, there are native populations in the western part of the country. This idea is based on the fact that the primary foodplant is a European introduction and that favored habitats are man-made, such as waste lots and weedy fields. Also, Eastern coppers are closer in appearance to European coppers than they are to populations in the northern and western parts of North America. This suggestion that Eastern populations are not native has bothered many butterfliers, who claim that there is no obvious point of introduction from whence the butterflies have spread (the butterflies were apparently common and widespread when the first lepidopterists started collections and observations); and that there are other butterflies that are clearly native that now use mostly alien plants as foodplants (e.g., Common Sootywing, Hayhurst's Scallopwing, Orange Sulphur, Clouded Sulphur). However, the fact that the species has been recorded only from very widely scattered counties away from the mountains is not consistent with populations of a native species, which should show a more continuous distribution without large gaps in the range.

The species is starting to show alarming declines in the state. Perhaps this is not surprising, as so many "meadow/field" species are declining due to habitat loss, possible herbiciding, untimely mowing, and other factors. Records away from the mountains, as of 2010, have been very few indeed.

Great Purple Hairstreak *Atlides halesus*





10 records / 22 individuals for 2016

NC counties: 62 or 62%
SC counties: 35 or 76%

High counts of:
35 - Robeson - 9 Oct 07
22 - Dare; Mainland - 8 Sep 01
21 - Robeson - 28 Aug 08

New for 24th: Cleveland

Earliest date: Mecklenburg 23 Jan 2002
Latest date: Randolph 26 Dec 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4G5

Other Name: Great Blue Hairstreak

DISTRIBUTION: Essentially throughout the Coastal Plain (though no records yet for most counties in the northwestern Coastal Plain), and scattered over most of the Piedmont; very local at lower elevations in the mountains.

ABUNDANCE: Uncommon to locally fairly common in the southern and eastern Coastal Plain, rare in the lower Piedmont and the northwestern Coastal Plain, and very rare in most of the Piedmont and the southern mountains. Common in a few places in the Coastal Plain, such as Alligator River National Wildlife Refuge in Dare County.

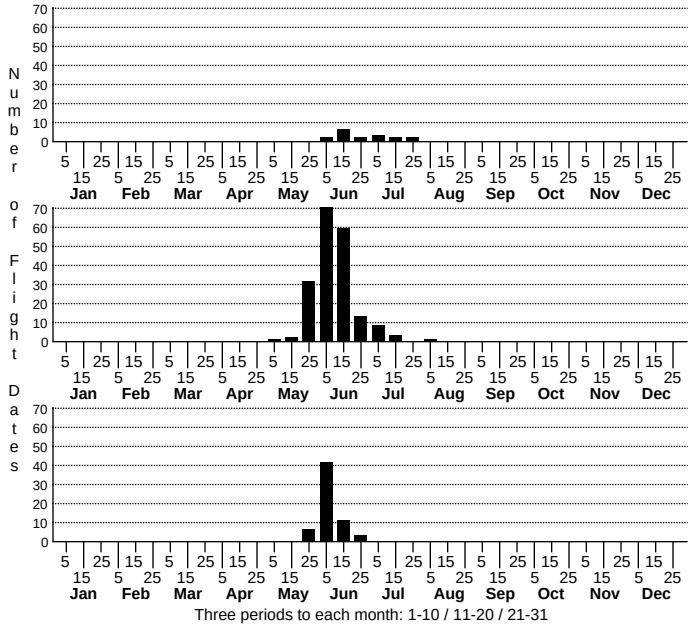
FLIGHT PERIOD: At least three flights: mid-March to late April, early May to late June, and mid-July to late October, with the last brood (or possibly two broods) being much more common. The spring broods are quite brief, at least relative to the last one.

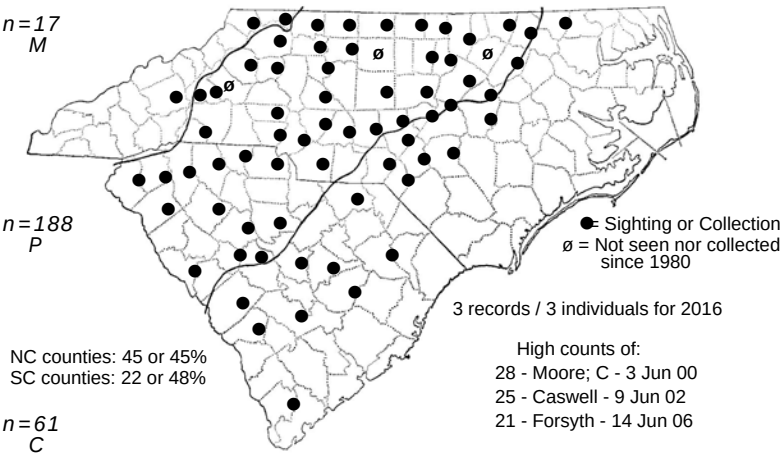
HABITAT: Usually near moist hardwood forests. Most often seen along edges of bottomland woods and swamps, but also noted in savannas, edges of pocosins, and along roads through moist woods. Not usually seen in dry habitats or far from woodlands.

FOOD AND NECTAR PLANTS: Mistletoe (Phoradendron serotinum) is the only known foodplant. Adults nectar on many plant species; I have seen it on goldenrods, sweet pepperbush (Clethra alnifolia), swamp milkweed (Asclepias incarnata), Indian hemp (Apocynum cannabinum), and other species. My best results have been at blooming sweet pepperbush in late July and August, and at climbing hempweed (Mikania scandens) in September.

COMMENTS: This spectacular species is one of the tamest of all butterflies in NC. Nectaring adults seldom flush until touched, and being very conspicuously black against the flowers on which it nectars, one wonders how many are preyed on by spiders and other predators. Although one might tend to look for this species by first locating clumps of mistletoe high in the trees, this is usually not productive. Mistletoe is inconspicuous in the growing season, and the butterflies often feed far from the plant. The species, thus, is usually encountered accidentally while searching the flowering plants blooming along the edges of moist forests.

Coral Hairstreak *Satyrium titus*





3 records / 3 individuals for 2016

High counts of:
28 - Moore; C - 3 Jun 00
25 - Caswell - 9 Jun 02
21 - Forsyth - 14 Jun 06

NC counties: 45 or 45%
SC counties: 22 or 48%

New for 24th: McDowell; M

Earliest date: Forsyth 9 May 1999
Latest date: Forsyth 3 Aug 2008

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Throughout the Piedmont and extreme western Coastal Plain, at least in the Sandhills portion of the latter province. Only three known county records for the mountains; presumably very scarce in that province.

ABUNDANCE: Uncommon to locally fairly common in the central and eastern Piedmont; uncommon in the Sandhills and in the western Piedmont. Very rare in the mountains, where it could occur over most of the province, but so far only known from counties along the VA line and Buncombe County.

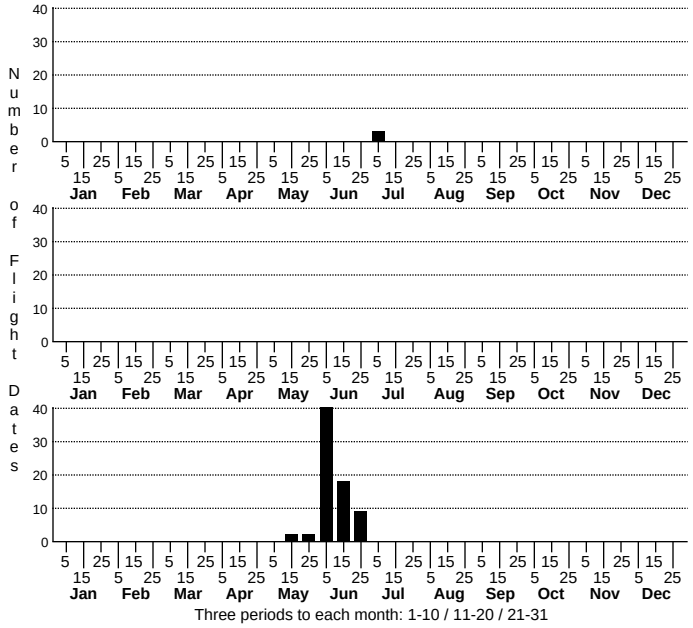
FLIGHT PERIOD: One brood; late May to mid-July downstate, with a peak during the first half of June. In the mountains, it flies from early June to late July.

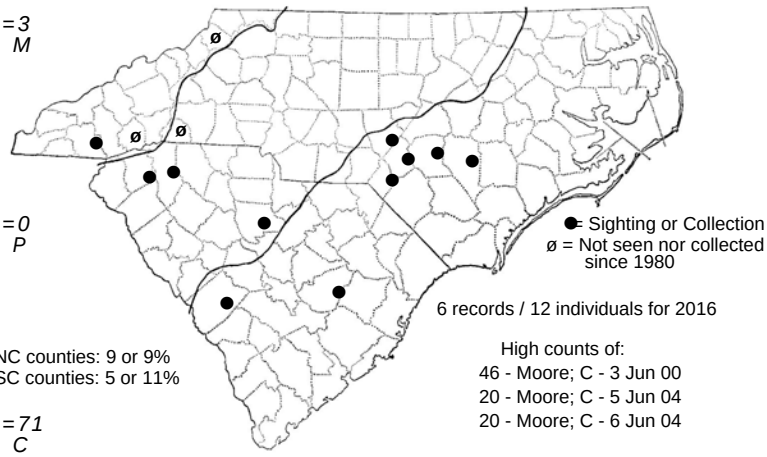
HABITAT: Old fields and borders of upland woods are favored habitats. Powerline clearings, brushy thickets, etc. are also suitable habitats. It is scarce or absent in moist habitats. Of the Satyrium species, it occurs in more open areas than all others.

FOOD AND NECTAR PLANTS: Species of Prunus, mainly black cherry and plums, are favored foodplants. Black cherry and Chickasaw plum are common Piedmont species of old fields, clearcuts, etc. The species nectars especially on butterfly-weed (Asclepias tuberosa). Other flowers are used much less frequently -- New Jersey tea, Indian hemp, etc.

COMMENTS: Many hairstreaks are notoriously difficult to find; most are uncommon, and many spend the majority of their time perched on leaves of trees, where they are hard to locate. Fortunately, the distinctive Coral Hairstreak is easily searched for, though not necessarily found. Scan blooming butterfly-weeds growing along dry woodland borders, along edges of thickets, and in powerline clearings. As with most hairstreaks, flocks are seldom found, but you may find three or four individuals of Coral Hairstreaks in a morning, with a diligent search of this conspicuous wildflower. Individuals are tame on the flowers and are easily studied.

Edwards' Hairstreak *Satyrium edwardsii*





Earliest date: Moore; C 16 May 2013
Latest date: Macon 7 Jul 1993

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G4

DISTRIBUTION: Spottily distributed in the mountains and probably the foothills; however, primarily known at present from the Sandhills. No records from essentially all of the Piedmont, though might be present at some monadnocks in that province. Absent from nearly all of the Coastal Plain, other than the Sandhills. Currently known from just nine counties in North Carolina.

ABUNDANCE: Rare to locally uncommon in the Sandhills, but very rare and probably local elsewhere. Presumably occurs in the Piedmont, where it must be extremely rare. Hardly any recent records for the mountains, suggestive of a decline for unknown reasons.

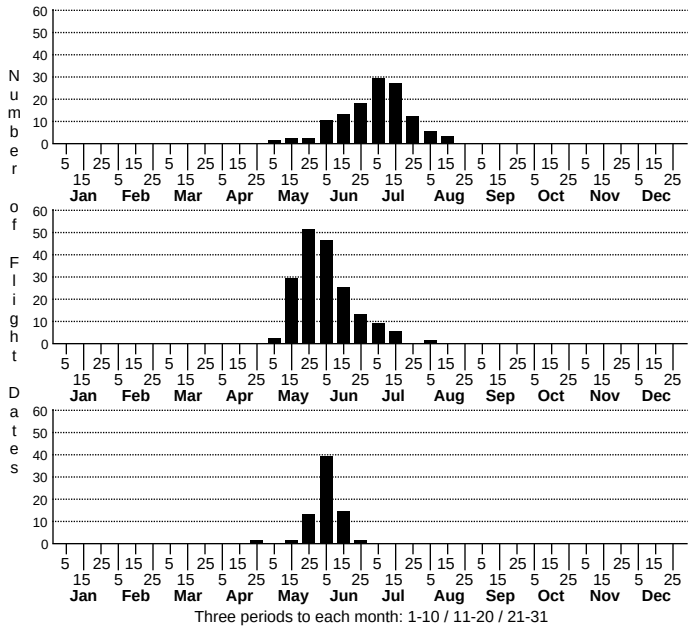
FLIGHT PERIOD: One brood -- late May to early July. Species present in July in the mountains; in the Sandhills the flight period is from late May into late June.

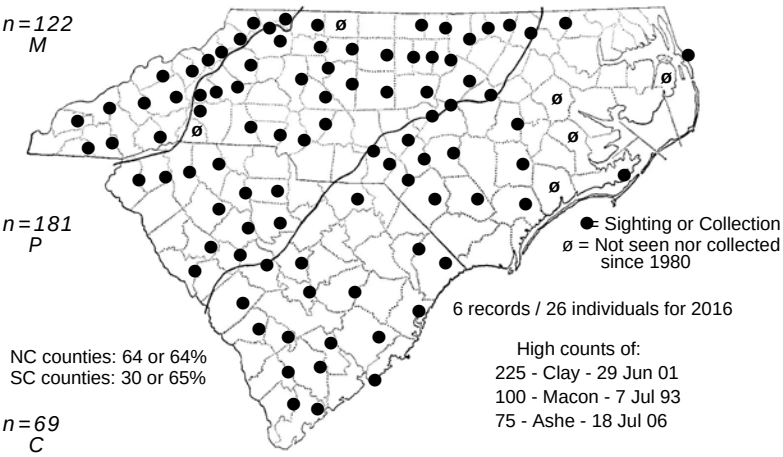
HABITAT: Throughout most of the range, the species occurs in areas of scrub oaks, on hilltops or in other dry or rocky sites. The most common host species -- bear oak (Quercus ilicifolia) -- is rare in NC, and the butterfly obviously has other host oak species in NC. In the mountains it is known from the vicinity of outcrops and other openings near mountaintops. In the Sandhills it occurs in xeric areas of scrub oaks, such as near turkey oaks (Q. laevis).

FOOD AND NECTAR PLANTS: Various species of scrub oaks; bear oak is the most common foodplant north of NC. In North Carolina, the foodplants are various stunted oaks near mountaintops, and scrub oaks such as turkey oak and blackjack oak (Q. marilandica) in the Sandhills. Steve Hall indicates that the presence of one or several ant species is very important in the selection of foodplants. This species nectars somewhat infrequently. Steve Hall saw several nectaring on wild hydrangea in the mountains of NC, and I have seen them nectaring on New Jersey tea (Ceanothus americanus) and on sourwood (Oxydendrum arboreum) in the Sandhills.

COMMENTS: This species ought to occur on monadnocks that contain bear oaks -- Pilot Mountain, Hanging Rock, and Crowders Mountain state parks, but there are no records from these counties! It is actually locally common at Weymouth Woods-Sandhills Nature Preserve, in typical longleaf pine/scrub oak woods. In 2002, I saw one in "sandhills" habitat in Sampson County, extending the range eastward, even though this county lies outside the Sandhills region. Needless to say, habits and habitats of the species elsewhere in the range are not the same as that in NC.

Banded Hairstreak *Satyrium calanus*





6 records / 26 individuals for 2016

High counts of:
225 - Clay - 29 Jun 01
100 - Macon - 7 Jul 93
75 - Ashe - 18 Jul 06

NC counties: 64 or 64%
SC counties: 30 or 65%

New for 24th: Burke; P, Duplin

Earliest date: Duplin 26 Apr 2016
Latest date: Ashe 16 Aug 2005

Status NC	Status US	Rank NC	Rank Global
-	-	S4S5	G5

DISTRIBUTION: Essentially statewide, though a number of gaps are present, especially in the Coastal Plain. Mysteriously very rare to absent in the northern Coastal Plain.

ABUNDANCE: Uncommon to very locally common in the mountains; uncommon in the Piedmont and southwestern Coastal Plain, but very rare in parts of the lower Coastal Plain, and especially so in the northern part of the province. Usually only one or a few individuals are seen at a time in the Piedmont and Coastal Plain, but 100 or more have been reported in a day in the mountains of the southern Appalachians.

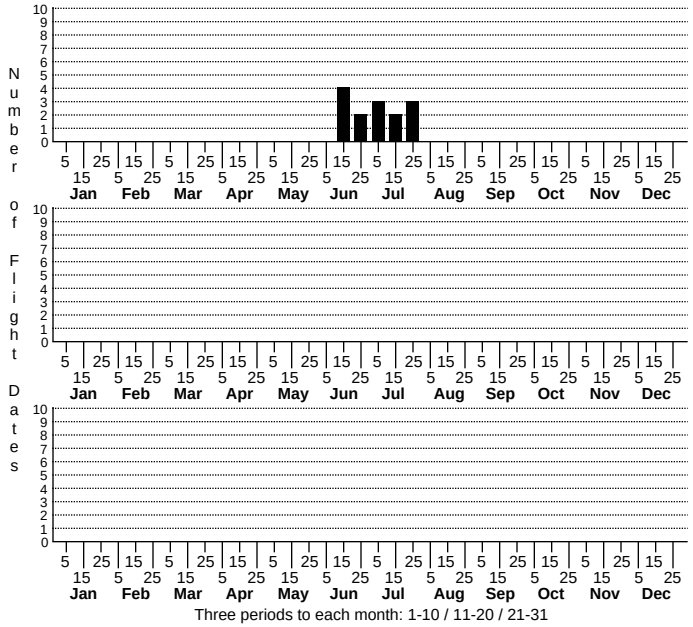
FLIGHT PERIOD: A single brood; mid-May to early July, peaking from June 1-10, in the Coastal Plain and Piedmont. In the mountains, flies from late May to the first half of August, peaking in early July.

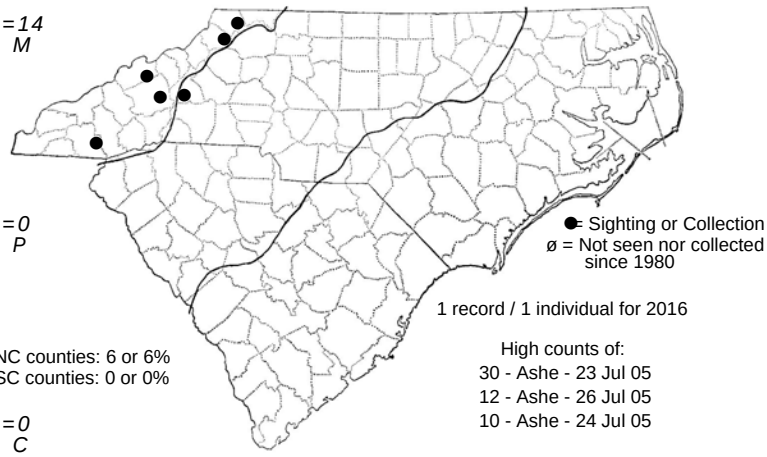
HABITAT: A wide variety of hardwood forests, but generally in open to medium-growth upland hardwoods. Typically seen nectaring or perched on leaves or twigs of trees along wooded borders or along roads or wide trails in the forest. Seldom seen more than 25 feet from a forest.

FOOD AND NECTAR PLANTS: Foodplants are generally oaks or hickories. The species spends much time perched on leaves and twigs of hardwoods along wooded borders and trails. Adults nectar at milkweeds, Indian hemp, and other flowers along wooded borders.

COMMENTS: Despite more than a decade of searching, I have seen more than 10 Banded Hairstreaks in a day only at one site -- at the top of Mount Jefferson. There are many literature reports of observers seeing 100 or more a day, usually in the mountains and in regions to the north of NC. Though NC is well within the range of the species, it is certainly more common to our north. Why it is so relatively scarce in NC is a mystery, as oaks are the primary foodplants. For example, in 2006 we received only two reports for the entire Piedmont province, and we received just one report for the entire mountain province in 2013!

Hickory Hairstreak *Satyrium caryaevorus*





1 record / 1 individual for 2016

NC counties: 6 or 6%
SC counties: 0 or 0%

High counts of:
30 - Ashe - 23 Jul 05
12 - Ashe - 26 Jul 05
10 - Ashe - 24 Jul 05

Earliest date: Buncombe 13 Jun 2013
Latest date: Ashe 26 Jul 2005

Status NC	Status US	Rank NC	Rank Global
SR	-	S1	G4

Synonym: *Satyrium caryaevorum*

DISTRIBUTION: Restricted to the mountains; specimens or photographs known only from Ashe, Watauga, Madison, Buncombe, and Macon counties, and reported (correctly?) from McDowell County. Certainly must be present in other mountain counties ranging to the GA border.

ABUNDANCE: Seemingly very rare. Although it can be overlooked as a Banded or other hairstreak, it has been searched for on a number of occasions, generally without success. This species has been recorded in just three counties in VA (Harry Pavulaan, pers. comm.), further emphasizing the rarity of the species in the southern Appalachians.

FLIGHT PERIOD: A single brood; the latter half of June to late July, averaging a week or two later than Banded Hairstreak. Thus, both species can occur together, but the Hickory has a later "peak" in mid- or late July, apparently, whereas Banded peaks in the mountains in early or mid-July. On the other hand, several recent records, at low elevations, have been made in mid-June. Perhaps the flight period is advancing earlier in recent years.

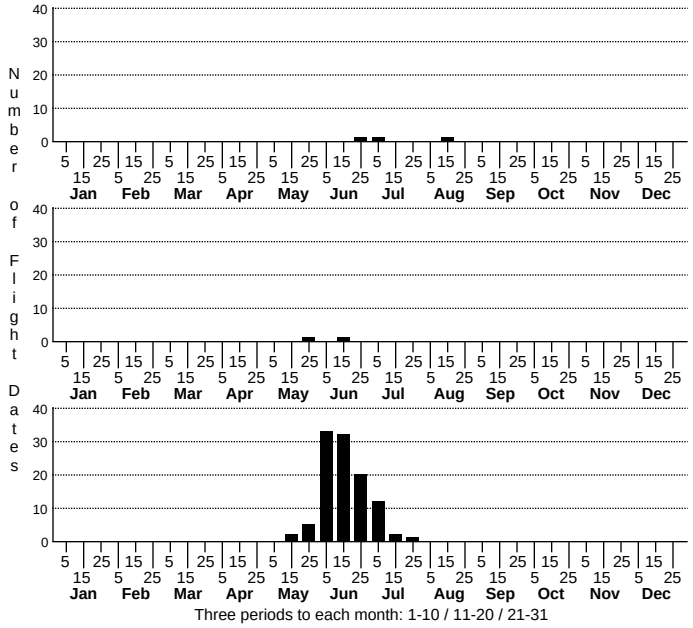
HABITAT: Edges of hardwood forests; openings or along roads or trails within hardwood forests, believed to be mainly near hickories.

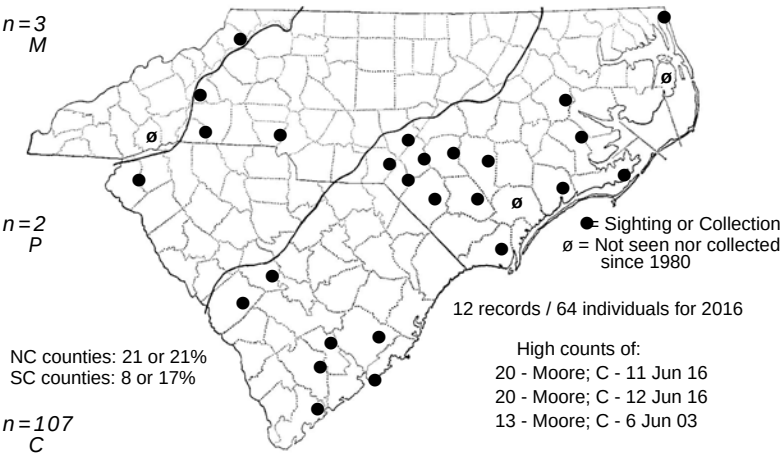
FOOD AND NECTAR PLANTS: Foodplants are hickories only. The species nectars on milkweeds, Indian hemp, sumacs, and others. One photographed in Buncombe County in 2002 was imbibing minerals/moisture from a dirt road.

COMMENTS: This species is poorly known in NC because of the great difficulty of identification; it is very similar to the Banded Hairstreak. Consult Glassberg (1999) and Cech and Tudor (2005) for identification; the text and photographs in these books are excellent. On a Hickory, the postmedian paired white bars are close together near the blue tail spot but become farther apart toward the leading margin. On a Banded, the paired white bars tend to be close together all along the hind wing, from the blue spot to the leading margin. On a Hickory, the top pair of white bars in the postmedian band is greatly displaced basally, and it lies almost in line over the basal paired white bars. On the Banded, the paired white bars on the postmedian band are in a smooth arc, such that the top bars (near the costal margin) are not aligned directly over the basal pair of white bars, but are still toward the outside.

The species has been reported on several occasions in the GA mountains. Thus, the butterfly certainly occurs in the NC mountains from the VA line to the GA line. In 2001-02, we received several sight and photo reports from Macon, Buncombe, and Watauga counties, where specimens have previously documented county occurrences. Ted Wilcox photographed large numbers of Banded, and apparently some Hickories, at two sites in Ashe County in 2005; many of his photos are probably best left unidentified! His data indicate that Bandeds peaked 7-10 days earlier than Hickory at the same site, though more confirmation is needed in upcoming years. He photographed large numbers of Satyriums in Ashe County in 2006; nearly all seemed to be Bandeds, which now makes us wonder about many of the 2005 individuals identified by others (from his photos) as Hickory Hairstreaks. In 2012, a group observed one in Madison County at a low elevation, with Doug Johnston obtaining definitive photos; he also photographed one in Buncombe County in 2013, and he photographed another in that county in 2016.

King's Hairstreak *Satyrium kingi*





Earliest date: Carteret 13 May 2012
Latest date: Transylvania 11 Aug ?

Status NC	Status US	Rank NC	Rank Global
W	-	S3S4	G3G4

DISTRIBUTION: Scattered in the southern half of the Coastal Plain, and also sparingly in the southern Piedmont and southern mountains, with an outlier record for the northern mountains (in 2008). Records for Currituck and Pitt counties in 2014 helped to fill in a large gap in the range in the northern Coastal Plain; the species is known from southeastern VA. Known only from Gaston, McDowell, Polk, Transylvania, and Watauga counties west of the Coastal Plain.

ABUNDANCE: Very local in the Coastal Plain; rare to uncommon, but seems to be colonial. Extremely rare elsewhere.

FLIGHT PERIOD: From late May to late July in the Coastal Plain; though the peak counts are around June 10, it is often found well into July, being the latest flying Satyrium species in the Coastal Plain. The mountain records are of singles photographed on June 27 and on July 8, and of a very worn individual in mid-August. Piedmont colonies have been found at Crowders Mountain State Park by me in 2001 and by David Campbell in Polk County in 2015; the flight there likely occurs from very late May to late June or early July.

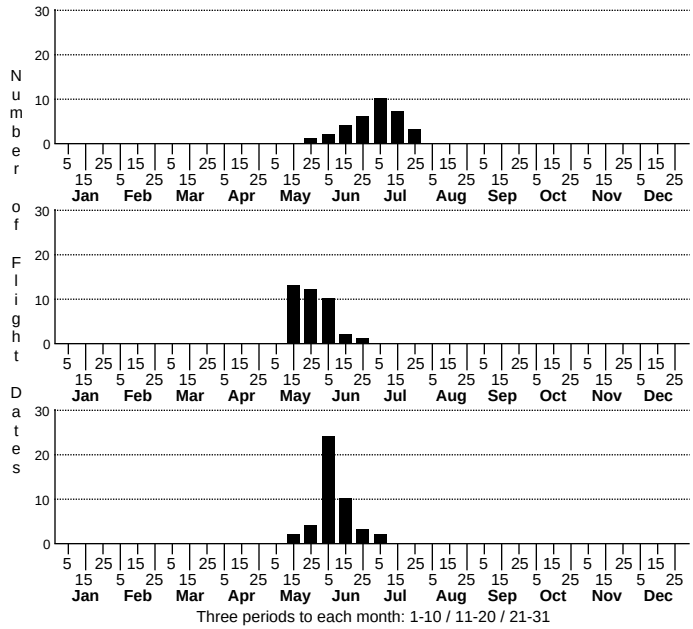
HABITAT: Pocosin ecotones, especially where longleaf pine forests meet pocosins, are the primary habitat in the Coastal Plain; also present in pine flatwoods and swamp/bottomland margins, but always near sweetleaf or horse sugar (Symplocos tinctoria). In the mountains, and perhaps in the Piedmont, the habitats are poorly known but are probably hardwood or mixed forests where sweetleaf is present. At Crowders Mountain the habitat is a monadnock with a good stand of sweetleaf near the summit, whereas the Polk County site is a pine/oak heath stand.

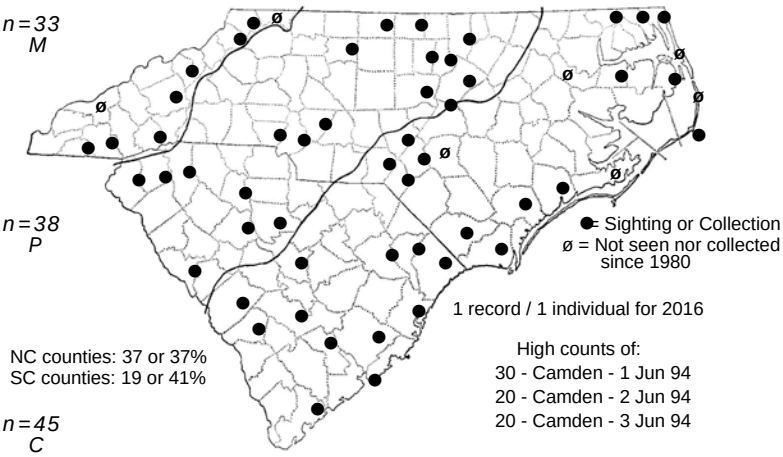
FOOD AND NECTAR PLANTS: The primary, if not sole, foodplant is sweetleaf. Some references indicate that azaleas may also be used. Sourwood (Oxydendrum) appears to be the primary nectar source in the Coastal Plain; at Weymouth Woods Sandhills Nature Preserve, New Jersey tea (Ceanothus americanus) is also used for nectar. There are relatively few flowers in bloom in the pocosin habitats when adults are on the wing.

COMMENTS: To find this species, you will have to look where sweetleaf is common. You will generally fail to find King's Hairstreaks, as they are quite colonial. In 1995, I observed colonies at Weymouth Woods and adjacent Paint Hill in Moore County, but I failed to find them in seemingly good habitat at Holly Shelter Game Land in Pender County. This butterfly has been found in at least 21 counties in NC, so it is not truly rare, and suitable habitat is probably common. However, all Satyrium species have single broods and generally can be found for only a few weeks in any given locality. Remarkable was the individual photographed (confirmed by the authors) along the Blue Ridge Parkway in Watauga County in 2008 by Lillian McElrath, and nearly as shocking was one photographed by Nancy Cowal in the foothills of McDowell County in 2015. The hostplant -- sweetleaf -- is presumed to occur in these areas; however, this shrub is present in most counties in the Piedmont, and yet there are just two known records in that province despite a heavy amount of field work. In the northern half of the Coastal Plain, Jeff Pippen and Salman Abdulali photographed individuals in Currituck and Pitt counties, respectively, in June 2014.

Bo Sullivan finds larvae of this species readily by tapping on the sweetleaf limbs with a stick or butterfly net. Based on his experience, he suggests that the species is not rare enough for the NC Natural Heritage Program to track records; thus, we have downgraded its NC Status to Watch List. Even so, finding adults requires much searching, as they typically do not perch on sweetleaf leaves, but on seemingly any leaves of various shrubs and small trees in its pocosin or swamp edge/opening habitats.

Striped Hairstreak *Satyrium liparops*





1 record / 1 individual for 2016

High counts of:
30 - Camden - 1 Jun 94
20 - Camden - 2 Jun 94
20 - Camden - 3 Jun 94

NC counties: 37 or 37%
SC counties: 19 or 41%

New for 24th: Watauga

Earliest date: Orange 12 May 2002
Latest date: Transylvania 31 Jul 2004

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G5

DISTRIBUTION: Scattered over the entire state, but many gaps in the range are present.

ABUNDANCE: Rare over most of the state; most numerous in the lower Coastal Plain. Locally uncommon in the lower Coastal Plain and along the Outer Banks; surprisingly numerous in the Great Dismal Swamp. Very rare in most of the Piedmont.

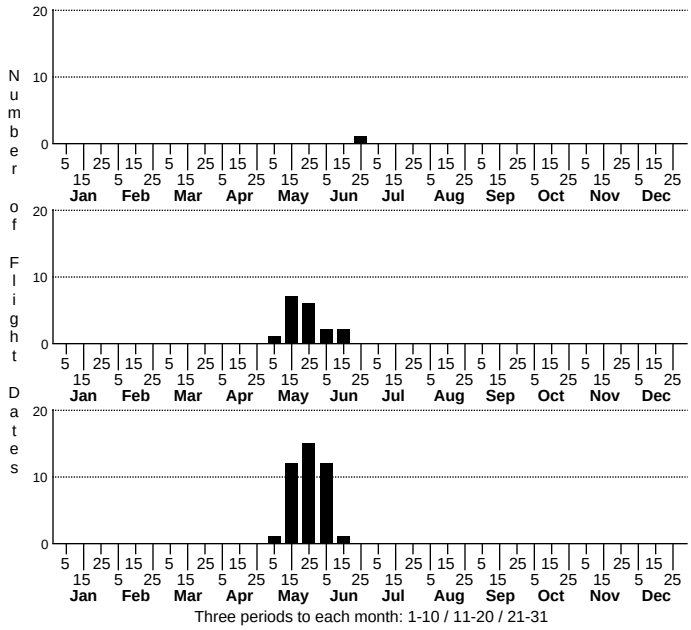
FLIGHT PERIOD: A single brood. The flight in the Coastal Plain and Coastal Plain occurs from mid-May to mid-June, rarely to early July, but in the mountains on the wing mostly from early or mid- June to late July. Except for the Oak Hairstreak, it flies slightly earlier than the other Satyrium species in NC, perhaps by about five days.

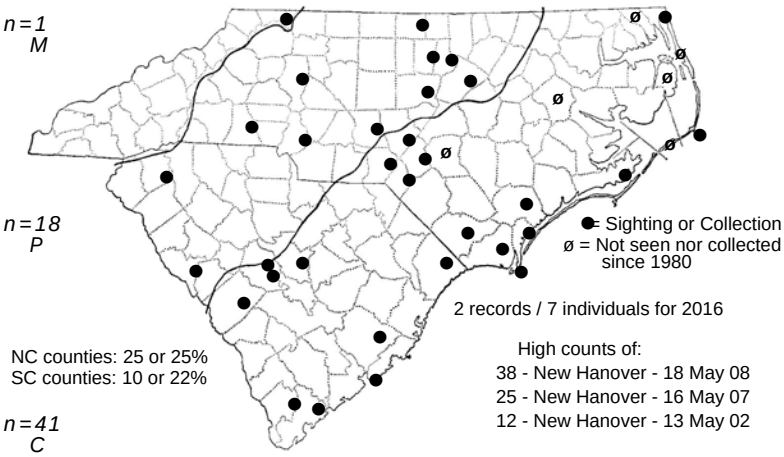
HABITAT: Very wide range of habitats, but usually near edges or openings of hardwood forests, especially those with an abundance of highbush blueberries. Occurs both in upland habitats and in wetland forests; in the Coastal Plain, it favors wetland forest openings and edges (particularly near stands of highbush blueberries). In the mountains, Striped Hairstreaks have been seen at mountaintop openings, with other hairstreaks. It tends to stay closer to forests than other Satyrium species.

FOOD AND NECTAR PLANTS: The foodplants are mostly cherries, plums, and blueberries; in other words, a variety of shrubs and trees in the rose and heath families. The species nectars on many flowers, such as milkweeds, Indian hemp, etc. In the Dismal Swamp, I found it quite common in 1994. Most nectared on Indian hemp. I suspect that highbush blueberries (Vaccinium corymbosum) to be a (or the) foodplant; this plant was common not only there but at a site in New Jersey were I saw 20 individuals in one hour in 1994.

COMMENTS: Why this species is so seemingly scarce in NC is a mystery. It has such a supposedly wide choice of foodplants and habitats that purposefully searching for it, other than in Dismal Swamp, is difficult. I saw up to 30 in a day in the Dismal Swamp from mid-May to early June 1994. At both this site and the New Jersey site, the hardwood forests were moist, highbush blueberries were abundant, and the woods were bisected by narrow dirt roads. I was fortunate to find the species on six occasions in 1995, from Mount Jefferson to Crowders Mountain to the Sandhills to Holly Shelter. In nearly all cases, however, sightings were unexpected. Despite thousands of hours of coverage by butterfliers in the state in 1999 and 2000, just a single Striped Hairstreak was reported, further emphasizing its rarity in North Carolina. We received five reports in 2001, better than for the two previous years, but still a paltry number considering the fair amount of field work done across the state and the potential for the species to occur in any county. Gratifyingly, observers found the species in three new counties in 2002, filling gaps in the central mountains and finally found in the heavily-worked Wake County. Sadly, very few new county records have been added over the past decade. To find this species, be afield often from mid- or late May to mid-June (and in July in the mountains)!

Oak Hairstreak *Satyrium favonius*





Earliest date: Orange 9 May 2010
Latest date: Alleghany 24 Jun 2000

Status NC	Status US	Rank NC	Rank Global
SR	-	S3	G4G5

Synonym: *Fixsenia favonius*
Other Name: Southern Hairstreak, Northern Hairstreak

DISTRIBUTION: Mainly in the lower Coastal Plain and in the Sandhills, but it does occur very sporadically over the Piedmont; extremely rare in the mountains.

ABUNDANCE: Rare and poorly known, though locally uncommon in maritime forests. Occurs mainly within 10 or 20 miles of the coast in NC; very rare farther inland, and seemingly absent over nearly all of the mountains. Most numerous along the southern coast from Fort Fisher (New Hanover County) to the SC state line, where at times five or more individuals can be seen in one or two hours.

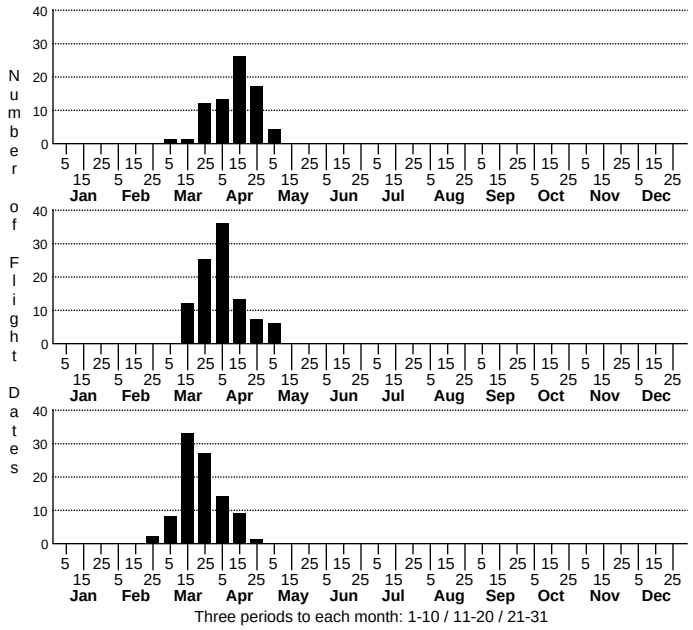
FLIGHT PERIOD: A single brood; mid-May to mid-June in the Coastal Plain and Piedmont; probably in June in the mountains. This is certainly the earliest flying Satyrium species. Its peak appears to be around May 20.

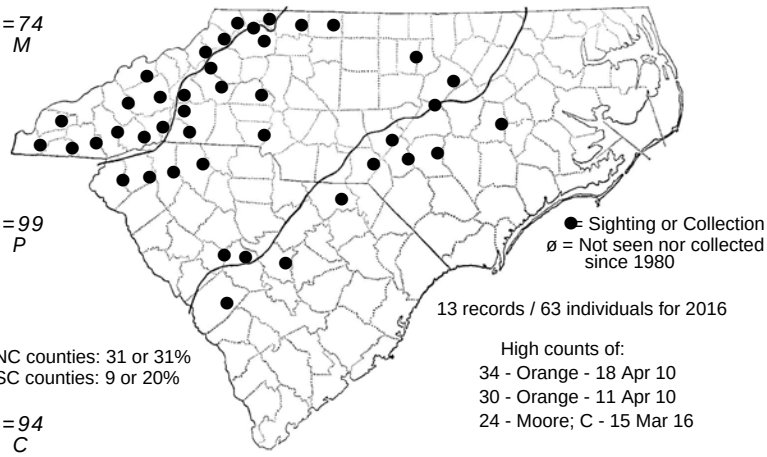
HABITAT: This species is most numerous in or near stands of evergreen oaks, such as live oaks (Quercus virginiana) or laurel oaks (Q. laurifolia) in maritime "sandhill" scrub forests. Farther inland, it is found in dry forests dominated by deciduous oak species. In the Sandhills, it is found mainly in xeric stands of scrub oak species.

FOOD AND NECTAR PLANTS: The foodplants are oaks; live oak is probably favored over others in NC. Nectar plants are typical for most hairstreaks, though chinquapin (Castanea pumila) has been reported as a favorite. Along the southern coast, sparkleberry (Vaccinium arboreum) is the chief nectar source.

COMMENTS: This is another of the rare hairstreaks, and it is difficult to find even with a purposeful search, except in a few maritime forests and thickets. The Oak Hairstreak is to be searched for along the coast, particularly in maritime forests such as Buxton Woods, Fort Fisher, Bald Head Island, and the Ocean Isle Beach/Sunset Beach area. From the Fort Fisher area southwest into SC, the southern subspecies (Satyrium favonius favonius), formerly called the "Southern Hairstreak", appears to be present (based on photos taken by Jeff Pippen and others), at the northern edge of its range. Also, the Pitt County record, a specimen from May 1977, is considered to be of this same subspecies (fide Alex Grkovich). However, there may be a mixing of characters in these butterflies with the nominate "Northern Hairstreak" (S. favonius ontario), which ranges over much of the eastern states, including the interior of NC. Away from maritime forests, the species would be expected to be found only by chance. The NC range was expanded westward in 2000 by the photographing of individuals by Randy Emmitt in Caswell County and by Bruce Grimes in Alleghany County (a first record for the mountains), and I saw two individuals at Crowders Mountain State Park in Cleveland County in 2001. In the past several years, Taylor Piephoff has found a few small colonies on the mainland side of Ocean Isle Beach.

Brown Elfin *Callophrys augustinus*





13 records / 63 individuals for 2016

High counts of:
34 - Orange - 18 Apr 10
30 - Orange - 11 Apr 10
24 - Moore; C - 15 Mar 16

NC counties: 31 or 31%
SC counties: 9 or 20%

Earliest date: Moore; C 26 Feb 2001
Latest date: Surry 9 May 2013

Status		Rank	
NC	US	NC	Global
-	-	S4	G5

Synonym: *Incisalia augustinus*

DISTRIBUTION: Occurs throughout the mountains and Piedmont foothills, as well as the Sandhills. Very scarce in most central and eastern Piedmont counties, and likely absent over most of the Coastal Plain. Likely occurs in all mountain counties.

ABUNDANCE: Generally uncommon in the mountains and foothill ranges. Very local and rare farther east, mainly in the Sandhills.

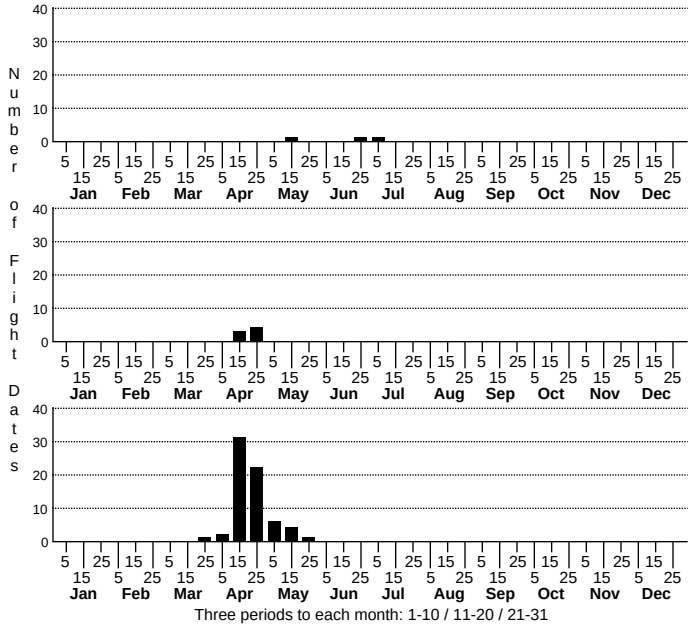
FLIGHT PERIOD: A single brood: early March to mid-April in the Piedmont and Sandhills, peaking in mid-March in the Sandhills and late March and early April in the upper Piedmont; primarily from late March to early May in the mountains.

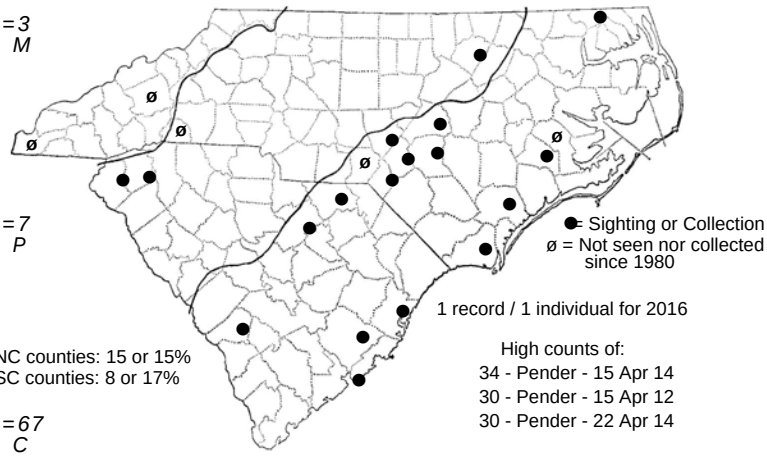
HABITAT: The species is characteristic of dry forests with an abundance of ericads. This can be longleaf pine/turkey oak scrub in the Sandhills, monadnock forests in the Piedmont, and a variety of dry to mesic forests in the mountains. Areas with an abundance of evergreen heath species, especially mountain laurel (Kalmia latifolia), provide the best habitat.

FOOD AND NECTAR PLANTS: Foodplants in NC seem to be mainly evergreen species of ericads. Mountain laurel appears to be the primary foodplant in the mountains and Piedmont, and creeping blueberry (Vaccinium crassifolium) is suspected as a foodplant in the Sandhills. Sand-myrtle (Kalmia buxifolia) is suspected of being a foodplant at a new site found in Hoke County. Certain deciduous species of ericads, such as some blueberries, might also be used. Nectar plants are ericads such as blueberries, but also sweetleaf (Symplocos tinctoria), etc.

COMMENTS: This is one of the more colonial butterflies in the state, as a handful of individuals can sometimes be seen once the first butterfly is found. The well-known population at Occoneechee Mountain in Orange County had a banner season in 2010, as observers made the two highest state counts there in April. As with most elfins, the species must normally be found with a purposeful search, as an observer usually would not look for butterflies in the interior of xeric forests from mid-March into April! Of course, few butterflies are found where and when the Brown Elfin flies.

Frosted Elfin *Callophrys irus*





NC counties: 15 or 15%
SC counties: 8 or 17%

Earliest date: Moore; C 27 Mar 2012
Latest date: Buncombe 3 Jul 1901

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G3

Synonym: *Incisalia irus*

DISTRIBUTION: Scattered in the Coastal Plain, and at least formerly in the southern mountains/foothills. No records for the northern mountains, essentially all of the Piedmont, and the northwestern Coastal Plain. The only recent records are from the southern half of the Coastal Plain, except for a surprising colony found in the eastern Piedmont (Franklin County) in 2002 and a re-discovery of a site in the northern Coastal Plain (Gates County) in 2014-2015.

ABUNDANCE: Rare to very rare; range certainly is poorly known in NC; more widespread in the Sandhills than elsewhere, but even there it is rare. It is extremely rare in the Piedmont and mountains. The species has declined in NC in recent decades and is now one of the rarest butterflies (that has a "wide" range) in the state.

FLIGHT PERIOD: A single brood; in the Coastal Plain mainly during the last 20 days of April, with a handful of records in May. The Franklin County records are for mid- and late April; probably late April to mid-May in the mountains. The flight is later than Brown or Henry's elfins, where they occur with Frosted Elfin. This species has a remarkably narrow flight period, seemingly only two to three weeks long in the Sandhills.

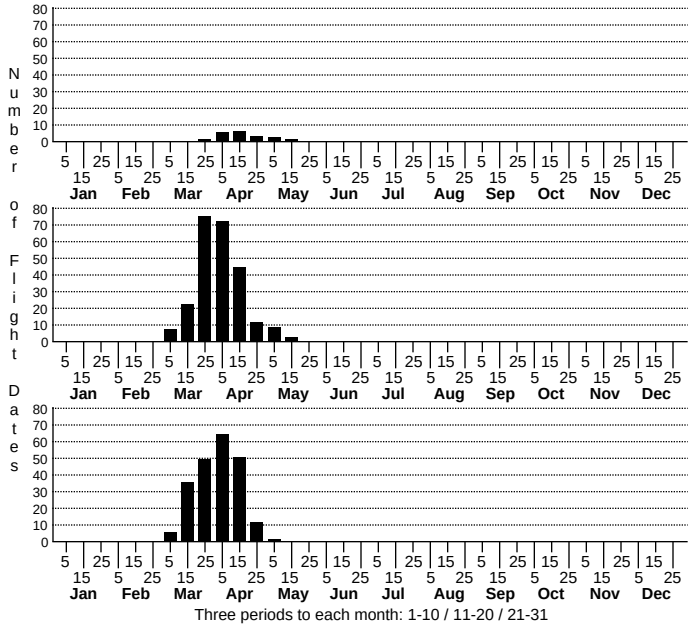
HABITAT: Restricted to areas with lupines (Lupinus spp.) or wild indigos (Baptisia spp.). These are typically along edges of upland or xeric woods. Plants of these genera are usually found along edges of woods or in clearings. Lupinus diffusus is locally common along edges of longleaf pine/scrub oak woods in the Sandhills.

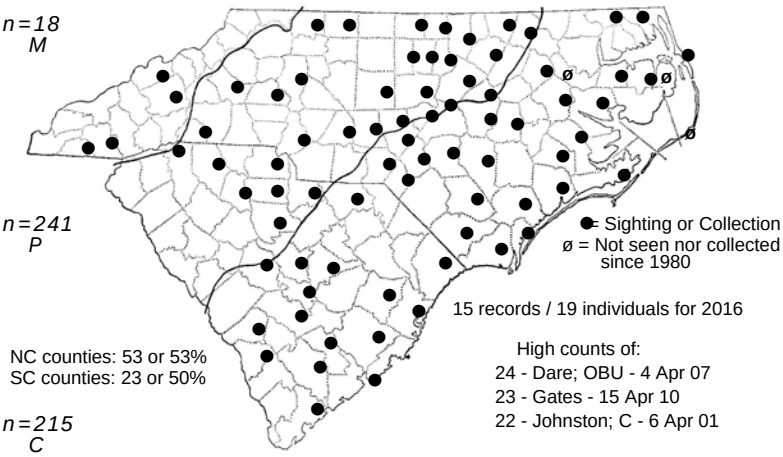
FOOD AND NECTAR PLANTS: Foodplants are Lupinus or Baptisia. Females lay eggs on unopened flowers of these plants; thus, you should carefully scrutinize the inflorescences of these plants for the butterflies. Nectar plants are not well known in NC, but lupines bloom in April and are used, along with blueberries.

COMMENTS: Because this species has such restricted foodplants, it can be purposefully searched for. However, suitable habitat is relatively rare, except in the Sandhills, where Lupinus diffusus and Baptisia cinerea are locally common. It is in this region where one should search for the species. I did this in late April 1993 by driving slowly along roads and looking for blooming Lupinus diffusus, which is strikingly sky-blue when in flower. I was rewarded by seeing two Frosted Elfins perched on the tips of the inflorescences. I saw two other Frosted Elfins in 1995 near Weymouth Woods, again at flowers of lupine, as well as in 1998 and 1999 at lupines in the Sandhills Game Land. However, I spent many futile hours looking for the species in 1996 and 1997, emphasizing the rarity of this elfin. A new population was found in 2006 in Harnett County; the site lies in the Coastal Plain, but outside the Sandhills. The state's largest known population is near the coast in Holly Shelter Game Land in Pender County, where an excellent one-day tally of 30 individuals was made on April 15, 2012; an even better tally of 34 elfins was made there on April 15, 2014.

I discovered a colony in Franklin County in April 2002, in a powerline clearing with an abundance of wild indigo (Baptisia tinctoria), its foodplant at the site. This was a first record for the Piedmont outside of the foothills. Powerline clearings are common in the eastern Piedmont, and many have been worked in late April (for species such as Cobweb or Dusted skippers). In all likelihood, few powerlines have sufficient populations of wild indigo to support the Frosted Elfin. Floyd and Signa Williams, and Larry Lynch, have found a colony on a sand ridge in Gates County in 2014 and 2015; there is an old record from this county, the only one known for the species in the northern half of the Coastal Plain.

Henry's Elfin *Callophrys henrici*





15 records / 19 individuals for 2016

High counts of:
24 - Dare; OBU - 4 Apr 07
23 - Gates - 15 Apr 10
22 - Johnston; C - 6 Apr 01

NC counties: 53 or 53%
SC counties: 23 or 50%

New for 24th: Surry

Earliest date: Harnett; P 1 Mar 1998
Latest date: Iredell 20 May 2009

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Incisalia henrici*

DISTRIBUTION: Assumed to be statewide, but few records for the mountains and western Piedmont. Occurs throughout the eastern half of the state, and presumed to occur in all Coastal Plain counties. Perhaps completely absent from the northern mountains.

ABUNDANCE: Uncommon to locally fairly common, and reasonably widespread, in the Coastal Plain and eastern Piedmont; surprisingly rare in the western Piedmont, and very rare in the lower mountains. Found in Clay County in 2001, for a first mountain report, in Macon County in 2007, in Buncombe County in 2008, and in Madison County in 2012.

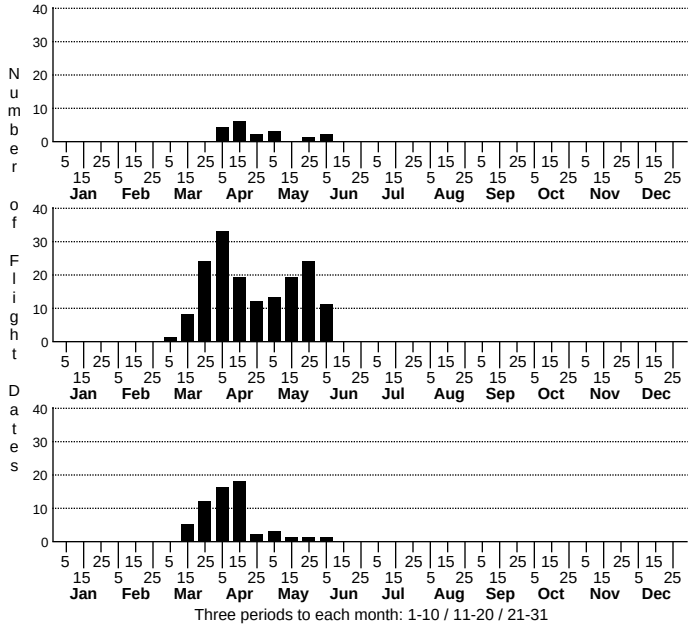
FLIGHT PERIOD: A single brood; downstate from early March to late April, very rarely to mid-May (peaking with the peak in flowering of redbud). The meager mountain flight is certainly later, from late March to mid-May.

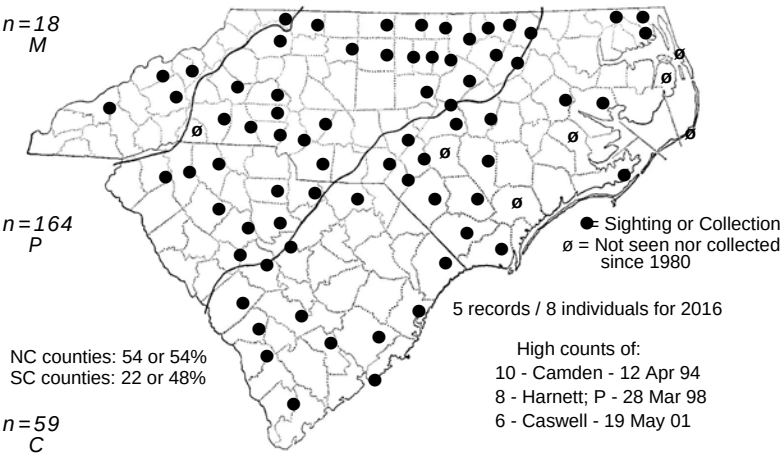
HABITAT: Highly varied; ranges from xeric upland hardwoods, to mesic woods, to pocosin margins, to clearcuts, to swamps! Often found along trails or dirt roads near these forested areas. Forests with evergreen species of hollies seem to be preferred; over most of the state, areas where American holly (Ilex opaca) is common may be a key feature.

FOOD AND NECTAR PLANTS: Evergreen hollies (Ilex spp.) seem to be the main foodplants in NC. American holly is favored, but other evergreen species such as gallberries and yaupon are apparently used in the Coastal Plain. Redbud (Cercis canadensis) is a foodplant in parts of its range, though there is no or little evidence it is used in NC because the elfin is practically unknown in many areas where this tree is common. The species commonly nectars on flowers of redbud, blueberries, and sweetleaf (Symplocos).

COMMENTS: This is not a colonial species, but you can find four or five in a day in some areas. It may be searched for, but never expected, in forests with hollies. To see this species, you must plan to be afield often in late March and April, preferably in the eastern half of the state. Nonetheless, this is the most often encountered elfin in the eastern part of the state. It is gratifying to see a few new records in recent years from the mountain and western Piedmont regions, though there are still no records for the northern mountains, nor for heavily-worked Guilford and Forsyth counties in the Piedmont.

Eastern Pine Elfin *Callophrys niphon*





Earliest date: Harnett; P 9 Mar 1992
Latest date: Lincoln 10 Jun 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Incisalia niphon*

DISTRIBUTION: Scattered across the state; however, scarce in the mountains, and spottily distributed over parts of the Piedmont and Coastal Plain (though it likely occurs in all counties in these two provinces).

ABUNDANCE: Rare to uncommon in the Coastal Plain and most of the Piedmont; very rare in the mountains. Probably restricted to the lower elevations in the mountains.

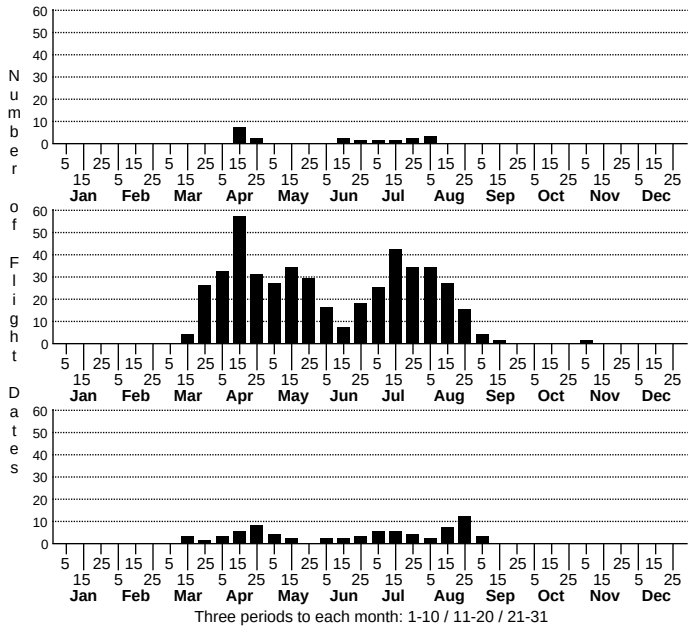
FLIGHT PERIOD: Supposedly a single brood; unlike with the other three elfins, this brood is either a long one or butterflies emerge at widely varying times; mid-March to early June; the peak is late March to early April, but there is a clear, secondary peak in late May.

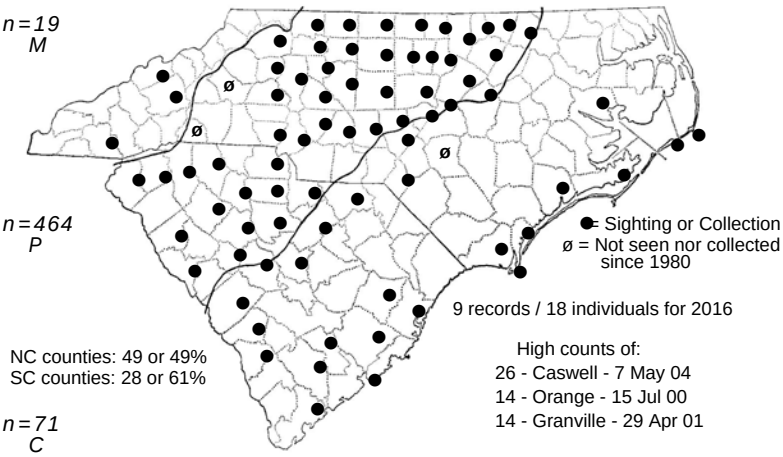
HABITAT: Rather varied, but typically in the vicinity of sapling or seedling pines. Most sightings are along edges of pine or mixed woodlands or in or near clearcuts with young pines, but individuals may occur in the interior of open pine forests.

FOOD AND NECTAR PLANTS: Various pines are the foodplant, but loblolly and shortleaf seem to be preferred. Nectar plants are varied, but may include blueberries, and shrubs or trees in the rose family (cherries, plums, etc.). As with other elfins, they may also be seen on dirt roads and trails obtaining moisture and minerals.

COMMENTS: This elfin is difficult to search for purposefully, simply because suitable habitat is so abundant. It is most likely to be found by examining flowers in spring along the sunny edges of pine or mixed woods or along the edges of old fields. The wide spread of the "single flight" period is troublesome; I have seen one as early as March 9, yet we have many records in late May and early June; these individuals were not obviously worn. There may be only one brood (as all elfin species are single-brooded), but there are certainly two flight periods! Further research, or explanation, is needed!

Juniper Hairstreak *Callophrys gryneus*





9 records / 18 individuals for 2016

High counts of:
26 - Caswell - 7 May 04
14 - Orange - 15 Jul 00
14 - Granville - 29 Apr 01

NC counties: 49 or 49%
SC counties: 28 or 61%

Earliest date: Harnett; P 11 Mar 2000
Latest date: Forsyth 1 Nov 2003

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Mitoura grynea*
Other Name: Olive Hairstreak

DISTRIBUTION: Throughout the Piedmont and extreme western Coastal Plain. There is a real hiatus in the central Coastal Plain, and it appears again near tidewater areas. Only known from three mountain counties; perhaps absent rom the northern mountains.

ABUNDANCE: Uncommon to locally fairly common in the Piedmont; rare to absent in most of the Coastal Plain, but locally uncommon in tidewater areas near red cedars. Absent to locally very rare in the mountains, though there were several records in 2011 from Buncombe County, and numerous records from Madison County in 2012.

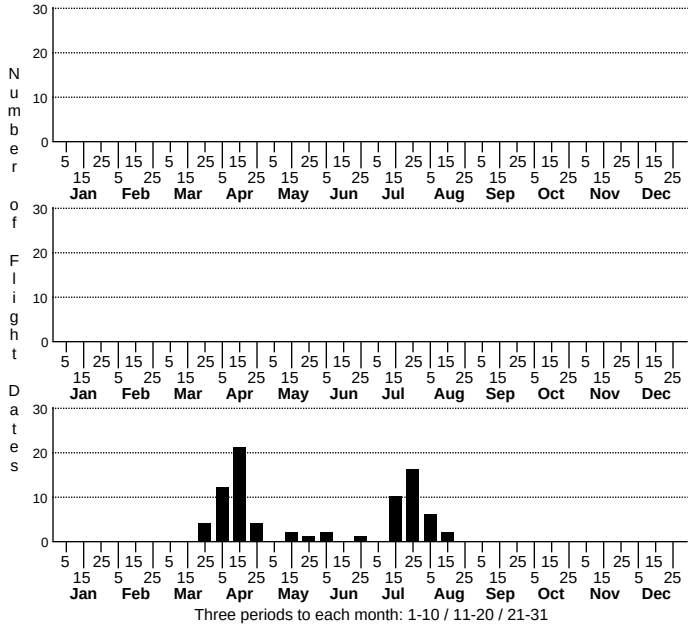
FLIGHT PERIOD: Two broods, quite extended in time for a Callophrys species. In the Piedmont, late March to mid-June, and late June to early September. The Coastal Plain flight has a gap between broods in late May or early June. In both provinces, the gap between broods is narrow. The meager mountain data suggest a small brood in April (and certainly into May) and from mid-June to early August.

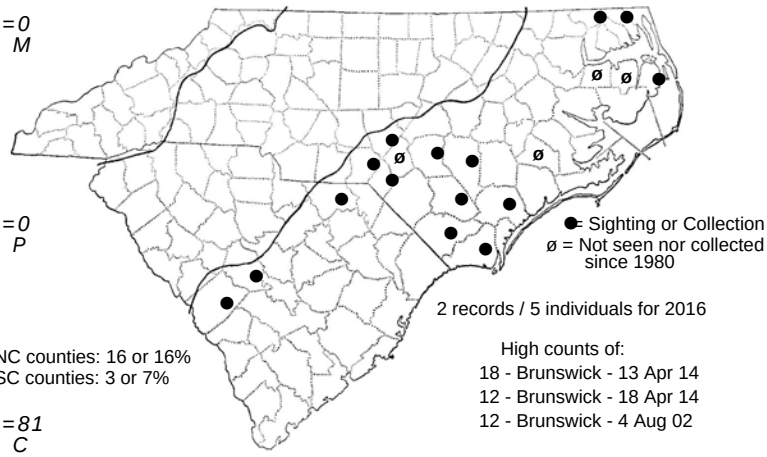
HABITAT: Always near red cedars. Eastern red cedar (Juniperus virginiana) is the key species in the Piedmont, whereas southern red cedar (J. salicicola) is the foodplant in the tidewater area. The species is usually seen along woodland borders, powerline clearings, or old fields, in dry situations; cedars are always present nearby. The species also occurs in foothills around outcrops where cedars are present, such as in the Brushy Mountains. In the tidewater region, it is present near brackish marshes and thickets, especially on coastal islands, where the cedar is found.

FOOD AND NECTAR PLANTS: Red cedars are the only foodplants. The butterflies nectar on many flowers of woodland borders, such as New Jersey tea and various composites.

COMMENTS: Though by no means a common butterfly, this is one of the easier hairstreaks in the state to find. It is often encountered by chance along a woodland border; however, it may be purposefully searched for in places where cedars are abundant, such as in circumneutral soils or around rock outcrops. The absence over most of the Coastal Plain is real, as both species of red cedars are rare to absent except near tidal water. However, cedars are not overly uncommon in some mountain areas, and Juniper Hairstreaks should be expected in other counties there.

Hessel's Hairstreak *Callophrys hesseli*





2 records / 5 individuals for 2016

High counts of:
18 - Brunswick - 13 Apr 14
12 - Brunswick - 18 Apr 14
12 - Brunswick - 4 Aug 02

NC counties: 16 or 16%
SC counties: 3 or 7%

Earliest date: Bladen 24 Mar 2002
Latest date: Brunswick 13 Aug 2006

Status NC	Status US	Rank NC	Rank Global
SR	-	S3	G3G4

Synonym: *Mitoura hesseli*

DISTRIBUTION: Scattered in the Coastal Plain; known from the northeastern Coastal Plain from Gates and Washington counties eastward, from the Sandhills, and from the southern counties (southeast of the Sandhills). Very rare or absent between these areas (mid-central Coastal Plain), with the only record for this region -- where its foodplant is extremely rare -- being from Jones County, within Croatan National Forest.

ABUNDANCE: Very local; rare to uncommon. Most numerous in the Green Swamp region of central Brunswick County, where the three highest state counts have been made.

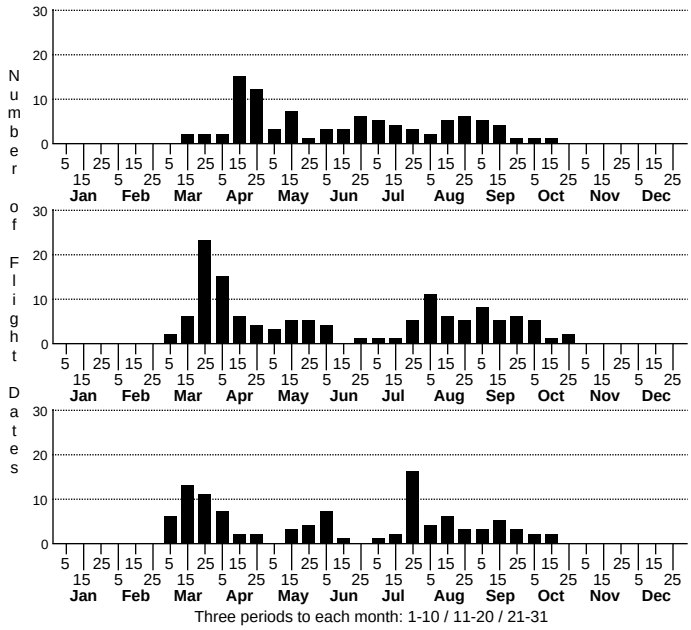
FLIGHT PERIOD: Two broods: very late March to late May, rarely to very early June; and very late June to mid-August (primarily mid-July to early August). No evidence that the species is more "numerous" in one brood over the other. The spring brood along the VA border appears mainly in May, whereas this brood in the southern Coastal Plain flies mostly in April.

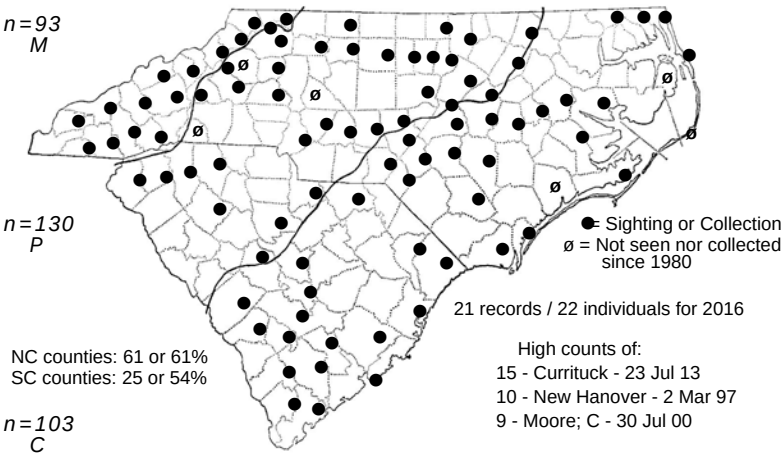
HABITAT: Very restricted to sites with Atlantic white-cedar (Chamaecyparis thyoides), such as pocosins and bay forests. Almost always seen along edges of these forests, as the forest interiors are dark and mostly devoid of flowers.

FOOD AND NECTAR PLANTS: The sole foodplant is Atlantic white-cedar. The species nectars on blueberries and other ericads, sweetleaf (Symplocos), sweet pepperbush, Indian hemp, and other shrubs.

COMMENTS: This can be a difficult species to find in NC. First, suitable stands of white-cedar can be hard to find near roads or other easy access. Second, nectar plants are sometimes scarce near such cedar forests. Fortunately, because it is so habitat specific, the observer can purposefully search for the butterflies, though usually unsuccessfully! To find the species, I suggest that you look for blooming blueberries or sweetleaf in April, and sweet pepperbush in late July, where they occur near the cedars. Individuals nectar more frequently in mid-morning and in late afternoon (after 4 pm). For much of the middle hours of the day, the butterflies remain high in the white cedars.

White-M Hairstreak *Parrhasius m-album*





21 records / 22 individuals for 2016

High counts of:
15 - Currituck - 23 Jul 13
10 - New Hanover - 2 Mar 97
9 - Moore; C - 30 Jul 00

NC counties: 61 or 61%
SC counties: 25 or 54%

New for 24th: Burke; M

Earliest date: New Hanover 2 Mar 1997
Latest date: Wake 26 Oct 2010

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Parrhasius malbum*
Other Name: White M Hairstreak

DISTRIBUTION: Statewide; though recorded from more than half of the counties, it may well occur in nearly every county. The large "holes" in the range map are presumably artifacts of field work and not of true scarcity.

ABUNDANCE: Rare to uncommon, but widespread. Potentially could be seen almost anywhere at any time from March to October. Seldom more than one or two are seen by an observer in a day. Abundance seems about evenly distributed over the state, not obviously more "numerous" in one province over another.

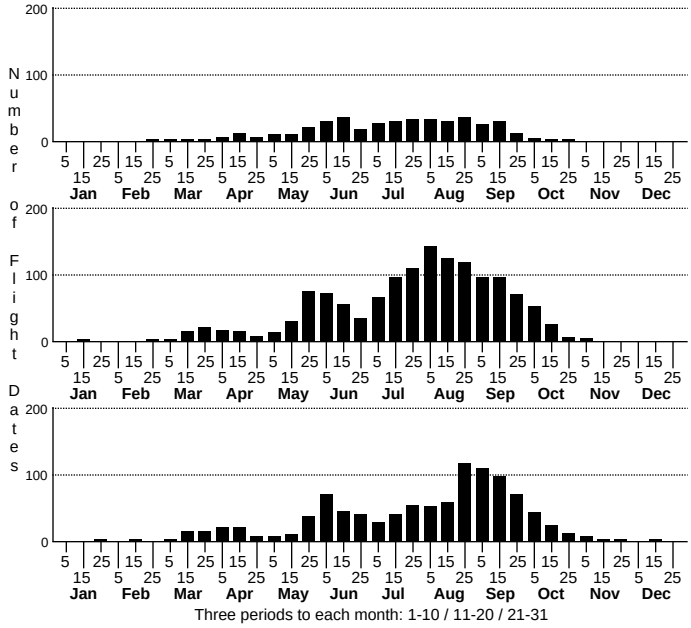
FLIGHT PERIOD: At least three broods, if not four; downstate -- early March to mid- or late April; mid-May to mid-June; mid-July into August; and August to mid-October. Mountain data suggest three broods from mid-March to mid-October.

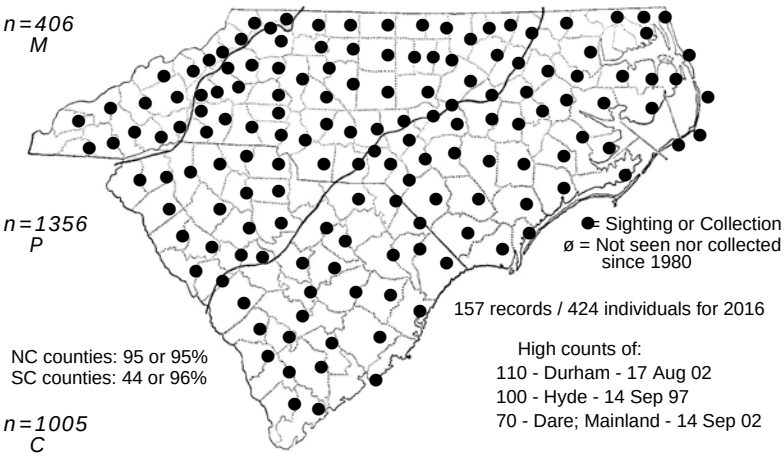
HABITAT: The species is found in typical hairstreak places, which is usually along the margin of, or openings in, a hardwood forest. Upland oak forests are typical. It occurs along the coast as well as in the higher mountains; it occurs near maritime forests, and oak forests in the mountains. Wide trails through hardwood forests are your best places to look for them. Edges of powerline clearings are also places to look.

FOOD AND NECTAR PLANTS: The foodplants are various oaks, mainly upland species. Nectar plants are quite varied; goldenrods, New Jersey tea, and Indian hemp are frequently used.

COMMENTS: Why this butterfly is so scarce is a mystery. Oaks are abundant in NC, and thus potential habitat is ubiquitous. The species is always found by accident; its habitat is so widespread that it cannot be specifically searched for. It probably occurs in all NC counties, but many gaps in the range are present. Interestingly, the three individuals I saw in the Dismal Swamp were nowhere near oaks, which are rare at that site!

Gray Hairstreak *Strymon melinus*





Date Spread: Harnett; P on 13 Jan 2000 to Carteret on 19 Dec 2007

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; undoubtedly occurring in all NC counties.

ABUNDANCE: Very widespread and frequently seen; fairly common to common in the Coastal Plain and eastern Piedmont; fairly common in the western Piedmont and mountains. More numerous in eastern NC than in western NC.

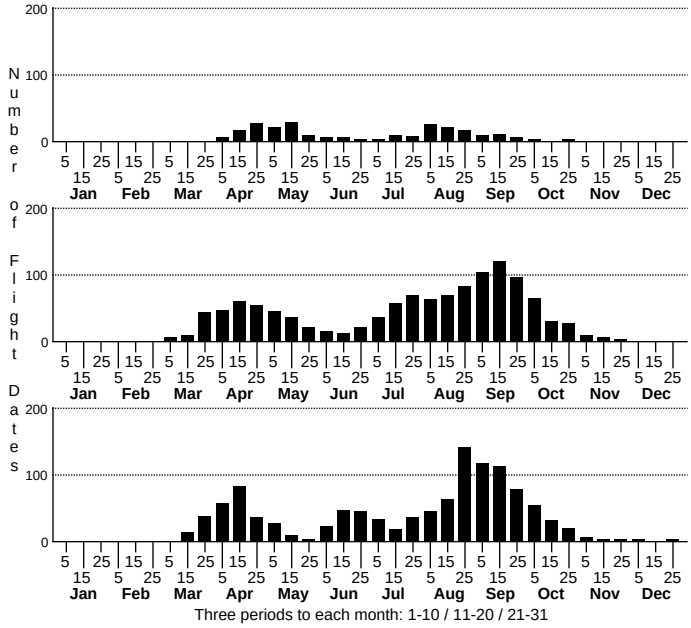
FLIGHT PERIOD: At least three broods, but with no true gaps (i.e., periods of local absence) between the flights. The broods occur between mid-March and late October, very rarely into November in the Coastal Plain; the first brood is small, as numbers are not usually seen until late May, and the species often is not common until July.

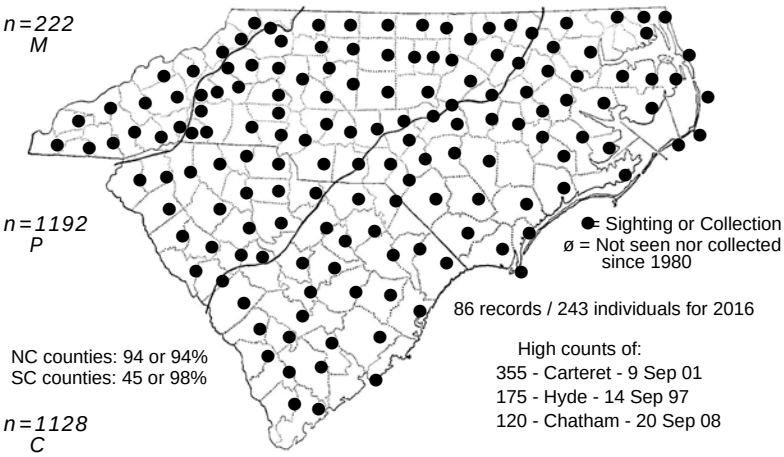
HABITAT: Extremely widespread. It typically favors dry, sunny places. It may be found along woodland borders, powerline clearings, old fields, savannas, and vacant lots; it is most numerous in sandy places with scattered vegetation, such as coastal dunes and fields in the Sandhills. It is not likely to be found in shade, but it may occasionally be found in gardens.

FOOD AND NECTAR PLANTS: A wide variety of foodplants, but legumes may be most common. Likewise, the list of nectar plants is so numerous that it could fill one or two pages of text.

COMMENTS: This is the most widespread and most frequently encountered hairstreak in NC. One does not often see more than 10 a day, but it can appear almost anywhere one is looking for butterflies. I frequently become excited upon seeing a hairstreak at a distance, as there are so many rare species in NC, only to exclaim "it's just a Gray" upon a closer look.

Red-banded Hairstreak *Calycopis cecrops*





Earliest date: Harnett; P 7 Mar 2002
Latest date: Carteret 22 Dec 2011

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Statewide; undoubtedly occurring in all 100 counties, but likely absent in the higher mountains.

ABUNDANCE: Common to locally abundant in the lower Coastal Plain; fairly common in the upper Coastal Plain and lower Piedmont, but uncommon in the upper Piedmont and mountains. At some Coastal Plain sites it is possible to see over 50 in a day; however, in most places fewer than 10 individuals are seen in a day.

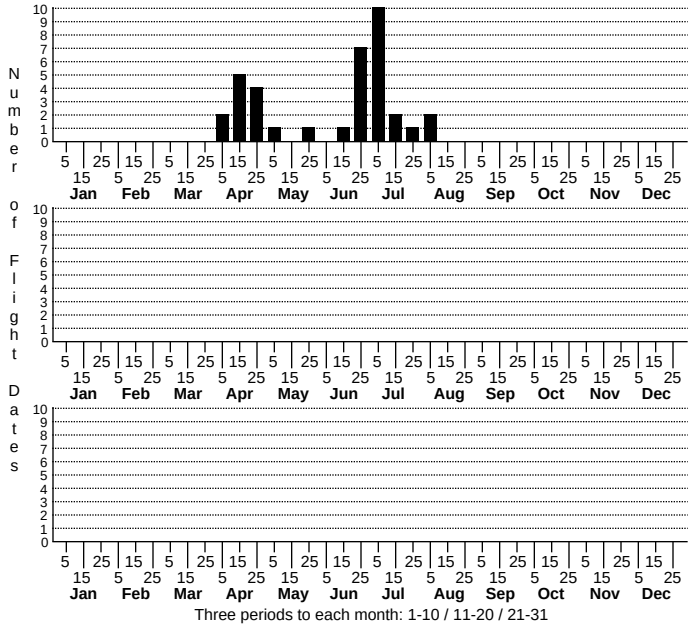
FLIGHT PERIOD: Supposedly two long flight periods. The first brood is from mid- or late March to mid-May in the Coastal Plain and to early or mid-June in the Piedmont. The second brood occurs from early June into late October (sparingly into November) in the Coastal Plain, and from late June to late October in the Piedmont. The mountain flights are from early April at least to mid-June, and early July to late September. The second flight period is so long -- five months -- that it is conceivable that two broods (without an obvious gap) are present.

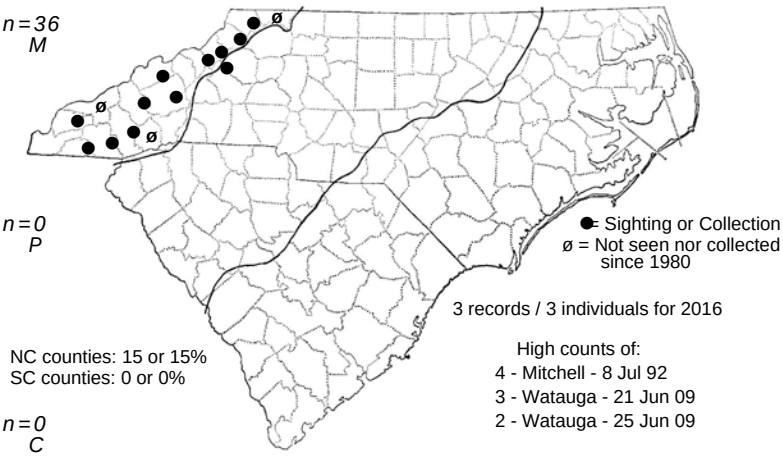
HABITAT: This species has a wide habitat range in NC. In fact, there is no "typical" habitat, though it favors moist sites close to forested areas. It is most numerous in savannas, pine flatwoods, and swamp margins, but it is found in old fields, woodland borders, weedy lots, powerline clearings, open longleaf pine/oak scrub, pocosin edges, roads through bottomlands, etc. It generally avoids the shade of forests, as well as urban areas, but it occasionally appears in gardens.

FOOD AND NECTAR PLANTS: The foodplants are mainly fallen leaves of sumacs, oaks, and waxmyrtles. The species nectars on an extremely wide variety of flowers. In the Coastal Plain, sweet pepperbush is a favorite nectar source.

COMMENTS: This species is considered "common" or "fairly common" more because it is widespread in so many habitats than it is numerous at a single site. For example, I seldom see more than 5 individuals a day, but it occurs in so many habitats in the state that it is a very numerous butterfly in NC. I often encounter them in savannas or forest edges while looking for rare species of skippers or other hairstreaks. I saw more than 50 individuals a day on several occasions in the Dismal Swamp in 1994 and in mainland Dare County in 1997, and one party tallied over 350 in a single day in Carteret County in 2001.

Early Hairstreak *Erora laeta*





Earliest date: Madison 1 Apr 2009
Latest date: Watauga 5 Aug 2015

Status NC	Status US	Rank NC	Rank Global
SR	-	S2S3	G2G4

DISTRIBUTION: Restricted in NC to the mountains, where it apparently occurs throughout the province mainly at higher elevations (over 4000 feet), but a few records below 3000 feet.

ABUNDANCE: Rare, or at least seldom encountered; this is a real "prize" to find.

FLIGHT PERIOD: Two broods; early April to mid- or late May, and mid- or late June to early August. Most likely to be seen in late April or the first ten days of July.

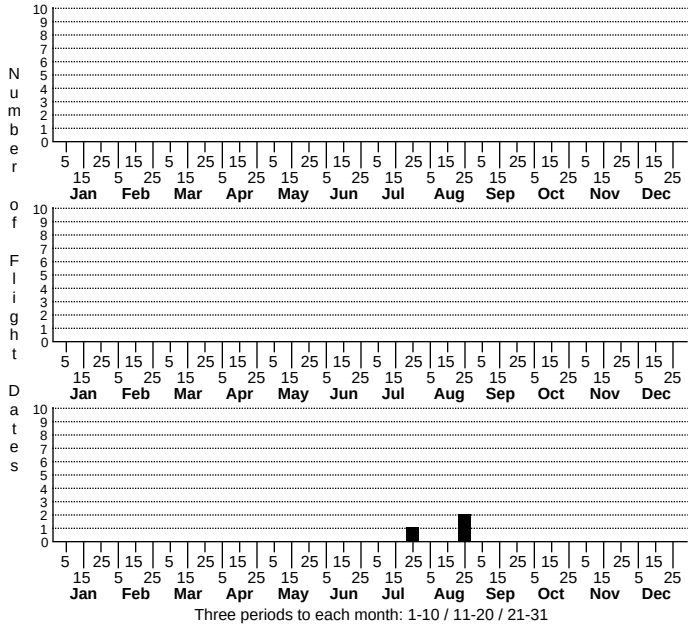
HABITAT: The species inhabits edges and openings in mid- to high elevation hardwood forests. Typical sites include edges of dirt roads and sunlit trails through northern hardwood forests, and hardwoods along the margins of rock outcrops. It is not an inhabitant of the shade of forest interiors.

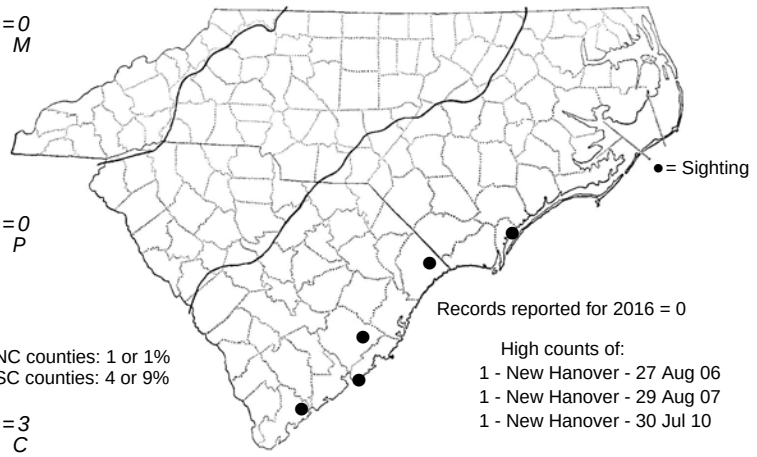
FOOD AND NECTAR PLANTS: The major foodplant in NC is apparently American beech (Fagus grandifolia), but beaked hazelnut (Corylus cornuta) has also been reported. The species nectars on many plants, but ox-eye daisy (Chrysanthemum) and daisy fleabanes (Erigeron annuus and E. strigosus) are most frequently used.

COMMENTS: This is one of the rarest and most prized butterflies in the eastern United States. Part of its rarity can be explained by its habit of spending most of the day perched on leaves 20+ feet off the ground. It can be searched for by walking along dirt roads (and probably also paved roads) at mid- to high elevations (over 3500 feet) through hardwood forests, examining flowers such as daisy fleabanes and ox-eye daisies along the edge of the road. They have also been seen at several overlooks near the southern end of the Blue Ridge Parkway. As with most hairstreaks, the butterflies are very tame when nectaring and can be poked to observe the blue on the upper wings, though the bright aqua blue-green and scarlet of the under wings (on fresh individuals) is striking enough for easy identification. However, worn individuals are pale gray below with only small flecks of scarlet color.

Prior to 2014, there seemed to be just one to several photos of this species taken in the state, of an individual in Mitchell County. Thankfully, Owen McConnell photographed one in Graham County on April 24, for a first county record; and Doug Allen photographed two on July 2 along the Blue Ridge Parkway in Haywood and Jackson counties. Excellent photos were taken of an Early Hairstreak by Dave Patton in 2015 in Watauga County, also documenting a first county record.

Cassius Blue *Leptotes cassius*





Earliest date: New Hanover 30 Jul 2010
Latest date: New Hanover 29 Aug 2007

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: Known from just a single coastal county (New Hanover), where first recorded in 2006. The species was also found in the same location in 2007 and in 2010, strongly suggesting that a local colony has been established there for at least five summer seasons. This species, essentially resident only in Florida (in the United States), has also established local breeding colonies in Charleston and Horry counties in SC and at a site in southeastern VA in 2001.

ABUNDANCE: An accidental visitor to NC, where it has established a single known breeding site. It is not considered a northbound migrant, and these outposts undoubtedly were established by gravid females laying eggs on foodplants while in the local area, or by eggs/larvae/pupae already present on the foodplants when brought to nurseries and then sold to, and planted by, gardeners. New generations become established, and apparently persist for a few years.

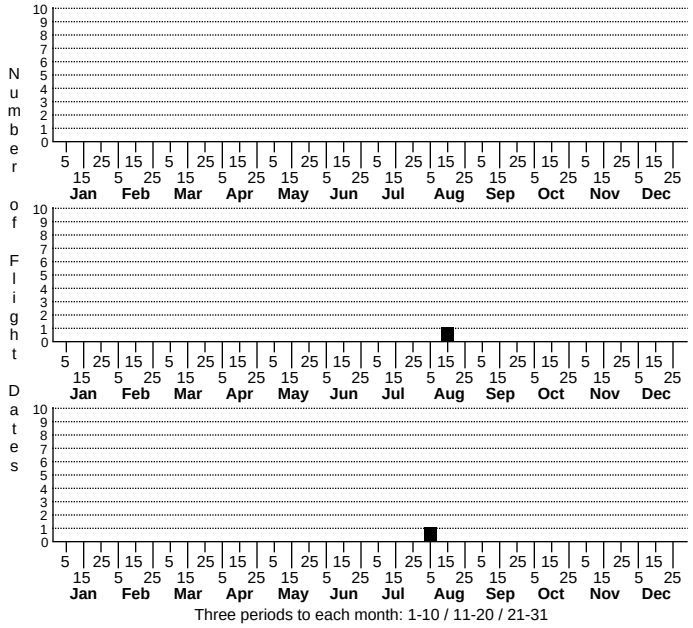
FLIGHT PERIOD: The records in NC are August 27, 2006; August 29, 2007; and the latter part of July 2010, all by a single observer in his yard in Wilmington. Nate Dias has noted in Charleston, SC, that "we see new emergence events from March - December. I have seen adults every month of the year except February. The larvae are tough to spot (for me anyway). Our numbers of adults peak in August-October generally." One must wonder if there is a "spring" brood at all in NC (i.e., if the life cycle at such a northern site does not "produce" adults on the wing until July or August).

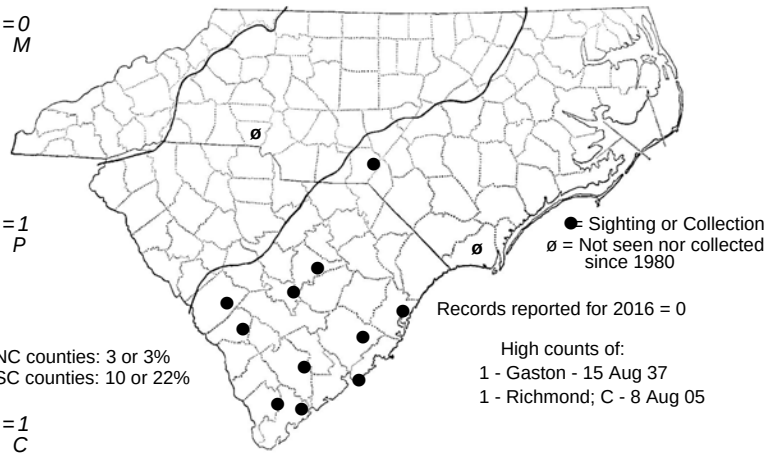
HABITAT: The species has a great range of habitats in FL, but they are mostly ruderal, such that it is found in weedy lots, gardens, roadsides, forest edges, and other open or semi-open areas. In the Carolinas, the habitat is essentially yards and gardens along and near the coast, especially where larval foodplants are found.

FOOD AND NECTAR PLANTS: Legumes are the primary foodplants in Florida. However, the most frequent foodplants in SC (if not in other parts of the range, including NC) are leadworts (Plumbago spp.), a group of plants in the family Plumbaginaceae. Leadworts are not native to the Carolinas, but they are commonly sold at nurseries. Most colonies in SC are suspected of being started around plantings of these low evergreen shrubs, according to Nate Dias. The species is not particular in nectar plants; individuals in Wilmington nectared on Mexican heather and lantana.

COMMENTS: We (the authors) were completely surprised when Mark Jones notified us in January 2011 that he believed he had photos of Cassius Blues taken in his Wilmington yard in recent years. Sure enough, the three photos (of two individuals) were indeed of that species, establishing a first state record. As mentioned above, the fact that all three records, at a single site over a five-summer period, were from a single yard, makes it clear that these (in 2007 and 2010) cannot simply be migrants/vagrants coming up from FL, especially as it is known that the species establishes local colonies in Charleston and at a few other sites in SC. Apparently the Wilmington colony did not survive the bitterly cold winter of 2010-2011; none were reported at all in 2011, despite some search.

Ceraunus Blue *Hemiargus ceraunus*





Earliest date: Richmond; C 8 Aug 2005
Latest date: Gaston 15 Aug 1937

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: Accidental; records from Brunswick, Richmond, and Gaston counties.

ABUNDANCE: A vagrant from the south; most likely to occur along the southern coast. Many records in recent years from coastal SC, where it is a possible sporadic resident.

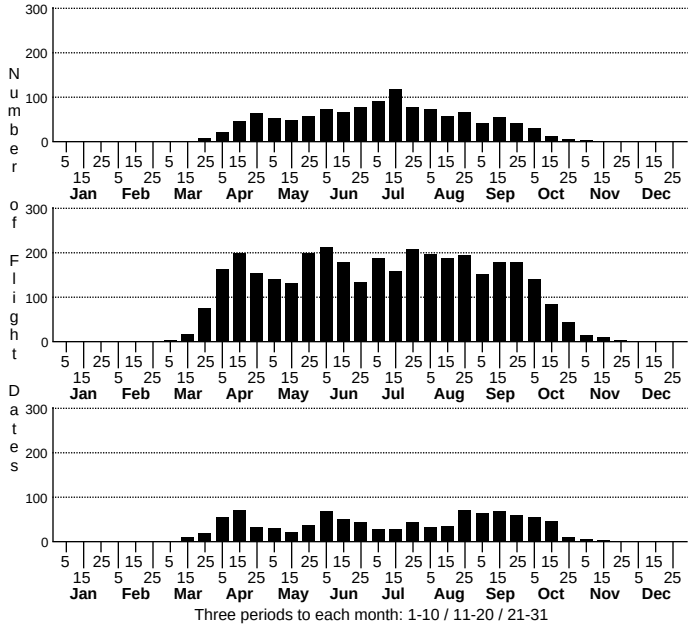
FLIGHT PERIOD: Not known; most likely to occur in NC in late summer or fall. The only dates available in NC is for August 8 (2005) (Richmond County) and August 15 (1937) (Gaston County).

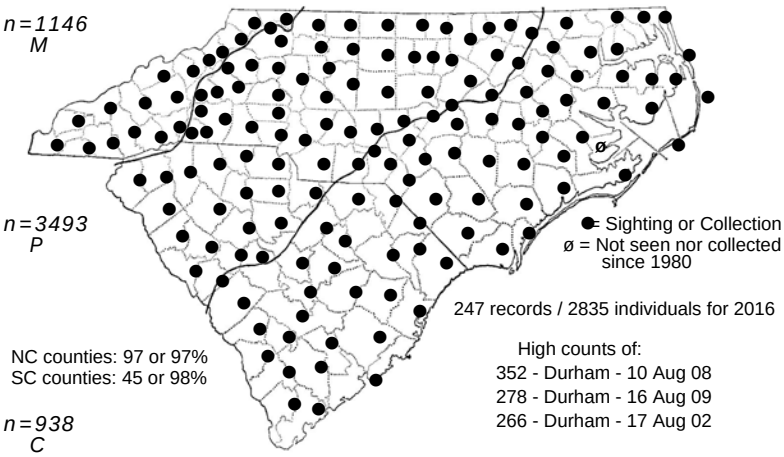
HABITAT: Open places; fields, roadsides, woodland edges, etc. In coastal GA, where resident, it is found in dunes and other coastal habitats. To be looked for near low vegetation, where it stays close to the ground like an Eastern Tailed-Blue.

FOOD AND NECTAR PLANTS: Woody legumes are foodplants. Nectar plants are not well known.

COMMENTS: This small blue can be overlooked as an Eastern Tailed-Blue. Its flight, behavior, and habitat are quite similar to that species. However, when perched, the underwing pattern is noticeably different. One of the highlights of 2005 was one carefully seen and described by Dan Williams in the Sandhills region of Richmond County on August 8. Another Ceraunus Blue was seen, and photographed, at James Island, SC, on October 9, 1999. Interestingly, Cassius Blue and Eastern Pygmy-Blue were found with the Ceraunus Blue; the latter still has not been found in NC. Ceraunus Blue was seen at a handful of SC sites in 2012, adding three new counties to that state's list; another county was added to the SC list in 2014, and still another was added in 2015. In addition to new counties, observers have been seeing this species in coastal SC on numerous recent occasions, though there is no record as yet for Horry County (which abuts NC). Thus, it is somewhat disappointing that there have not been more coastal reports of this stray in NC than just one old record.

Eastern Tailed-Blue *Cupido comyntas*





247 records / 2835 individuals for 2016

High counts of:
352 - Durham - 10 Aug 08
278 - Durham - 16 Aug 09
266 - Durham - 17 Aug 02

NC counties: 97 or 97%
SC counties: 45 or 98%

Earliest date: Lincoln 5 Mar 2000
Latest date: Wake 28 Nov 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Synonym: *Everes comyntas*

DISTRIBUTION: Statewide; certainly occurs in all NC counties.

ABUNDANCE: Very common to abundant in most areas; one of the most numerous butterflies in NC, particularly from July to October. However, it can be scarce (uncommon at best) in some coastal counties and rare to uncommon along the immediate coast. It is not overly common in April and May.

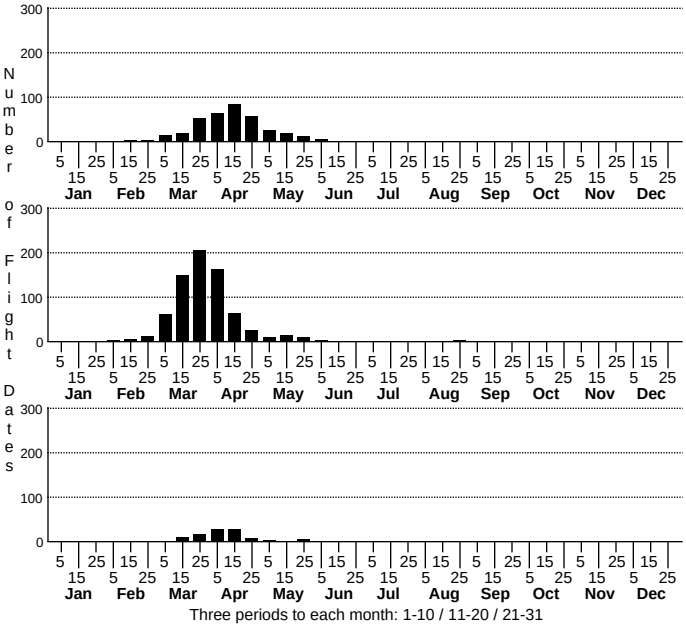
FLIGHT PERIOD: Probably four or five broods, but the broods essentially overlap within a given province; a continuous flight from late March to late October, sparingly from early March to late November.

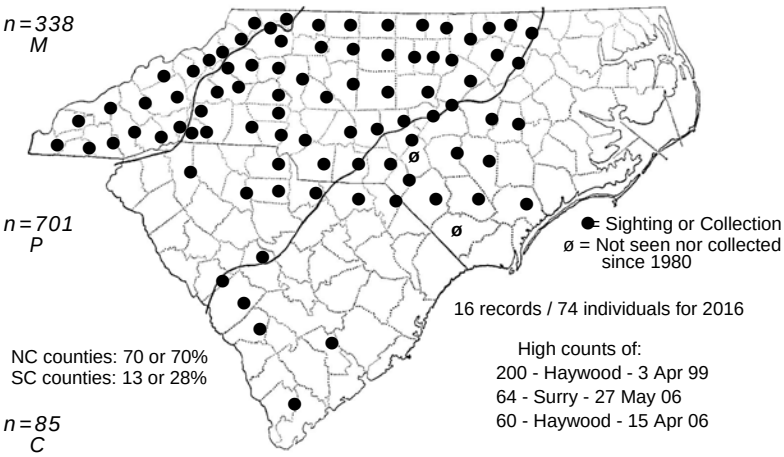
HABITAT: A very widespread species; seemingly found nearly anywhere, especially in open country with much herbaceous vegetation; woodland borders, powerline clearings, fields, savannas, vacant lots. Usually seen flying low to the ground, among or near grasses and forbs.

FOOD AND NECTAR PLANTS: Foodplants are herbaceous species of legumes. It has a very wide variety of nectar flowers, though it often perches on the ground or on leaves.

COMMENTS: This species is usually outnumbered in spring by various azure species, which precede the Eastern Tailed-Blue on the wing. By midsummer, the Eastern Tailed-Blue is often an abundant species, though its very small size and habit of flying close to the ground make it easy to overlook. It is one of the most often seen butterflies in September and October; 25 or more can often be seen in a day.

Spring Azure *Celastrina ladon*





Earliest date: Harnett; P 7 Feb 1999
Latest date: Rockingham 31 Aug 2016

Status NC	Status US	Rank NC	Rank Global
-	-	S4S5	G4G5

Synonym: *"Celastrina ladon" (broad sense), "Celastrina sp."*
Other Name: Edwards' Azure

DISTRIBUTION: Because of difficulty in identification from other azures, the range is speculative. Throughout the mountains and Piedmont, and apparently the western two-thirds of the Coastal Plain (Wright 1995; Pavulaan, pers. comm.). A 2007 report for Pender County, if correct, extends the range eastward toward the coast.

ABUNDANCE: Almost certainly declining. Common to formerly very common in the mountains, but only fairly common at best now in the Piedmont, and seemingly uncommon in many areas; rare to uncommon in the western Coastal Plain. Many individuals of what might have been called Spring Azures in the past were probably in actuality first-brood Summer Azures; in many areas of the state, it appears that Summer Azures actually outnumber Spring Azures during the spring season -- the only season in which the latter species flies.

FLIGHT PERIOD: A single brood everywhere. In the Coastal Plain and Piedmont, the flight is primarily from early March (rarely February) to the end of April or early May. In the mountains, the flight begins in mid-March (rarely February) and ends apparently in late May. Thus, the flight period is approximately two months at any given location.

HABITAT: This species is found primarily along woodland trails and clearings, usually far from open country. It associates with flowering dogwood; however, as this is such a widespread tree, found in nearly all forests, most people will have difficulty finding any correlation between the tree and the butterfly. It is less likely to occur in open areas than is the Summer Azure and is very seldom seen in yards, gardens, and other residential habitats.

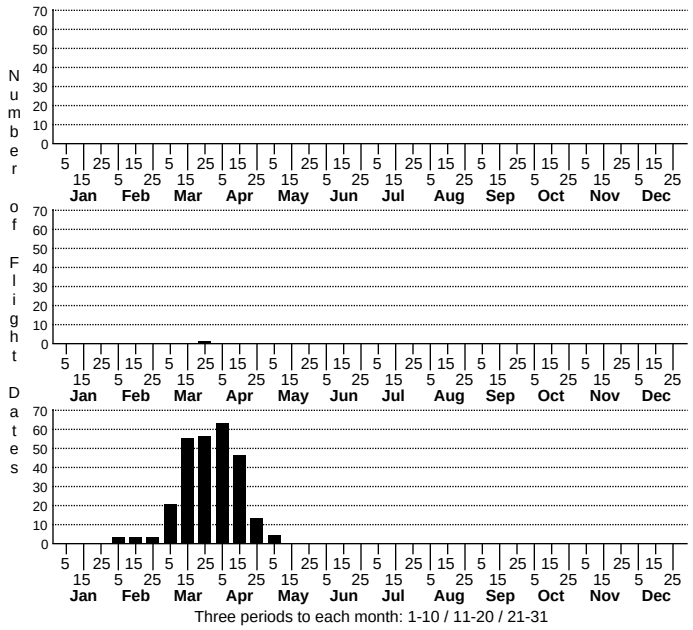
FOOD AND NECTAR PLANTS: The caterpillar foodplant is primarily flowering dogwood (Cornus florida). The adults nectar on many species, but they are commonly seen on mud or dirt or at puddles.

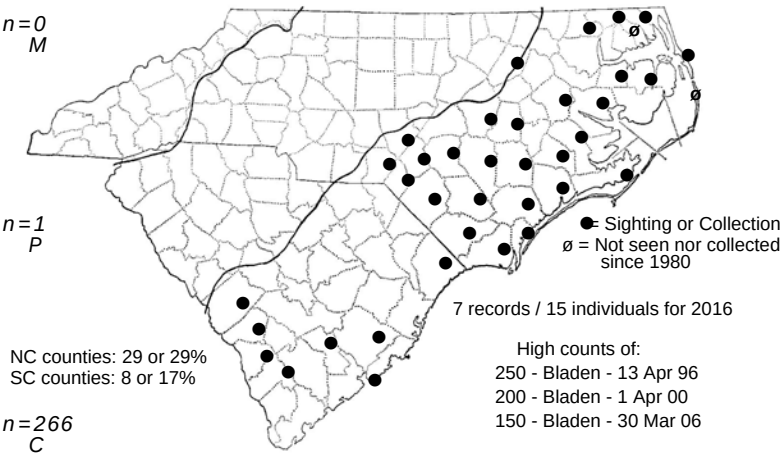
COMMENTS: The former "Spring Azure complex" is now generally considered to consist of the Spring (=Edwards') Azure, Cherry Gall Azure (not known for certain in NC), Holly Azure, and Summer Azure, as well as a few others nowhere near NC. This listing of species conforms with NatureServe and the Butterflies of America (2011) website checklist. Several older references, such as the NABA checklist (2001) and Brock and Kaufman (2003), still do not have these taxa split into separate species.

This species of the Spring Azure complex has a medium to dark blue color above with little sheen. It is slightly smaller than the next species (Holly Azure). The underparts are a medium gray, darker in shade than the next species and also the Summer Azure, both of which are very pale gray to whitish in ground color below. In the mountains, it flies with the rare Dusky Azure, and the end of the flight overlaps with that of the Appalachian Azure. Recent data suggest that the Summer Azure has a brood of uncertain size in March or April, and that the Holly Azure may occur into the eastern Piedmont. If so, we cannot assume an azure found in the Piedmont prior to May is a Spring Azure.

This species is in strong decline from the mountains of northern VA northward (Pavulaan, pers. comm.), following the death of flowering dogwood trees, the main foodplant. Trends of Spring Azure numbers in NC are not well known, but it appears to be much less numerous than formerly considered (with numbers in early spring being replaced by the first brood of Summer Azure).

Holly Azure *Celastrina idella*





Earliest date: Craven 2 Feb 2016
Latest date: Carteret 8 May 2005

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4G5

Synonym: *"Celastrina sp.", Celastrina ladon (complex)*

Other Name: American Holly Azure, Atlantic Holly Azure, Eastern [Spring] Azure, Holly [Spring] Azure, Spring Azure

DISTRIBUTION: Probably the Coastal Plain only, but the inner edge is not known; it may range to the Fall Line, if not beyond. It undoubtedly ranges inland to meet the range of the Spring Azure, but how much overlap in range there is we do not know. There is almost certainly no gap in the ranges of Spring and Holly, at least there is no place in NC that lacks some species of azure in the spring season.

ABUNDANCE: Common to locally abundant. Dozens can be seen in a day, and daily counts of 50 or more are not unusual in places.

FLIGHT PERIOD: A single spring brood only; early March (rarely February) to late April, rarely to early May.

HABITAT: This species is found in a wide variety of wooded or semi-wooded sites, in the vicinity of hollies. These can be roads through swamps and pocosins, bottomlands, upland forests, and maritime forests and thickets. I have found it most numerously along dirt roads through pocosins and swampy woods with much evergreen vegetation, particularly in Bladen County. As with the Spring Azure, the food plants of the Holly Azure are so widespread in Coastal Plain forests and thickets -- very few such places lack some species of evergreen holly -- that the observer might have difficulty associating the azures with hollies.

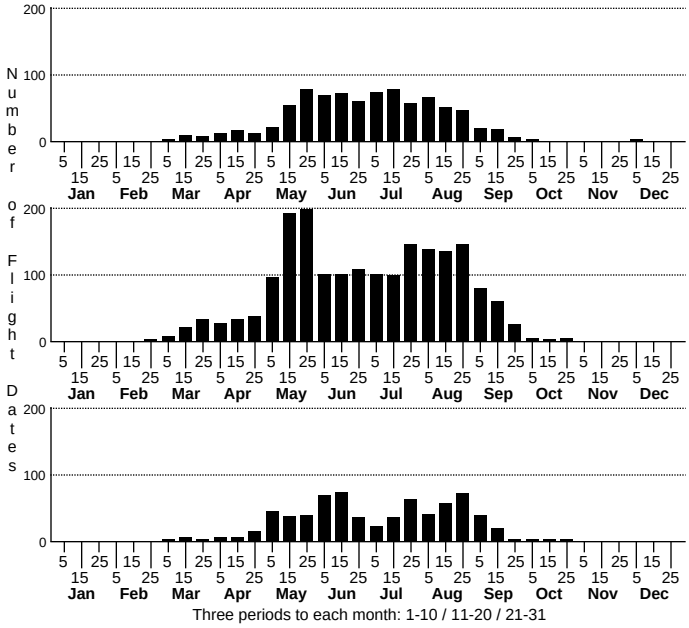
FOOD AND NECTAR PLANTS: The primary foodplants are evergreen species of hollies, which may be American holly (Ilex opaca), yaupon (I. vomitoria), and presumably gallberries (I. glabra and I. coriacea), among others. It has also been documented to use Virginia-willow (Itea virginica) along the VA coast (Harry Pavulaan, pers. comm.). As with all azures, the species nectars on many flowers, as well as consuming moisture and minerals at mud and other damp soil.

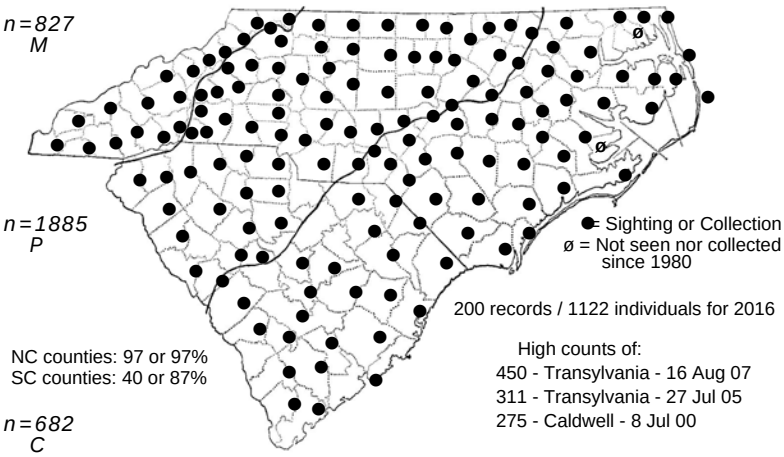
COMMENTS: In 1999, Wright and Pavulaan formally described this taxon as a species. They suggested the common name of Holly Azure in the paper. Paul Opler (pers. comm.) notes that an azure in England has the common name of Holly Azure and that C. idella should be named the Atlantic Holly Azure, to avoid confusion. Within the past several years, the Butterflies and Moths of North America [BAMONA] website and NatureServe have changed the common name to American Holly Azure. However, the Butterflies of America (2011) website uses the name Holly Azure, and we are now using that name starting with the 19th Aproximation.

This species is known to occur from NJ southward at least to the Carolinas. It looks quite a bit like the Summer Azure, in that it is quite pale gray to whitish below. It is a medium-sized azure and can even be reminiscent of Appalachian Azure, which is the largest species of azure. At any rate, it averages larger, and lighter blue above, than the Spring Azure (Pavulaan, pers. comm.).

NOTE: An azure photographed in the eastern Piedmont at Occoneechee Mountain State Natural Area, Orange County, by Randy Emmitt, is thought to be a Holly Azure by Harry Pavulaan. If this were confirmed (probably not possible from a photo), then our concept of this species' range would need to be re-evaluated.

Summer Azure *Celastrina neglecta*





Earliest date: Forsyth 28 Feb 2016
Latest date: Yancey 4 Dec 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Synonym: *Celastrina ladon (complex)*
Other Name: Spring Azure

DISTRIBUTION: Statewide; undoubtedly found in all 100 counties.

ABUNDANCE: Common to abundant in the mountains; less numerous, but certainly common, downstate. More numerous in NC than the Spring Azure, and probably also the Holly Azure. Abundance in early to mid-spring needs further elucidation. Formerly believed to be scarce in the "spring" brood, but such is not the case (at least now), and many records previously considered in the past as Spring Azure are probably better assigned to Summer Azure.

FLIGHT PERIOD: Three to possibly four broods. Recent evidence (Pavulaan, pers. comm.) has shown there to be an early spring brood, of unknown flight spread and abundance, in NC. This might be from February to April. However, the main broods occur after the single brood of Spring Azure and Holly Azure have finished. The main flights in the Coastal Plain occur between late April and mid-September, and in the Piedmont between early May and late September. In the mountains, the main flights occur from early or mid-May to late September. Two broods occur within these flight dates.

HABITAT: This species is very widespread, and it is found in wooded areas and in wood margins. It often occurs in more open areas than the other azure species.

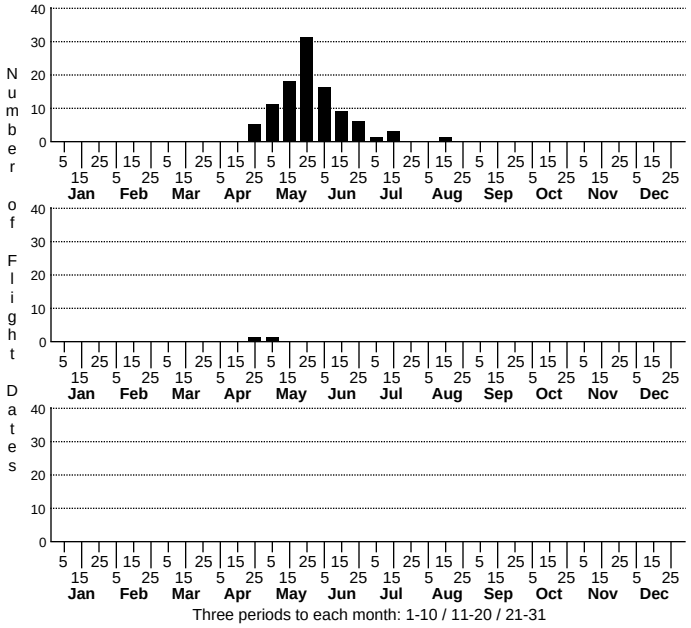
FOOD AND NECTAR PLANTS: The Summer Azure has a very wide array of food plants, both woody species and herbs. As with other azures, the species has a wide array of nectar plants. They also gather moisture and minerals at mud puddles and wet soil.

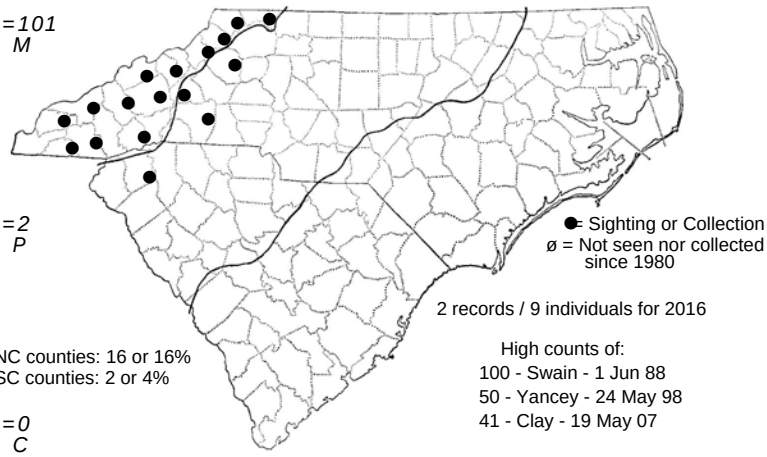
COMMENTS: This taxon was first described by Edwards in the 19th Century, but as of the late 20th Century it was still submerged in the Spring Azure complex. There is a growing consensus that Celastrina neglecta is a valid species; however, the NABA Checklist (2001) keeps Summer Azure as a subspecies of the C. ladon complex, opting to be conservative. We follow NatureServe and the Butterflies of America website (2011) by treating this as a valid species.

This species is the palest of the Spring Azure complex, both above and below. The males are a sky blue above on the fore wings, with thin white veins (that are absent on Spring Azure); there is more white on the hind wings than shown on the other azures. Females show much white scaling on both wings above. Below, the ground color is whitish to very pale gray.

This is the only azure that is flying downstate after early May. However, in the mountains the Appalachian Azure is on the wing from late April into June and early July, so great care must be taken there to distinguish the Summer Azure from that larger species. The first large brood of the Summer Azure typically emerges in the mountains a week after Appalachians emerge; thus, one should not find individuals of the same sex of both species, with the same scale wear, at the same time. As the species does occur during the early spring season, one cannot assume an azure seen from February into April to be a Spring Azure or a Holly Azure.

Appalachian Azure *Celastrina neglectamajor*





2 records / 9 individuals for 2016

NC counties: 16 or 16%
SC counties: 2 or 4%

High counts of:
100 - Swain - 1 Jun 88
50 - Yancey - 24 May 98
41 - Clay - 19 May 07

Earliest date: Macon 25 Apr 2006
Latest date: Macon 12 Aug 2008

Status NC	Status US	Rank NC	Rank Global
W	-	S3S4	G4

Synonym: *Celastrina neglecta-major*
Other Name: Appalachian Blue

DISTRIBUTION: Occurs throughout the mountains, from the VA line south to the GA and SC state lines. Also occurs in the South Mountains in the western Piedmont.

ABUNDANCE: Locally common in a few areas, but generally uncommon over most of the mountains. In fact, in VA it is known from about 90% of the mountain counties (Pavulaan 1996), and in WV is it known from about 90% of the Appalachian Mountain counties (Allen 1997). It is scarce as compared with the Spring Azure and the Summer Azure; however, Harry Pavulaan (pers. comm.) observed well over 100 freshly-emerged males at a mud puddle in the Great Smoky Mountains National Park. There are several additional counts of over 40 individuals in a day.

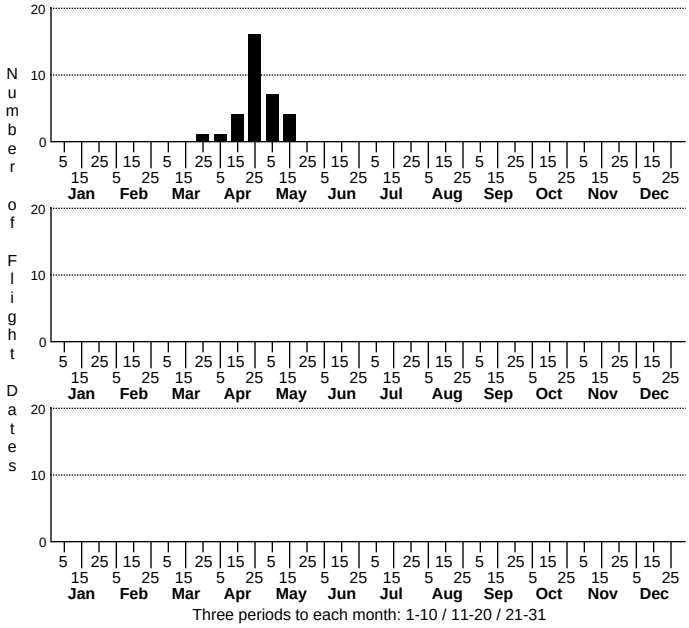
FLIGHT PERIOD: A single brood; late April into mid-July, depending on elevation. The flight period occurs in the "valley" between the brood of the Spring Azure and the first major brood of the Summer Azure. That is, when the males of Appalachian Azures begin to appear from late April to mid-May, generally only females of Spring Azures are present. Female Appalachian Azures fly mainly from late May to early July; in fact, Harry Pavulaan states that Appalachian Azures fly well into July in the higher elevations in the Smokies. Males are probably finished by mid-June, at least in the lower elevations. Male Summer Azures generally emerge as male Appalachians become worn and fly during the flight of female Appalachians. Thus, the statement that Appalachian Azure flies in the gap between the first and second broods of the Spring Azure complex is an over-simplification, as this gap is not a long one, and much overlapping with the single brood of Appalachian Azure occurs.

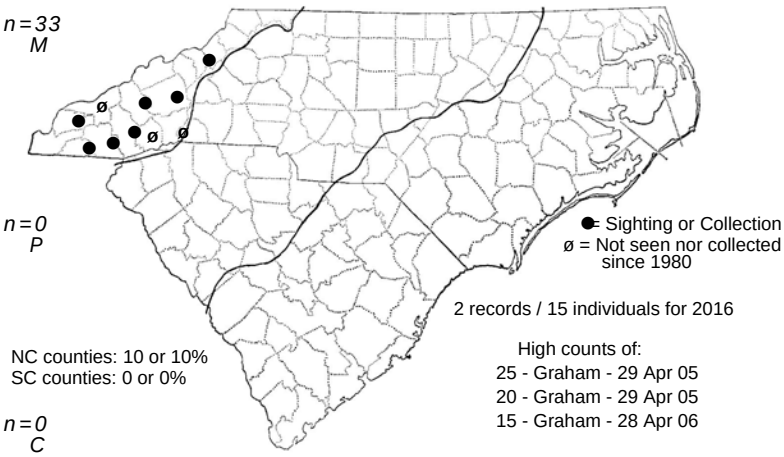
HABITAT: The species is limited to rich hardwood forests, such as coves, including openings, dirt roads, and edges of these forests. It is most frequently seen along streams in these habitats (H. Pavulaan, pers. comm.); however, my best results have been at mud and damp spots along dirt roads through rich woods and streamside forests.

FOOD AND NECTAR PLANTS: The only known foodplant is black cohosh (Actaea racemosa), a common plant of rich slopes and coves. Nectar plants are not well known. The species is more often seen on dirt roads or on mud along creeks gathering minerals and moisture than seen at flowers.

COMMENTS: This species can be overlooked, or passed over, as a Spring Azure or a Summer Azure; it can be a very difficult species to identify for certain. As Glassberg (1993) indicates, it is extremely important to know the local flight periods of the Spring Azure complex at a site where a suspected Appalachian Azure is found; it is also important to note the condition and sex ratio of any azures observed at the site. For example, fresh male Spring or Summer azures likely will not be found at the same place and time as fresh male Appalachians. Appalachians are quite strikingly large, about the size of a Gray Hairstreak or a Banded Hairstreak; otherwise, field marks separating them from other azures are probably unreliable. Lepidopterists suggest that the best way to locate a colony of Appalachian Azures is to look for caterpillars on black cohosh flowers during early summer, then looking for adults there the following May or June.

Dusky Azure *Celastrina nigra*





2 records / 15 individuals for 2016

High counts of:
25 - Graham - 29 Apr 05
20 - Graham - 29 Apr 05
15 - Graham - 28 Apr 06

NC counties: 10 or 10%
SC counties: 0 or 0%

Earliest date: Swain 25 Mar 1961
Latest date: Clay 14 May 2005

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G4

Synonym: *Celastrina ebenina*

DISTRIBUTION: Scattered in the mountains; likely occurs from the VA line to the GA line, but so far only recorded in ten counties, mainly in the southern mountains. Perhaps absent in some of the northern mountain counties, though seemingly suitable habitat is present there.

ABUNDANCE: Apparently rare to locally uncommon, but there appear to have been few people searching for this species, in part because of its narrow flight period. Although large numbers of eggs can be found on the foodplants, adults are very difficult to find and are seldom seen (Harry Pavulaan, pers. comm.).

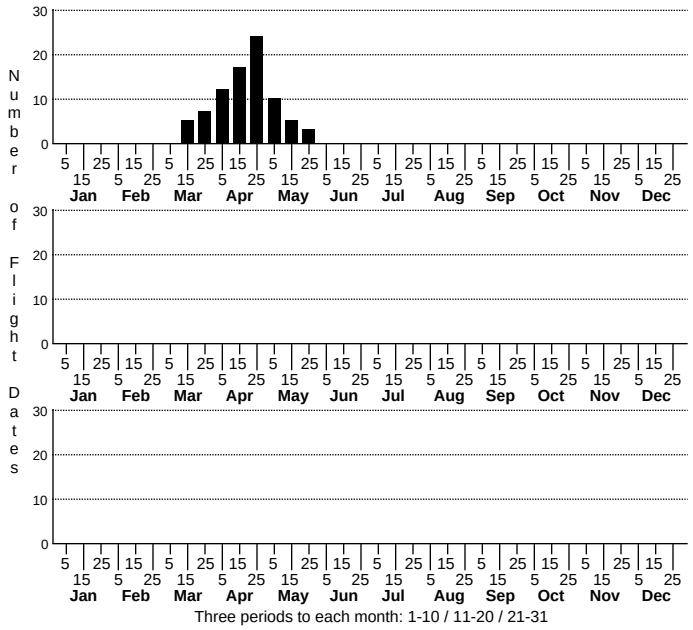
FLIGHT PERIOD: A single brood; very late March to mid-May, though potentially into late May at high elevations. At low elevations, the males peak in mid- to late April and the females peak in early May.

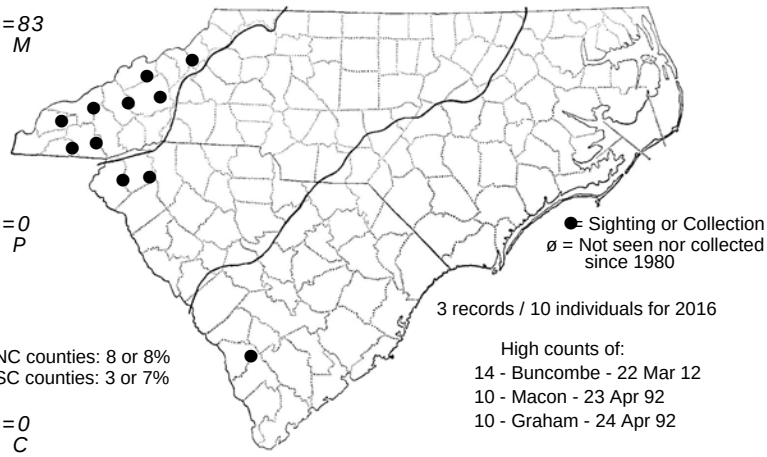
HABITAT: This species is found in the shade or dappled shade of rich hardwood forests, mostly on north-facing slopes. They are best looked for along logging roads or other dirt roads, or along wide trails, through such forests. The elevation range of the species is unknown; rich coves with the foodplant range from below 2000 feet to over 4000 feet in elevation.

FOOD AND NECTAR PLANTS: The only recorded foodplant is goat's-beard (Aruncus dioicus); the larvae feed on the young leaves and flower buds, a few weeks after the flight period of the adults is completed for the year. Nectar plants are not well known, but wild geranium (Geranium maculatum) is said to be most often used. I have seen the species nectaring on Carolina vetch (Vicia caroliniana), and Harry Pavulaan has seen them nectaring on woodland species of violets. Males often take moisture/minerals from dirt.

COMMENTS: As with the Appalachian Azure, much is still to be learned about the Dusky Azure. Both are limited in NC to the mountains, and both have a fairly brief spring flight (though Dusky finishes about when Appalachian begins). Fortunately, Allen (1997) provides much detail on the life history of both of these species in WV, where the two species are fairly widespread. The Carolina Butterfly Society found a colony of Dusky Azure along a logging road through a cove forest in Graham County in April 1996, and Rob Van Epps counted about 20 individuals along this road in 2005, easily a record one-day count. The males can be separated from Spring Azure in flight by their sooty (slaty-gray) upper surface, but you must let them perch to make sure that they are azures and not Eastern Tailed-Blues (whose females are also slate-colored above). Female Dusky Azures are very difficult to separate from Spring Azures. Some colony sites have been located by experts by finding caterpillars on goat's-beard in late spring, and then visiting the site the next spring to find the adults.

Silvery Blue *Glaucopsyche lygdamus*





3 records / 10 individuals for 2016

NC counties: 8 or 8%
SC counties: 3 or 7%

High counts of:
14 - Buncombe - 22 Mar 12
10 - Macon - 23 Apr 92
10 - Graham - 24 Apr 92

Earliest date: Madison 16 Mar 2013
Latest date: Clay 27 May 2005

Status NC	Status US	Rank NC	Rank Global
W	-	S2S3	G5

DISTRIBUTION: Mountain region; ought to occur throughout the mountains, as this is a northern species, but no records as yet from the northern counties. Elevation range not well known, but does occur below 2000 feet and above 4000 feet.

ABUNDANCE: In the southern mountains, it is rare to uncommon, but may be locally numerous. Apparently very rare in the northern mountains, and it might be absent in some counties.

FLIGHT PERIOD: A single brood; the latter half of March to mid-May. However, 2005 was an abnormally cool spring, and the species was recorded on several occasions as late as May 27. And, 2011 and 2012 were early springs, with many new March records added.

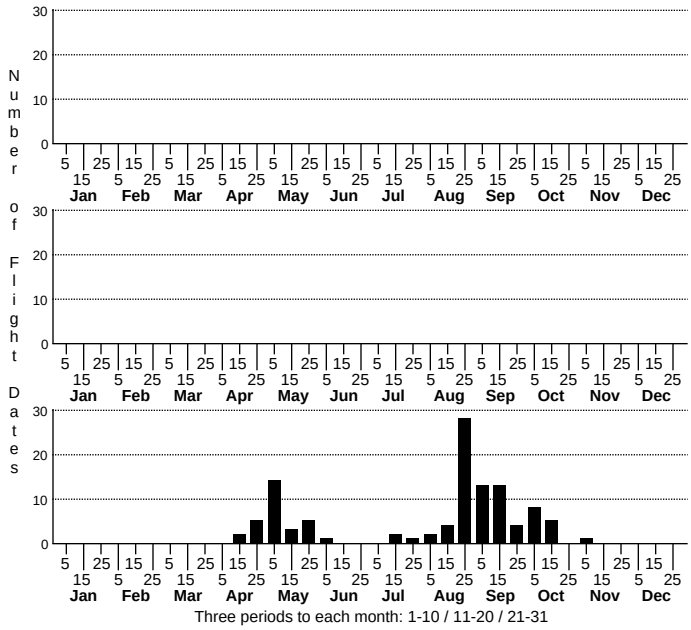
HABITAT: The species appears to be fairly restricted in habitat to places where Carolina vetch (Vicia caroliniana), and perhaps crown vetch (Coronilla varia), is present. We have found them along wooded roadbanks and along trails through hardwood forests where colonies of the vetch are present (and blooming). The forests may be cove forests or fairly dry forests, usually where sunlight reaches the vetch. The butterflies keep close to the vetch, not normally seen more than about 100 feet from them. In April 1996 the Carolina Butterfly Society found the species at one or two sites with crown vetch in Graham County.

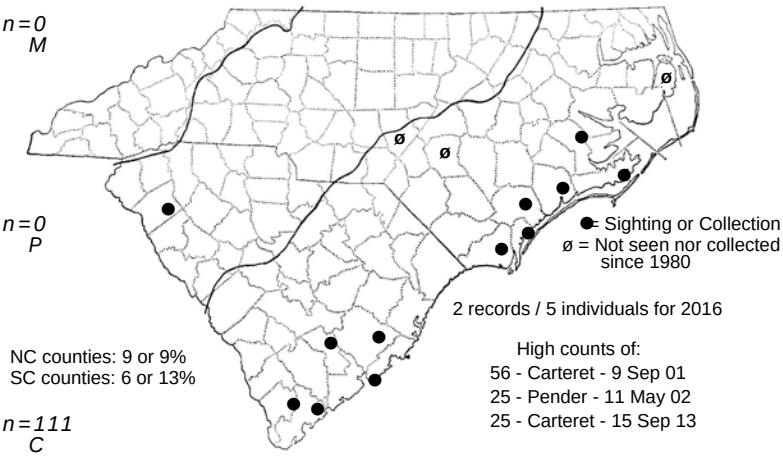
FOOD AND NECTAR PLANTS: The foodplant appears to primarily be Carolina vetch in NC, but crown vetch might also be used, though the use of this introduced species has perhaps not been confirmed. The species nectars on Carolina vetch or on other plants; robin's plantain (Erigeron pulchellus) is often used as another nectar source.

COMMENTS: This is one of the easier butterflies to look for. Of course, the observer will often miss the Silvery Blue whenever he finds a patch of vetch, but the species seems to be closely tied to sizable patches of vetch. Steve Hall and I have seen up to 10 individuals at a few such patches of Carolina vetch. Despite a modest amount of field work in mountain counties north of Asheville (in Buncombe County), the Silvery Blue is known from just two of eight such counties fully within this province.

NOTE: The outlier record for Allendale County, SC, actually a specimen collected by Billy McCord over a decade ago, is part of a strongly disjunct population (if it still exists) in the upper Coastal Plain of GA and western SC. Were it not for the presence of some specimens, most people would strongly assume that some other blue/azure species was being misidentified. There is no evidence of any upper Coastal Plain or Sandhills (or even Piedmont) populations of Silvery Blue farther northward in the Carolinas.

Little Metalmark *Calephelis virginiensis*





NC counties: 9 or 9%
SC counties: 6 or 13%

2 records / 5 individuals for 2016

High counts of:
56 - Carteret - 9 Sep 01
25 - Pender - 11 May 02
25 - Carteret - 15 Sep 13

Earliest date: Pender 14 Apr 2012
Latest date: Cumberland 4 Nov ?

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G4

DISTRIBUTION: Scattered over the southern half of the Coastal Plain, but apparently restricted to the lower Coastal Plain, plus the Sandhills region (at least formerly). Probably absent from the inner Coastal Plain north of Cumberland County, and might now be absent north of Croatan National Forest (Craven County).

ABUNDANCE: Uncommon, and restricted in habitat; may be locally common. Very rare to absent over Coastal Plain locales away from longleaf pine habitats. Certainly has declined in the Sandhills, as there are no recent records.

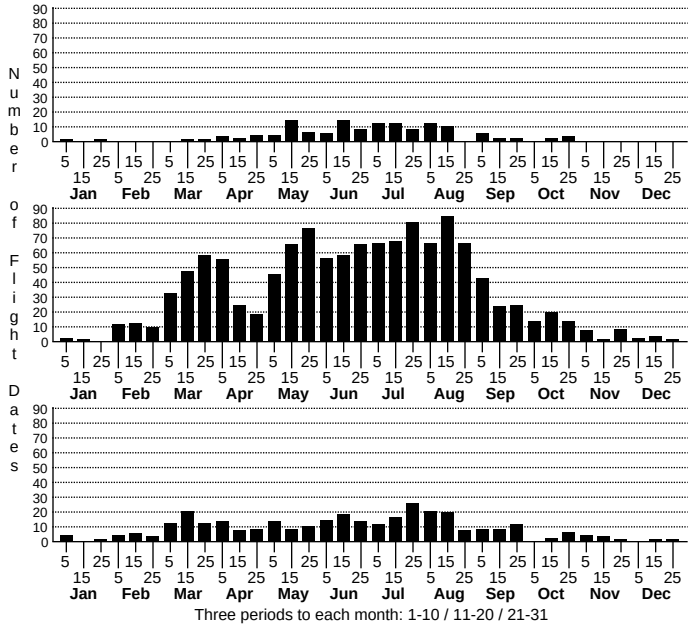
FLIGHT PERIOD: Seemingly three broods -- late April to late May, July, and mid-August to mid-October. The last brood is clearly the most numerous; highest numbers occur in early to mid-September.

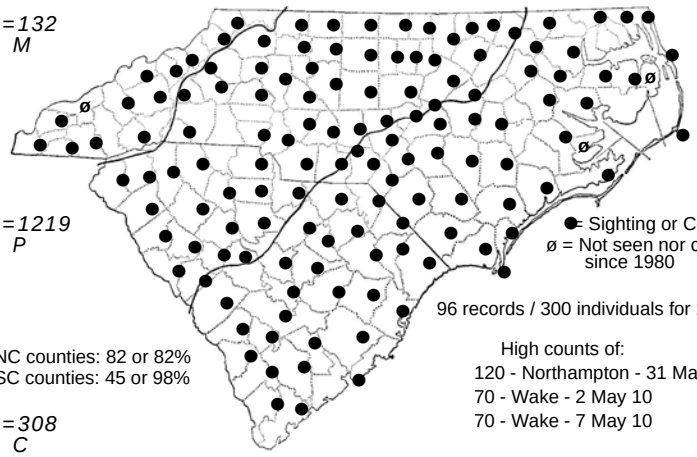
HABITAT: The species seems to require, or at least be found primarily in, high-quality longleaf pine communities. It is most numerous in longleaf pine savannas and flatwoods, which have mostly been destroyed by timber plantations, development, etc. It probably occurs (or formerly occurred) in similar habitat in the Sandhills. It likely is rare or absent in the drier pine/scrub oak habitats.

FOOD AND NECTAR PLANTS: The primary foodplant has been reported to be yellow thistle (Cirsium horridulum). However, Bo Sullivan (pers. comm.) has found that vanilla-plant (Trilisa odoratissima), a tall purple-flowered composite, is a (and probably sole) foodplant in NC. This plant is common in the savannas and flatwoods where I have seen the metalmark, and thus seems to be the correct solution to the mystery (i.e., there seems to be no correlation in NC between the thistle and the butterfly). Whether any species of thistle is a foodplant in NC is open to question. The species nectars on many flowers, but it is often seen resting on leaves and stems.

COMMENTS: This small and moth-like species can be numerous in a few high-quality flatwoods and savannas, such as Millis Road Savanna and at Holly Shelter Game Land. There is still much to be learned about it in NC. How often does it occur away from flatwoods and savannas? Is it found at all in the dry pine/turkey oak habitats, such as those common in the Sandhills? At any rate, it has been found at alarmingly few new sites in the last 20 years.

American Snout *Libytheana carinenta*





96 records / 300 individuals for 2016

High counts of:
120 - Northampton - 31 May 12
70 - Wake - 2 May 10
70 - Wake - 7 May 10

NC counties: 82 or 82%
SC counties: 45 or 98%

Date Spread: Chatham on 2 Jan 2000 to Washington on 28 Dec 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Synonym: *Libytheana bachmanii*
Other Name: Snout Butterfly

DISTRIBUTION: Essentially statewide, but might be absent in a few mountain counties.

ABUNDANCE: Uncommon to locally common in the upper Coastal Plain and the eastern half of the Piedmont; uncommon in the lower Coastal Plain and in the western Piedmont; rare to uncommon in the mountains. It might be somewhat migratory to some parts of the state, such as the mountains and the immediate coast, places where suitable foodplants are lacking.

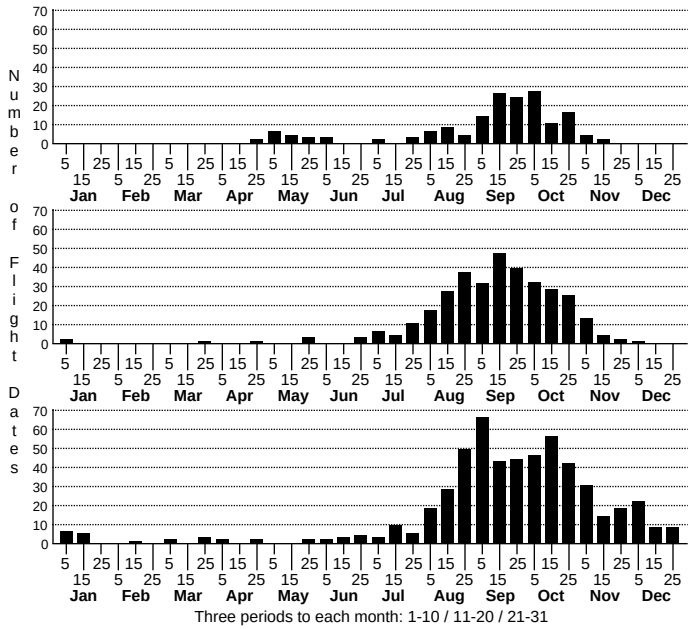
FLIGHT PERIOD: Apparently two broods. Adults overwinter and can be seen on warm days in winter; primary emergence begins in early March. These individuals fly to mid- or late April. The first new brood begins around early May and flies into late summer (until September?). The second brood flies in the fall and then overwinters.

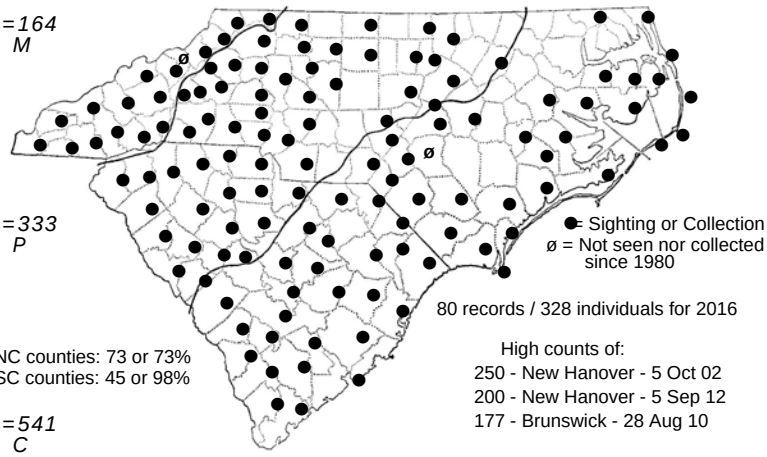
HABITAT: The species is associated with hackberries/sugarberries (Celtis laevigata and C. tenuifolia). Thus, it is seen usually in or near various hardwood forests. It may be found in the forest interior, such as in bottomland forests, as well as in upland forests. It may be found in quite xeric places, such as monadnock outcrops, where Georgia hackberry (C. tenuifolia) is found. It is also present in forest openings and edges, especially along dirt roads or wide dirt trails; however, it is not normally seen far from hardwood forests.

FOOD AND NECTAR PLANTS: Foodplants are solely hackberries. The species nectars infrequently; it is usually seen perched on leaves, twigs, tree trunks, and on moist dirt. Adults feed on sap, animal droppings, moisture, etc. They also alight on humans and imbibe salts from perspiration.

COMMENTS: This is an unusual species with no close relatives in NC. It is usually seen singly, often perching on dirt on a trail or road, behaving somewhat like a Question Mark, Eastern Comma, or Hackberry Emperor. It may occur in association with these woodland species. In some places with rich bottomlands, such as Raven Rock State Park and Pee Dee National Wildlife Refuge, snouts can occur in some numbers. As the species is a bit migratory along the Atlantic seaboard, an observer may see a few individuals far from their foodplant trees, such as in the middle of large fields, gardens, and other seeemingly inhospitable places.

Gulf Fritillary *Agraulis vanillae*





Date Spread: Carteret on 1 Jan 2008 to Carteret on 31 Dec 2007

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Dione vanillae*

DISTRIBUTION: This partial migrant species has an unusual distribution in the state. It occurs mainly along the southern coast and in the southern mountains and adjacent Piedmont. There are scattered records over nearly all of the state, but with few records for the northern mountains (though records for all counties) and very few for the northern Coastal Plain.

ABUNDANCE: Usually common in late summer and fall in the extreme southeast (where it is at least partially resident), but mostly uncommon to fairly common along the coast north to Carteret County, and rare farther north along coast, at least to Cape Hatteras. Generally uncommon in the southern mountains and southwestern Piedmont; very rare to rare elsewhere. Erratic in numbers from year to year, as this is mostly a migrant species (except near the coast).

FLIGHT PERIOD: Generally the late summer and fall seasons. Records scattered all year; however, it is scarce before mid-July and after early December. Mainly a migrant to the Piedmont and mountains, but definitely a resident in the southeastern Coastal Plain. There are perhaps as many as three broods in the state. The flight charts show small numbers in spring and early summer; and larger numbers after mid-July, which probably refer to two run-on broods. It isn't clear if most of the individuals before mid-July are migrants from farther south or west; for example, it seems unlikely that adults seen in the mountains in spring could have come from eggs laid in NC in the previous fall.

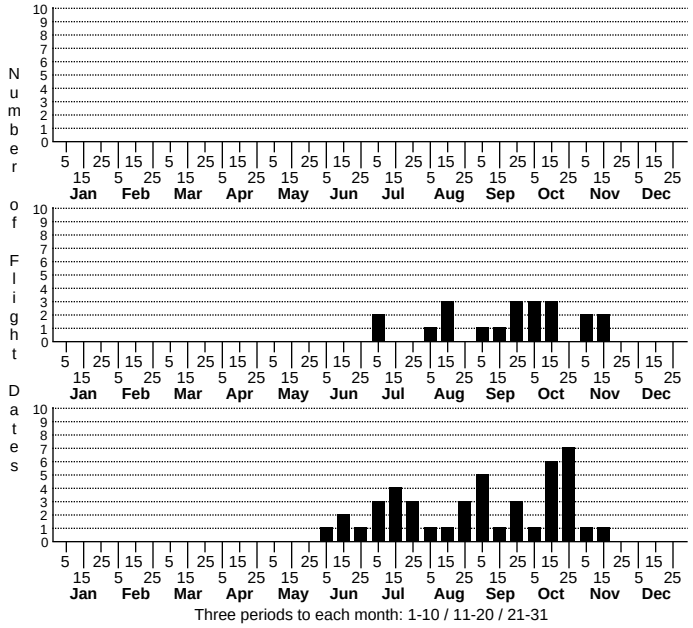
HABITAT: Various open country places, typical of most migrants -- dunes, fields, gardens, thickets, woodland edges.

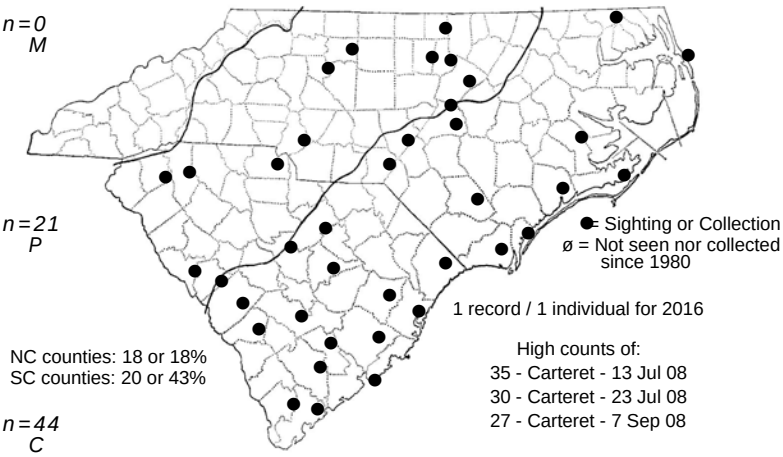
FOOD AND NECTAR PLANTS: Foodplants are maypops and other passion-flowers (Passiflora spp.). Nectar plants are very varied, and may include exotic garden species. Large numbers may be seen nectaring on lantana along the southern coast in the fall.

COMMENTS: Of the southern migrants into NC, this is one that can be seen annually along our southern coast. Surprisingly, the species is more likely to be seen in Asheville than it is in Fayetteville or Raleigh, as there seems to be a northbound or eastbound migration into the southwestern corner of the state. Interestingly, there is little inland "push" of migrants into the Coastal Plain from the immediate coast. The cluster of records in the northeastern Piedmont is likely due to the heavy amount of field work in that region.

Gulf Fritillaries had banner years in 2002, 2003, 2008, and 2012. A remarkable ten counties had first records in 2002, six more counties had first records in 2008, and four more in 2012. The species, however, continues to be surprisingly rare in the Sandhills, though found in all of these counties.

Zebra Longwing *Heliconius charithonia*





1 record / 1 individual for 2016

High counts of:
35 - Carteret - 13 Jul 08
30 - Carteret - 23 Jul 08
27 - Carteret - 7 Sep 08

NC counties: 18 or 18%
SC counties: 20 or 43%

New for 24th: Richmond; C

Earliest date: Richmond; C 1 Jun 2016
Latest date: Mecklenburg 20 Nov 2003

Status NC	Status US	Rank NC	Rank Global
-	-	SZN	G5

Synonym: *Heliconius charithonius, Heliconia charitonius*
Other Name: Zebra, Zebra Heliconian

DISTRIBUTION: Sparse migrant from the south. The records are widely scattered in the Piedmont and Coastal Plain (primarily the southern coast). A flurry of 2003-04 records from Durham County, where the N.C. Museum of Life and Science is located, makes it virtually certain that these records are related to escapes from the museum, which has a butterfly house containing this and other tropical species. In 2008, a remarkable outbreak of the species occurred along Bogue Banks in Carteret County, and it is likely that adults dispersing from that county were responsible for new records in neighboring Craven and Onslow counties. Another flurry of records came in fall 2013.

ABUNDANCE: Casual to now very rare; to be looked for primarily near the southern half of the coast, especially in Brunswick and New Hanover counties. The origin of most recent records is uncertain, and many likely pertain to man-assisted occurrences; however, essentially all of the 2013 records likely were of legitimate strays.

FLIGHT PERIOD: The dates fall between early June and mid-November, though most sightings are from mid-August into November.

HABITAT: Most likely to be seen around the margins of maritime forests and thickets near the coast (its usual habitat in FL). It can also occur in wooded residential areas and gardens. Not likely in wide open habitats such as fields.

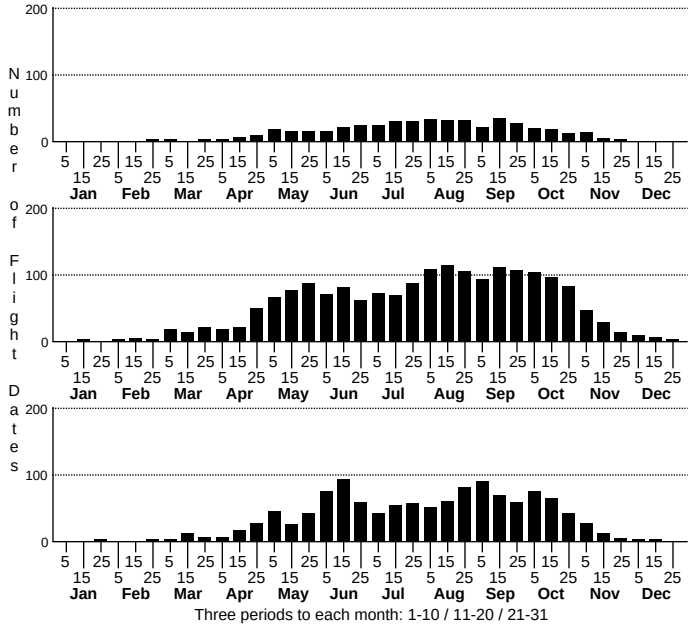
FOOD AND NECTAR PLANTS: Foodplants are passion-flower (Passiflora) species. Females were seen ovipositing on both P. lutea and P. incarnata at Fort Macon State Park in 2008. The Zebra Heliconian has been reported as nectaring on butterfly-bush (Buddleia) in gardens in NC, and it nectars on lantana in SC and perhaps in NC.

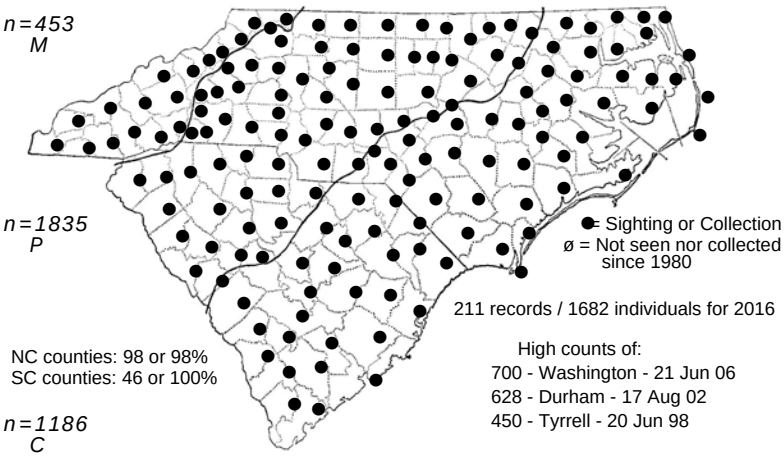
COMMENTS: This species has been reported from all coastal SC counties, including Horry (adjacent to NC). Thus, it is not a surprise that it has been seen in NC. One was photographed (photo on the internet) in Orange County, by Randy Emmitt, in October 1997; this apparently was the first tangible documentation of the Zebra Heliconian for North Carolina. In 2003, we received a remarkable 11 records, and surprisingly 10 of these were from the Piedmont.

On June 19, 2008, Randy Newman (ranger at Fort Macon State Park) saw one or two adults at the park, and over the next few months a number of other butterfliers made visits to the park to see them. Not only were 20 or more adults seen at the park, but observers found them at several other maritime forests on Bogue Banks, even westward toward Emerald Isle. Not surprisingly, a few adults were seen on the Carteret County mainland, and they were seen as far north as Craven County and west to Onslow County. This "outbreak" was not detected along the coast farther to the south, and it must have started with a single gravid female laying eggs at the state park in early summer. It seems highly unlikely that a good number of adults were simply blown to Carteret County from FL or GA, for example, as some butterflies should have been found farther south along the coast. Sadly, no "offspring" survived the winter of 2008-2009, as no adults were reported from anywhere in the state in 2009. There were a remarkable ten Coastal Plain and three Piedmont reports in 2013, including our first records from the northern half of the Coastal Plain (i.e., Dare and Gates counties). Most of these 2013 butterflies were photographed. Sadly, there were no reports in the state in 2014, nor any in 2015. The sole state record in 2016 was a first county record for Richmond County; this individual was seen a few days after passage of a tropical storm and likely was carried into the state by the storm. Interestingly, it is also the earliest record (June 1) for the state.

NOTE: The common name was changed in 2012 (to Zebra Longwing) to conform with the common name on the Butterflies of America (2012) website.

Variegated Fritillary *Euptoieta claudia*





Earliest date: Forsyth 15 Jan 2007
Latest date: Wake 29 Dec 2008

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; undoubtedly occurs in all 100 counties.

ABUNDANCE: Common to locally very common in the Coastal Plain; fairly common to common in the eastern and southern Piedmont; uncommon to fairly common in the northwestern Piedmont and in the mountains. Noticeably more numerous in the eastern half of the state than in the western half.

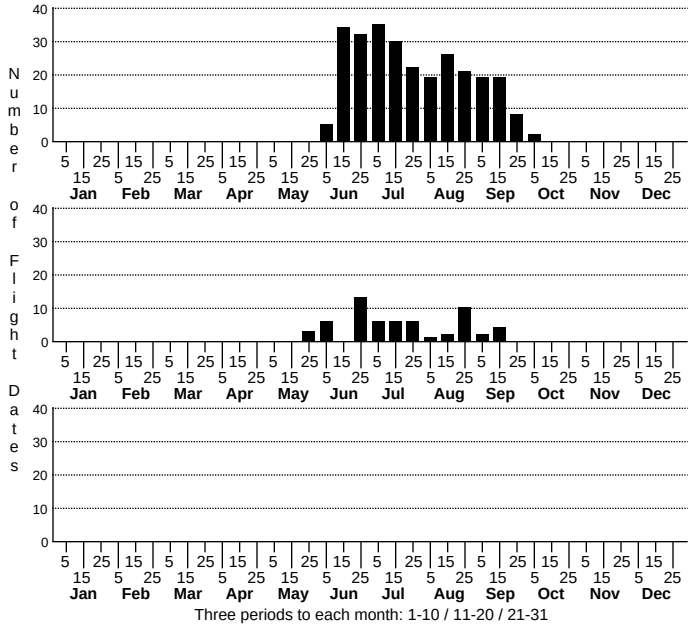
FLIGHT PERIOD: Three, and possibly four, broods; however, it has a continuous presence in NC from March (rarely from January) into December. It is definitely a "late" flier among our widespread and common butterflies and is not numerous until June. It is not clear if it is a breeding resident in all of the state or is simply a migrant to at least the western portions.

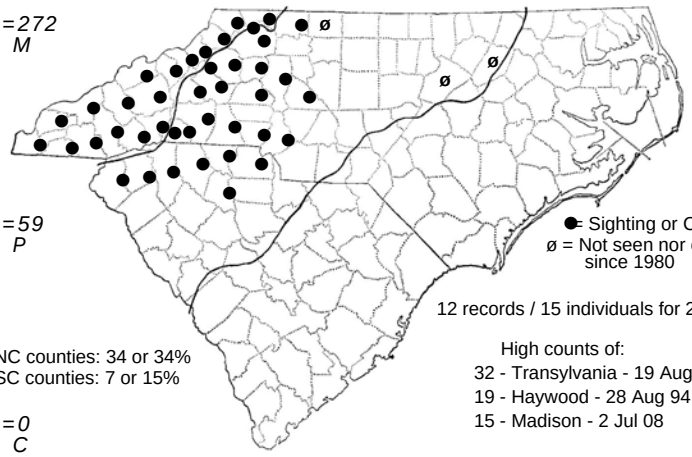
HABITAT: Widespread in open disturbed habitats; fields, roadsides, cultivated areas, vacant lots, dunes, etc. This is not a woodland species, nor is it common in "pristine" habitats such as savannas. It is often seen in arboretums and gardens, and it also frequent croplands with some flowers (and can occasionally be very common in some cultivated fields).

FOOD AND NECTAR PLANTS: Foodplants are varied; violets (Viola spp.), passion-flowers (Passiflora spp.), etc. I have seen females ovipositing on common blue violets along a field edge. Nectar plants are extremely varied, with no particular group singled out.

COMMENTS: This is the only fritillary seen in most of the Coastal Plain. It is also seen along with the Great Spangled, Meadow, and Aphrodite fritillaries in mountain meadows. Some of the populations seen in summer and fall are probably migrants from farther south. It remains common in parts of NC well into October, when relatively few species are still numerous. On warm days in winter, one or two can at times be seen, as well.

Diana Fritillary *Speyeria diana*





12 records / 15 individuals for 2016

High counts of:
32 - Transylvania - 19 Aug 11
19 - Haywood - 28 Aug 94
15 - Madison - 2 Jul 08

NC counties: 34 or 34%
SC counties: 7 or 15%

New for 24th: Rowan

Earliest date: Gaston 28 May 2006
Latest date: Haywood 9 Oct 1992

Status NC	Status US	Rank NC	Rank Global
W	FSC	S3S4	G3G4

Other Name: Diana

DISTRIBUTION: Throughout the mountains and adjacent foothills, and in the western third of the Piedmont. Formerly in the eastern Piedmont. A record in 2007 from Iredell County, and in Mecklenburg County in 2011, extend the range eastward. A record from Rowan County in 2016 further extends the range eastward.

ABUNDANCE: Uncommon to locally fairly common in the mountains; rare to locally uncommon in the extreme upper Piedmont (foothills), but very rare to rare in the Piedmont below about 1200 feet in elevation. Certainly absent now from the eastern Piedmont (i.e., old records from Nash and Wake counties).

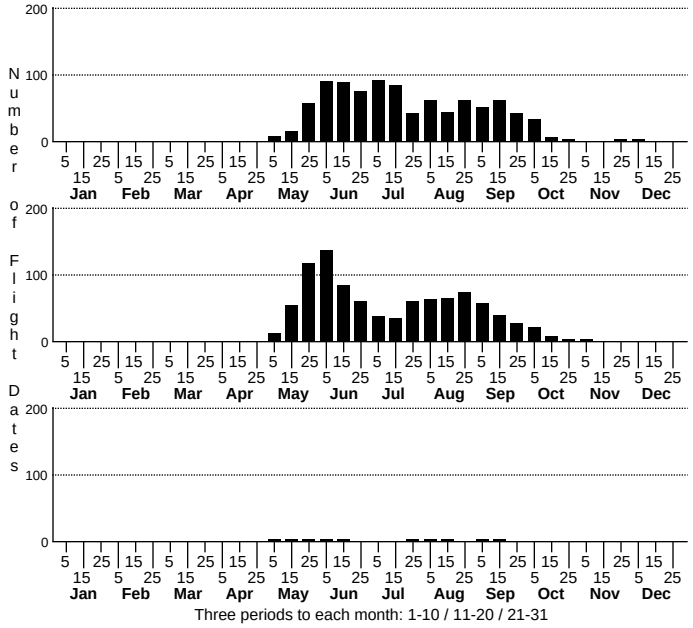
FLIGHT PERIOD: A single brood; mid-June to early October in the mountains, but the flight in the Piedmont begins in late May or early June. Males fly mainly into mid- or late August; females fly from July to September but are most frequently seen in September. (It can be difficult to see both a male and a female on the same day.) As with all Speyeria species, there appears to be some aestivation of individuals after the "peak" in June and July.

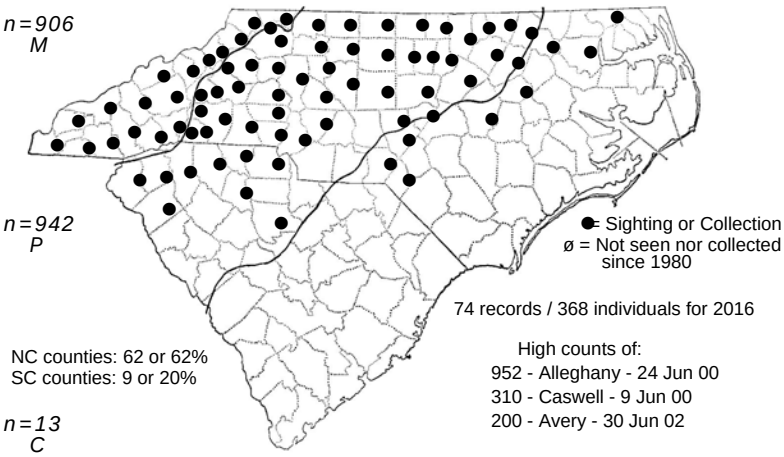
HABITAT: Generally in small openings or edges of montane forests. Most often seen along sunlit, wooded dirt roads. This species is not typically found in the extensive fields and meadows characteristic of most of the other fritillaries. It appears to be more numerous from 3500 feet downward; it is not generally seen on upper mountain slopes.

FOOD AND NECTAR PLANTS: The food plants are violets, presumably those found mainly in wooded slopes and bottomlands. The species does not nectar as frequently as do other fritillaries; milkweeds and Joe-pye-weeds are the most commonly used nectar plants. Males favor milkweeds, which bloom mainly in June and July; the females favor tall composites -- mainly pink- or purple-flowering species such as Joe-pye-weeds, ironweeds, and thistles -- which bloom mainly after milkweeds are finished, in late August and in September.

COMMENTS: This beautiful, sexually-dimorphic butterfly is not as numerous as one might expect, based on its habitat, which is abundant. Even so, I have seen as many as 19, all females, in one day. And, 32 adults were seen by several parties on the Transylvania County butterfly count in 2011, by far a state high count total. Your best bet to find females is to drive along mountain roads from late August to mid-September and concentrate on blooming Joe-pye-weeds along the roadsides. Small openings with blooming common milkweed (Asclepias syriaca) can be productive in midsummer, for males. I have yet to see a Diana Fritillary more than about 50 feet from a forest edge.

Great Spangled Fritillary *Speyeria cybele*





74 records / 368 individuals for 2016

High counts of:
952 - Alleghany - 24 Jun 00
310 - Caswell - 9 Jun 00
200 - Avery - 30 Jun 02

NC counties: 62 or 62%
SC counties: 9 or 20%

Earliest date: Forsyth 2 May 2012
Latest date: Yancey 4 Dec 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Throughout the mountains, and nearly throughout the Piedmont, though scarce to locally absent in the southeastern Piedmont. In the Coastal Plain (where not a resident species), it has been found only at a few sites near the Piedmont.

ABUNDANCE: Common to locally abundant in the mountains, being more common in the northern mountains than near GA. In the Piedmont, fairly common to locally common along the northern tier of counties east to Halifax County; however, it is uncommon in the central Piedmont, being especially scarce in the southeastern Piedmont, where it is perhaps absent as a breeding species in a few counties. It is certainly a stray/vagrant, however, in the Coastal Plain, as there have not been "repeatable" sightings at any location where initially seen.

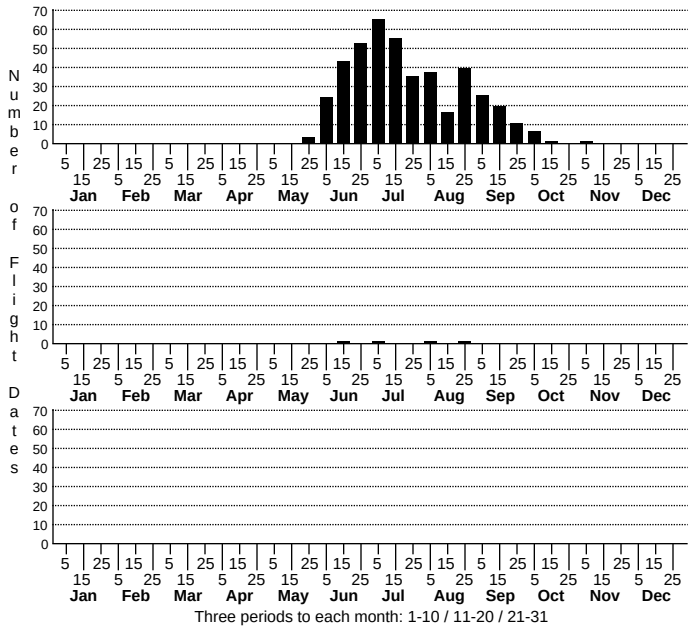
FLIGHT PERIOD: A single brood, but an extensive spread of dates; mid-May to mid-October, rarely later. Whether the peaks and valleys shown on the flight charts are real is not known, but there does seem to be a "burst" of flight activity for the first month of the flight period. It is suspected that some aestivation of individuals occurs in late summer and early fall.

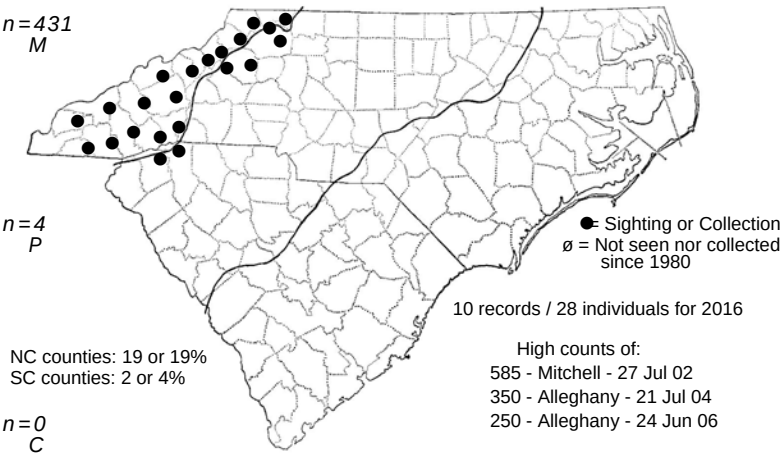
HABITAT: This is an open-country species, being most common in meadows, especially along streams through pastures, in the mountains. It is also found in various fields, clearcuts, thickets, woodland borders, and (less commonly) in woodland openings.

FOOD AND NECTAR PLANTS: Foodplants are violets of various species. This species is commonly seen nectaring; milkweeds are favored, but Joe-pye-weed, ironweed, ninebark, and other tall herbs or shrubs are often used, especially those of moist meadows or open streamsides.

COMMENTS: This is one of the more frequently seen and "obvious" butterflies in the mountains. The Fall Line forms the edge of the species' (resident status) range, and thus it is not too surprising that the species is not common in the southeastern Piedmont and might be absent as a breeder in a few counties. However, it can be occasionally common as far east as Warren and Halifax counties, along the VA border.

Aphrodite Fritillary *Speyeria aphrodite*





10 records / 28 individuals for 2016

High counts of:
585 - Mitchell - 27 Jul 02
350 - Alleghany - 21 Jul 04
250 - Alleghany - 24 Jun 06

NC counties: 19 or 19%
SC counties: 2 or 4%

Earliest date: Buncombe 25 May 1996
Latest date: Yancey 9 Nov 1995

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Throughout the mountains; essentially absent from the Piedmont. Records attributed to the latter province are from the Blue Ridge Escarpment along the boundary of the mountains and Piedmont.

ABUNDANCE: Generally common to locally very common in the northern mountains; much less numerous in the southern mountains, where often fairly common. However, rare to uncommon in the extreme southwestern counties. It is less numerous overall in the mountains than the Great Spangled Fritillary, but the Aphrodite can outnumber the Great Spangled in some places (mainly in the northern mountains).

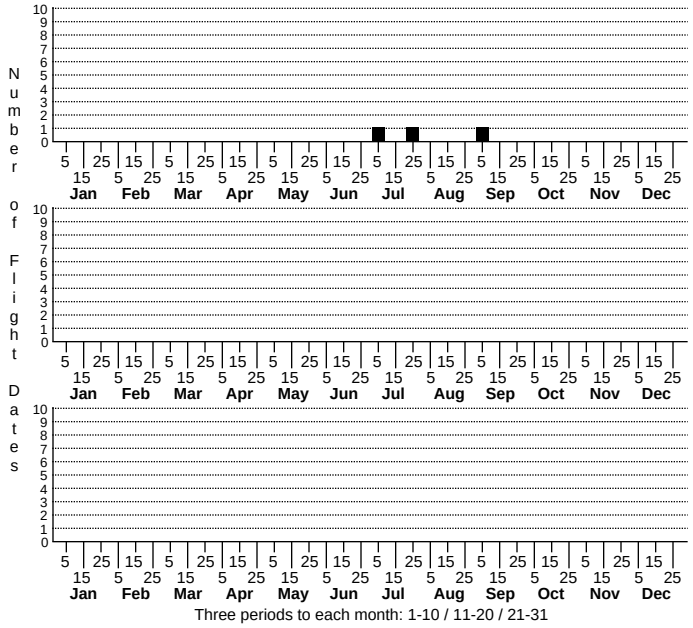
FLIGHT PERIOD: A single brood, slightly narrower in time than that of the Great Spangled; late May to very early October, straggling to early November. As with other fritillaries, males precede females by about a week.

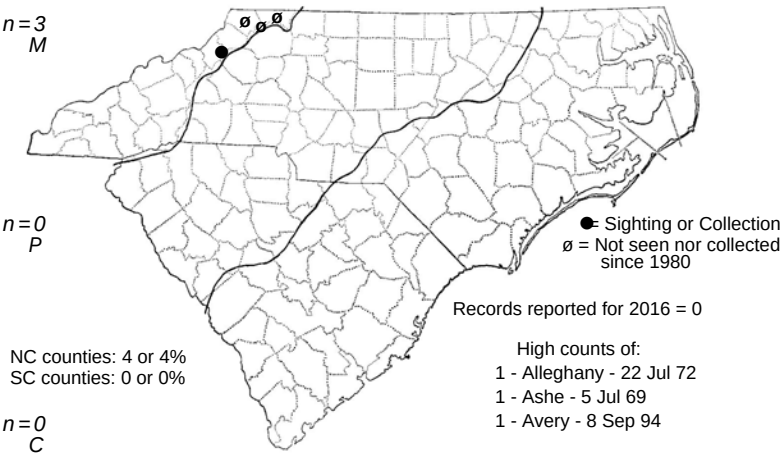
HABITAT: Overlaps with that of the Great Spangled, such as meadows, moist thickets, and forest edges. However, it shows more affinity for openings along roads or small clearings in the higher mountains than does the Great Spangled. Nevertheless, the Great Spangled often outnumbers the Aphrodite along wooded roadsides, especially at lower elevations. The Aphrodite outnumbers Great Spangled in some meadows in the extreme northern mountains and at the highest elevations such as Roan Mountain, where it can at times be the most common butterfly recorded on the Fourth of July count.

FOOD AND NECTAR PLANTS: As with other fritillaries, violets are believed to be the sole foodplants. Nectar plants include milkweeds, ninebark, and many other flowers.

COMMENTS: Identification of large fritillaries can be difficult. The Aphrodite tends to be slightly smaller, and slightly deeper orange on average than the Great Spangled; however, the narrow yellowish under hind wing post-median band is the best mark. The Aphrodite also has a more purplish ground color to the under hind wing; the Great Spangled is more rufous or rusty in color. The two species are often seen together and cannot be separated by habitat alone.

Regal Fritillary *Speyeria idalia*





Earliest date: Ashe 5 Jul 1969
Latest date: Avery 8 Sep 1994

Status NC	Status US	Rank NC	Rank Global
SR	FSC	SX	G3

DISTRIBUTION: Considered now to be extirpated in NC. Formerly found in the extreme northern mountains, south to Avery County. Records only from Avery, Ashe, Alleghany, and Wilkes counties in NC.

ABUNDANCE: Formerly rare or uncommon; however, the species is presumed extirpated in NC. One was reported in the Roan Mountain vicinity of Avery County in early September 1994; it might well have been a stray from a colony in southwestern VA. However, the Roan Mountain site has been worked on numerous occasions since, with no luck at finding this large and easily identified species.

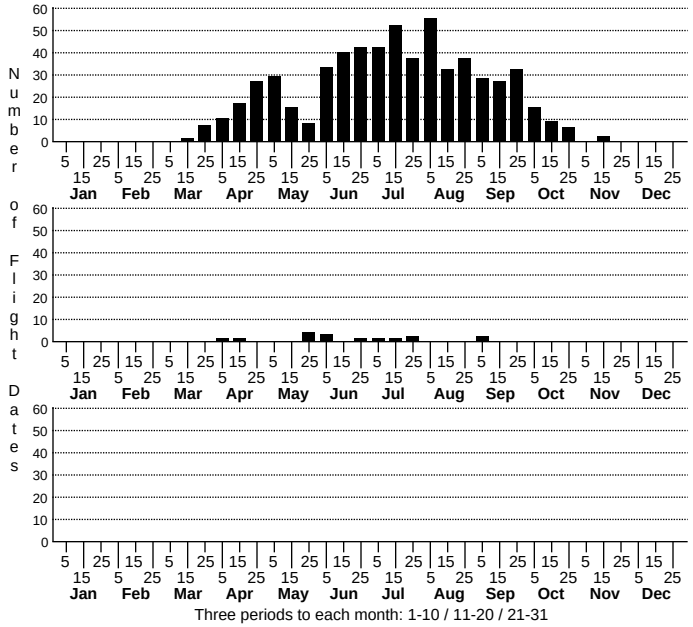
FLIGHT PERIOD: A single brood; mid-June to mid-September, and perhaps later into September or early October.

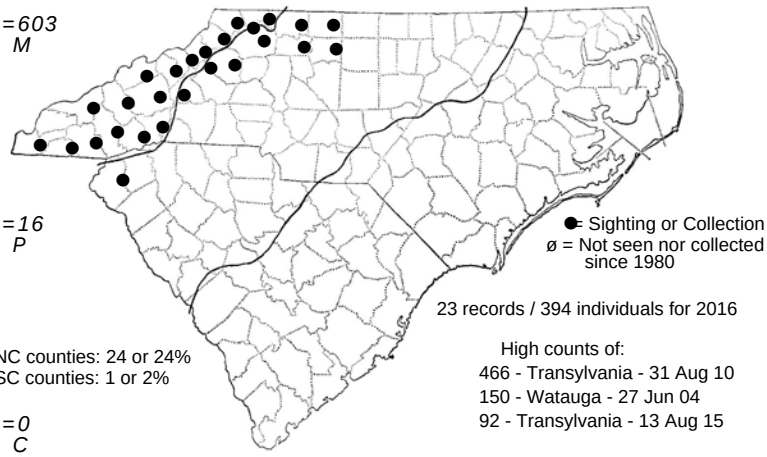
HABITAT: Extensive open country, such as wet meadows and pastures. Preferably in moist situations, but also present in extensive upland fallow fields and pastures. The 1994 report was from a mountaintop meadow with an abundance of wildflowers.

FOOD AND NECTAR PLANTS: Various violets are the foodplants; nectar plants are commonly milkweeds, but others are also used.

COMMENTS: The NC NHP was ecstatic to hear about a sighting of a worn individual seen in September 1994 by a U.S. Forest Service biologist. It gives hope that other Regal Fritillaries still lurk in the northern mountains, where much suitable habitat seemingly still exists. However, conversion of meadows and other grasslands to Christmas tree plantations is presumably impacting this Federal Species of Concern. Its great demise in the East is unprecedented among butterflies. It has been recorded from dozens of counties in western VA, yet biologists there now know of just two sites where the species is still present. Fortunately, 50+ individuals were counted in one of those sites in 1999, and there was a 1999 sighting (of a stray?) in Grayson County, right across the NC border. Thus, it still might be possible for someone to find a Regal Fritillary in the northern mountains of NC, but the odds would be that the butterfly is a stray. The finding of a viable, reproducing population of Regals in NC seems highly unlikely now. In 2012, NC NHP moved the State Rank from SH (Historical) to SX (Extirpated).

Meadow Fritillary *Boloria bellona*





23 records / 394 individuals for 2016

High counts of:
466 - Transylvania - 31 Aug 10
150 - Watauga - 27 Jun 04
92 - Transylvania - 13 Aug 15

NC counties: 24 or 24%
SC counties: 1 or 2%

Earliest date: Buncombe 14 Mar 2012
Latest date: Yancey 14 Nov 2000

Status		Rank	
NC	US	NC	Global
-	-	S4	G5

DISTRIBUTION: Throughout the mountains, and scattered in the northwestern Piedmont. Apparently absent from the Piedmont foothills in the southwestern part of the province.

ABUNDANCE: Common to locally very common in the northern mountains (north of Buncombe County), but uncommon to locally common in the central and southern mountains. Very rare in the northwestern Piedmont, but seemingly increasing and slowly expanding its range in the province, as witnessed by a first record in Forsyth County in 2014. Numbers in the mountains seem to be slowly increasing, as long as their proper habitat is present.

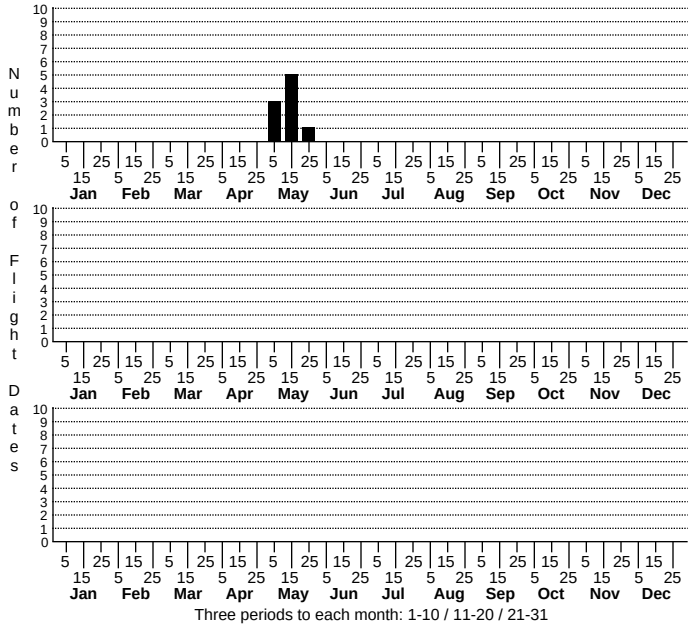
FLIGHT PERIOD: Supposedly three broods. The majority of NC records are for the second brood, probably because of the relative scarcity of field work before mid-May and after August. The broods overlap such that the species is flying throughout the April to October flight season, and the flight chart makes it difficult to determine when broods begin and end, though the first brood clearly ends in the latter part of May.

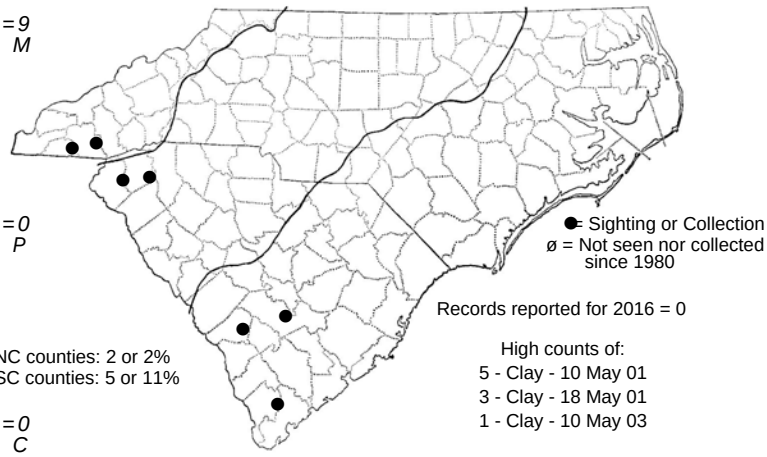
HABITAT: Extensive open country; fields, meadows, roadsides, etc.; more adapted to farmland fields than the Speyeria species. Not found near forests. The species is considered to have spread southward in the century with the expansion of farmland, though farmland acreage in the last 20 years is on the decline in the NC mountains.

FOOD AND NECTAR PLANTS: Violets are the foodplants. The species nectars on many plants, but usually on lower-growing species more than other fritillaries.

COMMENTS: This species flies lower to the ground than the Speyeria species, and its unusual shape (long and narrow forewings) makes it distinctive. However, all such fritillaries should be carefully examined, as the somewhat similar-looking Silver-bordered Fritillary, which occurs in wet meadows and bogs in parts of the VA mountains, might occur in northern NC.

Gorgone Checkerspot *Chlosyne gorgone*





Earliest date: Clay 4 May 2003
Latest date: Clay 27 May 2005

Status NC	Status US	Rank NC	Rank Global
SR	-	S1?	G5

DISTRIBUTION: Restricted to the extreme southwestern corner of the state, where known only from Clay and Macon counties. The species is found in the mountains of adjacent GA and the upper Piedmont of SC; thus, its discovery in 2001 in Clay County and in 2002 in Macon County was not a complete surprise.

ABUNDANCE: Very rare, assuming that it is still present. So far, found only at three sites in the state, but with no records in the past decade (due mainly to the long driving distances for most butterfliers to reach the range of the species).

FLIGHT PERIOD: At the Clay County sites, it apparently flies for a few weeks in May, and likely again later in summer. It does have up to three broods in northern GA, flying into September; however, Ron Gatrelle and others have yet to find the species in summer or fall, despite much field work where it occurs in May.

HABITAT: In Clay County, it is found along wooded borders, along logging roads, and in powerlines, and probably in open woods and glades -- but in dry situations. The Macon County site is a fairly high ridge. The species is typically found in dry to mesic situations; the similar Silvery Checkerspot is often found in moist wooded areas but does range into dry areas to overlap in habitat with the Gorgone.

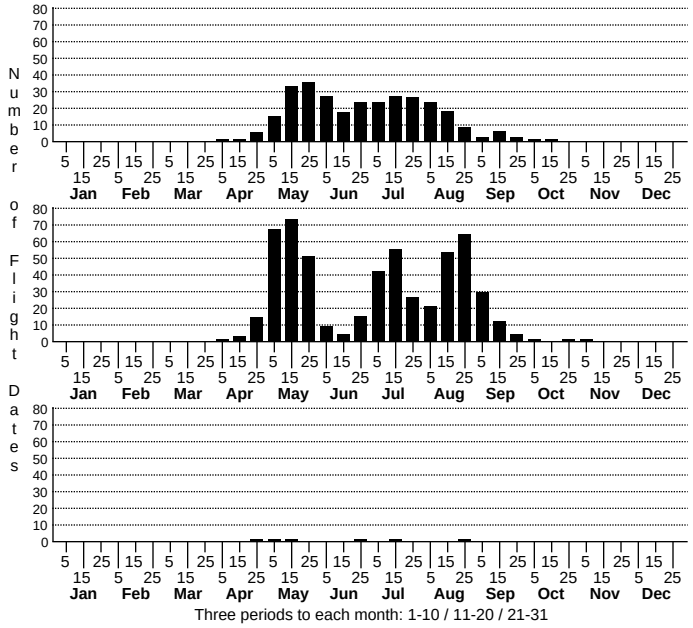
FOOD AND NECTAR PLANTS: As with the Silvery Checkerspot, this species favors sunflowers (Helianthus) and perhaps other tall yellow-flowering composites. The sunflower Helianthus divaricatus is a foodplant in parts of the range. Nectar plants are not well known in NC.

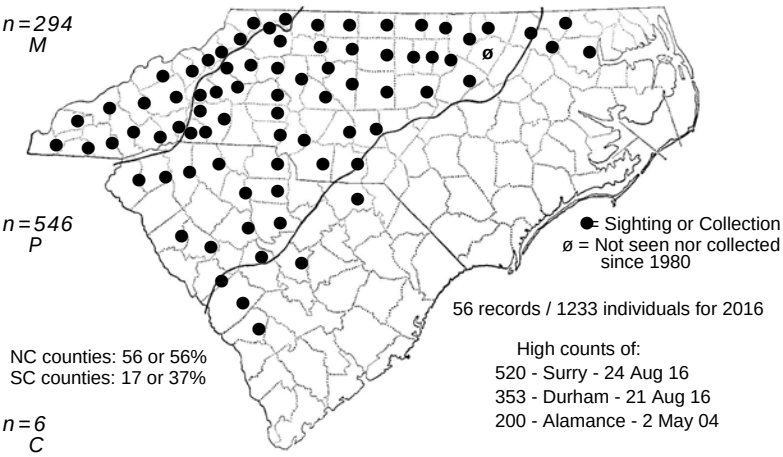
COMMENTS: Ron Gatrelle discovered this species in NC on May 10, 2001. Interestingly, he found the species at elevations from 3400 to 3600 feet, a surprisingly high elevation; those in GA have been found no higher than 2000 feet (Gatrelle, pers. comm.). The general area where he found the species is considerably drier, and more glady, than most of the remainder of Clay County, and probably has a warmer microclimate than most sites in the county at that elevation. The Gorgone Checkerspot should also be looked for in adjacent Cherokee County, which has a considerable amount of dry forests.

In 2002, Gatrelle located a new site in Macon County, on a surprisingly high ridge, over 4000 feet elevation. The species was relocated by Jeff Pippen and me at one of the Clay County sites; however, this site has been repeatedly checked in recent years without finding the species. Because of its small size and potential to colonize new early succession sites or small openings, it is much too soon to assume that it is gone from this initial location in Clay County, especially considering that suitable habitat is likely still widespread. In addition, few observers have visited the known locations during the past 10 years to search for this species.

Though the Gorgone looks very similar above to a Silvery Checkerspot, it is reasonably different below. It could certainly be overlooked, especially by people not suspecting Gorgone and thus not paying attention to look carefully at the under wings. Beginners could also overlook the species as a Pearl Crescent, as the Gorgone averages slightly smaller than Silvery and can overlap in size with the Pearl.

Silvery Checkerspot *Chlosyne nycteis*





Earliest date: Anson 8 Apr 2012
Latest date: Durham 1 Nov 1993

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Throughout the mountains, and nearly throughout the Piedmont, but of spotty/scarce occurrence in the southeastern quarter of that province. Known from the Coastal Plain only close to the Roanoke River in Halifax, Northampton, and Bertie counties.

ABUNDANCE: A noticeably colonial species; local, but fairly common to occasionally very common where found. Interestingly, our largest counts have come from near the eastern edge of the range. However, it is quite rare in the southeastern Piedmont.

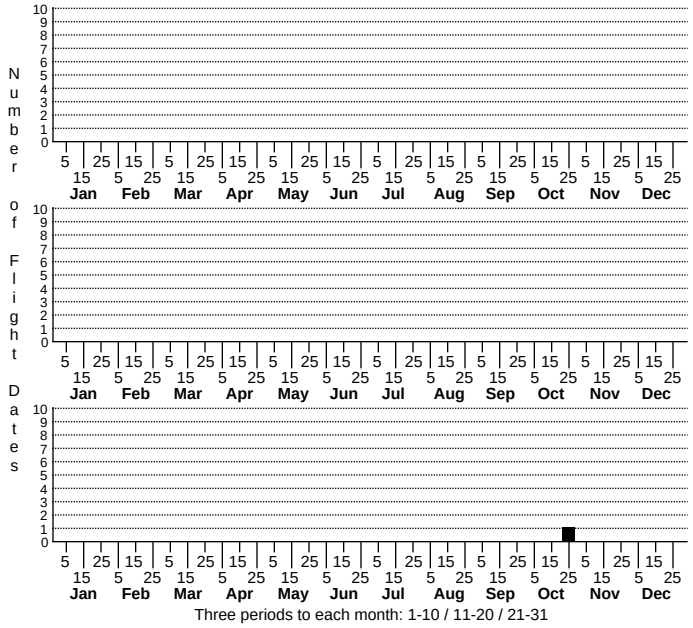
FLIGHT PERIOD: Three broods; in the Piedmont and lower elevations of the mountains, the first brood is from the latter half of April to early June. In these areas, the second brood is from mid-June to early August (and to late August in the mountains); a third brood begins in mid-August in the Piedmont and in September in the mountains; a few individuals linger into October, but the flights tend to be finished by the end of September. There might be just one brood in the higher mountains (above 4000 feet); on some of these higher mountains, fresh individuals are seen in early and mid-June, and worn ones are found in mid-July.

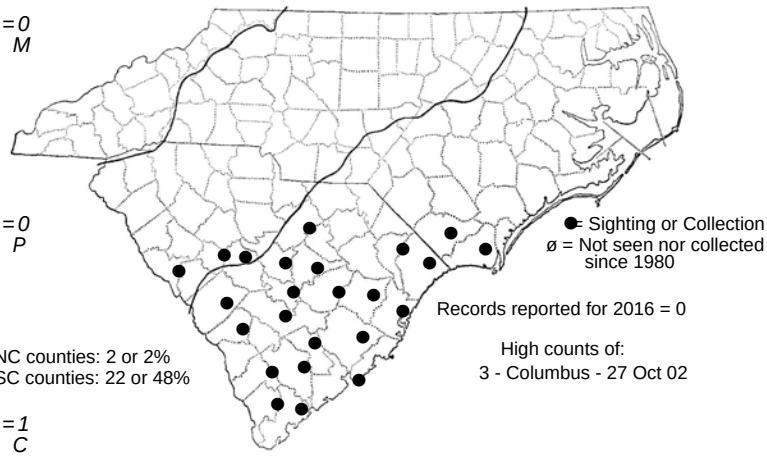
HABITAT: Generally in moist areas, in floodplains, along woodland borders, and edges of wet thickets; however, also in dry places along wooded borders, even in woods on mountaintops (such as the top of Mount Jefferson). Often seen along sewerline clearings in floodplains, along dirt roads through bottomlands, etc.

FOOD AND NECTAR PLANTS: Foodplants are tall composites, generally yellow-flowered species such as sunflowers (Helianthus) and rosinweeds (Silphium). The species also nectars on its foodplants, such as on rosinweeds, as well as other species. It frequently obtains moisture from moist dirt roads.

COMMENTS: This is one of the more colonial butterflies, as when one individual is seen, often five or more can be found with a little search. The species is strongly attracted to Silphium species that grow along wooded borders; when large clumps of them are in bloom in July and August, one should search the flowers for this butterfly. Some field guides and references seem to omit most of the NC Piedmont from the species' range, but the Silvery Checkerspot ranges east nearly to the edge of the province, and even extends into the Coastal Plain in the floodplain of the upper Roanoke River. It may well be that the species has expanded its range eastward in the northeastern Piedmont and in the Roanoke River floodplain in recent years, but this is just speculation.

Texan Crescent *Anthanassa texana*





Earliest date: Brunswick ? May 1985
Latest date: Columbus 27 Oct 2002

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

Synonym: *Phyciodes texana*
Other Name: Seminole Crescent

DISTRIBUTION: The extreme southeastern corner of the state, near the SC state line. Recorded in the 1980's from Brunswick County and in 2002 from Columbus County.

ABUNDANCE: Apparently a very rare stray. There was a population explosion of the species in SC in 2002, and thus the discovery of a few crescents in Columbus County, NC, at a site just a few miles from the SC border, apparently reflected individuals dispersing from that larger population, because efforts to find a resident population at this site in more recent years has failed. And, despite a modest amount of field work in Brunswick County, there have been no recent reports of the species from that county.

FLIGHT PERIOD: Probably three broods, at least from SC to FL. If there are resident populations in NC, expected to fly in NC from late March or early April to late October, possibly into November in mild falls. NC records fall between May and late October.

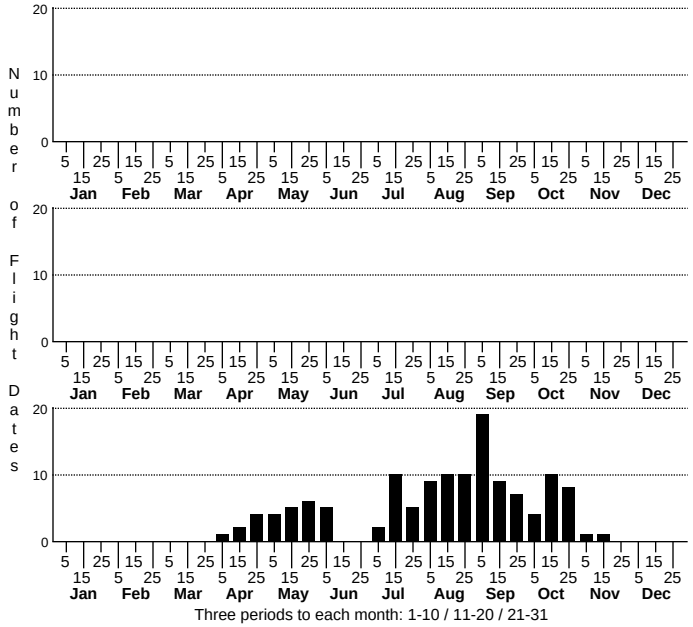
HABITAT: Along the Atlantic coast, this taxon (the "Seminole" Texan Crescent [Anthanassa texana seminole]) is primarily found in bottomlands and swamps, especially in openings such as along the margins of roads through floodplains. The Columbus County individuals were found along a road margin near creeks that are tributaries to the Waccamaw River.

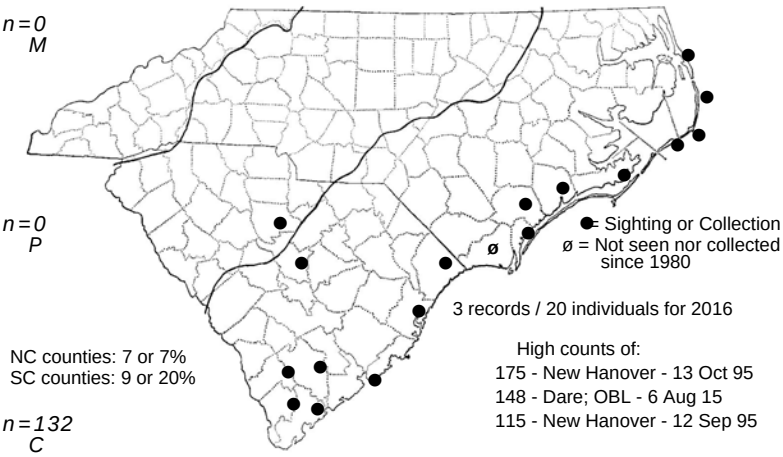
FOOD AND NECTAR PLANTS: The foodplants are various small members of the Acanthaceae family; Justicia ovata is likely the primary or sole foodplant in NC, if there are resident butterfly populations. Nectar plants are not well reported in the Carolinas, though large numbers of individuals in the Carolinas in October 2002 were nectaring on various asters.

COMMENTS: Randy Emmitt decided to try to find this species in NC in late October 2002 after visiting one or two known sites in SC, which was undergoing a boom in the populations in that year. Sure enough, near the Waccamaw River he found three moderately worn adults on October 27, thinking that this was a first state record. News of this discovery prompted a response from Leroy Koehn, who had collected the species in Brunswick County, NC, in May 1985 and September 1987. Oddly, these 1980's records had apparently never been made public, as no field guide, reference book, or website has shown the range to include NC.

I have made several trips between 2003 and 2006 to the Waccamaw River area where Emmitt saw his crescents in 2002. Unfortunately, I have found no individuals, and I strongly suspect those adults were strays from a breeding population in nearby SC. However, strays do not normally appear in spring, so the May NC record could well indicate that the species is, indeed, a very rare resident in the state. Nonetheless, because of the lack of any additional records, and because there has been a moderate amount of recent field work in potential habitat along the Waccamaw and Lumber rivers, the NC Natural Heritage Program is no longer considering this as a likely breeding species in the state, and is considering it as an accidental/stray visitor. The species is a sporadic/explosive breeder in SC (a few big years among many poor ones); thus, small colonies can easily go unnoticed for years, and we hope there are a few breeding colonies to be discovered in the southeastern part of NC.

Phaon Crescent *Phyciodes phaon*





3 records / 20 individuals for 2016

NC counties: 7 or 7%
SC counties: 9 or 20%

High counts of:
175 - New Hanover - 13 Oct 95
148 - Dare; OBL - 6 Aug 15
115 - New Hanover - 12 Sep 95

Earliest date: Carteret 5 Apr 2006
Latest date: Carteret 19 Nov 2005

Status		Rank	
NC	US	NC	Global
W	-	S3	G5

DISTRIBUTION: Through 2010, known strictly on the immediate coast, generally on barrier islands. However, in fall 2011, large populations were found a few miles away from tidal water in the southeastern part of Wilmington, and a few additional sites were found on the north side of that city. It ranges north to the Kill Devil Hills area of Dare County, though it was found in coastal VA in 2000.

ABUNDANCE: Common at least locally, where suitable habitat exists. At times, abundant at Fort Fisher in southern New Hanover County. Status not clear on many coastal islands, and seemingly absent on some islands; mysteriously scarce in Brunswick County, with no recent records. Very common to abundant along several roads in southeastern Wilmington. Abundance not clear along the northern part of the city. For whatever reason, the species seemed hard to find in coastal New Hanover County in 2016.

FLIGHT PERIOD: Apparently three broods, at a minimum, in NC; early April to early June, and a continuous period of at least two broods from early July to late October, sparingly into November. Some of the populations in fall have been suggested in books to represent migrants from south of the state, but this species is not a migrant. Individuals remain close to their foodplants at all times. The species seems much more common in fall than in spring and summer.

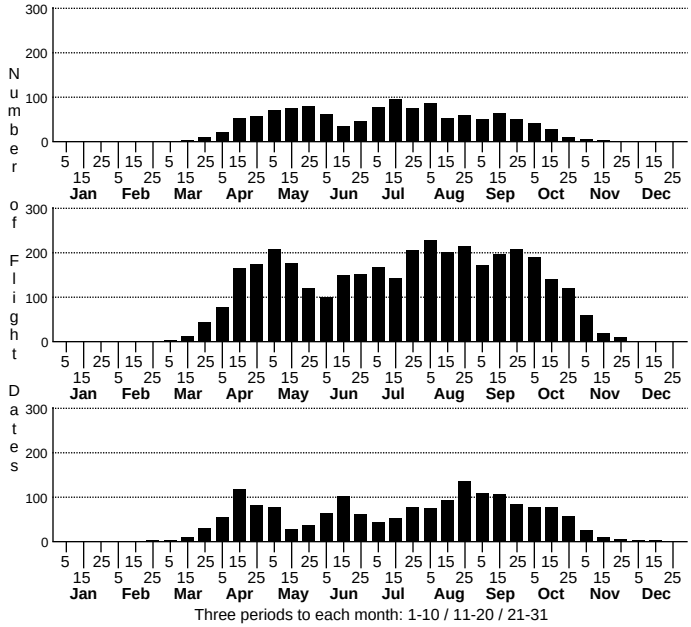
HABITAT: The habitat in NC is very restricted -- weedy or vacant lots, lawns, low dunes, or roadsides along the coast, but only where patches of frog-fruit (Lippia nodiflora) are present. The habitat is often sandy, but may be moist. Most habitats are disturbed sites as opposed to natural grasslands. In Wilmington, the habitats are mainly border of woodlands, where stands of the hostplants occur along the adjacent roadsides, especially where sandy; also, found in some private yards and a church yard.

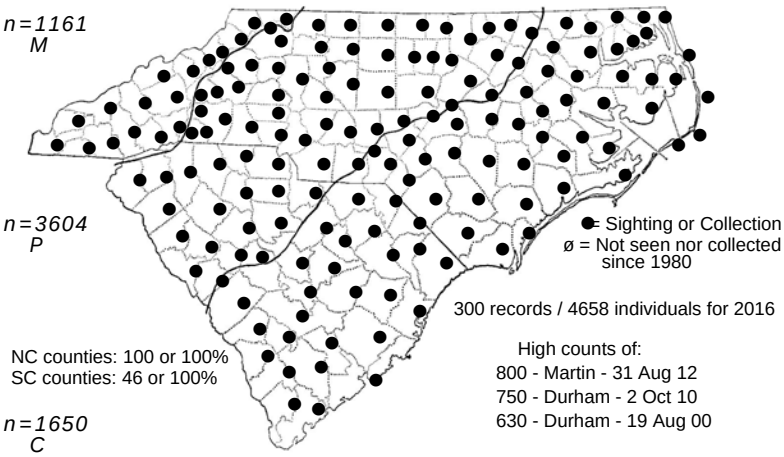
FOOD AND NECTAR PLANTS: The foodplants are Phyla (formerly called Lippia) species; in NC, primarily on L. nodiflora, but may also be on L. lanceolata, a marsh species. The species is usually seen nectaring on frog-fruit (its foodplant), but they may nectar on other very low plants such as Bacopa and white clover (Trifolium repens).

COMMENTS: This is a tiny, yet very attractive, butterfly that flies closer to the ground than any other species in NC. Often it confines its total activities to within 3-6 inches of the ground. Its strong ties to patches of frog-fruit make it easy to survey for, as I have often found colonies where the frog-fruit is common. It is noticeably smaller and more brightly colored than the Pearl Crescent, which may at times be seen with the Phaon Crescent. Swarms of Phaon Crescents can be seen at Fort Fisher, where it is often the most common butterfly in September on the Aquarium grounds. However, the strong hurricanes in fall 1999 (especially Hurricane Floyd) devastated the Fort Fisher population and its habitat, and expansion of the Aquarium has consumed additional habitat.

In fall 2011, Jeff Pippen and I (Harry LeGrand) discovered dozens (total count of 90 individuals) of Phaon Crescents along three streets in suburban southeastern Wilmington, about 2 miles from tidal water. A handful were nectaring on flowers in residential yards, but most were nectaring on flowers along borders of wooded areas, especially where sandy. Stands of Phyla nodiflora were seen at two of the sites. Also, Tim Armstrong observed a few individuals at two sites, along the northern edge of that city, near the southern terminus of I-40, about 4 miles from tidal water. He provided us with a photo and indicated that Phyla (sp.) was also present at the colonies. With these findings, one wonders how widespread this tiny species is elsewhere near that city and farther southward in New Hanover County (away from tidal water). One also wonders if similar sites and populations are found on the Brunswick County mainland. At long last, the species was found in Pender County, where Rob Van Epps photographed one on the mainland, though just a few miles from tidal water, on September 8, 2014.

Pearl Crescent *Phyciodes tharos*





Earliest date: Carteret 22 Feb 2012
Latest date: Jones 12 Dec 2004

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; occurs in all 100 counties, ranging from the higher mountains to the immediate coast.

ABUNDANCE: Very common statewide; one of the most widespread and often seen butterflies. Appears to be equally numerous in the mountains as in other provinces. It is more numerous in late summer and fall than it is in April and May.

FLIGHT PERIOD: Many broods (four or five) that essentially overlap; there is a continuous presence in NC from mid-March to late November. In the mountains, the species is rarely found into November, and it is also scarce in March.

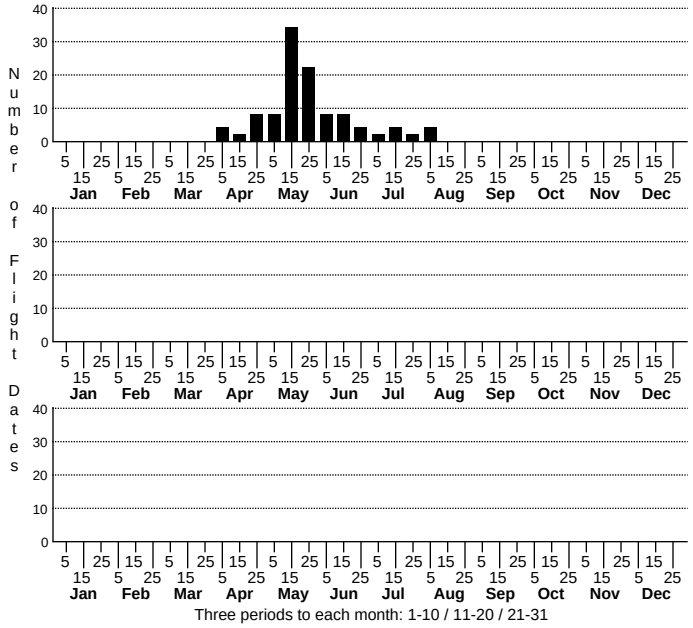
HABITAT: Extremely widespread in most any sunny locations -- fields, wooded borders, yards, etc. Not associated with interior forested areas, but certainly one of the more frequently seen butterflies along woodland edges and powerline clearings.

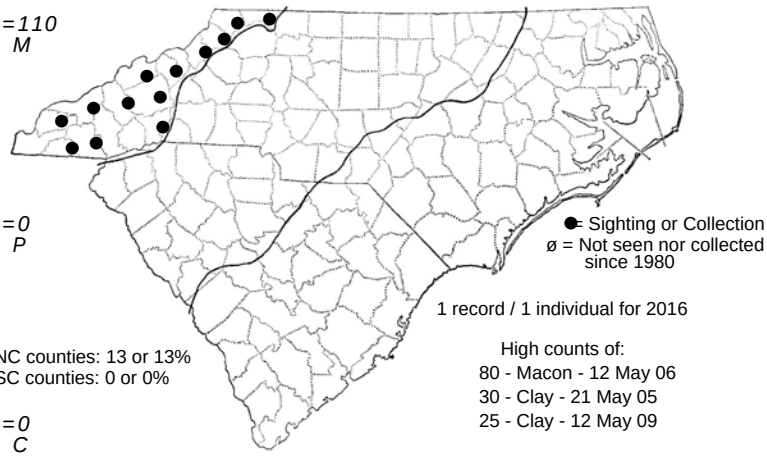
FOOD AND NECTAR PLANTS: Foodplants are essentially asters. Ironically, because it is such a widespread species, the butterfly observer would never suspect what plants are the foodplants! Nectar plants are very widespread, but they are usually low-growing herbs, as opposed to tall herbs or large shrubs.

COMMENTS: Observers should learn this species well, especially the various forms of it; the underparts are quite varied in coloration and pattern. Five other similar-looking species (Phaon, Tawny, and Northern [Mimic] Crescents, and Silvery and Gorgone Checkerspots) occur in the state and can be confused with the Pearl Crescent. This is particularly true in the mountains, where all of the above except Phaon Crescent are found.

There are a few color forms/types of Pearl Crescent, and a few such "forms" (not including the Northern Crescent) have been mentioned in the literature as potential splits from this widespread and abundant species. The Mimic Crescent is one such "form" recently described as a species; however, the Butterflies of America website checklist considers this as a subspecies, not of Pearl Crescent but of the Northern Crescent (i.e., P. cocyta incognitus). It would come as little surprise if what we still know as the Pearl Crescent (in NC or in the East) is actually composed of more than just one species.

Northern Crescent *Phyciodes cocya*





NC counties: 13 or 13%
SC counties: 0 or 0%

Earliest date: Madison 8 Apr 2012
Latest date: Watauga 9 Aug 2004

Status NC	Status US	Rank NC	Rank Global
W	-	S3?	G5

Synonym: *Phyciodes incognitus, Phyciodes pascoensis, Phyciodes selenis*
Other Name: Mimic Crescent

DISTRIBUTION: Apparently limited to the mountains. Somewhat poorly known; at present, specimens known from Clay, Macon, and Swain counties, plus photographs from one or two additional counties. The portion of the range of the Northern Crescent in the central and southern Appalachians was originally described as a full species -- the Mimic Crescent (Phyciodes incognitus) (Gatrelle 2004). As far as known, this taxon -- now generally considered as a subspecies (P. cocyta incognitus) -- occurs at least locally throughout the middle and higher elevations of the NC mountains, north into VA, WV, and OH. However, Gatrelle did not find the taxon in NC north of Clay and Macon counties, despite a moderate amount of field work in the central and northern mountains.

ABUNDANCE: Apparently uncommon to fairly common, but local; however, it appears to be absent in much of the mountains (Gatrelle 2004). As the "species" was only described in 2004, and as its appearance is quite similar to other crescents, most butterfliers would probably have difficulty identifying it; thus, its abundance and range will be difficult to determine for a number of years.

FLIGHT PERIOD: Two broods: mid-April to late June or early July, and late July through September (Gatrelle 2004). Much more flight data needed to verify Gatrelle's listed dates, but the data so far suggest an earlier second brood flight period that starts in the first half of July, ending in the first half of August. We do not yet have records, especially photos, that would corroborate a flight of the species as occurring in September, as Gatrelle indicated.

HABITAT: Small openings, road cuts, and woodland edges, mainly in middle (2500-4000 feet) elevations. The species occurs in dry sites and appears to avoid wetlands, fields, and other cultivated/urban areas.

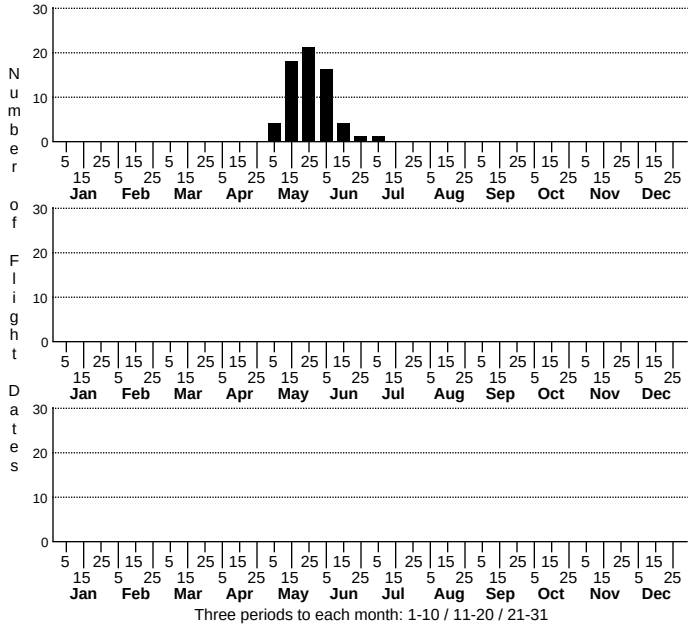
FOOD AND NECTAR PLANTS: Food plants are presumed to be asters (as other Phycoides use asters); nectar plants have not been reported.

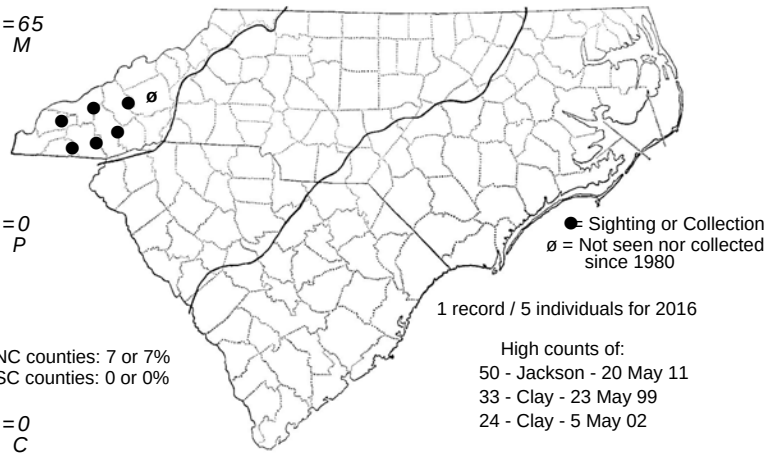
COMMENTS: Ron Gatrelle described a "new" cryptic species in 2004 in The Taxonomic Report. His studies indicated that the Northern Crescent (P. cocyta) does not occur south of WV. He believes that previous specimens and sight reports of that species from VA, NC, and northern GA likely refer to Mimic Crescent. The Butterflies of America website checklist, which we are adopting for scientific names, considers "Mimic Crescent" to be a southern Appalachian subspecies of the very widespread Northern Crescent. This decision is not surprising, as there seemed little support for adoption of "Mimic Crescent" as a full species by any checklist committee; the question was likely to which species -- Pearl or Northern -- the taxon would be placed.

The principal field marks separating "Mimic" and Pearl, based on Gatrelle's paper, are: 1) Mimic averages larger in size, often much larger; 2) Mimic generally has orange antennal clubs (at least on the undersides) in both sexes, whereas Pearl males have all black clubs and females have variable (orange to black) clubs; 3) Mimic males have ventral HW lines rust-orange as opposed to often brown lines in Pearl; and 4) Mimic tends to have a more "open" orange pattern on the dorsal HW than does Pearl. Also, 5) female Mimic looks very similar to male Mimic; both are orange and black. Both Pearl and Tawny females have much more black patches above than do males and typically also show buffy patches, as well.

Jeff Pippen, Will Cook, and I studied "Mimic" Crescents in Clay County in 2005-2006, and Pippen and Cook have put numerous photographs on their websites. We noted that the taxon often flew over 10 feet above the ground, perching well up on leaves of trees along woodland borders. We have never seen Pearl Crescents fly anywhere near this height off the ground nor perching on tree leaves. This flight behavior will need more study at different sites across its range to be sure if this behavior is characteristic of "Mimic" Crescents.

Tawny Crescent *Phyciodes batesii*





1 record / 5 individuals for 2016

NC counties: 7 or 7%
SC counties: 0 or 0%

High counts of:
50 - Jackson - 20 May 11
33 - Clay - 23 May 99
24 - Clay - 5 May 02

Earliest date: Clay 5 May 2002
Latest date: Macon 6 Jul 1992

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S2	G4

DISTRIBUTION: Apparently restricted to the southern half of the mountains (seven county records known to NHP). We are not aware of mountain records north of Buncombe County, and the species likely is absent in the northern half of the mountain region. Though this is a northern species, it seems to be extirpated in many states to the north, such that there is now an isolated population in southwestern NC and adjacent GA.

ABUNDANCE: Rare to locally uncommon, though common at a few sites in Clay County, and quite common at a site in Jackson County discovered in 2011. Elsewhere in the range, the species is undergoing a decline (gypsy moth spraying?), but there is no reason to suspect a decline in NC.

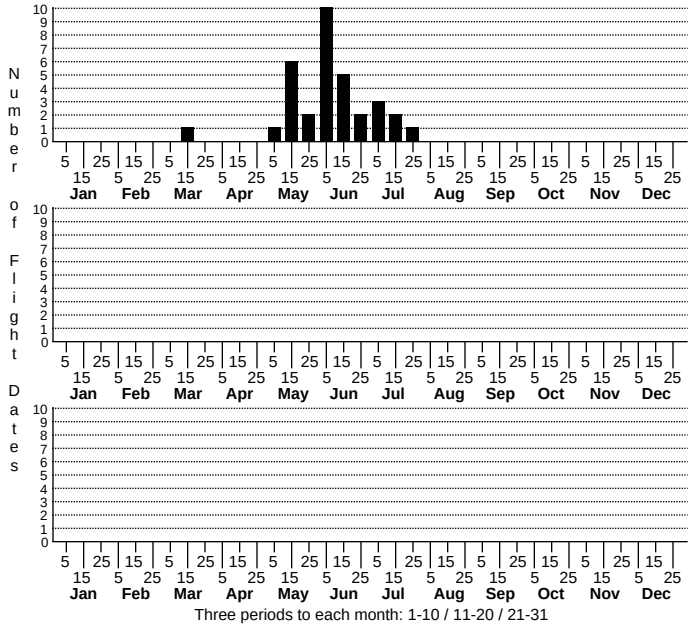
FLIGHT PERIOD: A single brood; from early May into early July, with peak numbers in mid- to late May. The flight dates are advancing in the last few years. Formerly, late May into early July was the flight period, but now the adults are emerging by early May and can be locally common then, as evidenced by the count made by Derb Carter, Jeff Pippen, and me of a remarkable 24 individuals on May 5, 2002. I suspect the flight is over in many places by the end of May or early June now.

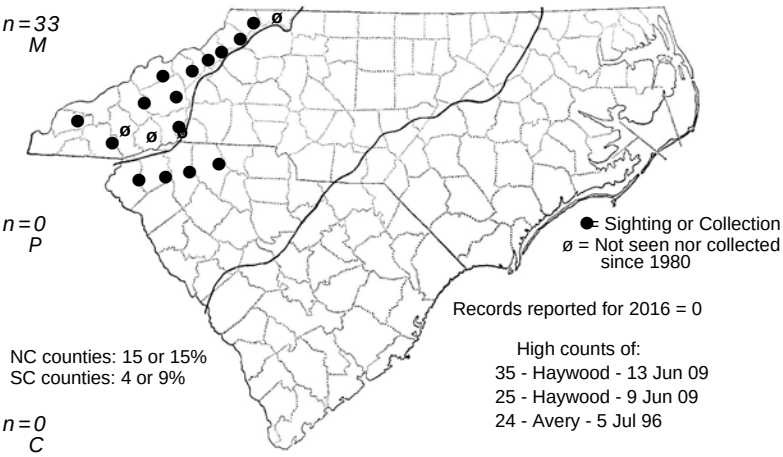
HABITAT: Generally in mid- to high-elevation openings (mostly over 3500 feet), such as open rocky ridges or dry and open roadbanks through forests. The habitats are typically small openings and, though such openings may not be rare, each habitat "patch" is often very small (under an acre in size). Most recent records have been along logging roads and at sparsely vegetated road-cuts.

FOOD AND NECTAR PLANTS: Asters, supposedly only wavy-leaved aster (Aster undulatus), but it is hard to believe that a single aster species is the sole foodplant. Nectar plants are not well known.

COMMENTS: The southern Appalachian race (P. batesii maconensis) is a Federal Species of Concern. Considerable effort was made by biologists from several state and federal agencies, plus butterfliers working on their own, to locate the species in 1999. Thankfully, Tawny Crescents were found at a number of new sites, and a previously known site yielded a remarkable one-day count of 33 individuals! A few new sites have been found in the last 5 years in Clay County, and a new, large population was found in Macon County in 2006. The largest known population, an estimated 50 individuals seen, was found in 2011 by Kevin Caldwell at a fairly high-elevation site in northern Jackson County; he photographed several individuals for documentation. Tawny Crescents average slightly larger than Pearl Crescents and have restricted amounts of orange on the upper fore wings (i.e., usually more black than orange); the under wing is creamy or ochre in color with little or no dark or white blotches.

Baltimore Checkerspot *Euphydryas phaeton*





Records reported for 2016 = 0

NC counties: 15 or 15%
SC counties: 4 or 9%

High counts of:
35 - Haywood - 13 Jun 09
25 - Haywood - 9 Jun 09
24 - Avery - 5 Jul 96

Earliest date: Watauga 12 Mar 2012
Latest date: Watauga 22 Jul 1992

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G4

Other Name: Baltimore

DISTRIBUTION: Restricted to the mountains in NC, with 15 county records, ranging from the VA border to the GA border.

ABUNDANCE: Rare, though it can be locally numerous (there are several one-day counts of 24 or more). If it is mainly restricted to bogs and wet meadows, it is also very habitat-restricted. If it also occurs in upland forests, as it does in GA, it is not as restricted as formerly believed.

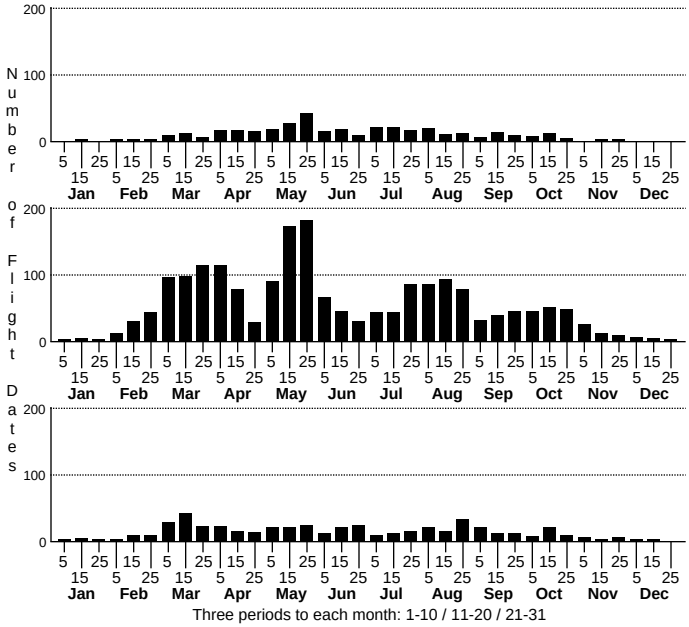
FLIGHT PERIOD: A single brood. At lower elevations (at least in the southern counties) the flight begins around mid-May, but in the higher elevations the flight doesn't begin until late June. The flight lasts about a month at any place, with the high elevation sites finishing around mid- to late July. There was a shocking report of two adults seen in Watauga County on March 12, 2012, likely owing to the very warm spring weather.

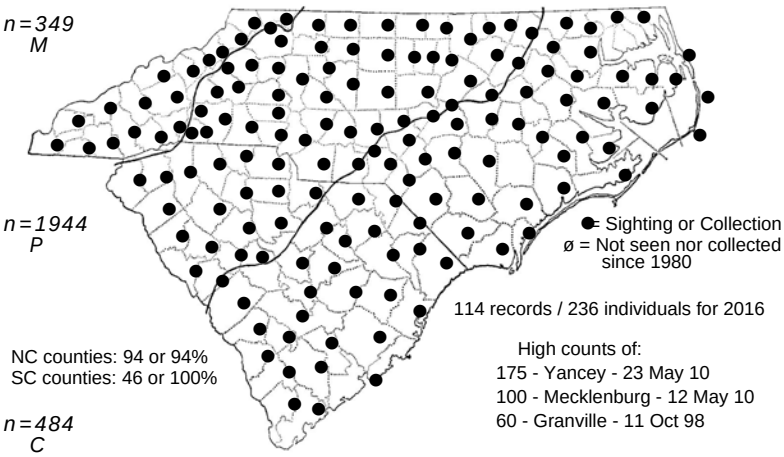
HABITAT: In the southern Appalachians, the species inhabits two very different habitats. From NC northward, it typically occurs in bogs and wet meadows where considerable turtleheads (Chelone) are present. However, in GA it has been reported only in upland forests, presumably near false-foxgloves (Aureolaria). It has been recorded from all three mountain counties in SC, plus in the foothills in neighboring Spartanburg County; bogs are very rare in these counties, and I suspect the butterflies might have been from upland places. Most NC records come from bogs/wet meadows, at least in the northern mountains. However, I saw one in a clearcut on a ridge in June 1994, and in a high elevation meadow in July 1995.

FOOD AND NECTAR PLANTS: The primary foodplants in NC are turtleheads (Chelone), of which there are four species. Three are restricted to bogs, wet meadows, etc., but Chelone lyonii is also found in seeps and other damp spots on forested slopes. False-foxgloves (Aureolaria) are usually found on dry to mesic wooded areas and are suspected foodplants in GA and in the Ozarks. Interestingly, the weedy plantains (Plantago spp.) are foodplants in some northern states. The population near Roan Mountain in Avery County might be using this genus, as butterfliers cannot locate any species of turtleheads or false-foxgloves (whereas plantains are probably present, but easily overlooked along roadsides). Nectar plants are varied, and the adults also feed at carrion, mud, and other places.

COMMENTS: Much is still to be learned about this beautiful species in NC. Some people suspect that the upland populations might be a different subspecies or even species. Finding the Baltimore Checkerspot in NC generally requires searching in bogs, most of which are on private property. The species thus is somewhat colonial, and certainly restricted in habitat. Of major interest was the counting of 24 Baltimore Checkerspots in two high-elevation meadows near Roan Mountain in early July 1996 by Derb Carter, Jeff Pippen, and me. This population seems to have crashed in recent years. Are butterflies being collected out, or are some other factors involved, such as deer-browse on the foodplants (as the habitat and other butterfly species are present in usual condition/numbers)? Other observers found two large colonies, at new sites, in the southern mountains in 2004. Both were in bogs or marshy, open wetlands, as opposed to uplands. Pippen found the largest colony ever reported in the state at a site in Haywood County in 2009; most individuals were seen on a dirt road, where they could be easily observed and photographed, but (sadly) could also be easily run over by vehicles.

Question Mark *Polygonia interrogationis*





Date Spread: Harnett; P on 2 Jan 2004 to Harnett; P on 31 Dec 2008

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, probably occurring in all counties, though few records from the northeastern corner of the state. Present on the Outer Banks.

ABUNDANCE: Widespread; fairly common, to occasionally common. The species is somewhat more common in the Piedmont than in other provinces; it is likely scarce in the higher mountains and in some counties in the lower Coastal Plain.

FLIGHT PERIOD: Complex; two broods. This species overwinters as an adult, and it can be seen on the wing as early as February, and even on warm days in January. It is frequent from late February to mid-June, except for a period around late April. The first new brood emerges in early to mid-May and flies until mid-June, when many individuals aestivate. They again emerge by mid- or late July. The second brood emerges in July and August and can be seen at least to late October, rarely to mid-December, when they "hibernate" as adults. Worn individuals of the previous brood may be seen with fresh individuals of the new brood both in spring and in late summer.

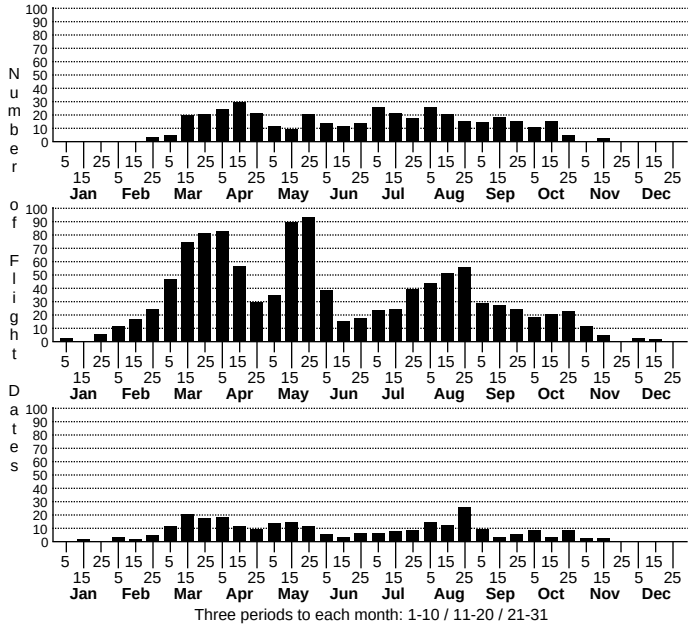
HABITAT: This species is usually not seen far from deciduous or mixed forests, though it migrates to an undetermined extent. It is often seen along dirt roads or wide trails through hardwood forests, both uplands and lowlands. It is also seen in the dappled shade of forest interiors.

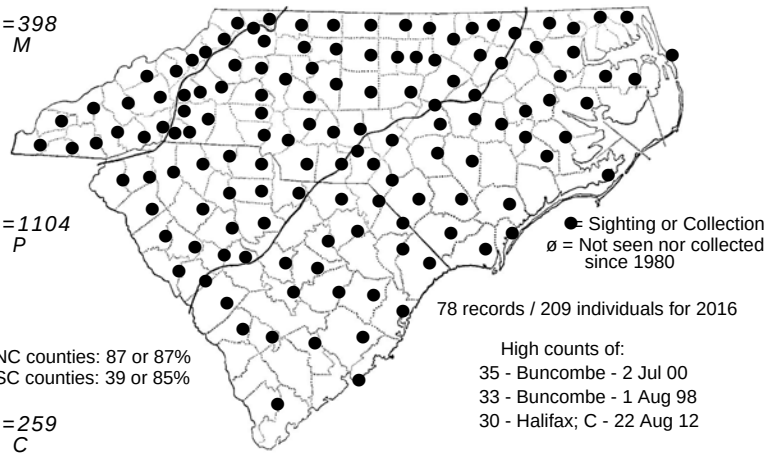
FOOD AND NECTAR PLANTS: The food plants are primarily elms (Ulmus) and hackberries (Celtis), but nettles (Family Urticaceae) have also been mentioned. The species does not usually nectar at flowers, but adults feed at sap, decaying fruit, carrion, damp ground, etc. Thus, it is usually seen perched on leaves, tree trunks, or especially on dirt roads.

COMMENTS: This species is often seen, and most easily observed, along dirt roads passing through moist forests, where the adults can be seen perched on the roads, obtaining moisture from the mud. As this is a fast flier, and can easily be confused with the Eastern Comma, many individuals seen on the wing must be left as unidentified, though the Question Mark is somewhat larger than the Comma and does not fly quite as fast or erratically as that species.

As with most butterfly species, the Question Mark can have poor years and big years. For whatever reason, the species was shockingly scarce across the state in 2014. For example, despite it potentially being able to be seen afield on most dates within a calendar year (on days with mild to hot temperatures), there were only 7 reports from the mountains and just 8 from the Coastal Plain for the entire year (2014).

Eastern Comma *Polygonia comma*





78 records / 209 individuals for 2016

NC counties: 87 or 87%
SC counties: 39 or 85%

High counts of:
35 - Buncombe - 2 Jul 00
33 - Buncombe - 1 Aug 98
30 - Halifax; C - 22 Aug 12

Date Spread: Wake on 4 Jan 2010 to Durham on 18 Dec 2016

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Comma, Comma Anglewing, Hop Merchant

DISTRIBUTION: Essentially statewide, but a number of counties in the Coastal Plain are lacking records. However, probably occurs, at least on rare occasions, in all counties. The first and only report for the Outer Banks was made in 2006.

ABUNDANCE: Uncommon to occasionally fairly common in the Piedmont and mountains; uncommon in the upper Coastal Plain, but rare in the lower Coastal Plain. Less common than the Question Mark; usually outnumbered about 3:1 by that species in most places where both occur.

FLIGHT PERIOD: As with the Question Mark, there are two broods. Adults overwinter and can occasionally be seen in mid- to late winter. Adults are normally on the wing by February in the Piedmont, and starting by March elsewhere. The first new brood is present in May and early June; they fly sporadically into August, but many individuals aestivate. The second new brood emerges in August and flies to late October, rarely to mid-November, after which the butterflies overwinter by hibernating in hollow logs and other highly sheltered places.

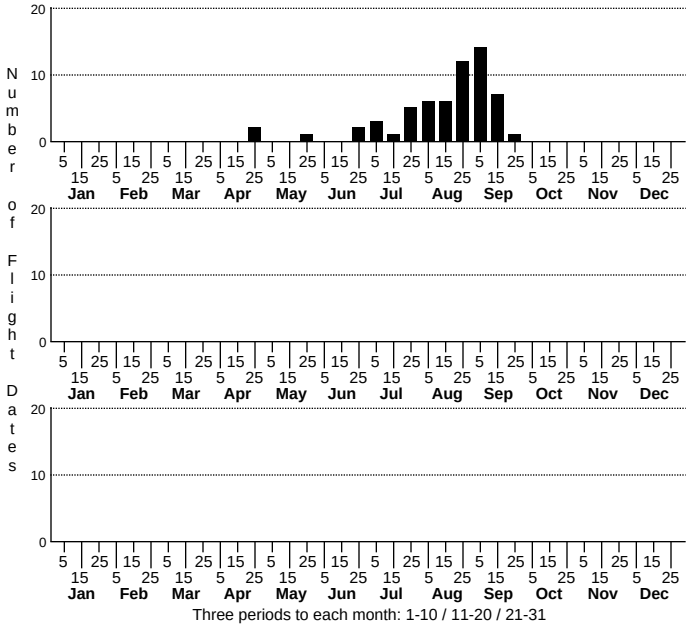
HABITAT: The habitat is identical to that of the Question Mark in NC -- deciduous or mixed forests, usually where moist; generally along openings such as dirt roads or trails. It also frequently perches on dirt roads and trails.

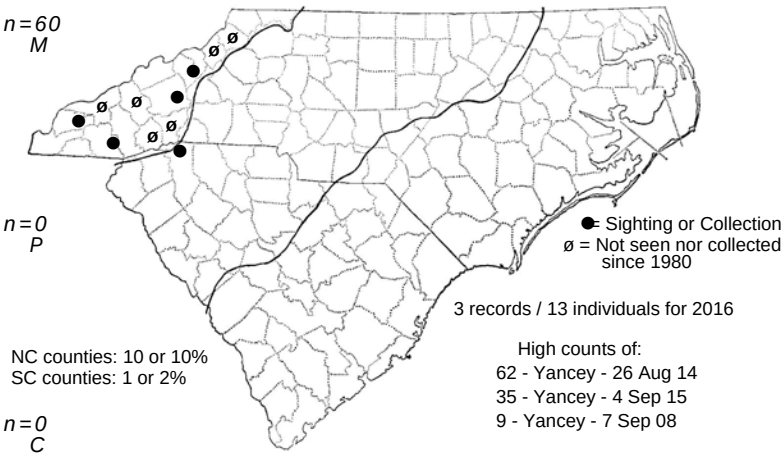
FOOD AND NECTAR PLANTS: Nettles are the main foodplants, but elms are also used. Feeding habits of adults are like those of the Question Mark -- seldom at flowers, but often seen on roads and trails, at sap on trees, carrion, etc.

COMMENTS: This is a fast and erratic flier, often difficult to identify positively on the wing. Perched individuals are also wary and difficult to approach to see the field marks well. Fortunately, in the Piedmont and Coastal Plain, only the Question Mark can be confused with it, but in the mountains the Gray Comma and the Green Comma also are found (though both are very rare). More field work needs to be done near the northeastern coast to see if the species really is rare in the Albemarle/Pamlico area.

For several years, the Butterflies of America website has listed the common name for this species as Comma Anglewing. Even though the Green Comma is listed there as Green Anglewing and the Gray Comma is listed as Gray Anglewing, the website has retained Question Mark as a common name, as opposed to Question Mark Anglewing. Because nearly all reference books and field guides, as well as NatureServe Explorer, still use "xxxxx Comma" for common names for the first three species, we will retain Eastern Comma, Green Comma, and Gray Comma as common names on this website, for at least the near future.

Green Comma *Polygonia faunus*





3 records / 13 individuals for 2016

High counts of:
62 - Yancey - 26 Aug 14
35 - Yancey - 4 Sep 15
9 - Yancey - 7 Sep 08

NC counties: 10 or 10%
SC counties: 1 or 2%

Earliest date: Graham 25 Apr 1996
Latest date: Yancey 25 Sep 2009

Status NC	Status US	Rank NC	Rank Global
SR	-	S1S2	G5

Other Name: Green Anglewing

DISTRIBUTION: Scattered in most of the mountains; absent from the Piedmont and Coastal Plain. No recent records from the northern mountains (north of Yancey County).

ABUNDANCE: Even though there are records for 10 of the 17 entirely mountain counties, this is a very rare species in the state and is much less often seen in the mountains than is the Question Mark or Eastern Comma. Even in its preferred habitats, it is greatly outnumbered by those two species. And, as it has been seen in only 4 counties in the past 30 years, it is clearly in decline.

FLIGHT PERIOD: Apparently one brood, with fresh adults on the wing beginning in July, flying at least sporadically into September. They overwinter in hibernation and fly again in spring. Much more flight data are needed, at least in spring. Interestingly, Scott (1986) states "apparently L June - M Aug., and Sep. overwintering to May in Va." If there are two broods in VA, there are certainly two broods in NC, with flight dates similar to VA. However, Allen (1997) says the species "is univoltine in the Appalachians. Overwintering adults appear in early spring, often while snow is still present, and fly through May. The single brood emerges from late June to August and may aestivate during hot summer days. They become active again during fall, feeding and storing fat. These individuals hibernate during the winter months."

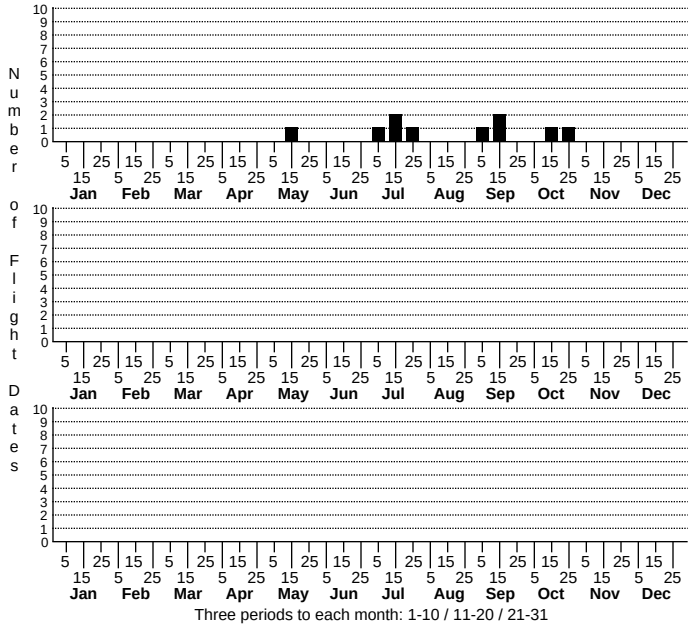
HABITAT: This is a species of cool forests. In NC, its favored habitat, at least formerly, seems to be a mixture of hemlocks and hardwoods at low and middle elevations, often near a stream. It also is found in hardwood or coniferous forests at high elevations, including spruce-fir forests (such as at Mount Mitchell State Park). The species is best looked for in openings, along trails, and especially along dirt roads in such cool forests. With the death of most eastern hemlocks (owing to the hemlock woolly adelgid), the species is becoming even more scarce at lower and middle elevations.

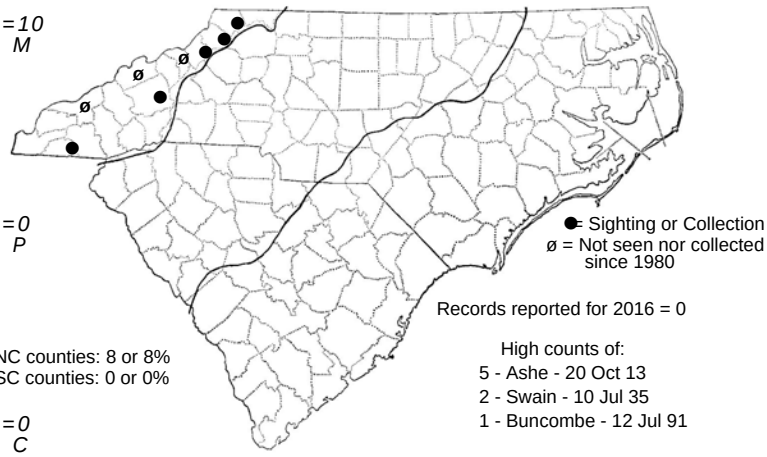
FOOD AND NECTAR PLANTS: Foodplants are primarily birches (Betula) and willows (Salix). In NC, it is suspected that birches (yellow birch and sweet birch) are the primary foodplants of the caterpillars; willows are presumably not foodplants in NC. Adult foods are presumably the same as for the Eastern Comma and Question Mark.

COMMENTS: Why this butterfly seems so scarce today is a mystery, as its habitats are abundant in the mountains. It has certainly declined in numbers, for no obvious reason. This decline has preceded the decline in the population of the eastern hemlock, which is a component of the Green Comma's habitat at some locales. Though Green Comma looks somewhat like Eastern Comma, with a decent view it is reasonably obvious because of the very ragged wing margin, yellow spots on the hind wing margin above, the deep scarlet near the body shading to light orange near the wing tips, and the blackish under wing. To see this species, you should be prepared to drive numerous poorly-traveled dirt roads, as slowly as you can. Four of my six sightings have been on U.S. Forest Service roads and a fifth was on a dirt road at a Forest Service campground. A small population was found at Mount Mitchell State Park in 2000 by Simon Thompson, and he and others found relatively large numbers there in 2008. Several observers tallied a remarkable 62 adults there on August 26, 2014. Though regular at this state park, the Green Comma is seldom reported anywhere else now. Are people looking in other areas of spruce-fir stands (such as Roan Mountain, Grandfather Mountain, and the southern Blue Ridge Parkway) in August and September, for this species?

As explained on the Eastern Comma page, we are retaining the common name as Green Comma, as opposed to Green Anglewing, as is used on the Butterflies of America website.

Gray Comma *Polygonia progne*





Earliest date: Clay 18 May 2001
Latest date: Watauga 27 Oct 2014

Status NC	Status US	Rank NC	Rank Global
SR	-	S1	G4G5

Other Name: Gray Anglewing

DISTRIBUTION: Mountains only, recorded south to Clay County. As there are no records from GA or SC, the record from Clay County in 2001 represents the southern end of the range.

ABUNDANCE: Extremely rare to very rare, with records from just eight counties. Records from three of these eight counties are older than 20 years, thus indicating a decline in numbers of the species in recent decades.

FLIGHT PERIOD: Poorly known in NC. Believed to be two broods, with adults overwintering and flying in spring. The first new brood flies from June to August, supposedly. The second brood flies in the fall, and then overwinters. I saw one in Buncombe County on July 12, 1991; one was seen on September 8, 1994 by a U.S. Forest Service biologist; Ron Gatrelle noted one on May 18, 2001; and Ted Wilcox photographed a fresh individual (in Watauga County) on September 13, 2008. A new late date, by over a month, was made by David Campbell on October 20, 2013 (see below); and an even later date was provided by Brian Bockhahn on October 27, 2014.

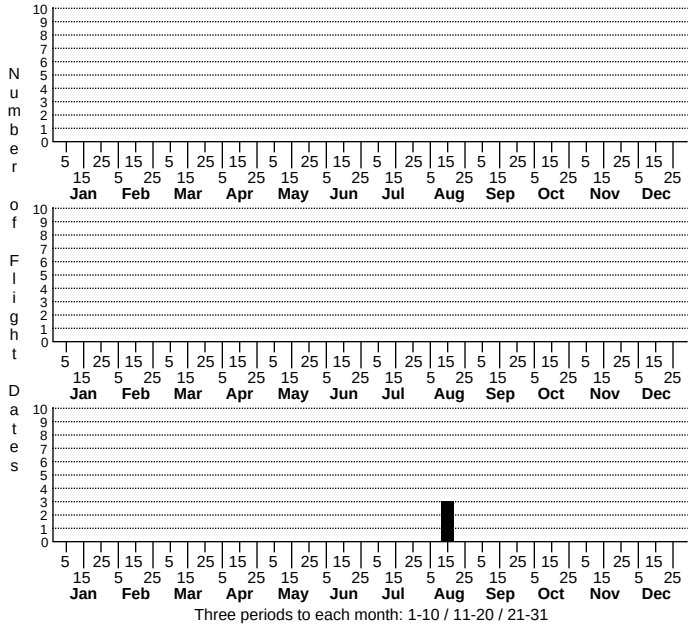
HABITAT: This species is found primarily in rich hardwood forests at high elevations (above 4000 feet), particularly along dirt roads or other openings. In NC, cove forests or northern hardwood forests are likely the primary habitats.

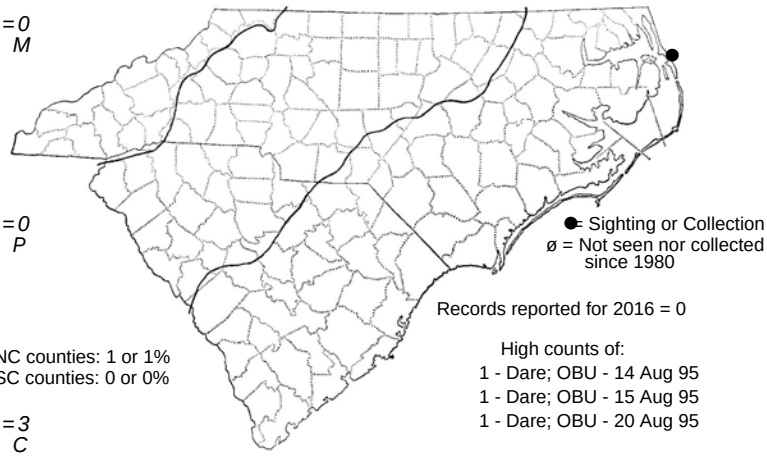
FOOD AND NECTAR PLANTS: The foodplants are gooseberries or currants (Ribes), which are frequent in NC in cool moist forests. The species likely does not feed at flowers, but is found on wet roads, sap, carrion, etc.

COMMENTS: I have seen the species once in NC, on a dirt road in the midst of a very rich forest in northeastern Buncombe County. To see the Gray Comma and the Green Comma in NC would likely require considerable driving, slowly, on dirt roads through cool forests; or, extensive hiking at high elevations along wide, sunlit trails. All Polygonia individuals are very flighty and are easily flushed, often not to be seen again by the observer. This species flies slower than other anglewings, which might tip the observer to take a closer look at the butterfly in question. Further surveys in rich hardwoods in late summer and fall, even in October, are needed to elucidate the range of the Gray Comma. The species might be on the verge of extirpation in NC, but as potential habitat is common, surely some Gray Commas must still be present in the state (as evidenced by the 2008 record from Watauga County). Thankfully, in fall 2013, David Campbell got the idea to place some rotten bananas in potential habitat in southern Ashe County, near a stand of gooseberries (foodplants); he was rewarded by seeing a state-record five individual Gray Commas coming to the bait on October 20!

As explained on the Eastern Comma page, we are retaining the common name as Gray Comma, as opposed to Gray Anglewing, as is used on the Butterflies of America website.

Compton Tortoiseshell *Nymphalis l-album*





Earliest date: Dare; OBU 14 Aug 1995
Latest date: Dare; OBU 20 Aug 1995

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

Synonym: *Nymphalis vaualbum, Nymphalis vau-album, Roddia vaualbum*

DISTRIBUTION: Reported only from Southern Shores, along the northern coast of Dare County. This is a northern species, ranging south to PA, and casually as a stray/migrant to VA and NC.

ABUNDANCE: Accidental or "escape"; one record.

FLIGHT PERIOD: The single record was of an individual (presumably just one) seen and photographed on August 14, 15, and 20, 1995 by Thomas Stock. Normally, the species emerges in late June or early July and flies until the fall; it overwinters and flies again in spring. Thus, it has a single brood.

HABITAT: The habitat of the individual seen was at a beach and yard along the coast. It fed on rotting figs in the yard. Normally, this northern species is found in upland hardwood forests, with its habitats and behavior similar to that of the Mourning Cloak.

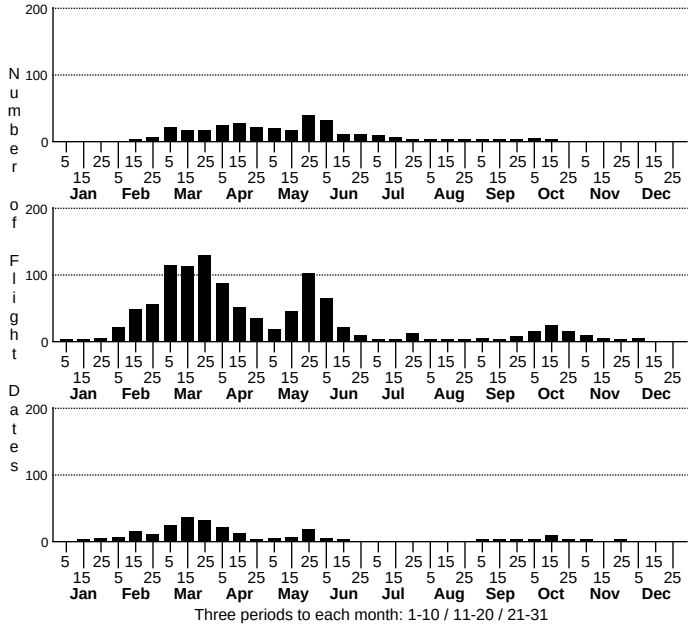
FOOD AND NECTAR PLANTS: Foodplants are various hardwood trees. The species typically does not nectar, but adults take nutrients from rotten fruit, tree sap, dung, and other non-flower sources.

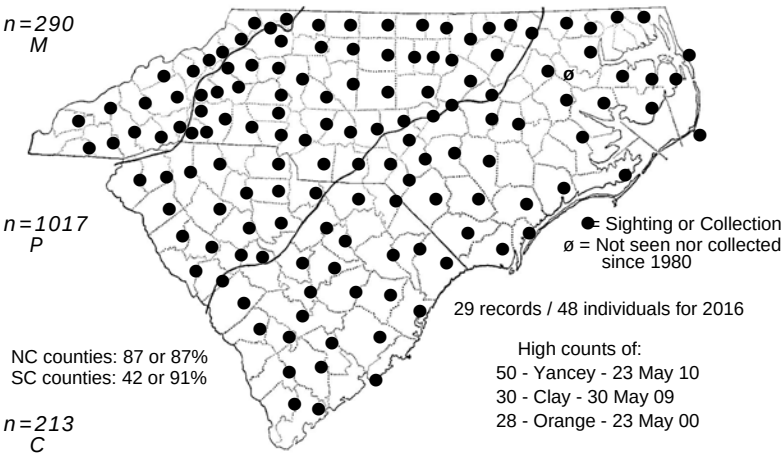
COMMENTS: This species acts very much like a Mourning Cloak, with some of the markings of Commas or the Question Mark. It can alight on people; my "lifer" in NY lit on my shoulder, six inches from my eye! It is easily identified from the upper side, but the underside looks somewhat like an Eastern Comma or Question Mark.

[NOTE -- Bo Sullivan believes that because the individual was fresh, either it or a stage of its life cycle may well have been inadvertently carried to the Outer Banks. It is not unusual for caterpillars to "hitch a ride" on a vacation camper and be carried to a new location.

However, the Compton Tortoiseshell is known to stray southward. There are some isolated, out-of-range records for the species across the continent; whether these represent true strays is not known. Also, there was a coastal migration of this species in the NY/NJ area in the fall of 1995, according to Rick Cech (The Anglewing, Dec. 1996). Cape May, NJ, had its first record of Compton Tortoiseshell on August 20, 1995 (Gochfeld and Burger 1997). Thus, the NC record could have been a part of this noticeable flight. In fact, it hardly seems a coincidence that the NC record took place at the same time as Cape May's first record.]

Mourning Cloak *Nymphalis antiopa*





29 records / 48 individuals for 2016

High counts of:
50 - Yancey - 23 May 10
30 - Clay - 30 May 09
28 - Orange - 23 May 00

NC counties: 87 or 87%
SC counties: 42 or 91%

Earliest date: Gaston 4 Jan 2016
Latest date: Mecklenburg 8 Dec 2004

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, from the mountains to the Outer Banks. Though no records yet for scattered Coastal Plain counties, likely is present in all counties. It was finally recorded from well-worked Brunswick and Onslow counties, along the coast, in 2011.

ABUNDANCE: Despite its wide range in NC, it is generally uncommon. It is somewhat more numerous in the mountains (where it may be locally fairly common) than in the Piedmont, and it is rare to very uncommon in the central and eastern Coastal Plain.

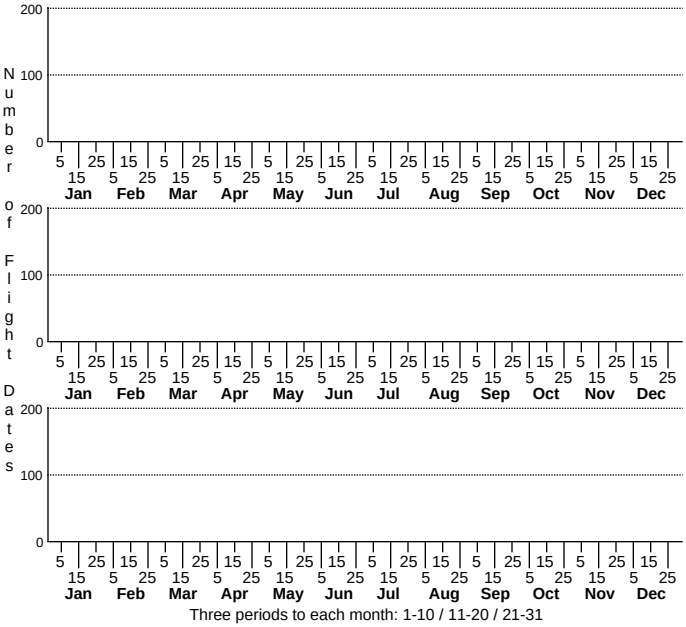
FLIGHT PERIOD: This butterfly has the longest life-span (brood) of any species in the eastern United States, up to about 11 months. The species overwinters as an adult, with these butterflies on the wing on warm winter days, but mainly from mid-February to mid-June, when worn individuals are seen. The new brood is on the wing from mid-May into mid-June downstate, and until mid- or late July in the mountains. Adults then aestivate during the summer, and then fly sporadically in fall (generally October). Some dates refer to migratory individuals.

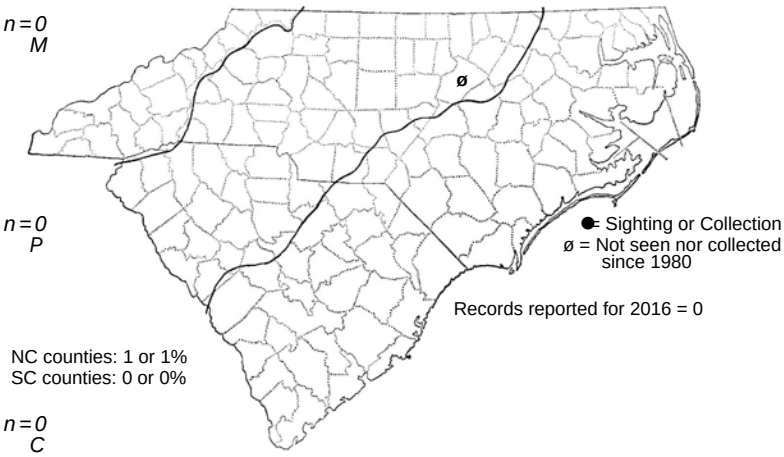
HABITAT: Most individuals are seen inside or along the margins of hardwood forests. Migrants, however, may be seen flying across roads and other open country. Mourning Cloaks are often seen flying through forests that do not have full leaf cover -- early or mid-spring before leaves have completely emerged, or October when leaves are beginning to drop. They may be seen along forest trails and dirt roads through forests, but they are not typically found in open country.

FOOD AND NECTAR PLANTS: The foodplants are various trees and shrubs -- willows, birches, elms, cottonwoods, etc. The species does not normally nectar at flowers; instead, it feeds on sap, decaying fruit, moist spots on trails and roads, and so forth.

COMMENTS: This is a common, widespread, and familiar butterfly in the northeastern states, but in NC it is not common, though it may be locally numerous in the mountains and Piedmont. It is not one of the butterflies that the average person will encounter, except for those spending considerable time walking through upland woods in spring and fall. It is one of the more solitary butterflies in NC, and even seeing more than several a day is a rare occurrence.

Milbert's Tortoiseshell *Aglais milberti*





Earliest date: ?
Latest date: ?

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

Synonym: *Nymphalis milberti*

DISTRIBUTION: One old record, for Wake County. This is a northern species, ranging southward normally to southern PA and southern OH.

ABUNDANCE: Accidental.

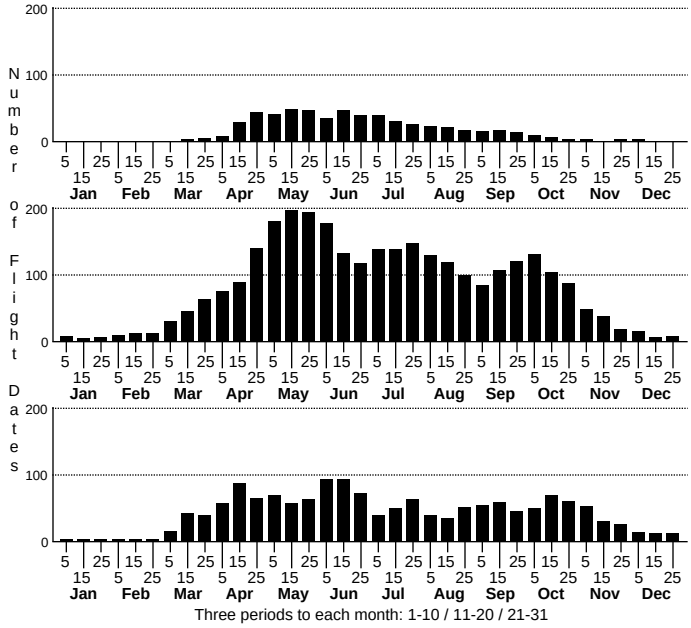
FLIGHT PERIOD: The NC record is listed in Brimley (1938) as only "November", with no day or year. As with the Mourning Cloak, adults overwinter, with one or two broods during the year.

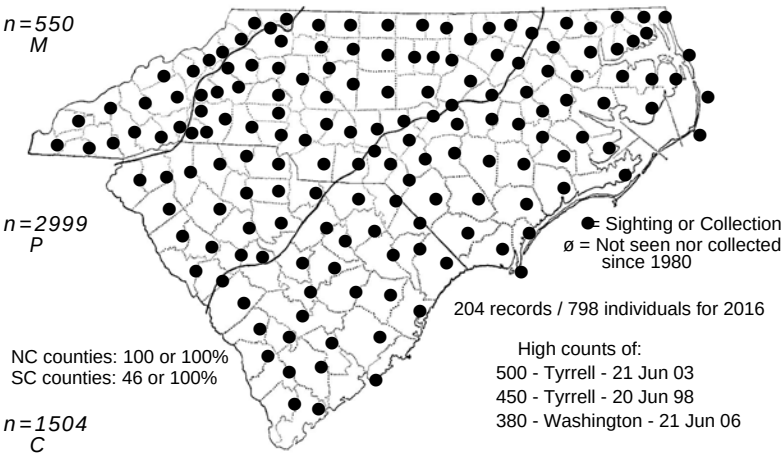
HABITAT: Supposedly open fields near woodland edges, especially in or near wetlands.

FOOD AND NECTAR PLANTS: Nettles (Urtica) are the foodplants. Nectar plants are not known, and are immaterial for NC.

COMMENTS: This is an accidental visitor that is not expected again. Interestingly, the Peterson field guide map (Opler and Malikul 1992) shows records for both SC and GA; however, the Butterflies and Moths of North America [BAMONA] website range maps show no Milbert's Tortoiseshell records for these two states. Thus, the NC record, from Raleigh in November (prior to 1938), apparently is the southernmost for the Atlantic seaboard. There is a 1969 specimen taken in Louisiana.

American Lady *Vanessa virginiensis*





Date Spread: Chatham on 1 Jan 1998 to Brunswick on 31 Dec 2011

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: American Painted Lady

DISTRIBUTION: Statewide, occurring in all 100 counties, including the Outer Banks.

ABUNDANCE: Generally common over most of the state, though seldom seen in colonies or large numbers. Somewhat more numerous in the Coastal Plain than farther westward, but certainly not uncommon in any region. The species undergoes unpredictable population changes and can be quite scarce for much of a given year. In recent years, it has often been uncommon in summer and early fall, but it then is seen again in larger numbers in fall. Thus, it is most numerous in spring and in fall than in late summer.

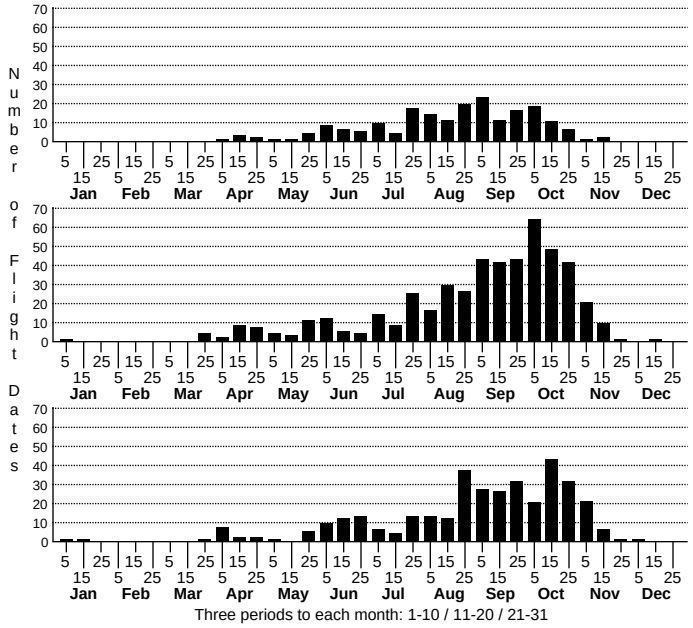
FLIGHT PERIOD: Three or four broods, with a continuous flight period. Present in NC without gaps from February to November; a few all winter. The first flight in the mountains does not begin until early April. Adults can be seen on warm winter days in the Piedmont and Coastal Plain, but whether they mate in late winter (as do anglewings) is not clear. The first flight of newly-hatched individuals downstate likely begins during the latter half of March.

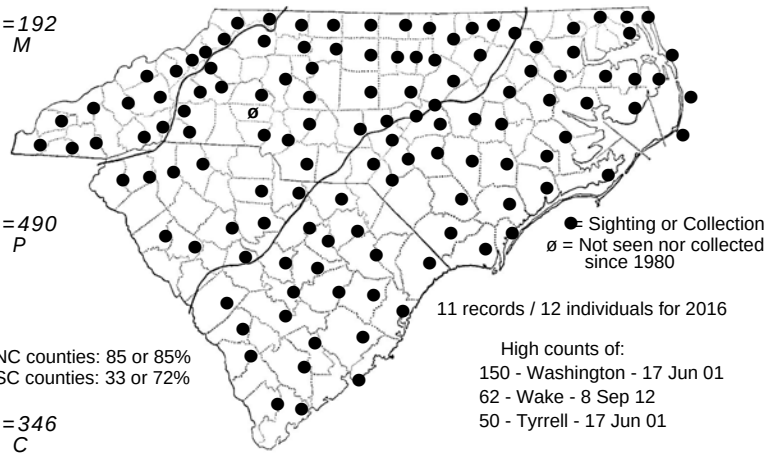
HABITAT: Very widespread, and not showing any favoritism toward damp places (as the Red Admiral tends to do). Occurs in fields, wooded borders, powerline clearings, yards and gardens, dunes, savannas, and a great variety of open or mostly open sites.

FOOD AND NECTAR PLANTS: Foodplants are primarily pussy-toes (Antennaria spp.) and cudweeds (Gnaphalium spp.), less often other composites. The species has a wide nectar preference, often in gardens; also feeds on tree sap and damp soil.

COMMENTS: This is the commonest of the three Vanessa butterflies in NC, and it is seen on the majority of full-day trips, though usually only one to several individuals are seen per day. Nonetheless, it is such a widespread species that its "common" status is warranted. For some unknown reason (drought?), American Ladies were very scarce across NC in the last half of 2002. They (as did the other two Vanessa species) had another poor year in 2006, at least in the latter half of the year, and also in the latter half of 2010.

Painted Lady *Vanessa cardui*





11 records / 12 individuals for 2016

High counts of:
150 - Washington - 17 Jun 01
62 - Wake - 8 Sep 12
50 - Tyrrell - 17 Jun 01

NC counties: 85 or 85%
SC counties: 33 or 72%

Earliest date: Harnett; P 26 Mar 2002
Latest date: Dare; OBM 16 Jan 2016

Status NC	Status US	Rank NC	Rank Global
-	-	SZB	G5

DISTRIBUTION: A migratory species that is scattered across the state, and potentially occurring in every county.

ABUNDANCE: Very erratic from year to year. This is a migrant from Mexico and the Southwestern states. It undergoes mass emigrations every few years, so it is very rare or absent in some years in NC, but can be uncommon to rarely fairly common in other years. In 1994 and 1996, we had only one record for the species, and in 1993 we had no records in the state. However, 1992 was a good flight year, with a handful of sightings; 1995 was another good flight year, with some observers seeing them on 10 or more occasions. The flight in 2001 was remarkable, with 17 new county reports, and many record counts, including 200 tallied on the Pettigrew State Park count. In 2002, we had roughly a dozen reports from across the state, a good total for most years, but a big letdown after the banner year in 2001. We had another very good year in 2003, with 74 reports across the state; 2004 was about normal, with 27 reports. In 2005, there was another very good flight, with new records for 8 counties and a doubling of the previous number of mountain records. In 2006, we received only 18 reports, though two new counties were added. In 2007, there were 40 records added, a decent but not exceptional year, and only one new county was added (Avery). Two additional counties, both in the foothills, had first records in 2008, which was another good flight year, though daily counts were low. Only one new county record was added in 2009, which was a moderate year for the species in NC; 2010 was a decent year also, with another new county record added. However, there were just 5 reports statewide in 2011. Perhaps the best flight in over 20 years occurred in 2012, when a whopping 185 records were made, with at least 35 new records in each province!

FLIGHT PERIOD: The flight period, or better stated "occurrence period", in NC is very wide. They have been recorded from late March into early January, but flight periods, of which there must be about three broods, need elucidation. Even though the species is a migrant, the first brood migrants obviously lay eggs in the state, and several broods of butterflies certainly are raised locally (as butterflies in summer and fall often are fresh). In general, individuals seen through June are rather worn, suggesting that they are migrants from the Southwest.

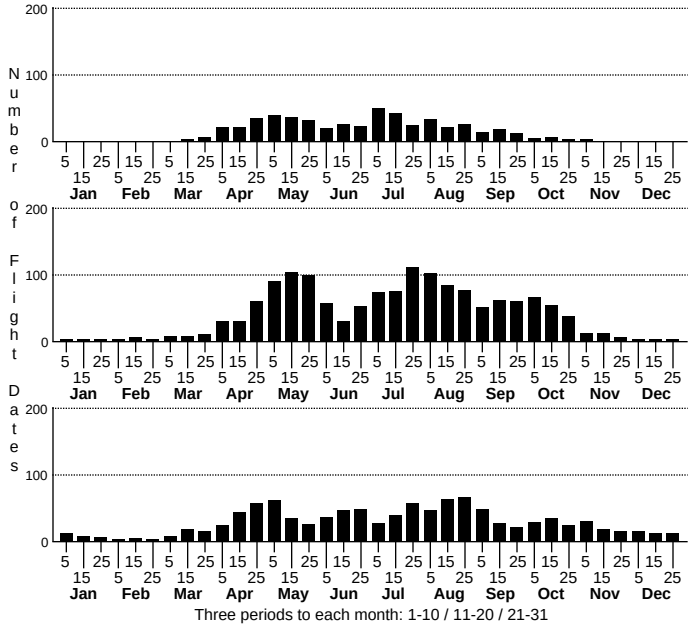
HABITAT: Open country; ranging from fields, lawns and gardens, savannas, grassy balds, roadsides, and many other habitats. When found, the Painted Ladies are often seen with American Ladies; of course, the reverse is not usually true!

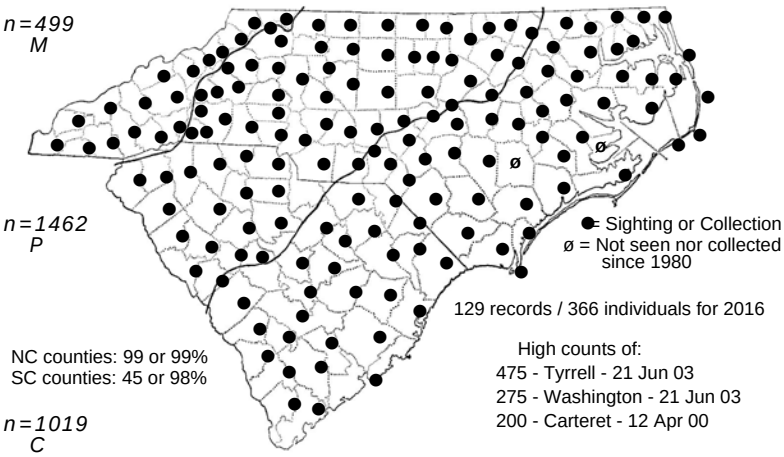
FOOD AND NECTAR PLANTS: The foodplants are a great variety of herbaceous plants, but thistles (Cirsium) are the best known. Nectar plants are varied, with no species particularly important, at least in NC.

COMMENTS: This is the "Evening Grosbeak" of the butterfly world; its mass emigrations have made national news. This species cannot safely be distinguished from the American Lady in flight; thus, it is certainly possible that some Painted Ladies will be overlooked and let go as unidentified unless they are perched, when the distinctive 4-5 spots on the under hind wing can be seen.

[NOTE: Butterfly kits frequently use the pupae of Painted Ladies; people then rear the butterflies and may release them into the wild. Thus, it is possible that a few records of this butterfly could refer to released or escaped individuals.]

Red Admiral *Vanessa atalanta*





NC counties: 99 or 99%
SC counties: 45 or 98%

129 records / 366 individuals for 2016

High counts of:
475 - Tyrrell - 21 Jun 03
275 - Washington - 21 Jun 03
200 - Carteret - 12 Apr 00

Date Spread: Orange on 1 Jan 2000 to Brunswick; BHI on 31 Dec 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, undoubtedly occurring in all 100 counties.

ABUNDANCE: Fairly common over most of the state, but least numerous in the Piedmont, where often uncommon. Usually not colonial, but at times ten or more may be seen in a day. Quite common in parts of the state in 2001, which was a surprising "invasion" year; 2007 and 2012 were other good years for the species in most parts of the state.

FLIGHT PERIOD: Probably three broods with no clear gaps in the flight periods except for a brood break in mid-June in the Piedmont; ranges from early March to well into November, rarely all winter.

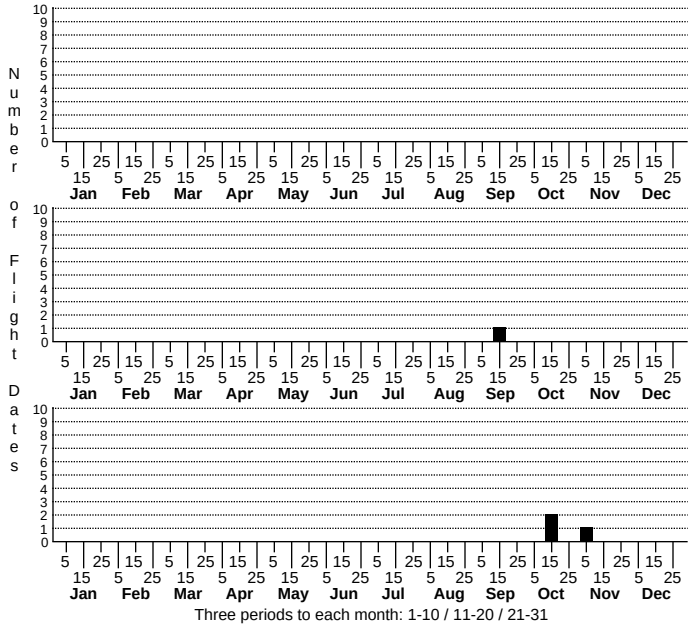
HABITAT: Varied, and could be seen almost anywhere. It is found along woodland edges or wide woodland trails most often, but it can be present in fields, gardens, marshes, and many other habitats. It is somewhat more numerous in moist places, such as the edge of a damp woodland or wet thicket, than in dry places.

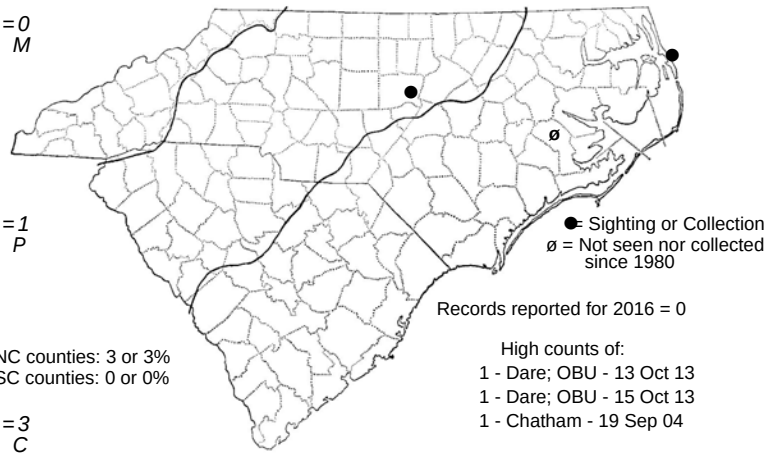
FOOD AND NECTAR PLANTS: The nettle family (Laportea, Boehmeria, etc.) is the main foodplant of the caterpillar. Most nettle species occur in wetland habitats. The species nectars on many flowers. However, it is most often seen basking on the ground or feeding at tree sap, droppings, muddy spots, etc.

COMMENTS: This is a more common butterfly in the Northeastern states than in the South, though it certainly occurs in every NC county. The Red Admiral may be the fastest flying butterfly in the state, and they are difficult to follow when flushed.

This species is known to be partly migratory. In most years, migrants likely would not be obviously known as such. However, early in 2001, reports of large numbers in TX were harbingers of big things in the Carolinas. By spring, observers here were reporting Red Admirals in good numbers, often in double digits. The species remained common essentially all summer and fall. The species' numbers returned to normal in the first half of 2002, but numbers thereafter crashed (as did those of American Lady), and the species was quite hard to find from July through the fall.

Mimic *Hypolimnas misippus*





Records reported for 2016 = 0

NC counties: 3 or 3%
SC counties: 0 or 0%

High counts of:
1 - Dare; OBU - 13 Oct 13
1 - Dare; OBU - 15 Oct 13
1 - Chatham - 19 Sep 04

Earliest date: Chatham 19 Sep 2004
Latest date: Craven 9 Nov 1975

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

Other Name: Danaid Eggfly

DISTRIBUTION: Formerly, there was a single NC record (Cumberland County). However, Bob Cavanaugh has made an important correction to this record. In a 2005 e-mail message, he indicated to us that he collected a Mimic in Craven County on November 9, 1975. He noted that there was no record for Craven County in the Nekola-Opler unpublished atlas of North Carolina butterflies, but instead was a county dot for Cumberland County. Also, the Opler and Krizek (1984) range map for Mimic has a dot in the general vicinity of Cumberland County but not for Craven County, further indicating that Cavanaugh's record was attributed to the wrong county. Thus, there apparently never was a record for Cumberland County.

Very surprising was a female Mimic photographed by Mike Dunn in his yard in Chatham County in 2004. Just as surprising was a male seen by Mary Doll in her yard in Manteo (Dare County) on October 13 and 15, 2013; and Mac Basnight obtained excellent photos to document the record. For a species that is likely introduced in the West Indies -- its native range is Asia and Africa -- it seems remarkable that NC has three records, as there are very few others for the eastern United States.

ABUNDANCE: Accidental. Not recorded from SC.

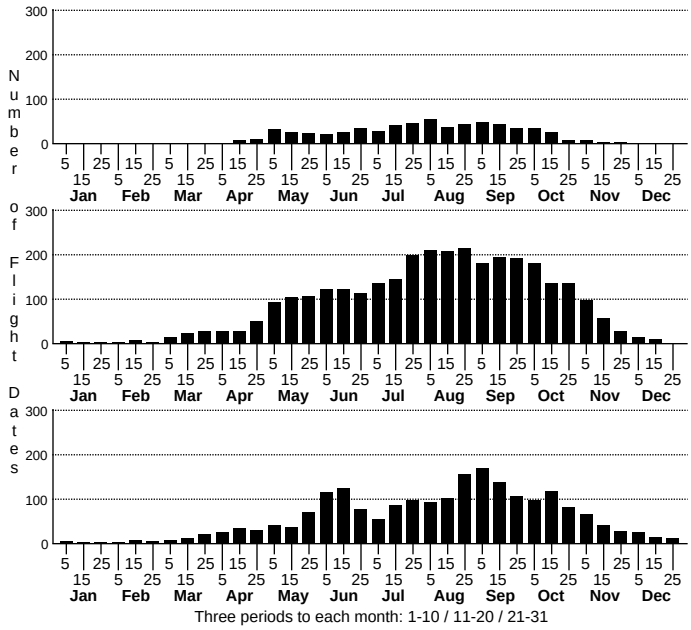
FLIGHT PERIOD: In the West Indies, April to May, and September to December, according to Opler and Malikul (1992).

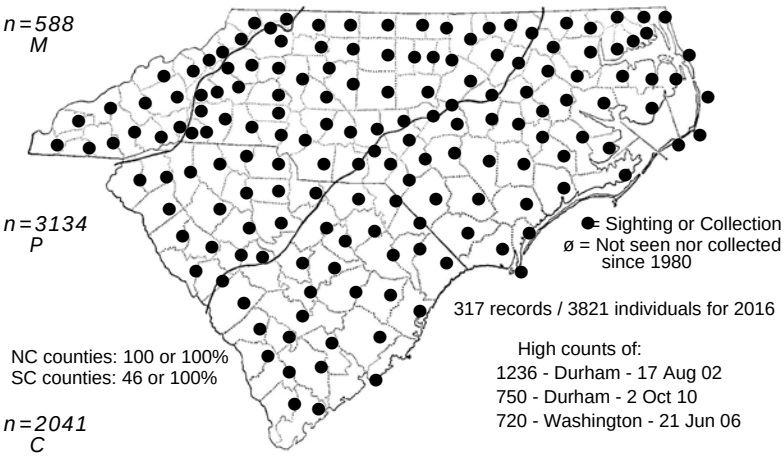
HABITAT: Open, weedy areas (Opler and Malikul 1992). In NC, mainly found in yards and gardens.

FOOD AND NECTAR PLANTS: Various herbaceous species in tropical families are foodplants. Nectar plants are not well reported in the US.

COMMENTS: This species is well known for its sexual dimorphism; the female is mostly orange with some black and white, mimicking a Monarch or Viceroy. Although one might assume this 2004 individual was an escape, the report came shortly after a strong hurricane passed through the West Indies and came into NC. One lepidopterist believes the butterfly could have legitimately been transported to NC via such a storm, as he is aware of strong colonizing abilities of the Mimic. Weather in relation to the 2013 record is not known, but it came during a period of considerable northbound movements of several Southern migrants, especially the Zebra Longwing.

Common Buckeye *Junonia coenia*





Date Spread: Hyde; OB on 1 Jan 2008 to Brunswick; BHI on 31 Dec 2006

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

Other Name: Northern Buckeye

DISTRIBUTION: Statewide, occurring in every county. Ranges onto the Outer Banks, and probably to the higher mountains (though perhaps not a breeder at high elevations).

ABUNDANCE: Very common in the Coastal Plain; common to very common in the eastern and southern Piedmont; fairly common to common in the upper Piedmont; fairly common in the mountains. The species appears to be partly migratory, with an increase in butterflies from August to October. Over 50 individuals can be seen in a day in Coastal Plain and Piedmont counties in the fall.

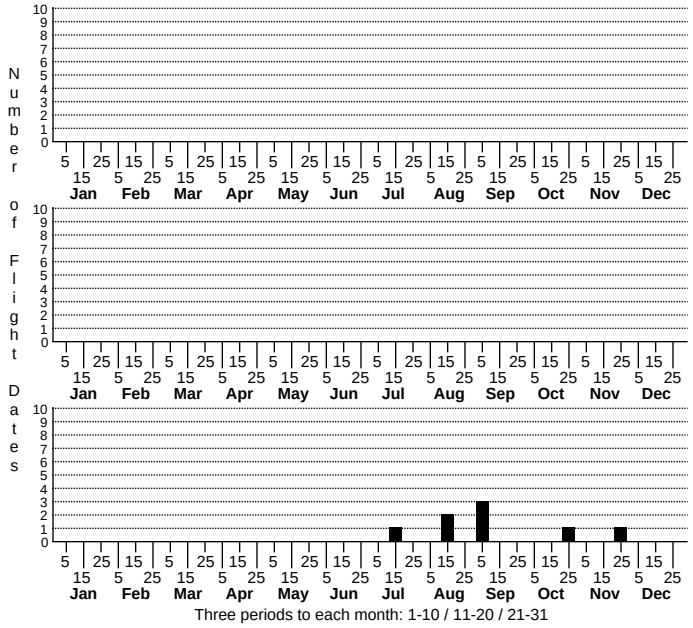
FLIGHT PERIOD: Several broods (at least three); the species has a continuous presence in NC from mid-March to mid-December. Abundance increases in August, remaining very numerous well into October; a few can be seen on warm winter days.

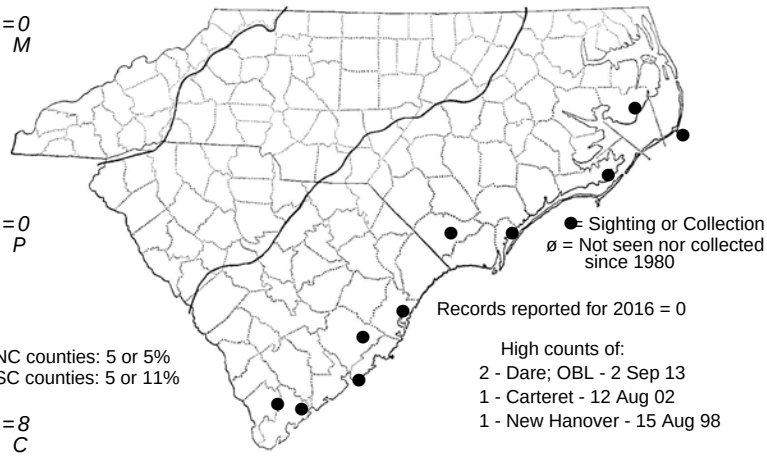
HABITAT: Open country; very widespread in fields, roadsides, lawns, vacant lots, dunes, savannas, and other places with low growth. It is not typically found near woodlands, but it is often common in powerline clearings through forests.

FOOD AND NECTAR PLANTS: A wide variety of herbaceous plantains (Plantago) and "scrophs" (Family Scrophulariaceae); probably also species in the ruellia family (Acanthaceae). Species of gerardias (Agalinis spp.) are commonly used, and caterpillars are conspicuous and easily found on these plants in the fall season. Nectar plants are very widespread, but the species typically nectars on low-growing herbs such as clovers; adults also sip moisture and minerals along bare ground.

COMMENTS: This species typically keeps low to the ground, and frequently perches on bare ground, sand, and dirt. It also nectars on clovers, fog-fruits, and other flowers within a few inches of the ground. It is perhaps the most common "large" butterfly around lawns and roadsides, thereby making it one of the most familiar butterflies to North Carolinians.

White Peacock *Anartia jatrophae*





Earliest date: New Hanover 18 Jul 1998
Latest date: Dare; OBL 21 Nov 1992

Status NC	Status US	Rank NC	Rank Global
-	-	SZN	G5

DISTRIBUTION: A few records from the immediate coast, plus a 2006 record from mainland Hyde County and a 2013 record for Columbus County. This is a southern stray, breeding in FL and migrating sparingly to GA and the southern coast of SC.

ABUNDANCE: Of casual occurrence. There is at least one pre-1992 record from the Buxton area, according to the Opler/Nekola maps. I saw one at Buxton/Frisco on November 21, 1992, and Trip Dennis saw one in July 1995 at Portsmouth Island. Derb Carter photographed one at Fort Fisher on July 19, 1998; Greg Schneider saw one (a different individual?) at the same site on August 15, 1998; and Bob Cavanaugh photographed one on the Carteret County mainland on August 12, 2002. Cavanaugh had another in Carteret County on September 3, 2006, and Ricky Davis photographed one at Lake Mattamuskeet on October 21, 2006. In 2013, Charlotte Fulcher saw two in the Hatteras/Buxton area on September 2, and Jim Parnell saw one in Columbus County, on that same date.

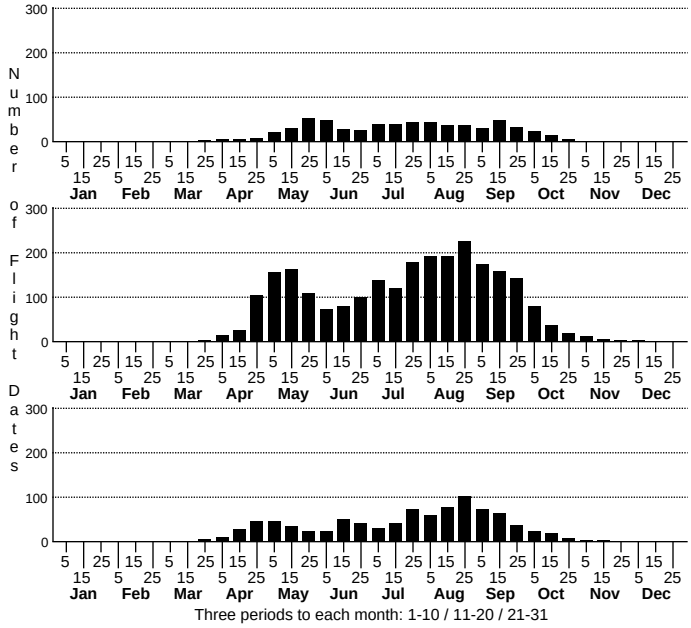
FLIGHT PERIOD: Apparently all year in the Deep South. Date(s) of the first NC record is not known to us, but the known dates range from July to November.

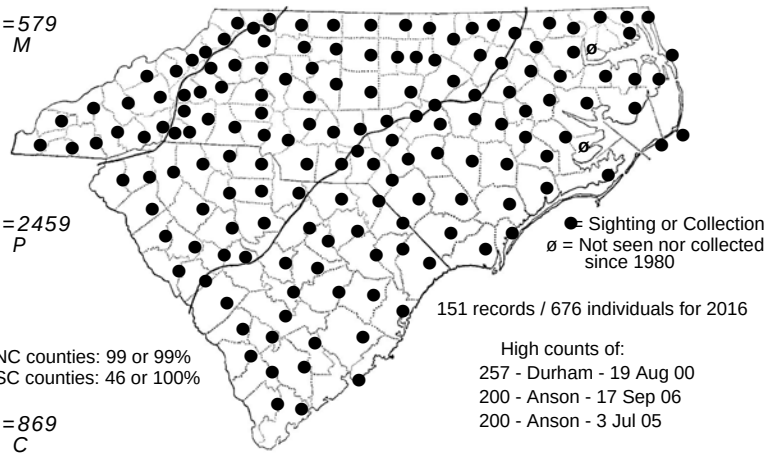
HABITAT: In its range, generally in weedy areas in open country. In NC, could occur practically anywhere, at least near the coast. Three recent records have been from the ecotone between maritime thickets and salt/brackish marshes, but the 2002 individual was in a garden.

FOOD AND NECTAR PLANTS: Various herbaceous species in the Scrophulariaceae, Acanthaceae, or related families. Nectar plants are not well known, but in NC to be looked for on lantana in coastal gardens.

COMMENTS: Based on the NC and SC records, it seems that the best chance of finding the species in NC is to check along the coast in late summer or fall, particularly at the edges of maritime thickets, in gardens, or in weedy places. Of course, such are typical places to search for nearly all Southern strays, such as Great Southern White, Brazilian Skipper, etc. This is a common butterfly in FL, where its behavior and habitat are very similar to that of the Common Buckeye.

Red-spotted Purple *Limenitis arthemis astyanax*





Earliest date: Madison 25 Mar 2016
Latest date: Durham 1 Dec 2016

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Red-spotted Admiral (also called White Admiral) is the common name for the full species [Limenitis arthemis].

DISTRIBUTION: Statewide, certainly occurring in all counties; also widespread along the immediate coast, such as the Outer Banks.

ABUNDANCE: Common and widespread, though seldom seen in large numbers. Abundance reasonably even across the state, not obviously more common in some provinces than others except near the coast, where generally uncommon.

FLIGHT PERIOD: Apparently three broods, extending from mid-April to late October; rarely as early as the end of March and into November. The first brood seems to end during the first half of June in the Coastal Plain and Piedmont, and in late June in the mountains. The flight after this gap seems to have two broods that run together.

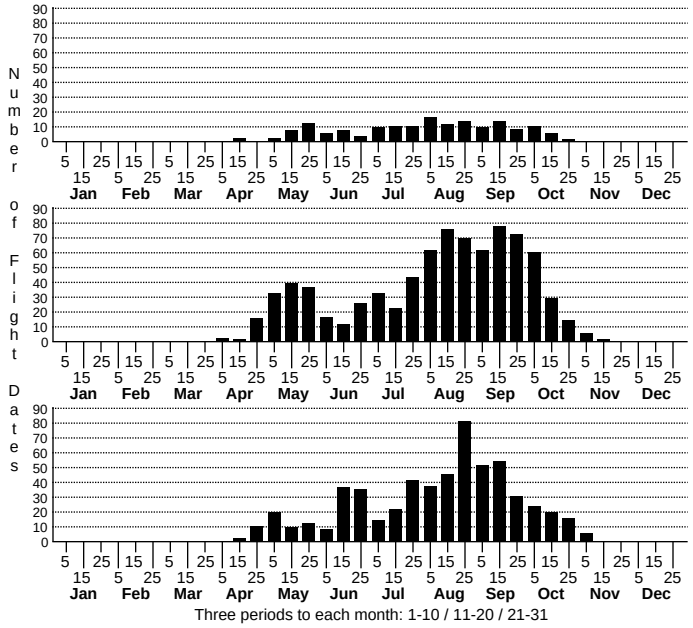
HABITAT: Typically in or near hardwood forests or their borders. It favors openings or edges of rich or moist woods, but it is also found along powerline clearings in uplands, as well as wooded yards and gardens. It can be seen flying around roads and fields, but it would be misleading to give the impression that it is a denizen of wide-open places.

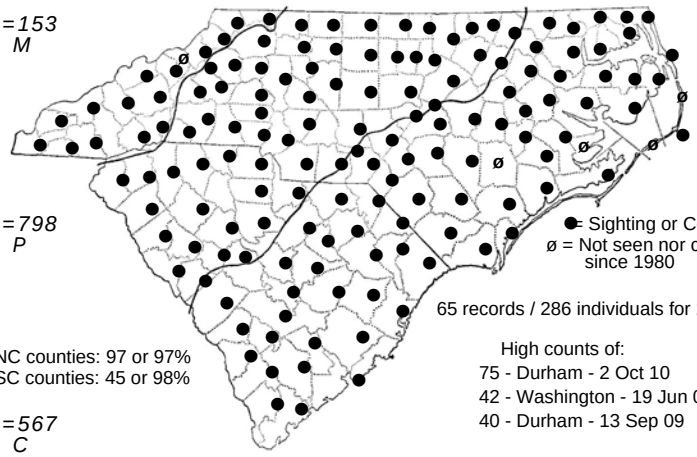
FOOD AND NECTAR PLANTS: Foodplants are leaves of hardwood trees, such as cherry (Prunus) and other trees in the Rosaceae family. It has a wide array of such food trees. The species nectars to some extent, but it is more often seen perched on damp ground sucking moisture, or taking tree sap, carrion, etc.

COMMENTS: This conspicuous and attractive butterfly is often mistaken as a swallowtail by the novice. It is one of the more frequently seen butterflies flying through hardwood forests, particularly open woods, along wooded trails, and dirt roads through forests. Many are run over by cars on dirt roads. Though not normally seen in colonies, I have seen as many as 20 individuals in a day on several occasions.

The Red-spotted Purple (L. arthemis astyanax) is the southern counterpart of the other subspecies, the White Admiral (L. arthemis arthemis), which is dark with a single wide white band on each wing. Because most Limenitis species are known as Admirals (e.g., Lorquin's and Weidemeyer's), the NABA Checklist (2001) and NatureServe Explorer give the common name for the full species as "Red-spotted Admiral", which is the sensible name for the full species. However, to avoid confusing butterfliers in NC, we prefer to use the subspecies name on the header line. [The Butterflies of America website only gives common names for the two subspecies, but not one for the combined full species.]

Viceroy *Limenitis archippus*





65 records / 286 individuals for 2016

High counts of:
75 - Durham - 2 Oct 10
42 - Washington - 19 Jun 04
40 - Durham - 13 Sep 09

NC counties: 97 or 97%
SC counties: 45 or 98%

Earliest date: Wake 6 Apr 2012
Latest date: Wake 14 Nov 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, from the coast to the mountains; presumed to occur in all NC counties.

ABUNDANCE: Fairly common to locally common in the lower Coastal Plain; locally fairly common in the upper Coastal Plain and eastern Piedmont. However, uncommon in the mountains and the western 2/3rds of the Piedmont.

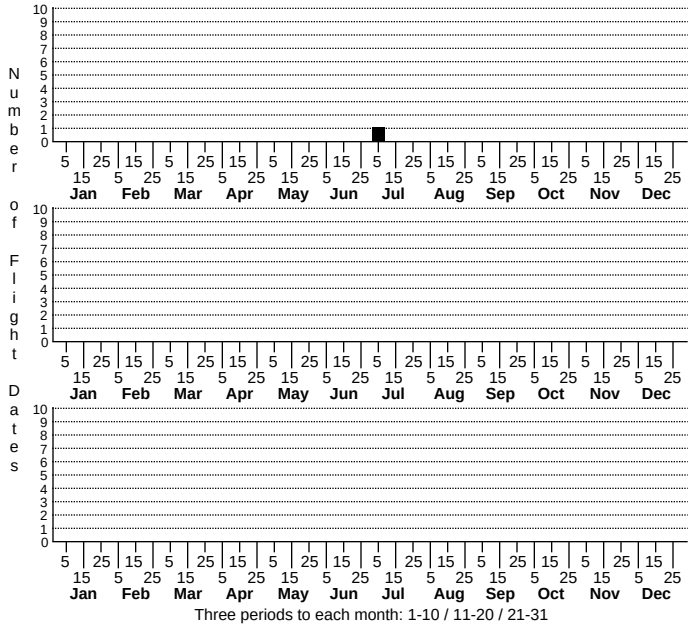
FLIGHT PERIOD: Probably three broods, generally occurring from late April to early November. Rather scarce before mid-June, as the first brood is a somewhat small one. The second brood begins downstate in mid-June and in the mountains in early July, but the third brood overlaps broadly with the second.

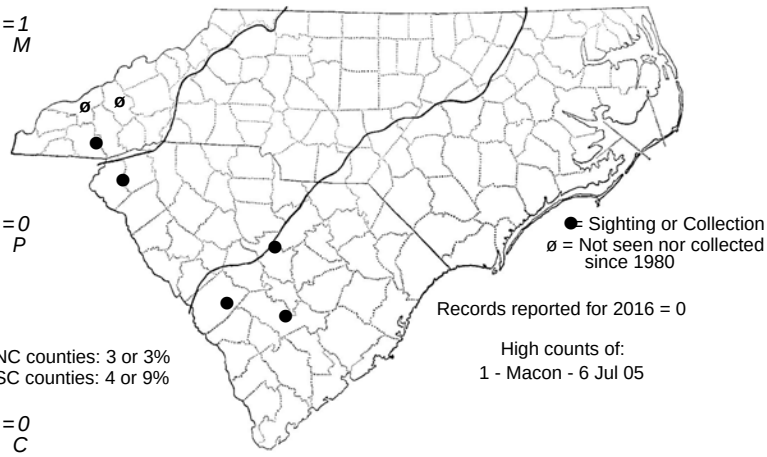
HABITAT: The Viceroy tends to favor moist areas near willows. Habitats are typically margins of fresh or slightly brackish marshes, shores of lakes and ponds, wet thickets, edges of moist woods, etc. It is a species of open, moist sites, not normally seen in uplands.

FOOD AND NECTAR PLANTS: The foodplants are primarily willows, in NC likely black willow (Salix nigra) and Coastal Plain willow (S. caroliniana) for the most part. Adults nectar on many flowers, not favoring any particular species; they also feed on moisture on dirt roads or mud, on sap, carrion, etc.

COMMENTS: The Viceroy is easily confused with the Monarch unless seen well. It may take some effort to see it in the mountains and Piedmont, where the best places to look are around lake shores where willows are common. In the tidewater section, particularly near fresh or slightly brackish marshes with willows, Viceroys may be locally common.

Goatweed Leafwing *Anaea andria*





NC counties: 3 or 3%
SC counties: 4 or 9%

Earliest date: Macon 6 Jul 2005
Latest date: Macon 6 Jul 2005

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G4G5

Other Name: Goatweed Butterfly

DISTRIBUTION: Accidental or casual; three county records (Swain, Haywood, and Macon), in the southwestern mountains.

ABUNDANCE: This species breeds in the midwestern states, and is regular east to east-central TN and western and southern GA, as well as in central SC. The NC records, and a record for Oconee County, SC, are probably of migrants. It would be expected to occur as a migrant or vagrant at times in the extreme southwestern counties (Cherokee, Clay, and Graham) where not yet recorded.

FLIGHT PERIOD: Glassberg (1999) states: "2 broods, generally June/July - Aug; Aug - Oct, overwintering as adults and flying April - May". The only date available to us is one seen on July 6, 2005.

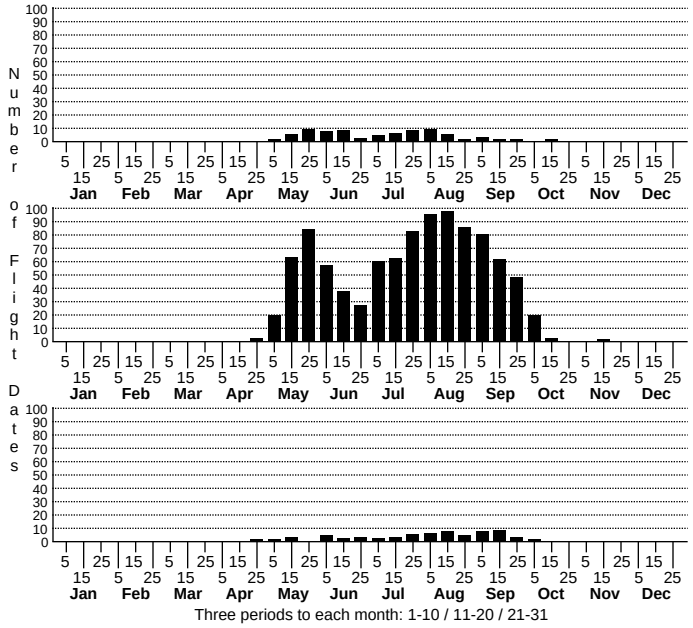
HABITAT: Open upland woods and scrub; wooded edges.

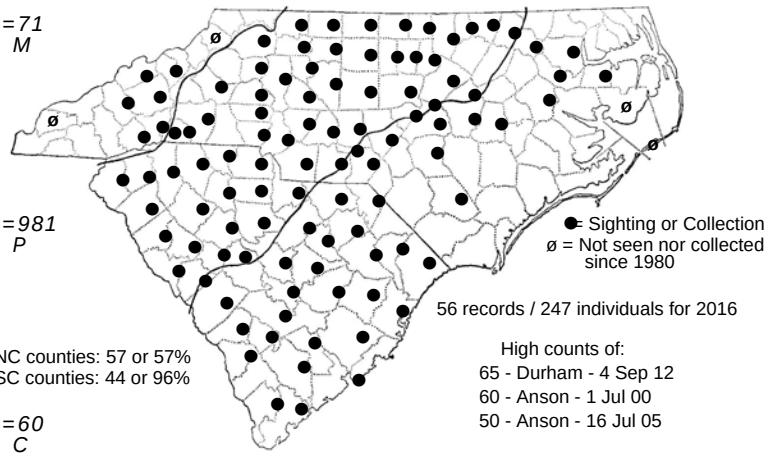
FOOD AND NECTAR PLANTS: The foodplants are crotons/goatweeds (Croton), especially C. monanthogynus and C. capitatus. The former is found in NC only in Madison County, where very rare; the latter is absent in NC. Adults do not nectar, but feed on sap, carrion, decaying fruit, etc.

COMMENTS: Several biologists relocated a population of the rare Croton monanthogynus in the Hot Springs part of Madison County in late July 2012, but field work in the general area failed to turn up any leafwings. In addition, much field work in the county from spring to fall 2012, within a few miles of this plant population, yielded no leafwings. Thus, the butterfly is presumed to not have any breeding population there. The species is therefore most likely to be encountered by accident, mainly in the extreme southwestern corner of the state. The species has been reported from Haywood County in Great Smoky Mountains National Park (fide Don DeFoe). Whether the Swain County record is also from the park is not known to us. The first NC report in a number of decades was one seen by Jonathan Mays in Macon County in 2005. Fortunately, he saw it perched, both from above and below. (Leafwings of all species are more often seen in flight only, perching inconspicuously on tree trunks, and easily overlooked unless an observer sees it landing on the trunk.)

Of considerable interest was the finding of this species, documented with photos, at a site in Orangeburg County, SC, in late March 2009 and again in early September. Field trips to this site in both spring and early fall from 2010 - 2014 found multiple individuals, clearly indicating an established resident population. The hostplant at this site is Croton capitatus. Whether the species is resident elsewhere in southern or southwestern SC is uncertain, though one was seen in Aiken County in 2009, and another was seen in the county in 2010, suggesting that it might be a breeding species in that county.

Hackberry Emperor *Asterocampa celtis*





56 records / 247 individuals for 2016

High counts of:
65 - Durham - 4 Sep 12
60 - Anson - 1 Jul 00
50 - Anson - 16 Jul 05

NC counties: 57 or 57%
SC counties: 44 or 96%

Earliest date: Harnett; P 28 Apr 2002
Latest date: Durham 18 Nov 2010

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Hackberry Butterfly

DISTRIBUTION: Throughout the Piedmont; scattered in the Coastal Plain, mainly along brownwater rivers in the upper half of the province. In the mountains probably found only at low elevations. There are few records known from the southern half of the Coastal Plain. As there are records from most of the SC Coastal Plain counties, it likely occurs in most of the NC Coastal Plain counties, but there are clearly some distribution anomalies between these two states.

ABUNDANCE: Locally fairly common to common in the Piedmont. Rare to locally uncommon in the upper Coastal Plain; rare to possibly absent in counties that lack brownwater rivers. Limited in the mountains presumably to low elevations. This is not a widespread butterfly in North Carolina, it being rather colonial in nature, and can be uncommon over large areas of the range in the Piedmont.

FLIGHT PERIOD: Apparently three broods in the Piedmont: early May to late June, late June to late August, and late August to the end of September. Much more data needed for the mountains and the Coastal Plain.

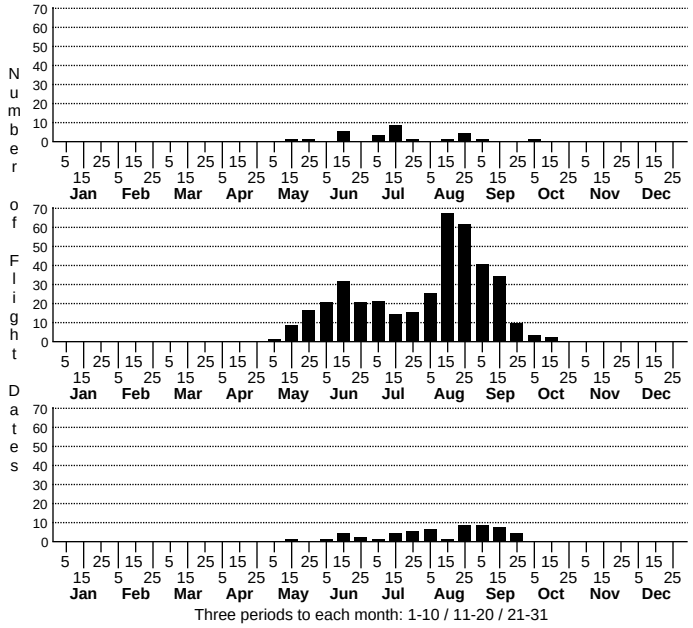
HABITAT: The species is limited to areas with hackberries or sugarberries (Celtis). Thus, it is found inside bottomland forests of the Piedmont and brownwater bottomlands of the Coastal Plain, where Celtis laevigata is found; it may also be found in other forests, as long as Celtis is present. It is also found in dry upland forests, usually over mafic rock, where C. tenuifolia occurs. It is often found along dirt or paved roads through bottomlands, and is fond of railroad tracks through suitable habitat also. The butterflies may also be found in the dappled shade deep inside forests.

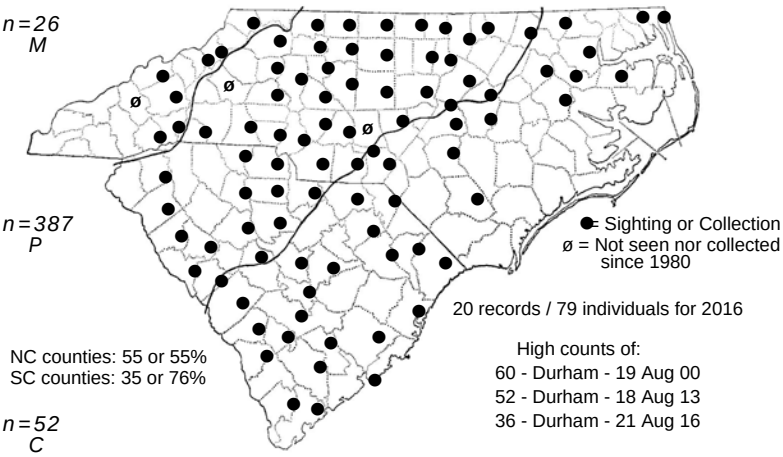
FOOD AND NECTAR PLANTS: Foodplants are strictly hackberries and sugarberries of the genus Celtis. Adults do not nectar, but feed on sap, decaying fruit, carrion, mud, etc. Adults have the unusual habit of drinking perspiration from humans; the butterflies often alight on clothing or bare skin, and can be studied at very close range!

COMMENTS: The Hackberry Emperor is somewhat habitat limited in NC; however, because it is tied to a few tree species, it can be searched for with some degree of success in bottomlands with an abundant amount of sugarberry or, less commonly, in uplands with Georgia hackberry. This species likes to bask on the warm rocks along the sides of railroad tracks.

The species is very widespread in the Coastal Plain of SC, into FL. Yet, we have only 60 flight date records for the NC Coastal Plain, and it has been found in barely 25% of the Coastal Plain counties. These odd results are apparently due to the discrepancy in the distribution of Celtis (C. laevigata). This large tree is limited in the NC Coastal Plain mainly to brownwater rivers (Roanoke, Tar, Neuse, and Cape Fear). In the SC Coastal Plain, this tree is much more widespread and is often numerous even in coastal counties.

Tawny Emperor *Asterocampa clyton*





Earliest date: Harnett; P 8 May 2010
Latest date: Forsyth 18 Oct 2005

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Throughout the Piedmont; scattered in the upper Coastal Plain; found in Currituck County near the northeastern coast in 1994 and in Washington County in 1996. There are only eight known county records for the mountains. Ought to occur along some brownwater rivers eastward into the central Coastal Plain.

ABUNDANCE: Generally uncommon in the central and eastern Piedmont; rather rare in the upper Piedmont and in the upper Coastal Plain. Very rare and poorly known in the mountains and lower Coastal Plain. At nearly all places where it occurs, it is outnumbered by the Hackberry Emperor by about 3:1 to 5:1.

FLIGHT PERIOD: Two broods downstate; generally mid-May to mid-July, and late July to late September, rarely mid-October. Presumably two broods in the mountains because of the wide spread of dates, though it could be a stray or migrant to some higher elevation areas. Its flight period in spring is one to two weeks later than the Hackberry Emperor.

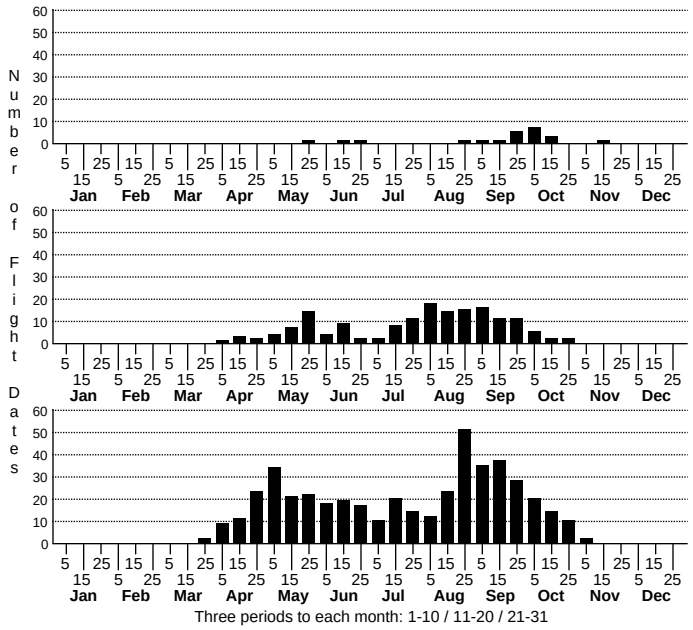
HABITAT: Almost identical to that of the Hackberry Emperor, and the two are often seen together, even landing on an observer at the same time! Habitats include bottomlands, especially along dirt or paved roads, or railroad tracks, through bottomlands; upland forests over mafic rock. All habitats must have Celtis present.

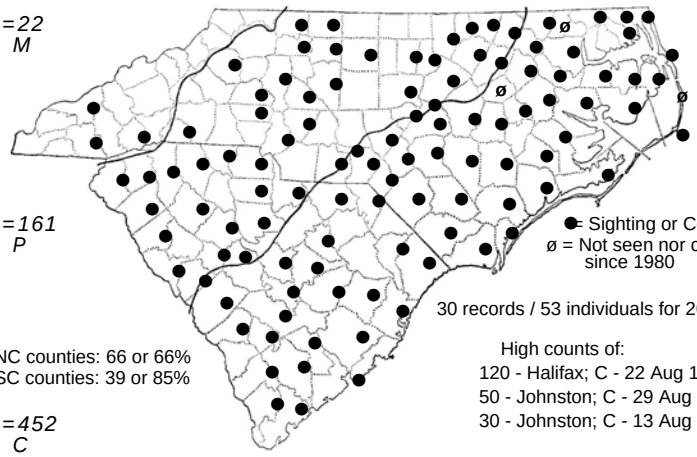
FOOD AND NECTAR PLANTS: Identical to those of the Hackberry Emperor.

COMMENTS: Except for it being noticeably less numerous than the Hackberry Emperor, the Tawny Emperor's habits, habitats, and behavior are identical to the former. Usually when and where I see a Tawny Emperor, I will see one to five Hackberry Emperors. I have had good success in finding these species along railroad tracks through bottomlands. On hot days, when you are sweating, keep an eye out for these species landing on you.

As with the Hackberry Emperor, this species is much more widespread in the SC Coastal Plain than in the NC Coastal Plain. This discrepancy is due to the much wider range of hackberry/sugarberry (Celtis laevigata) in SC. Both emperors in the NC Coastal Plain are seldom found away from brownwater floodplain forests.

Southern Pearly-eye *Lethe portlandia*





30 records / 53 individuals for 2016

High counts of:
120 - Halifax; C - 22 Aug 12
50 - Johnston; C - 29 Aug 00
30 - Johnston; C - 13 Aug 12

NC counties: 66 or 66%
SC counties: 39 or 85%

New for 24th: Caldwell

Earliest date: Moore; C 27 Mar 2012
Latest date: Swain 18 Nov 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

Synonym: *Enodia portlandia*
Other Name: Pearly Eye

DISTRIBUTION: Throughout the Coastal Plain and in most of the Piedmont; possibly absent in a few northern and a few foothill counties in the Piedmont. Only known in the mountains from the southern portions (Macon, Swain, and Transylvania counties -- photos). Confusion with the very similar Northern Pearly-eye has caused much uncertainty about the range in the Piedmont, but there are photos for Surry and Stokes counties in the northwestern corner for solid documentation. A 2015 photo record from Swain County, shockingly in mid-November (!), extends the range slightly northward in the mountains.

ABUNDANCE: Locally fairly common to common in the Coastal Plain; uncommon in the eastern and southern Piedmont, and rare in the remainder of the province. Essentially absent in the mountains, except very rare in the southern counties.

FLIGHT PERIOD: Probably three broods in the Coastal Plain, and two or three in the Piedmont; adults present in the Coastal Plain from very late March to very early November. The first brood flies until late June or early July. The second and third broods, if there are three, fly between late June (Coastal Plain) or early July (Piedmont) and late October. The first flight in the Piedmont begins in mid-April. Apparently two broods in the mountains.

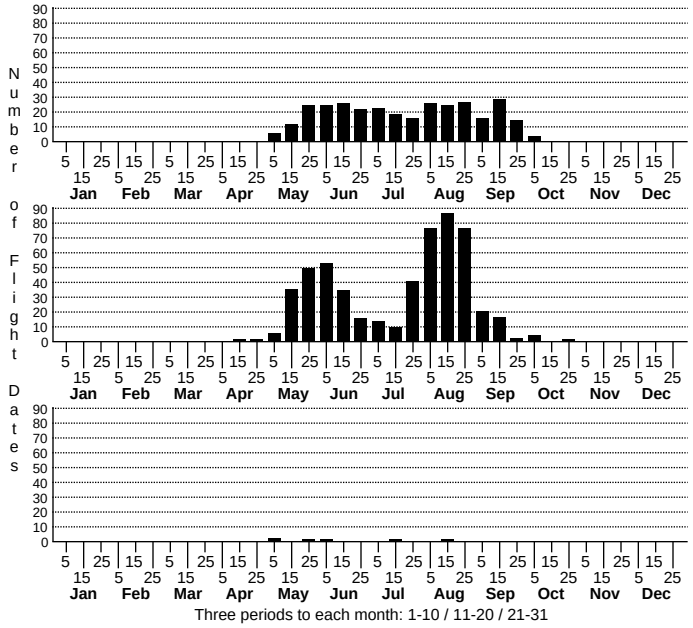
HABITAT: Habitats are generally bottomlands, other moist forests (such as bay forests or moist maritime forests), and less frequently in upland forests. Cane (Arundinaria) is always present in the habitat. They seldom venture far from forests, but they will fly along wooded trails, partly shaded roads through bottomlands, etc. Pearly-eyes (all three species) fly more in shaded places and more towards twilight than most other butterflies.

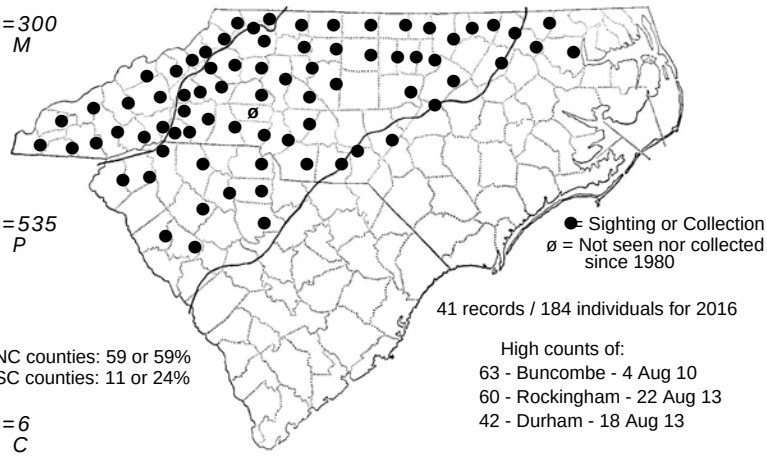
FOOD AND NECTAR PLANTS: The foodplants are supposedly only cane (Arundinaria). The butterflies do not nectar; they feed on sap, decaying fruit, mud or moist ground, etc.

COMMENTS: This species can be quite common in a few places, such as in Kitty Hawk Woods and Nags Head Woods in coastal Dare County and in Howell Woods in Johnston County. The species looks quite similar to the Creole Pearly-eye, and is often found with it. Fortunately, these two species often perch on trails, on the ground, or on tree trunks, where they can be studied at leisure.

The species is extremely similar to Northern Pearly-eye and can only be separated by male genitalia and apparently by antennal club color; wing pattern and coloration are unreliable. Southerns have a completely orange club. Northerns have black on the club, generally with an orange tip.

Northern Pearly-eye *Lethe anthedon*





Earliest date: Cabarrus 11 Apr 2011
Latest date: Forsyth 27 Oct 2013

Status		Rank	
NC	US	NC	Global
-	-	S4	G5

Synonym: *Enodia anthedon*

DISTRIBUTION: Throughout the mountains; probably present over all of the Piedmont, where formerly overlooked as Southern, and possibly Creole, Pearly-eyes. Status in the southeastern Piedmont not well known, though likely occurs in all counties there. Occurs in the Coastal Plain along the Roanoke River, but not known from elsewhere in the province.

ABUNDANCE: Generally fairly common (at least locally) in the mountains, and uncommon to locally fairly common in most of the Piedmont; ranges to well over 4000 feet in elevation. Presumably less numerous in southeastern Piedmont counties, and rare along the Roanoke River. The species is spreading eastward in the state, both in range and abundance.

FLIGHT PERIOD: Apparently three flight periods; early May to late September (rarely to early October); broods probably from early or mid-May to late June, early July to early September, and a small brood in mid- and late September. More data needed to be certain there really is a third brood.

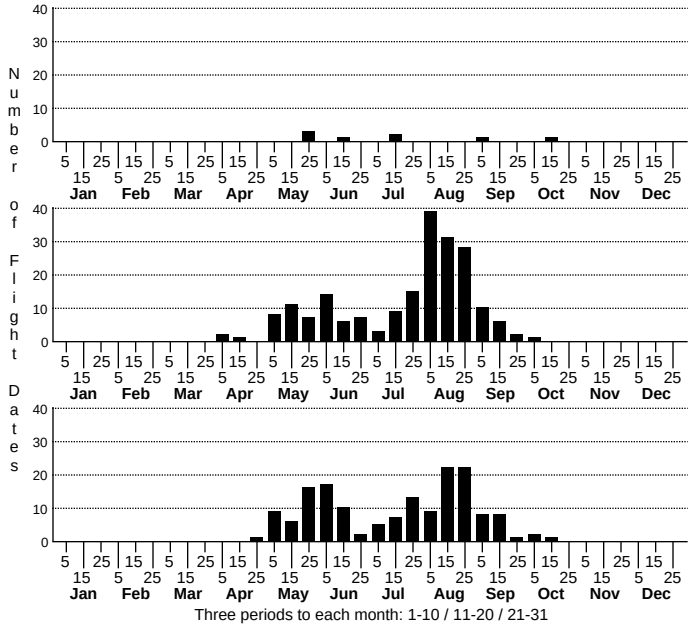
HABITAT: In the mountains, it is found in rich to mesic hardwood forests, usually near a stream or seepage. To be looked for along trails or other openings in moist montane woods, especially on dirt roads through hardwood forests. In the Piedmont, seen in various moist to mesic hardwood forests, usually along dirt roads and wide trails through forests. The Coastal Plain sites are openings in moist hardwood forests next to the Roanoke River.

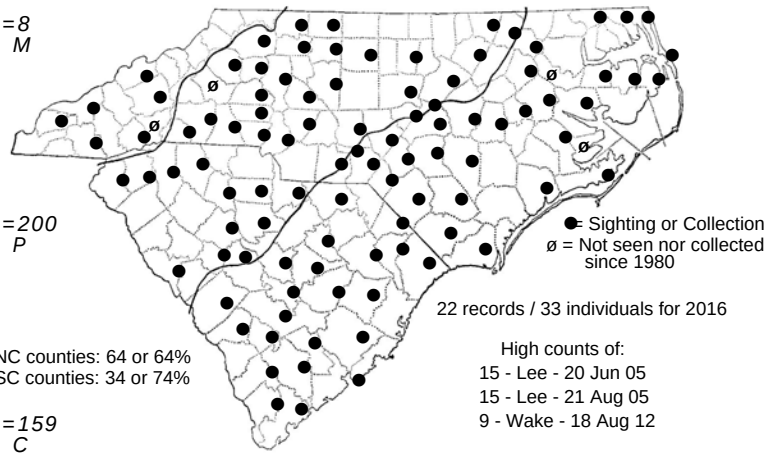
FOOD AND NECTAR PLANTS: Tall grasses with broad leaves are foodplants; cane is likely not a foodplant. The introduced, weedy exotic Japanese stilt grass (Microstegium vimineum) is a known food plant in NC. Food of adults is presumed like that of the Southern Pearly-eye; does not nectar.

COMMENTS: With the great spread of Microstegium vimineum across bottomlands in NC, we are seeing a corresponding increase in the Northern Pearly-eye, at least in the Piedmont. Because this exotic plant also occurs in the Coastal Plain, it was not a complete surprise for a Coastal Plain record in 2006. Additional Coastal Plain records can be expected in upcoming years, away from the Roanoke River floodplain.

Adults readily perch on dirt roads to allow close observation. They look very similar to Southern Pearly-eyes, but they average slightly smaller and brighter-colored than the latter species, with less white frosting beneath. However, the only conclusive field mark is apparently the black antennal club, generally with an orange tip. (Southern has an all-orange club.)

Creole Pearly-eye *Lethe creola*





22 records / 33 individuals for 2016

High counts of:
15 - Lee - 20 Jun 05
15 - Lee - 21 Aug 05
9 - Wake - 18 Aug 12

NC counties: 64 or 64%
SC counties: 34 or 74%

New for 24th: Caldwell, Onslow

Earliest date: Anson 8 Apr 2012
Latest date: Macon 18 Oct 2008

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G3G4

Synonym: *Enodia creola*

DISTRIBUTION: Throughout most or all of the Coastal Plain. In the Piedmont, known from across the province, though it might be absent in some counties that border VA, as southern VA lies at the northern edge of the range. Also reported in the lower elevations in the mountains, but seemingly absent in the northern half of the province. Major gaps in known locations in the southeastern part of the Coastal Plain, and in much of the extreme northern Piedmont.

ABUNDANCE: Uncommon in the Sandhills and northern two-thirds of the Coastal Plain, but is surprisingly rare in the southeastern portion of that province. It is rare to locally uncommon in the Piedmont. Rare to very rare in the southern mountains, where recent photos have documented records from Buncombe, Swain, and Macon counties. Probably absent in the northern mountains.

FLIGHT PERIOD: Two broods; early May (rarely in April) to late June, and early July to mid-September (sparingly into October).

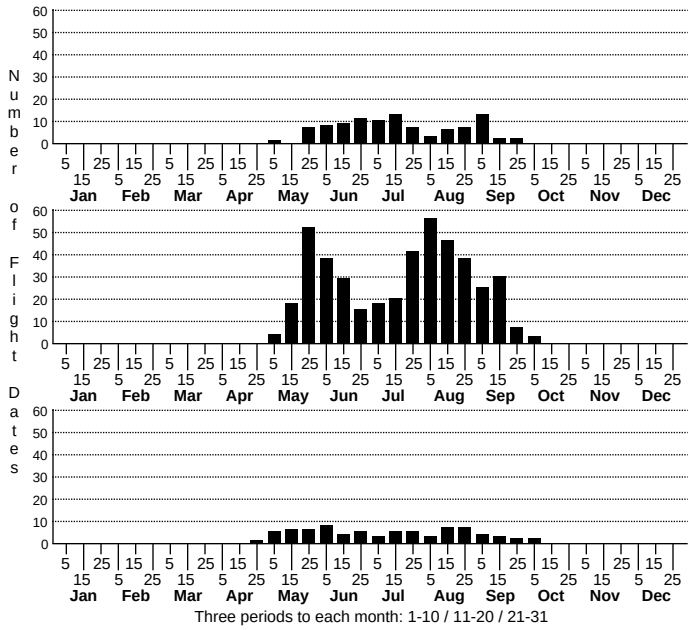
HABITAT: Essentially identical to that of the Southern Pearly-eye, as the species are often seen together. Habitats include bottomlands and other moist forests, maritime forests, bay forests, etc. As with the Southern Pearly-eye, it can be seen along trails and on dirt roads through forests. It also is routinely seen in shady forests; it may often fly late in the day, near or at dusk.

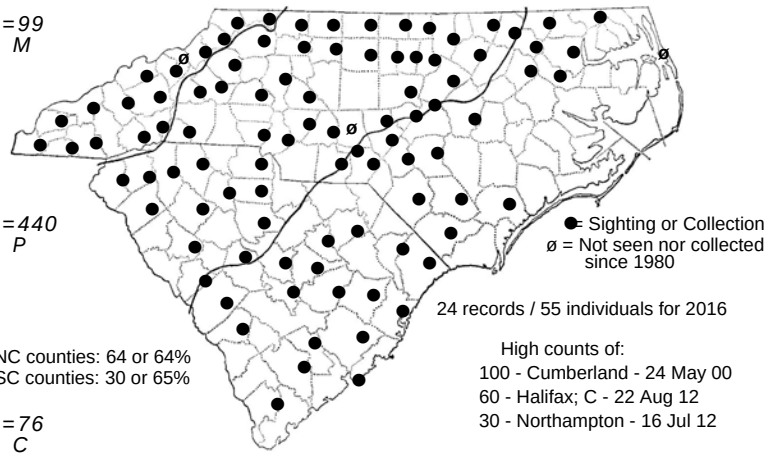
FOOD AND NECTAR PLANTS: Essentially identical to those of the Southern Pearly-eye.

COMMENTS: The habits, habitats, and behavior of the species are, in my experience, identical to that of the Southern Pearly-eye (as are those of the Tawny Emperor with those of the Hackberry Emperor). I have at times found the Creole Pearly-eye at a site without seeing a Southern Pearly-eye, but the converse is much more often the case. The Creole is outnumbered by the Southern/Northern Pearly-eye probably 3:1 in the Piedmont, in my experience, and perhaps 10:1 by the Southern in some coastal sites. Despite the Great Dismal Swamp being a well-known locality for the Creole, I failed to see it during my work there on the NC side of the swamp in 1994. I also failed to find it during considerable field work at Holly Shelter Game Land in Pender County in 1995. And, despite a great amount of field work in the Green Swamp and other wetlands with cane in Brunswick County, no one seemed to have found Creole Pearly-eyes there or in nearby NC counties to the northeast, until I saw a single individual near the Waccamaw River in Columbus County in 2003. John Ennis photographed one in Brunswick County in 2006, and Onslow County was finally added to the list of known counties in 2016.

Creoles can generally be separated from Southern and Northern Pearly-eyes by five fore wing eye-spots instead of four, and by the outward bend in the post-median line on the under fore wing, which resembles knuckles on a closed fist. Male Creoles have a long fore wing with a concave outer margin, giving them a "tall" look when perched. Antennal club color is black, usually with an orange tip; antennal club color alone cannot be used to identify Creoles (as Northerns also have black clubs with orange tips).

Appalachian Brown *Lethe appalachia*





24 records / 55 individuals for 2016

High counts of:
100 - Cumberland - 24 May 00
60 - Halifax; C - 22 Aug 12
30 - Northampton - 16 Jul 12

NC counties: 64 or 64%
SC counties: 30 or 65%

New for 24th: Johnston; C

Earliest date: Halifax; C 25 Apr 2012
Latest date: Chatham 8 Oct 2005

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

Synonym: *Satyrodes appalachia*
Other Name: Appalachian Eyed Brown

DISTRIBUTION: Throughout the mountains and Piedmont, and in the southwestern and northern portions of the Coastal Plain, including the Sandhills. Seemingly absent in much of the central and eastern Coastal Plain, despite much suitable habitat there, and despite its presence in the majority of Coastal Plain counties in SC. We have no data on the Dare County record and do not know if there is currently any population still there.

ABUNDANCE: Uncommon to locally fairly common, but restricted in habitat in the mountains and Piedmont; rare in the Sandhills, though common in a few wetlands at Fort Bragg. Rare elsewhere in the northern and southwestern Coastal Plain, except locally numerous near the Roanoke River. Perhaps absent in most of the eastern 2/3rds of the Coastal Plain.

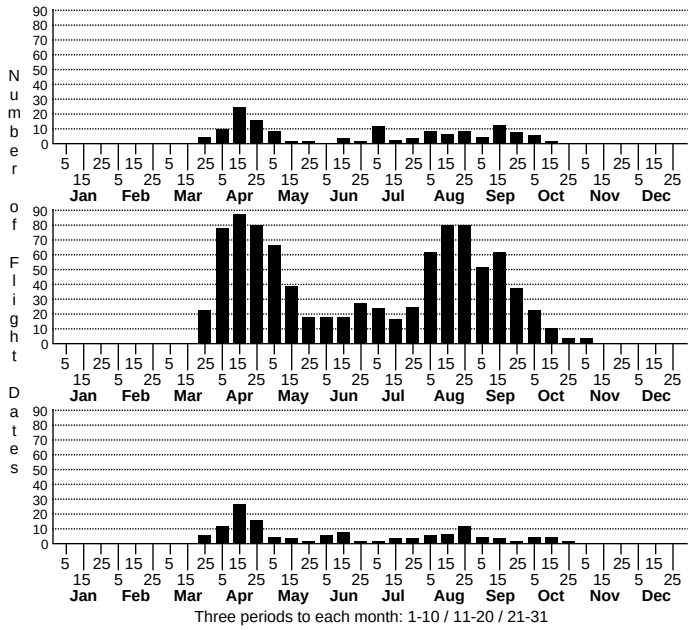
FLIGHT PERIOD: Two broods. The overall flight in each province is roughly from mid-May to the end of September, with the gap between broods downstate in late June. There is a dip in the flight data in the mountains in early August, much later than the gap in the Piedmont, a confusing situation (as a mountain flight gap should only be a few weeks later, not 5-6 weeks later, than a Piedmont gap). Peak numbers are from late May to early June, and again from early August to mid-August.

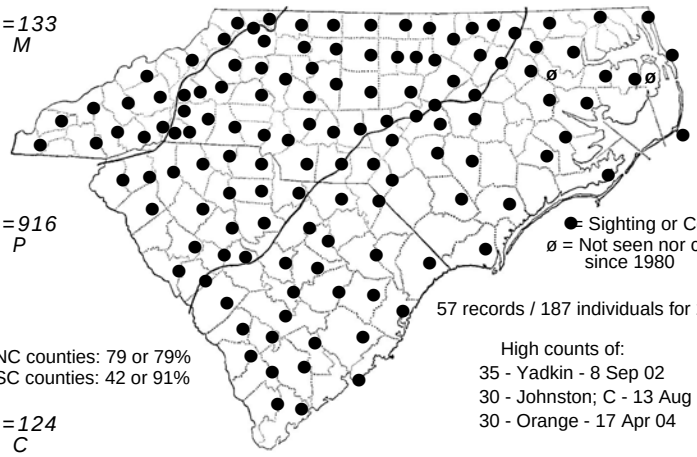
HABITAT: Fairly restricted habitat; favors shaded or semi-shaded woodland pools or wet places with a good growth of sedges. Habitats can include marshy beaver ponds, floodplain pools, shaded bogs, or wet spots along woodland edges. Adults may be seen along trails or dirt roads near such pools.

FOOD AND NECTAR PLANTS: Various sedges, primary Carex species, are the foodplants. The adults seldom nectar; as with most satyrs, they feed on sap, dung, decaying fruit, moisture, etc.

COMMENTS: This is a rather local, or at least habitat-restricted, species. Although it may be found by accident, it is seldom found in most places where an observer looks for butterflies, such as wooded borders, powerline clearings, savannas, and weedy fields. The Coastal Plain range in NC is still poorly known, though a number of new county records have been made lately. The fact that it occurs in many counties in the central and lower Coastal Plain of SC suggests that it ought to occur over much of the NC Coastal Plain. However, observers have covered bottomlands across most parts of the Coastal Plain, with little or no success. I spent many days in bottomlands in Johnston County in 2000 and failed to find the species, though Mike Turner finally found the species in this county in 2016. Thankfully, both Shay Garriock and I found the species at several sites in Columbus, Bladen, and Robeson counties in 2007; in fact, I saw them at several sites along the Lumber River in the last county. Steve Hall and I found them frequently in the Roanoke River floodplain in 2012, adding new county records for Bertie and Martin counties. I saw one at Moores Creek National Battlefield (Pender County) in 2015, extending the range slightly eastward toward the southern coast.

Gemmed Satyr *Cyllopsis gemma*





57 records / 187 individuals for 2016

High counts of:
35 - Yadkin - 8 Sep 02
30 - Johnston; C - 13 Aug 12
30 - Orange - 17 Apr 04

NC counties: 79 or 79%
SC counties: 42 or 91%

New for 24th: Cleveland, Watauga

Earliest date: Catawba 23 Mar 2012
Latest date: Wake 2 Nov 2000

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G4G5

Other Name: Eastern Gemmed-Satyr

DISTRIBUTION: Throughout the Piedmont, and present over most, if not all, of the Coastal Plain. Quite spotty in the latter province, especially in the northeastern corner of the state. Scattered in the lower elevations of the mountains; few records for the northern mountains, and probably absent in several of those counties.

ABUNDANCE: Uncommon to fairly common in the Piedmont; very uncommon to rare, and spottily distributed, in the Coastal Plain, and possibly absent in some counties. Rare to uncommon in the mountains, generally at low elevations.

FLIGHT PERIOD: Three broods. Late March to late May, early June to mid-July, and late July to late October. The middle brood is conspicuously small.

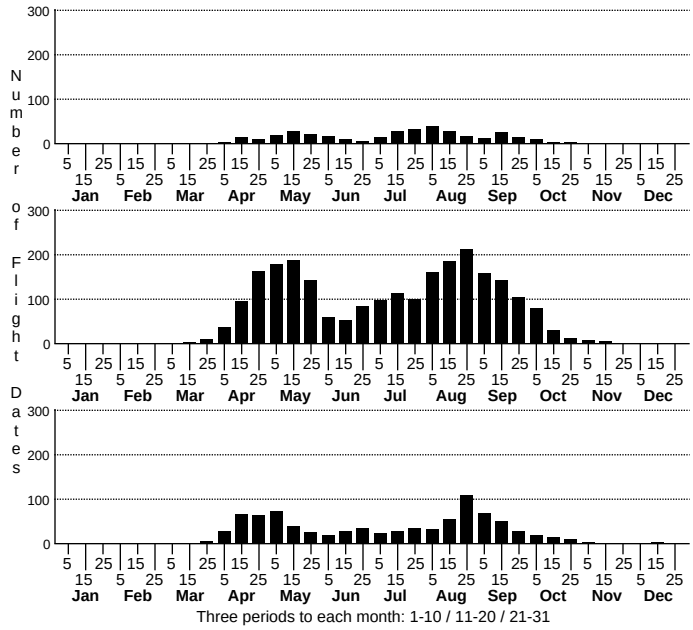
HABITAT: Generally found in the partial shade of open hardwood forests. It favors upland woods, ranging from foothill ridgetops to somewhat moist woods. However, it is infrequent in bottomlands or other wet woods. It tends to be seen where there are grasses in the forest, such as near or along trails, or along the margins of roads through forests. It also occurs in Coastal Plain pinewoods, such as flatwoods, to an extent, but I have found it mainly in association with grasses in hardwoods. Note that most field guides and references have the habitat for this species described incorrectly, or confused with Carolina Satyr; they tend to say that the Gemmed occurs mainly in moist forested habitats and the Carolina in moist or upland habitats! These authors, unfortunately, do not live within the range of these satyrs, or at least within the range of the Gemmed Satyr. As a reminder, the Gemmed Satyr occurs in drier habitats than does the Carolina Satyr, though they can often be found together.

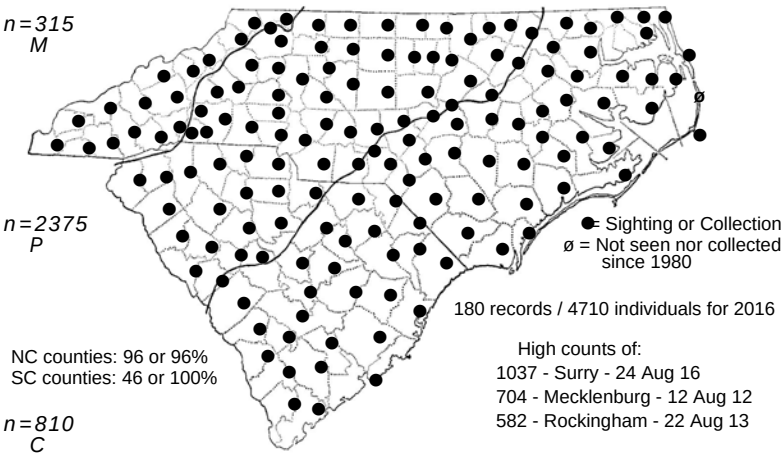
FOOD AND NECTAR PLANTS: Various grasses are the foodplants; typically grasses growing in woodlands as opposed to fields and edges. As with other satyrs, it seldom nectars; feeds on sap, dung, moisture, etc.

COMMENTS: The satyrs in NC have a distinctive bouncing, up and down, flight that separates them from other butterflies. The Gemmed is often found in the same habitats as the Carolina Satyr, but it tends to be less numerous in wetland forests than the Carolina Satyr. The Gemmed is slightly lighter or warmer brown and very slightly larger. However, the observer must always follow them and wait for them to perch on the ground or on leaves to clinch the identification.

The Butterflies of America website uses "Gemmed-Satyr" in the name for nearly all of the Cyllopsis satyr species, such as Canyonland Gemmed-Satyr and Eastern Gemmed-Satyr, but oddly still retaining "Nabokov's Satyr"! However, our NC website will refrain from using Eastern Gemmed-Satyr for now, as essentially all reference books and the NatureServe Explorer avoid the use of "Gemmed-Satyr", and continue to call this species as the Gemmed Satyr.

Carolina Satyr *Hermeuptychia sosybius*





Earliest date: Wake 17 Mar 2016
Latest date: Carteret 20 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Throughout the Coastal Plain and Piedmont, and nearly throughout the mountains. However, in the last province, limited mostly to the lower elevations, primarily in the southern half of the mountains. Thus, the range in NC is practically the same as that of the Gemmed Satyr.

ABUNDANCE: Common to often abundant in the Coastal Plain and Piedmont, except fairly common to locally common in the lower mountains. This is one of the most often seen butterflies in the dappled shade of hardwood forests and along forest trails. Seems to have greatly increased across the state in recent years, perhaps owing to their usage of the ever-increasing exotic Japanese stilt grass for a foodplant. Note that the peak daily totals, all from NABA butterfly counts, have occurred in the past three years.

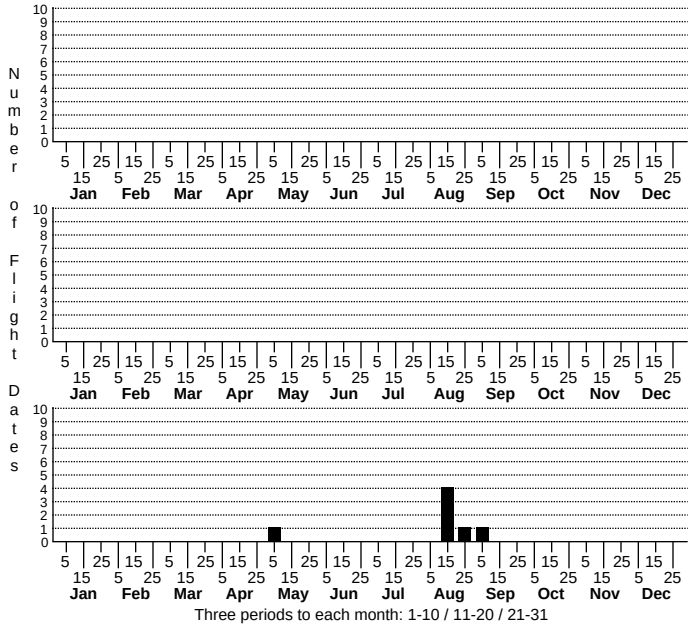
FLIGHT PERIOD: Apparently three broods. Flight periods downstate are from very late March to early June, early June to early August, and early August to late October. In the mountains the gaps are in mid-June and in late August or early September, about two weeks later than downstate. As with the Gemmed Satyr, the middle brood is the least common.

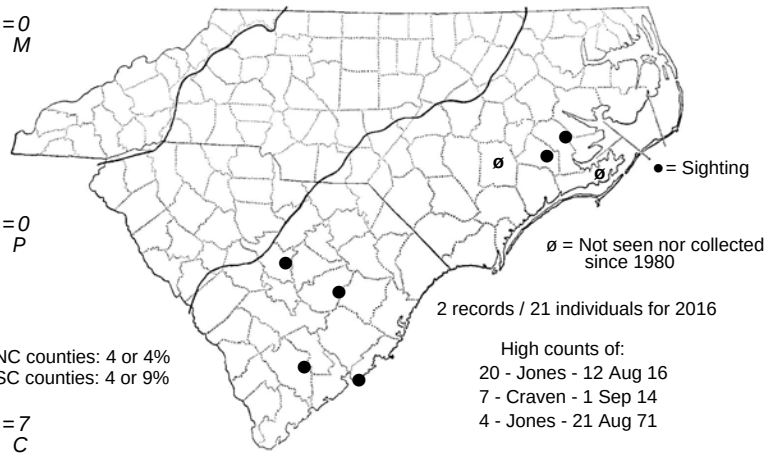
HABITAT: Widespread in hardwood or mixed forests, especially wetter ones that are somewhat open or have trails. As with the Gemmed, the Carolina favors woods with considerable grasses, such as those along trails and wooded edges. It also can be found in flatwoods, open swamps, and many other forests and edges. It is common in sewerline clearings through bottomlands.

FOOD AND NECTAR PLANTS: Various grasses are the foodplants, especially those growing in shade. The species now uses the invasive, exotic Japanese stilt grass (Microstegium vimineum) as a foodplant, perhaps exclusively so in some areas. Although I have seen a few of them nectaring, the species generally feeds at carrion, sap, fruits, moisture, etc.

COMMENTS: Both the Carolina Satyr and the Gemmed Satyr have a bouncing flight near the forest floor, especially along trails, sewerline clearings, and edges of dirt roads. Their flight seldom takes them more than a foot off the ground. In flight the Carolina Satyr is a little bit darker brown and smaller than the Gemmed Satyr and is about 5 times more common than the Gemmed in most areas.

Intricate Satyr *Hermeuptychia intricata*





Earliest date: Carteret 2 May 1971
Latest date: Craven 1 Sep 2014

Status NC	Status US	Rank NC	Rank Global
W	-	SU	G?

DISTRIBUTION: This species was described only in early 2014, with specimen review and determinations made only in March 2014. So far it is known in the state only from specimens in the southeastern part of the state's Coastal Plain, north to Jones and Carteret counties, as well as from several photos in 2016 from this area. As it occurs farther southward to FL, it certainly must occur in counties between these and the SC border, if not farther inland. No records are known from the Piedmont as yet (based on recent specimen determinations). Currently known to range in the Coastal Plain from eastern NC to FL, and westward to eastern TX. [NOTE: The species is essentially identical to the Carolina Satyr visually, and thus is a cryptic species that had been overlooked.]

ABUNDANCE: Andy Warren at the University of FL McGuire Center has found that the great majority of the specimens of the genus Hermeuptychia in that collection are Carolina Satyrs, with Intricate Satyrs being relatively scarce. The NC abundance is very poorly known, as this is a recently described species, based on specimen work. Four Intricate Satyrs were collected at a single site in Jones County in 1971, and thus it might not be rare, at least locally, in NC. At this same location, in August 2016, Jeff Pippen, Jim Brock, Steve Moore, and I saw about 20 individuals, with several photographed by Pippen for confirmation (by Andy Warren). Plus, poorly worked Duplin County also has two collection records; as this county has few noteworthy or rare habitats, this also suggests that Intricate Satyrs are probably not rare in lower NC, but not nearly as common as is the Carolina Satyr. [Note that when these collections were made, in the 1970's, the collectors had no idea there was a second species involved; thus, the ratio of Carolina Satyrs to Intricate Satyrs in the FL collection from NC ought to represent the actual ratio in life, at least if they occur in similar habitats.]

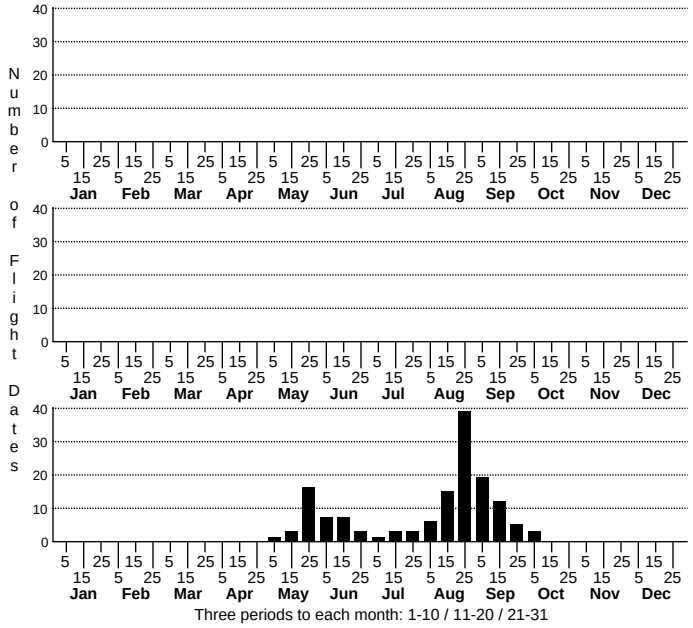
FLIGHT PERIOD: Completely unknown, but likely several broods from March into October, similar to that of the Carolina Satyr. The specimen and photo records for NC are from May 2 and from August 12-21, though certainly this isn't meaningful in terms of the spread of flight dates, other than clearly representing two broods (if not more). There is a sight report for September 1, 2014, though currently sight reports must be considered as unconfirmed.

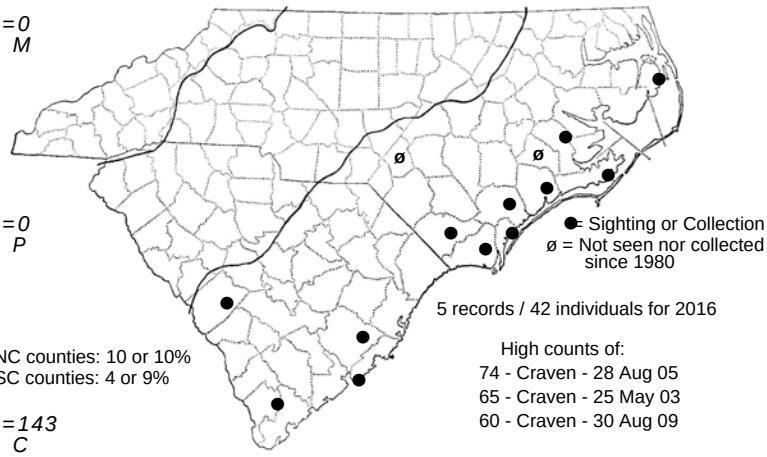
HABITAT: Presumably mesic to moist hardwood or mixed forests, similar to that of Carolina Satyrs. The site in Jones County is known to be quite rich and on high pH soils, but there are too few records to suggest there is a relationship with high pH soils.

FOOD AND NECTAR PLANTS: Almost certainly grasses, but not yet reported. Nothing is yet reported on nectar plants or amount of nectaring, though the Carolina Satyr only infrequenty is found at flowers.

COMMENTS: The paper describing the Intricate Satyr, and a second new satyr from TX into MX, only came out in early 2014 (Zookeys [379] 43-91), by Cong and Grishin. According to the abstract, "The two species [Intricate and Carolina] differ strongly in both male and female genitalia" as well as in barcode sequencing of mitochondrial DNA. Warren has found that male specimens of Intricate Satyr in the FL collection (based on genitalia) have the upper wing surface evenly colored brown, if not slightly darker toward the margin than toward the base. In general, Carolina Satyr specimens tend to be slightly paler around and near the margins and slightly darker at the bases. The photos of males taken by Pippen at the Jones County seem to corroborate this, with evenly colored brown scaling. Warren states that female Intricates show a "ghost" of the ventral bands as seen from the dorsal side; this can be seen on specimens, but no one has ever reported or photographed these "ghost" bands on live individuals. Thus, it is not clear if (live) female Intricates can be definitely identified by photographs or by sight. Thankfully, Carolina Satyrs and Intricate Satyrs, at least males, do often spread their wings open (as opposed to all other local satyr species); thus, people will be able to obtain photos of satyrs in the field to attempt to identify them.

Georgia Satyr *Neonympha areolatus*





5 records / 42 individuals for 2016

High counts of:
74 - Craven - 28 Aug 05
65 - Craven - 25 May 03
60 - Craven - 30 Aug 09

NC counties: 10 or 10%
SC counties: 4 or 9%

Earliest date: Pender 2 May 1995
Latest date: Carteret 5 Oct 1993

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G3G4

Synonym: *Neonympha areolata*

DISTRIBUTION: A paper by Ron Gatrelle (1999) split off a new species -- Helicta Satyr (N. helicta) -- from the Georgia Satyr (N. areolatus). The "new" Georgia Satyr thus has a more restricted distribution than the former Georgia Satyr (broad sense). Based on habitat and field marks in Gatrelle (1999), photos on websites of Jeff Pippen and Will Cook, and information on NatureServe Explorer, the "new" Georgia Satyr ranges north only to NC. It occurs north at least to Croatan National Forest (Craven, Jones, and Carteret counties), and is mainly limited to coastal counties, with some records from the Sandhills region. Roughly 8-9 specimens (in the Carnegie Museum) taken in mainland Dare County appear to be Georgia Satyrs, based mainly on the shape of the hind wing eyespots. As a result, sight reports from that county have now been moved from Helicta Satyr to Georgia Satyr.

ABUNDANCE: Quite local; mostly uncommon, but locally very common in some Coastal Plain savannas. Poorly known along the inner side of Pamlico and Croatan sounds, where it is rare to locally uncommon and probably declining. The species has lost much or most of its former habitat in the Coastal Plain, and it is clearly declining, being found now mainly in protected savanna/flatwood sites.

FLIGHT PERIOD: Two broods; early May to late June, and sparingly to mid-July, and a larger brood from late July to early October. Peak abundance in late May, and in late August and early September.

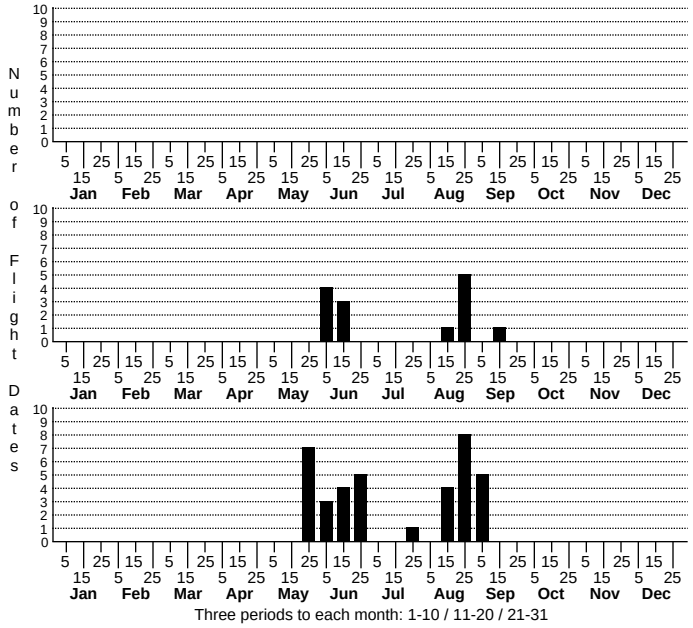
HABITAT: This is the "savanna" butterfly in NC. It is usually associated with open pinewood canopy with a dense herbaceous layer. It strongly favors dense and diverse herbaceous vegetation of savannas, but also can be common in powerline clearings that "mimic" a savanna. Also apparently occurs in coastal or near-coastal wet grasslands and oligohaline marshes (near the shorelines of Pamlico Sound and Croatan Sound). It is seldom if ever found in uplands or near hardwoods.

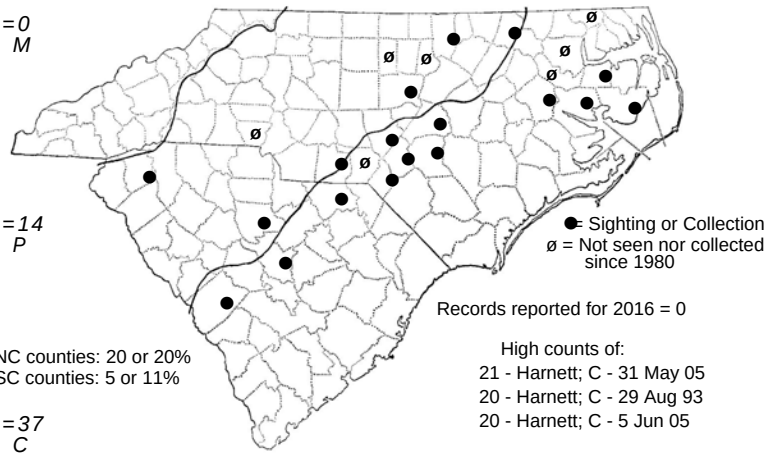
FOOD AND NECTAR PLANTS: Sedges are the foodplants. The adults seldom nectar, but feed on the usual satyr "foods" -- carrion, sap, fruits, moisture.

COMMENTS: This is one of the most colonial butterflies in NC, and because it favors high-quality savannas, it is also more seriously threatened by habitat destruction than most butterflies. An observer can often see several dozens of Georgia Satyrs bouncing slowly over savanna herbs, but yet once the savanna has been left, it is difficult to find them anywhere else on a day's outing. This is probably the slowest, and easiest to catch, butterfly in NC.

We are still quite uncertain about the ranges of the "new" Georgia Satyr and Helicta Satyr. However, it seems certain that most or all individuals in savannas from the Croatan National Forest southward through Brunswick County are Georgia Satyr (strict sense), as photos taken by Pippen and Cook from Croatan National Forest and Holly Shelter Game Land show the field marks as described in the Gatrelle paper. North of the longleaf pine belt, it appears to be present to an unknown extent close to Pamlico and Croatan sounds, but how far inward onto the Pamlimarle Peninsula it occurs is not known, as most of the records on that peninsula are sightings prior to the split of these species. See the Helicta Satyr page for details on field marks.

Helicta Satyr *Neonympha helicta*





Records reported for 2016 = 0

NC counties: 20 or 20%
SC counties: 5 or 11%

High counts of:
21 - Harnett; C - 31 May 05
20 - Harnett; C - 29 Aug 93
20 - Harnett; C - 5 Jun 05

Earliest date: Pitt 21 May 1995
Latest date: Durham 12 Sep 1967

Status NC	Status US	Rank NC	Rank Global
SR	-	S1?	G3G4

Synonym: *Neonympha septentrionalis, Neonympha areolata septentrionalis*

DISTRIBUTION: Apparently the northern half, and the inner portion, of the Coastal Plain, as well as (at least formerly) the lower Piedmont. The Neonympha species found in the southeastern Coastal Plain is believed to be solely N. areolatus (strict sense). As N. helicta is a fairly recently described species (1999), split off from N. areolatus [Georgia Satyr], there is much to be learned about the overlap of the two species, though it is clear that, at least in NC, Helicta Satyr is the more inland species and likely the only one to occur in the Piedmont. Gatrelle (1999) mentions that both species have been taken in Hoke County, in the Sandhills region (and in Aiken County, SC, also in the Sandhills region). Helicta ranges north to VA and NJ; Georgia (strict sense) is believed to be absent north of NC. How far east the species ranges toward the coast is uncertain; records from the Pamlimarle Peninsula are mainly sightings prior to the split.

ABUNDANCE: Strongly declining in the state. Formerly rare to very locally uncommon in the Sandhills; now quite rare there. Currently very rare in the upper Coastal Plain, though some numbers have recently been found in a powerline clearing in the Coastal Plain portion of Harnett County. Apparently also now casual to rare in the northern Coastal Plain, and casual to perhaps absent now in the Piedmont.

FLIGHT PERIOD: Two broods, probably similar to those of the Georgia Satyr, though apparently finishing earlier in fall (and not into October). Flights are from late May to late June, and mid-August to mid-September.

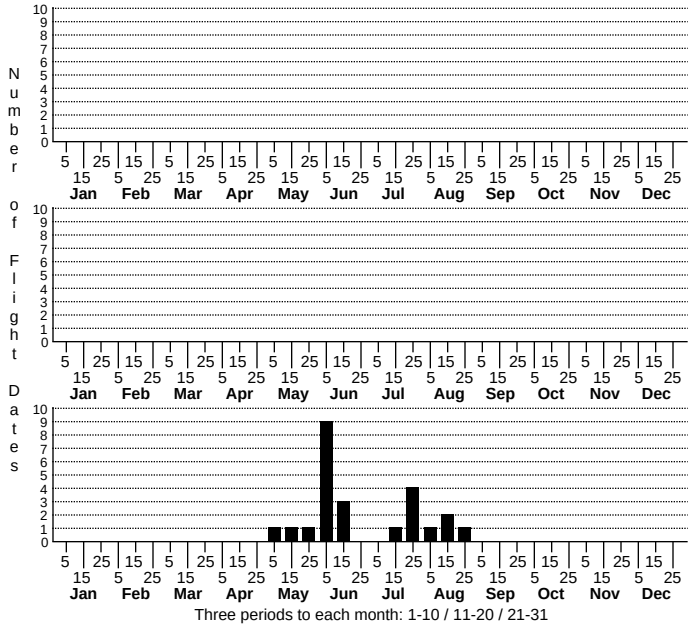
HABITAT: In SC, Gatrelle (1999) has found it "only in dry, upland sandhill". However, experience with "Georgia Satyrs" in the NC Sandhills and lower Piedmont by Steve Hall and myself indicate that Helicta (presumably) occurs in damp to wet "sedgy" areas such as low powerline clearings, frequently-burned pocosin or beaver pond margins, and low road shoulders. However, sites in Durham and Granville counties were associated with glade-like edges and openings on high pH soils. Much more information is needed on habitats in the northern Coastal Plain and elsewhere; those west of Pamlico Sound, of whatever species, have tended to be in wet grassy areas, ditches, and marsh edges.

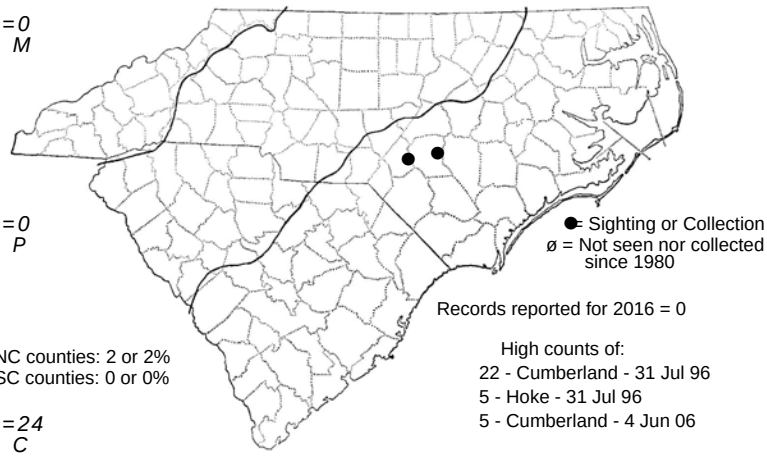
FOOD AND NECTAR PLANTS: The foodplants are sedges, though Gatrelle (1999) does not mention such foodplants. The species probably does not nectar often, but likely takes moisture and minerals at mud or dirt.

COMMENTS: Field marks mentioned in Gatrelle (1999) separating Helicta from Georgia include: 1) Helicta averages slightly larger in size; 2) Helicta has a swifter and higher above ground flight than Georgia, which normally bobs slowly among savanna plants; 3) Helicta eye spots on the ventral hind wing are more elliptical in shape than the narrower, more elongated eye spots of Georgia; 4) Helicta has only tiny white dots inside the eye spots, whereas Georgia usually has one or two yellow bars or dots, as well as white dots, inside at least one or two eye spots; and 5) the two orange bands that encircle the eye spots in Helicta tend to remain separated, or meet only at the costal margin, whereas in Georgia these two bands join before the costal margin to form a closed orange loop. [However, essentially all photos of the complex taken in NC show a closed orange band at the top of the eyespots, a supposed mark for true Georgia.]

Sadly, there have been very few reports in the last decade for this species, or at least for any "inland Georgia Satyrs", outside of a single powerline clearing in Harnett County. Hall has found the species at several impact areas in Fort Bragg, but these areas are now off-limits to all biologists. There have been no reports at all from the Piedmont since about 1995, and it is practically now of historical occurrence in that province. Damp grasslands/glades within its range are now becoming fire suppressed, are being converted to agriculture or silviculture, or are being developed. For these reasons, the NC Natural Heritage Program is now tracking the species as Significantly Rare.

Mitchell's Satyr *Neonympha mitchellii*





Records reported for 2016 = 0

NC counties: 2 or 2%
SC counties: 0 or 0%

High counts of:
22 - Cumberland - 31 Jul 96
5 - Hoke - 31 Jul 96
5 - Cumberland - 4 Jun 06

Earliest date: Cumberland 5 May ?
Latest date: Cumberland 21 Aug 1984

Status NC	Status US	Rank NC	Rank Global
SR	E	S1	G2

Other Name: Our subspecies [francisci] is called the St. Francis' Satyr.

DISTRIBUTION: Restricted in NC to a small area of the Sandhills, so far found only in Cumberland and Hoke counties. This area is a far southerly disjunction from the main range -- NJ (formerly) west to MI and IN. In fact, this NC population is considered to be a disjunct subspecies, called "St. Francis' Satyr" (Neonympha mitchellii francisci). NOTE: In the past few years, the species has also been conclusively found in southwestern VA, AL, and MS.

ABUNDANCE: Rare. This is one of the rarest butterfly species in the eastern United States, with the NC population first discovered only in the early and mid-1980's. Unfortunately, most or all areas where records are known are now off-limits to visitors owing to liability concerns; thus, new records have been scarce to absent in recent years, and likely will be also in the near future.

FLIGHT PERIOD: Two broods in NC; late May (very rarely from early May) to late June, and mid- or late July to late August.

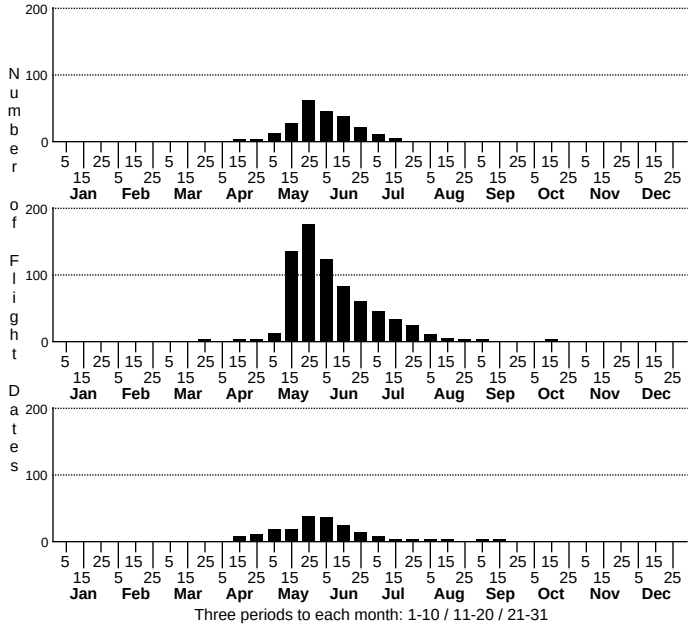
HABITAT: This species is extremely habitat restricted. In NC, it is found mainly at old beaver ponds that have grown up to a dense sedge meadow/bog. It is also found in bomb craters that have much sedge. It typically is found in semi-shaded places, but these semi-shaded places are probably inferior habitat compared with open "sedgy" areas (which are extremely rare), the favored habitat by the species in the primary portion of the range (OH to southern MI).

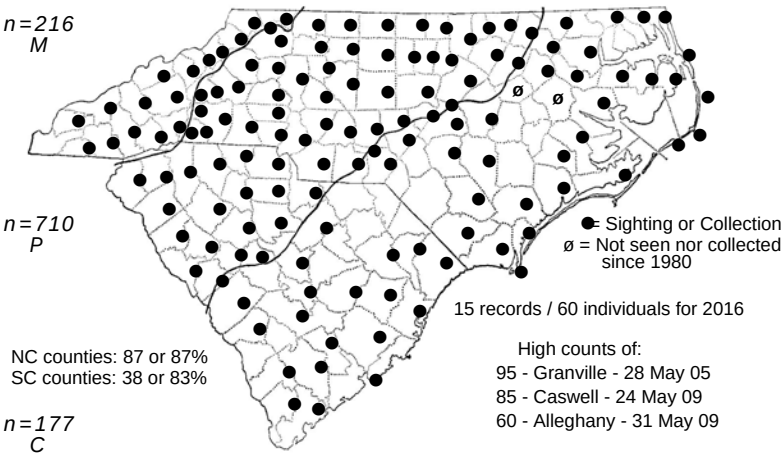
FOOD AND NECTAR PLANTS: Foodplants are sedges, believed to be Carex mitchelliana in NC, but other sedges might be used (based on a study by Steve Hall). It feeds like other satyrs on carrion, fruit, sap, etc.

COMMENTS: This species is so rare in its range that it has been devastated by habitat loss and by over-collection. Even though it is Federally Endangered, including the NC subspecies, unscrupulous collecting is, possibly, still a problem. Because of potential collecting pressure, even in NC, exact locations must be kept as secret as possible. Like the Georgia Satyr, it is a very slow flier that is easily netted. Another threat is that its "sedgy" habitat, which is quite transitory, can become overgrown with shrubs and trees unless fire, continued beaver activity, or cutting of shrubs and saplings by man's intervention keeps woody vegetation retarded.

Because of the recent findings of the species in VA, AL, and MS, there is a chance the species might be found in western NC some day, in grassy, open to partly-shaded wetlands, such as wet meadows (cow pastures).

Little Wood-Satyr *Megisto cymela*





15 records / 60 individuals for 2016

High counts of:
95 - Granville - 28 May 05
85 - Caswell - 24 May 09
60 - Alleghany - 31 May 09

NC counties: 87 or 87%
SC counties: 38 or 83%

Earliest date: Orange 23 Mar 2012
Latest date: Durham 11 Oct 1993

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; probably occurs in all NC counties, though a number of counties in the Coastal Plain lack records.

ABUNDANCE: Fairly common to locally common in the Piedmont and mountains, but generally uncommon to only locally fairly common in the Coastal Plain. It is less common in NC than in the Northeastern and Midwestern states. This northern abundance shows a bit here, as the species is most numerous in NC in northern Piedmont and northern mountain counties. Note that the three highest state one-day counts are all from counties bordering VA.

FLIGHT PERIOD: Seemingly one long flight period, but a small brood may be present in late summer. Present from mid-April to very early September, very rarely in October; the great majority of records are from mid-May to late July. However, peak counts are in the early part of the flight period, in late May and early June. A number of the reports after July might represent misidentified Carolina Satyrs, and most experienced butterfliers seldom see Little Wood-Satyrs after early or mid-July. Photos from August into October would be most appreciated for documentation.

HABITAT: This satyr is typically found along woodland borders or very open woods. It also occurs in old fields, clearcuts, upland "glades", powerline clearings, and other woodland openings. It favors upland sites as opposed to wetlands; it also appears to be more common over circumneutral soils in NC, a trait noted by Opler and others.

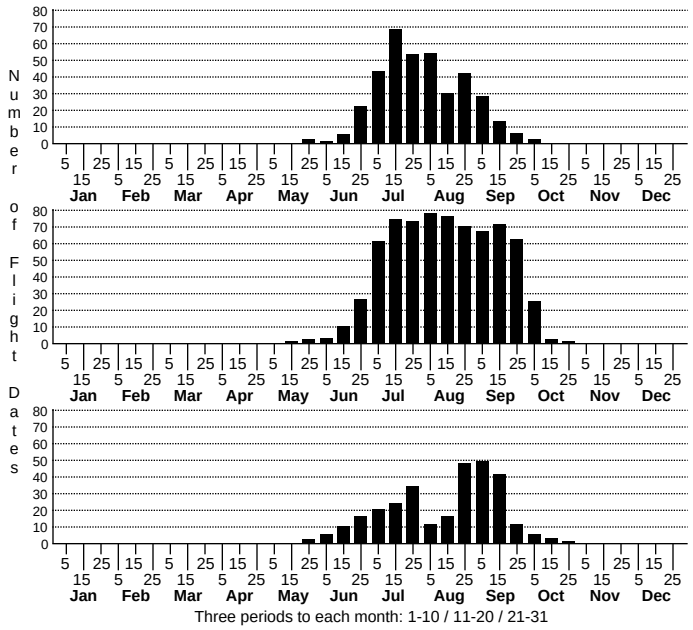
FOOD AND NECTAR PLANTS: The foodplants are grasses, probably those of old fields and edges. As with other satyrs, adults seldom nectar, but feed on carrion, decaying fruit, sap, and moisture.

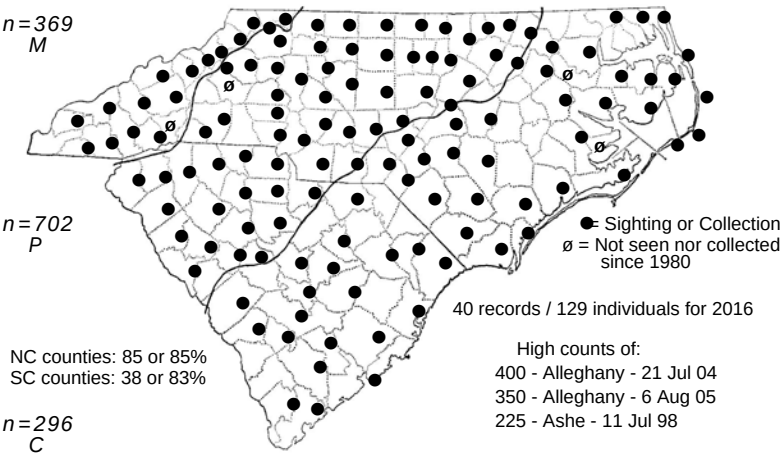
COMMENTS: I frequently see this species bouncing along wooded edges, weaving around saplings and working briefly into the shade of the woodland edge. Little Wood-Satyrs can be identified on the wing; it is 1 1/2 - 2 times the size of the other four satyrs.

A number of references have indicated that there is a second peak in the flight in July, and flight charts in more northern states do show a clear second peak. Allen (1997) notes a second peak in WV but considers this part of a single brood, just delayed emergence and flight by some of the population. H. Pavulaan (1996 and pers. comm.) considers these as Type I and Type II, which may represent sibling species. Whatever the case, eggs laid by the females in May and June (Type I) do not produce Type II offspring, so there are not two broods. Confusing the matter is that Type I and Type II individuals range across all of VA. The Type II brood, though occurring in NC, is apparently scarce, barely showing on the flight chart; and it seems to be limited (as presently known) to the northern half of the Piedmont. Much more data are needed in NC, such as habitat, flight behavior, coloration, and amount of wear when seen, for such wood-satyrs seen in late June, July, and August. Another puzzling feature of this species, if indeed only one is present in the East, is that its flight in NC begins at practically the same time as it does in NJ (Gochfeld and Burger 1997) and NY (Glassberg 1999)! For essentially all other butterfly species, the flight of a given species begins two to four weeks earlier in central NC than it does in central NY. Might there be two species involved here?

The "Viola's Wood-Satyr", considered by Opler and Warren (2004), NatureServe, and Butterflies of America (2009) to be a subspecies of Little Wood-Satyr, was tentatively considered to occur along the southeastern coast of NC in the 13th Approximation. However, specimens and photos from this region, plus observations in 2006, suggest that these butterflies all belong to the nominate subspecies of Little Wood-Satyr. Thus, "Viola's", whether a full species or a subspecies, is only known as far north as coastal SC.

Common Wood-Nymph *Cercyonis pegala*





Earliest date: Forsyth 17 May 1998
Latest date: Forsyth 26 Oct 1999

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, probably occurring in all NC counties.

ABUNDANCE: Locally common to very common in the northern mountains, but mostly uncommon (to locally fairly common) elsewhere in the state. Can be numerous on the Outer Banks. Seems quite scarce in many counties, despite this being considered a common butterfly in the eastern United States.

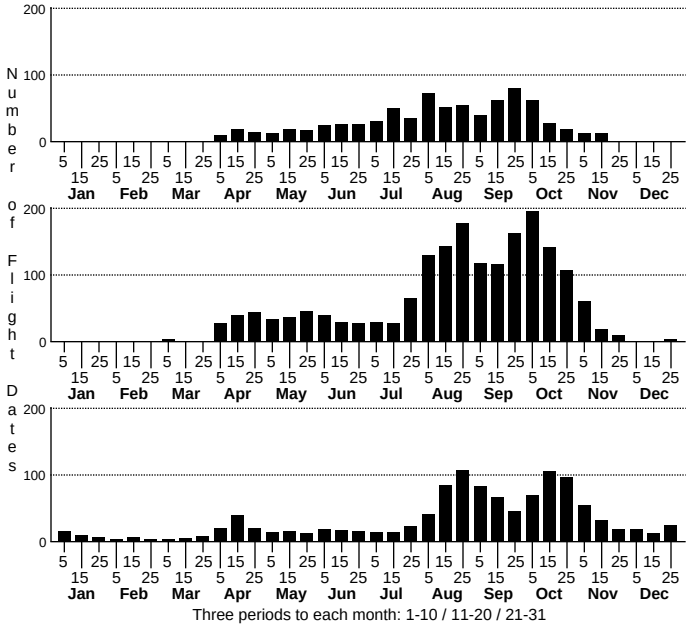
FLIGHT PERIOD: A single, long brood; continuous presence in NC from the end of May or early June to late October. However, many individuals apparently aestivate for awhile in midsummer, especially in August when a clear drop in numbers is evident. Evidence of the "single-broodedness" of the species can be seen in fall, when individuals are quite faded, and the ochre forewing band is often worn to a white color. This is one of the latest of the common butterflies to appear each year, usually not being numerous until late June.

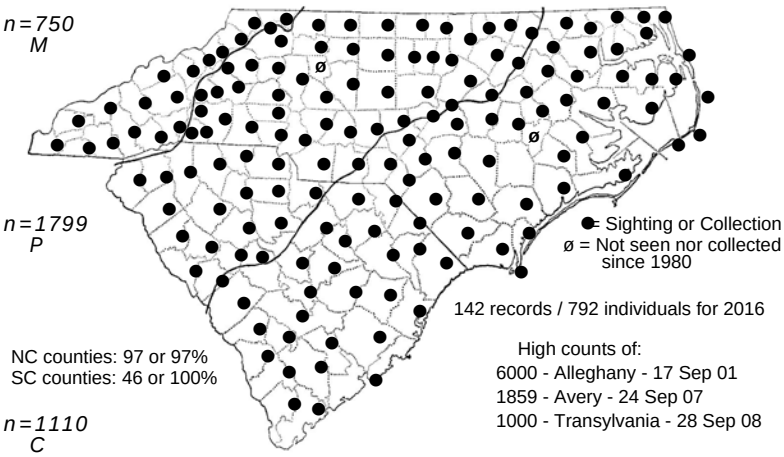
HABITAT: Quite varied; it occurs in more open areas than most of the satyrs, ranging from dunes, savannas, wooded edges, old fields, powerline clearings, and many other semi-open areas. It is not usually seen in woodland interiors, nor is it typical of cultivated fields or gardens. In the mountains, the species can be quite numerous in meadows, where the adults are not in evidence until flushed nearly underfoot.

FOOD AND NECTAR PLANTS: Foodplants are grasses. The species seldom nectars; adult foods are those typical of satyrs, pearly-eyes, etc. -- sap, animal droppings, moisture, etc.

COMMENTS: This is a frequently seen butterfly near maritime thickets, brackish marsh edges, savannas, and other semi-open places in the lower Coastal Plain. They range well into the mountains, where seen over 4000 feet in elevation. Some meadows in Ashe and Alleghany counties teem with this species, and a remarkable one-day count of 400 was made in the latter county in 2004.

Monarch *Danaus plexippus*





142 records / 792 individuals for 2016

High counts of:
6000 - Alleghany - 17 Sep 01
1859 - Avery - 24 Sep 07
1000 - Transylvania - 28 Sep 08

NC counties: 97 or 97%
SC counties: 46 or 100%

Date Spread: New Hanover on 1 Jan 2004 to Durham on 31 Dec 1999

Status NC	Status US	Rank NC	Rank Global
-	FSR	S4	G4

DISTRIBUTION: Statewide, occurring at some time during the year in all counties. As this is a highly migratory species, it is likely absent from some of these counties during portions of the flight period.

ABUNDANCE: Varied, depending on the time of the year. The species has a noticeable fall migration, as individuals are seen flying in a southwesterly direction, if the winds will allow them to do so. From August to October, they are common to at times very common or abundant in the mountains and along the coast, and often fairly common to common elsewhere. At other times (mainly from mid-April through July) it tends to be uncommon. At any rate, it is generally not commonly seen in the state until August. In 2004, the species seemed to have "crashed" in the eastern US, and it was shockingly scarce, with some veteran observers nearly missing the species completely. Another major crash in the eastern US took place in 2013; there were very few counts of more than five individuals in a day in NC, even in the mountains.

FLIGHT PERIOD: Several broods across the state, but the species has a complex life history. Generally found from early April, rarely early March, through most of November, and sparingly into early January. Many of the individuals seen in September and October are actively migrating toward their wintering grounds (in Mexico?). Individuals seen in spring are those that have overwintered much farther to the south, such as Mexico and perhaps near the Gulf coast or FL. These Monarchs, on their northward migration, mate and lay eggs, producing a summer (non-migratory) brood, according to most references. This progeny supposedly produces a brood by the fall season, whereby the adults migrates south.

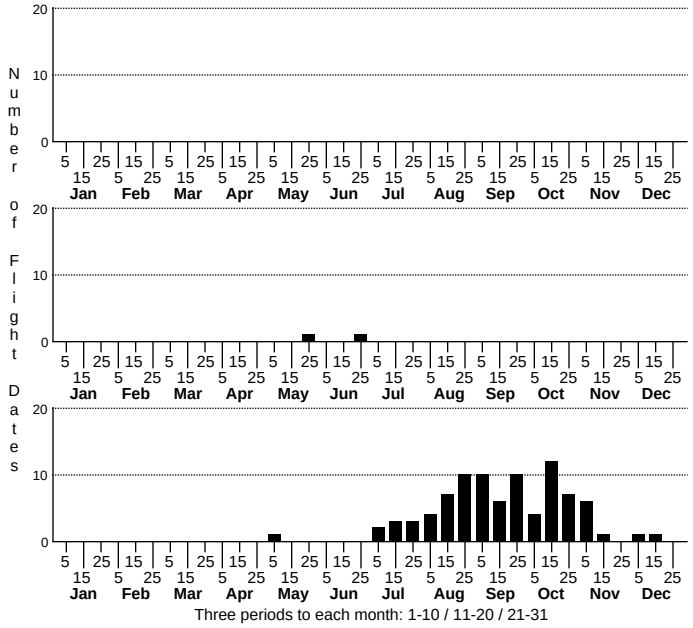
HABITAT: In migration, Monarchs can be seen in (or more correctly, over) any habitat, such as mountain ridges, coastlines, fields, gardens, etc. When not in migration, they are usually found near milkweeds -- woodland borders, old fields, savannas, powerline clearings, and other places where the genus (Asclepias) grows.

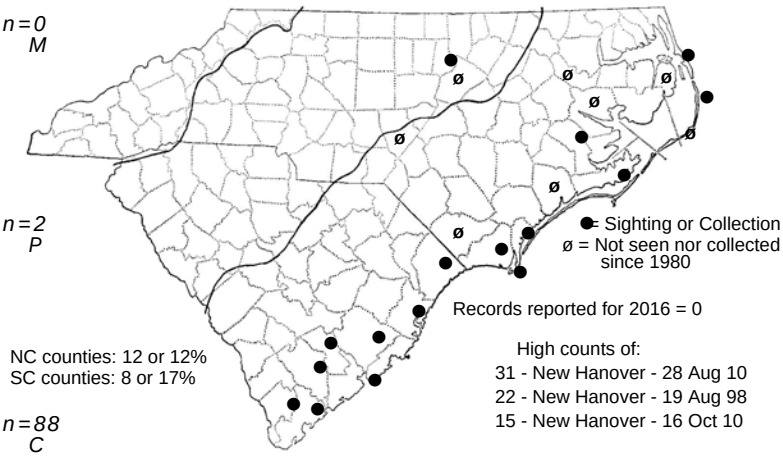
FOOD AND NECTAR PLANTS: The foodplants are strictly milkweeds and other species in the milkweed family (Cynanchum and Matelea), especially butterfly-weed (Asclepias tuberosa) and common milkweed (A. syriaca). It commonly visits flowers. Adults nectar on milkweeds, especially, but also on asters and many other species.

COMMENTS: This is the most celebrated butterfly in North America because of its spectacular migration, as well as its distastefulness to predators (for which it is mimicked by the Viceroy). However, I suspect that most North Carolinians would probably consider the Eastern Tiger Swallowtail as the butterfly that they see or recognize most often, as the Monarch is often not seen by most people except during the fall.

There has been considerable concern in recent winters about severe weather and logging causing mass deaths of millions of Monarchs at their main wintering site high in the mountains of central Mexico. It is almost certain that the scarcity of Monarchs as seen in the East in 2004 and in 2013 can be traced to their winter mortality. Sure, butterfly populations of most species, especially migratory ones, oscillate yearly, but Monarchs are clearly on the decline in the 21st Century. Loss of field habitats, with the foodplants such as common milkweed, are also a problem in the US, particularly in the central US, where pesticide and herbicide use on crops is impacting Monarchs. In 2014, several conservation organizations petitioned the US Fish and Wildlife Service to list the Monarch as a Threatened species. As a result, the Service has issued a Status Review of the species, in December 2014, soliciting information from the public on population trends, threats, and other factors that document the decline and the reasons for the decline.

Queen *Danaus gilippus*





Earliest date: Moore; C 4 May 1908
Latest date: Carteret 20 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	SZB	G5

DISTRIBUTION: Though there are scattered records over the Coastal Plain and eastern Piedmont, it is primarily seen along and near the southern coast. The record from Durham County likely relates to an escaped individual, as the species is kept at butterfly houses and as several observers have actually seen free-flying Queens outside the houses on the grounds of the N.C. Museum of Life and Science. However, the Wake County record came in 1935, long before butterfy houses.

ABUNDANCE: This is primarily a post-breeding southern migrant into NC during the summer and fall. It is rare along the immediate coast, north to Carteret County, very rare farther north along the coast, and a casual stray inland to the Fall Line. It is also quite variable in numbers from year to year and is not reported annually. However, it can occasionally be numerous every few summers and falls at Fort Fisher (New Hanover).

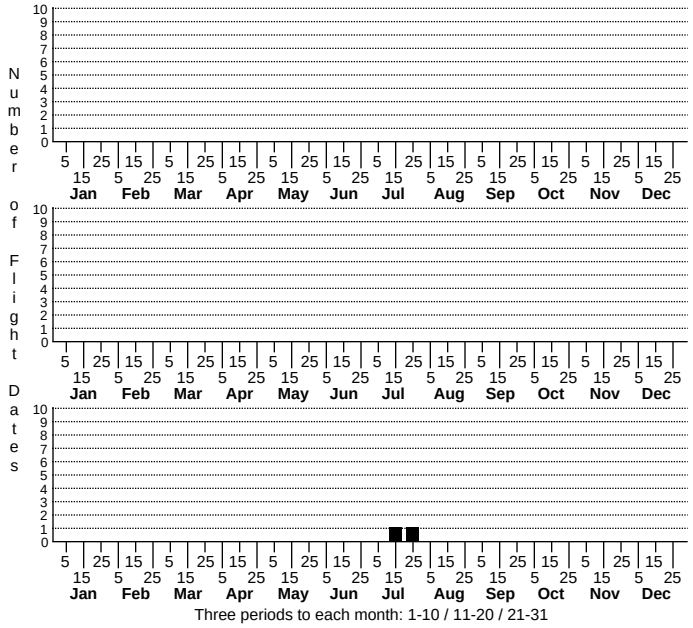
FLIGHT PERIOD: Essentially only in summer and fall, generally from mid-July to early or mid-November. Migrants (or possibly residents) in summer lay eggs and produce a fall brood of adults. Whether adults seen in July and August are mostly migrants from farther south, or eclosed along the NC coast, is not known, but some individuals in summer are fresh -- suggesting the latter.

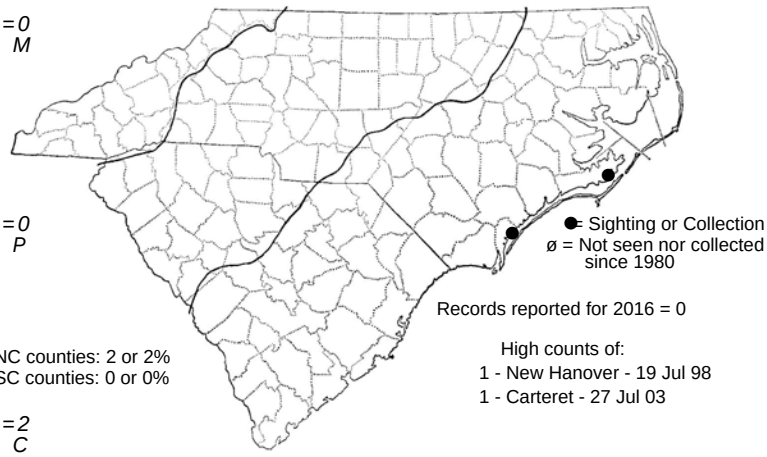
HABITAT: Mainly in coastal environments, such as tidal marshes and shrub thickets, and the margins of maritime forests. Probably also other open areas near the coast.

FOOD AND NECTAR PLANTS: Individuals in NC have been seen ovipositing on sand-vine (Cynanchum angustifolium), which grows in maritime thickets and marshes. Adults nectar on many flowers.

COMMENTS: This is the southern counterpart of the Monarch, at least in the Gulf states and the Southwest. Even though the species is thought to be mostly a migrant to NC, adults do lay eggs in the state, and some of the individuals seen in 1995 were extremely fresh and may have been raised in-state. In 1998, certainly some of the adults seen came from eggs laid in the state, perhaps by the first brood in July. Hurricane Floyd in September 1999 heavily damaged the Fort Fisher area, and no Queens could be found there in a check in October. However, one was reported at nearby Bald Head Island after the hurricane, so there is hope that the species still has a resident colony or two in the state. We had only one report in 2000, not surprisingly from Fort Fisher, but none in the state in 2001. A few were reported, from Fort Fisher and Shackleford Banks, in 2002; a count of eight individuals at Fort Fisher attests to the continued reproductive success at that site. However, the species has been nearly absent, or at least not reported, from the Fort Fisher area in 2003-04; the colony there might have died out again. Randy Newman had three records in late summer and fall 2005 from Fort Macon State Park in Carteret County, and there were a handful of reports from 2006-2008, all from the coast. There were a remarkable 15 reports in 2009, though most being at Fort Macon State Park. In 2010, there were eight reports, nearly all from Fort Fisher, where the state record count of 31 adults was made on August 28. There were only a few state reports in 2011 and in 2012, but 2013 was a fairly good year in the state, with a total of 11 reports. There was not a single report for the state in 2016.

Soldier *Danaus eresimus*





Earliest date: New Hanover 19 Jul 1998
Latest date: Carteret 27 Jul 2003

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: Two records, from Fort Fisher in New Hanover County and Fort Macon State Park in Carteret County. This is a subtropical and relatively non-migratory species, ranging northward only to central FL and central TX. There are no previously known East Coast records north of GA, and it is perhaps surprising that the Soldier has yet to be recorded from SC.

ABUNDANCE: Accidental.

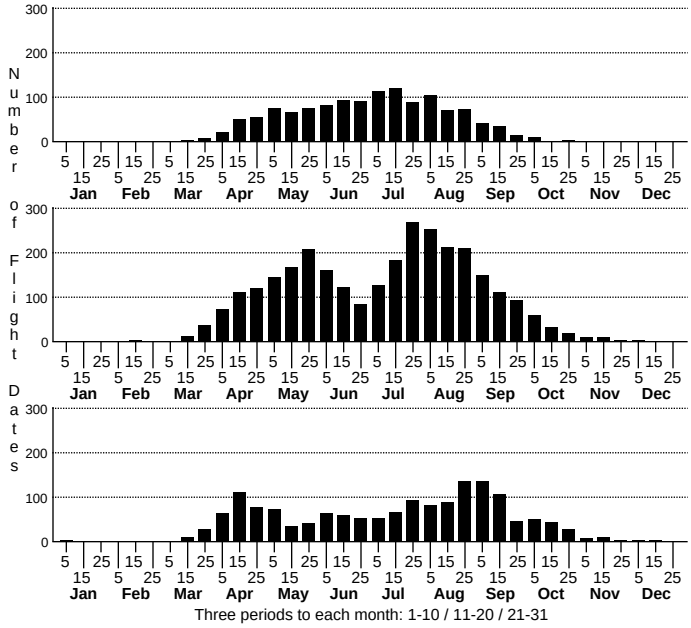
FLIGHT PERIOD: The only records are one photographed by Derb Carter at Fort Fisher on July 19, 1998, and by Randy Newman at Fort Macon on July 27, 2003.

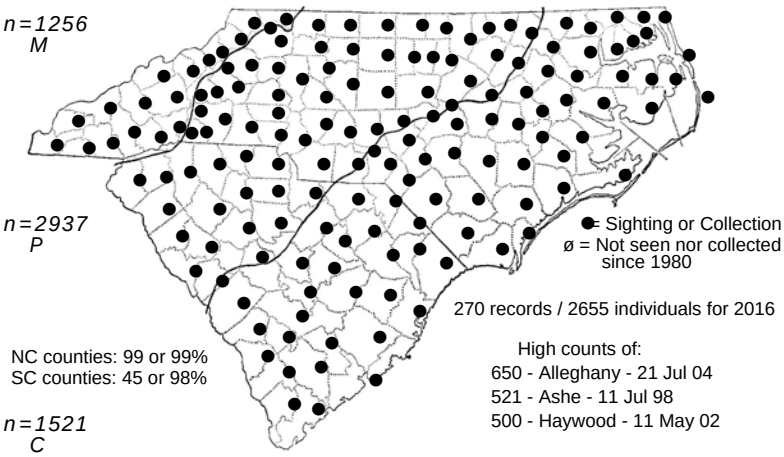
HABITAT: In FL and TX, the species is found in open fields, wooded borders, and other mostly disturbed sites. It is not normally associated with coastal habitats, but at Fort Fisher and at Fort Macon the butterflies were found along the edges of a maritime forest and brackish marsh.

FOOD AND NECTAR PLANTS: The foodplants are in the milkweed family. Adults nectar on a wide variety of flowers.

COMMENTS: This species is easily overlooked as a Queen when perched, and as a Monarch when flying. These two related species are quite migratory, as opposed to the rather sedentary Soldier. The two NC records of Soldier are eerily similar. Both of the sightings took place in the exact areas where Queens had been seen in previous years. In fact, Queens were reported at each site a few days earlier or later! One can speculate that the Soldiers arrived with groups of Queens. Interestingly, another very rare stray (a White Peacock) was found at Fort Fisher on the same day as the first Soldier, implying a northward exodus of butterflies from FL, which was undergoing severe drought and wildfires during July 1998.

Silver-spotted Skipper *Epargyreus clarus*





Earliest date: Forsyth 19 Feb 1998
Latest date: New Hanover 10 Jan 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; doubtless occurs in every county in the state, though no records yet for the Outer Banks of southern Dare and Hyde counties.

ABUNDANCE: Common to abundant; one of the most often encountered skippers anywhere in NC, from the high mountains to the coast. It is often abundant in the mountains, and is least common in the eastern counties, but it is certainly common in the latter region.

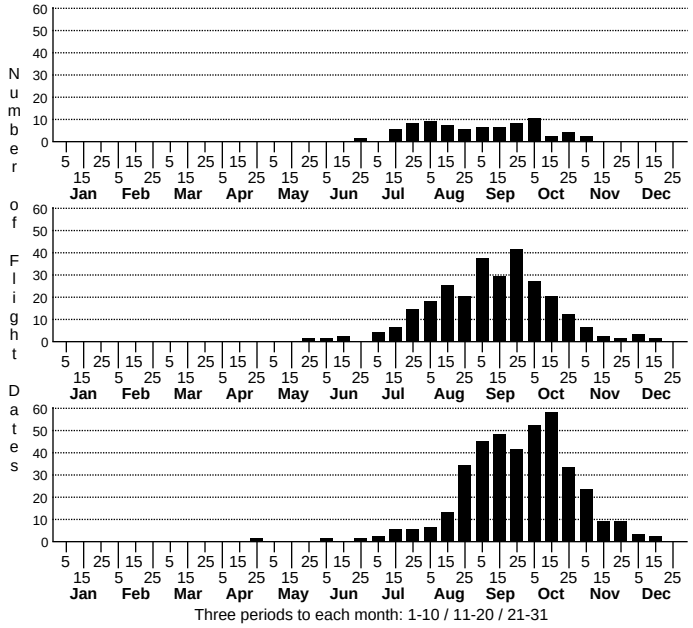
FLIGHT PERIOD: Two, to probably three, broods; however, downstate it is continuously on the wing from mid-March to late October, and sparingly into mid-November. The first flight in the mountains begins in early to mid-April, rarely late March.

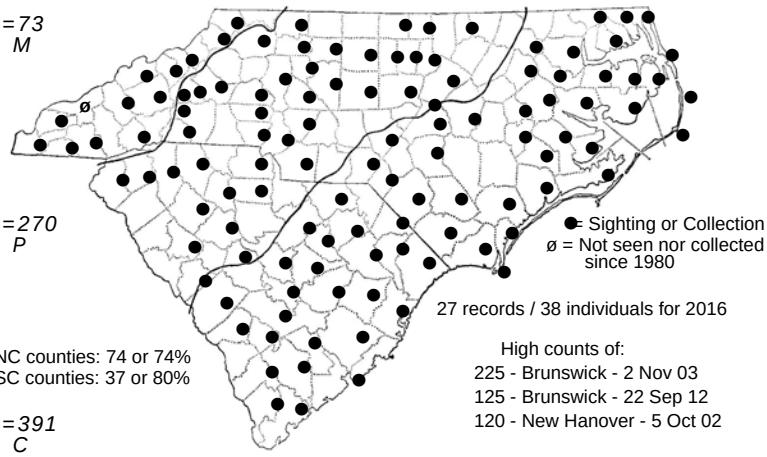
HABITAT: Extremely widespread, in nearly all "skipper" habitats, except for salt marshes. Found along woodland borders, clearings, old fields, savannas, coastal scrub, high mountain rocky areas, gardens, etc. It is quite common at sunlit spots and at wet spots along dirt roads through hardwood forests, especially in the mountains.

FOOD AND NECTAR PLANTS: The foodplants are legumes -- favoring woody species or larger herbaceous species -- such as locusts (Robinia), sennas (Cassia), wisteria (Wisteria), etc. The species nectars on a very wide variety of flowers, including butterfly-bush (Buddleia) in gardens. It often perches on damp ground to sip moisture.

COMMENTS: Along with the Pearl Crescent, this is probably the most widespread butterfly in the state, in terms of range from mountaintop to shore and in choice of habitats. It is one of the few NC skippers, along with the Long-tailed, that can be identified in flight at great distances, because of the conspicuous large white (not silver!) under wing patch.

Long-tailed Skipper *Urbanus proteus*





Earliest date: Carteret 28 Apr 2006
Latest date: New Hanover 20 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S4B	G5

DISTRIBUTION: Records scattered across all parts of the state, though it is primarily found in the Coastal Plain, and is quite scarce in the northwest.

ABUNDANCE: A post-breeding migrant from the south and thus quite erratic in numbers from one year to the next; may be fairly common to common in some years in fall near the southern coast, north to Carteret and Craven counties. However, in some years it can be quite uncommon there and elsewhere in the Coastal Plain. Uncommon through the remainder of the Coastal Plain and the eastern and southern Piedmont; rare to very rare in the southern mountains. Numbers are reduced in years following severe winters, and also during and after drought conditions farther to the south.

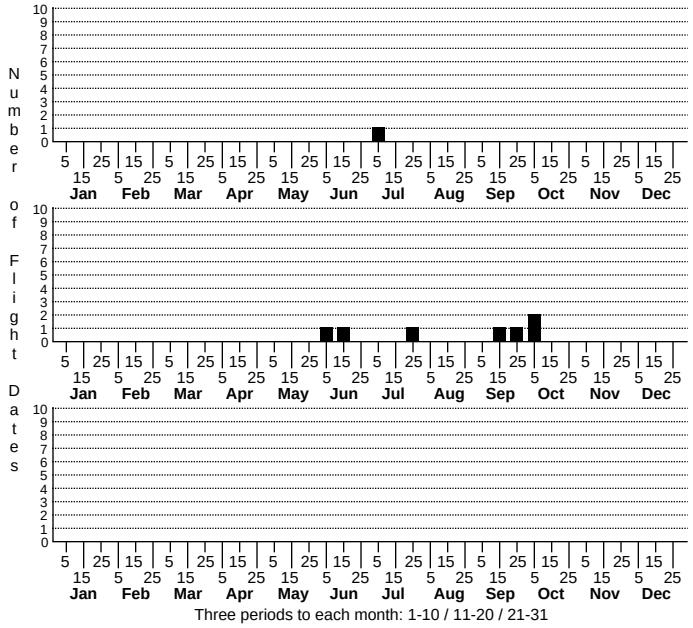
FLIGHT PERIOD: In NC, primarily from mid-July, rarely in June, to late November, and sparingly into mid-December. Peak numbers are in October, later than most skippers. Whether broods are actually produced in the latter half of the fall season is not clear from the flight charts or field experience.

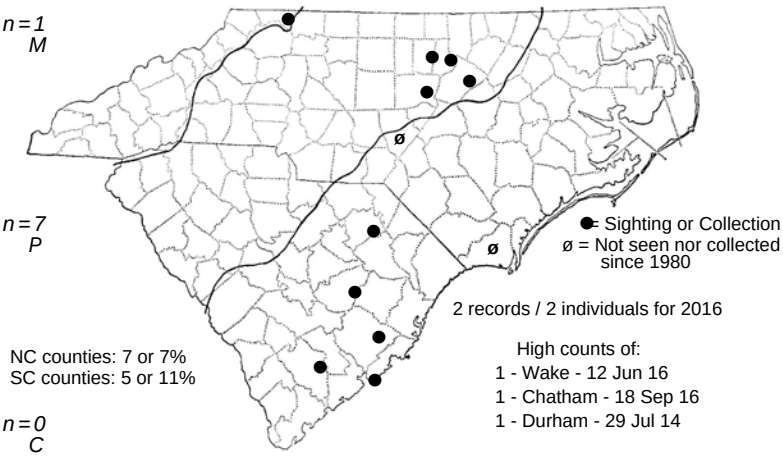
HABITAT: Habitats are typical of those of southern migrants -- fields, gardens, woodland edges, and other "non-specialized" habitats where plenty of flowers are blooming. It does occur in savannas and flatwoods well away from civilization.

FOOD AND NECTAR PLANTS: The foodplants are various legumes (Family Fabaceae). The species nectars on many flowers, including deep-throated ones such as morning-glories, which most butterflies avoid.

COMMENTS: This is one of our most striking butterflies, and it is one of the few skippers that would catch the attention of the layman. The species seems to have been quite numerous in North Carolina in 1994, 1995, and 1998. In fact, I had some daily counts of 100+ at Holly Shelter Game Land in October 1995. However, numbers were much reduced in the state in fall 1996; numbers rebounded somewhat in 1997, but not back to 1995 levels. The year 2001 was another very poor year, with just two reports for the entire Piedmont. Numbers in 2002 and 2003 were somewhat "normal", with the all-time state count set in 2003, on the rather late date of November 2. Numbers have been low since 2003 and in most years since then; the peak daily counts were all between 1995 and 2003. On the other hand, 2012 was a banner year, with a whopping 137 reports across the state, probably the most in over 20 years. Sadly, only nine records were made in 2013, all in the Coastal Plain! The flights rebounded somewhat from 2014-2016, though there were only roughly 25 reports statewide in each of these years.

Dorantes Longtail *Urbanus dorantes*





Status		Rank	
NC	US	NC	Global
-	-	SZN	G5

DISTRIBUTION: A stray to NC, scattered records across the state. This is a southern species, found primarily north to northern FL and TX. It is expanding its range northward, having been found a few years ago in SC, and there were several reports in GA in 1998. It has somewhat recently (2000?) been found in VA, as well (Harry Pavulaan, pers. comm.).

ABUNDANCE: A recent "arrival" to the state, with five records in 1998-1999, one in 2004, one in 2007, one in 2014, and two in 2016. The 2014 record was remarkably early; Jeff Pippen photographed one on June 5 in Orange County. This individual had certainly been blown to or carried to NC by a tropical storm that had passed up the coast from FL a few days earlier. In fact, the two records in 2016 each came a few days after the passages of a hurricane and a tropical storm! Thus, it is a casual to very rare stray to the state at the present time.

FLIGHT PERIOD: Dates of eight records fall between early June and early October; the other two are not known. Remarkably, two of the records are from October 3, and both were seen by me at the N.C. State University arboretum, five years apart! The species flies all year in southern FL, but records for northern FL are mainly in late summer and fall.

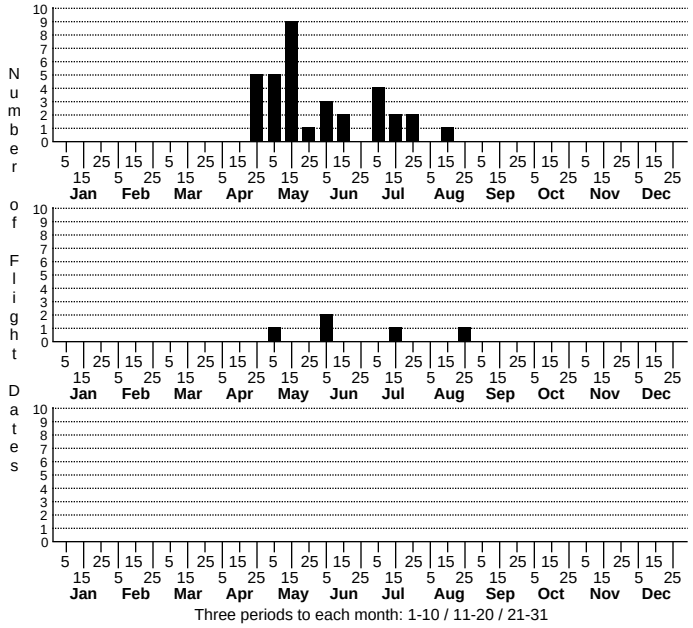
HABITAT: The species is typically found along woodland borders, old fields, gardens, and other brushy places, in similar habitats to the closely-related Long-tailed Skipper.

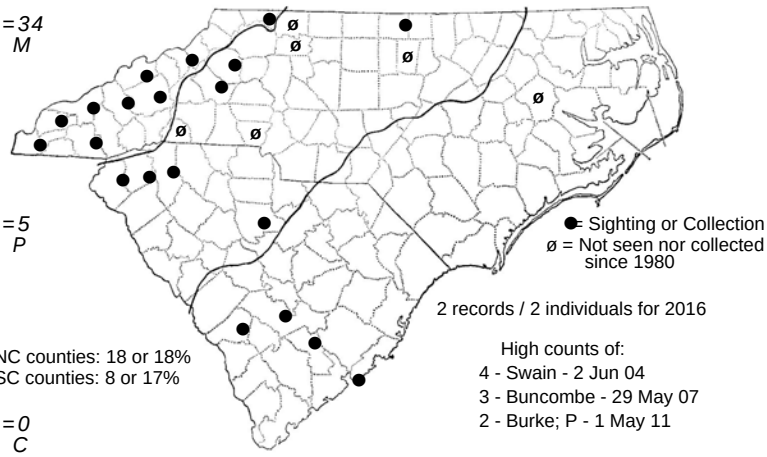
FOOD AND NECTAR PLANTS: The foodplants are vine species of legumes. Dorantes Longtails nectar on a wide variety of flowers, especially on shepherd's-needle (Bidens pilosa).

COMMENTS: Records for Dorantes Longtail in NC are not overly surprising, considering its range expansion in FL. It became established in FL from the West Indies, probably through a natural invasion, within the past several decades. In addition to the NC records, another Dorantes Longtail was seen (by me) in Charleston County, SC, on September 25, 1999. It can be easily overlooked as a Long-tailed Skipper, but the Dorantes has a brown body and wings, as opposed to blue-green coloration present on the Long-tailed's body and basal portion of the wings. However, the Dorantes tends not to spread its wings open like a Long-tailed but keeps them in a narrow "V". Thus, observers must look inside the "V", not always an easy task, to see the all-brown wings and body.

Richard Stickney saw one on July 29, 2014, at the NC Museum of Life and Science garden in Durham. He made an interesting observation: his record and the two from Wake County are from gardens/arboretums, and he speculated that life stages of this semi-tropical species were probably brought to NC on vegetation that was planted at those two sites. His point is well taken, as one would expect that most state records of truly vagrant Dorantes Longtails should be along the southeastern coastal area. On the other hand, at least three of the records came so close after the passages of hurricanes and tropical storms that it is clear that the species is carried or blown northward by such storms. The clustering of records for the "Triangle" region of the northeastern Piedmont can be attributed mainly to a higher concentration of butterfly field work than elsewhere in the state.

Golden Banded-Skipper *Autochton cellus*





2 records / 2 individuals for 2016

High counts of:
4 - Swain - 2 Jun 04
3 - Buncombe - 29 May 07
2 - Burke; P - 1 May 11

NC counties: 18 or 18%
SC counties: 8 or 17%

Earliest date: Cherokee 25 Apr 2005
Latest date: Caldwell 23 Aug 2016

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G4

Other Name: Gold-banded Skipper, Golden-banded Skipper

DISTRIBUTION: Presently, only in the mountains, the Piedmont foothills, and Caswell County in the northern Piedmont; formerly more widespread. Theoretically, it could occur most anywhere in the state, except perhaps in some far eastern counties. It also has been found in all three provinces in SC.

ABUNDANCE: Very rare to rare in the southern half of the mountains, and extremely rare to very rare elsewhere, east to Caswell County. This is almost a "mythical" species, considering that it has been found in 18 NC counties, but we have just 39 records for it. Yet, Kevin Caldwell found it at three places in spring 2007 in Madison and Buncombe counties, providing confirming photos from one site. The abundance has almost certainly declined in recent decades, and the range seemingly has shrunk back to the west, for unknown reasons; we have no recent records away from the mountains, except from Burke, Caldwell, and Caswell counties.

FLIGHT PERIOD: Two broods. In the Washington, DC, area, the species is found from late April to June, with a partial second brood from late July to late August (Glassberg 1993). The two seen in Caswell County in early June 2000 were quite fresh, but the dates better fit the first brood, rather than the beginning of the second. In the mountains and foothills, the first flight is from late April into mid-June, and the second occurs from early July to mid-August (with just two known records for August). The second brood in NC, as in the Washington, DC, area, seems to be only a partial one, or at least the first brood is certainly the larger one.

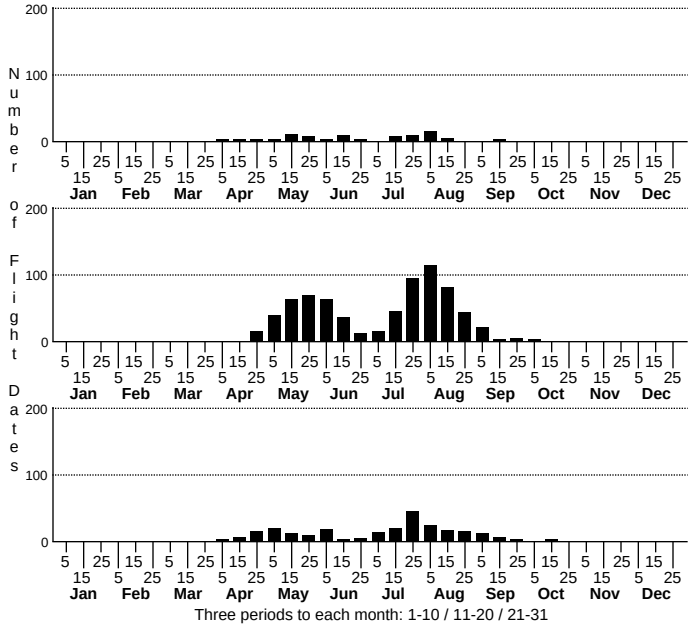
HABITAT: Primarily in fairly pristine places -- openings in moist woods or near ravines, along creeks in moist woods, and other sites near forests and water. Should be searched for in rich woods and bottomlands with sunlit places along creeks and dirt roads. Driving U.S. Forest Service dirt roads through rich woods and along wooded streams, as slowly as possible, is your best bet to find this very elusive species.

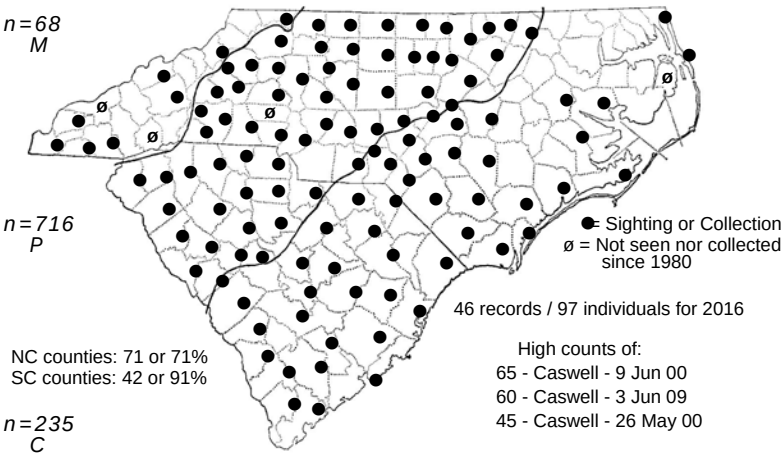
FOOD AND NECTAR PLANTS: The foodplant had long been considered to be solely hog peanut (Amphicarpa bracteata), which is very common in moist woods and bottomlands in NC. However, a recent study by Boscoe et al. (2015) has shown that wild kidney bean (Phaseolus polystachios) is the sole foodplant, at least in the eastern US; this is an uncommon to fairly common vine that is limited mainly to rich forested slopes and bottomlands, often in the same habitats as the hog peanut, but more limited to high pH soils. The authors also proved that the species rejected hog peanut as a foodplant. The butterfly apparently nectars at many plants. Kilian Roever (pers. comm.) has seen it nectaring on Joe-pye-weed (Eupatorium fistulosum); as this species blooms mainly in August, the flight period in the mountains presumably extends well past the July 31 date on the flight chart. Several observers, including Jeff Pippen and me in 2002, have seen it nectaring on blackberries.

COMMENTS: Why this attractive butterfly is so rare in the East is a mystery. Wild kidney bean is not overly uncommon in the mountains, though it is widely scattered in the Piedmont. It may be that suitable nectar sources are rare on rich slopes and bottomlands; I do not often see many suitable "butterfly" flowers in such habitat types. The difficulty in finding the species is heightened by its supposed habit of flying primarily in the late afternoon, as pointed out by Opler and Malikul (1992). It does seem to fly more in the afternoon than in the morning, but more NC observations are needed to see if this pattern holds.

The discovery of a Golden Banded-Skipper in "far-eastern" Caswell County in early June 2000 by Randy Emmitt caused a tremendous amount of excitement, so much, in fact, that several of us were able to relocate the species there a few days later. However, other observers failed to find them later in June and July 2000, and I did not see the species during extensive field work in the county, including at the previous site, in 2009. Our first report of more than a single individual in a day came in 2004, when Shay Garriock observed two on one day and four on another, each in Great Smoky Mountains National Park. A very worn individual seen by Jeff Pippen and me on August 23, 2016 extended the latest date in the state by 12 days.

Hoary Edge *Achalarus lyciades*





46 records / 97 individuals for 2016

High counts of:
65 - Caswell - 9 Jun 00
60 - Caswell - 3 Jun 09
45 - Caswell - 26 May 00

NC counties: 71 or 71%
SC counties: 42 or 91%

Earliest date: Madison 9 Apr 2012
Latest date: Moore; C 15 Oct 2011

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G4G5

DISTRIBUTION: Apparently statewide, but relatively few mountain records; possibly absent in the higher mountains and in most of the northern mountains. Throughout the Piedmont and most of the Coastal Plain, though there are some major gaps in the county dot map, particularly in the northern Coastal Plain.

ABUNDANCE: Uncommon to fairly common in the lower Piedmont and upper Coastal Plain; most numerous (at times common) in the Sandhills. Uncommon in many parts of the state, such as the upper Piedmont and the southeastern Coastal Plain. Rare in the mountains, where probably found only at the lower elevations. Rare in the central Coastal Plain, and very rare in the northern counties in the Coastal Plain (where certainly not just an artifact of field work).

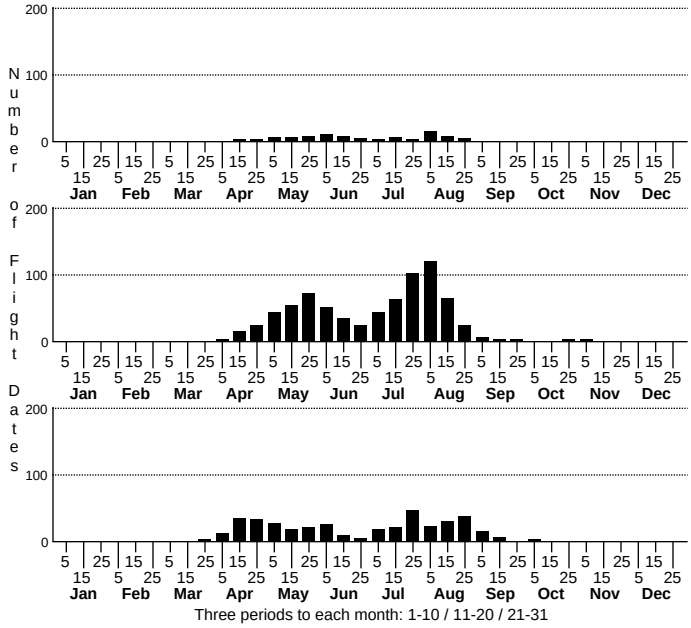
FLIGHT PERIOD: Two distinct broods -- in the Coastal Plain from mid-April to mid-June, and early July to mid-September, rarely mid-October. Broods in the Piedmont fly slightly later -- late April to late June, and early or mid-July to early or mid-September, rarely to early October. The second brood is apparently larger than the first, even though the three highest counts for the state have been from the first brood. More mountain data needed, though there are also two broods present in this province.

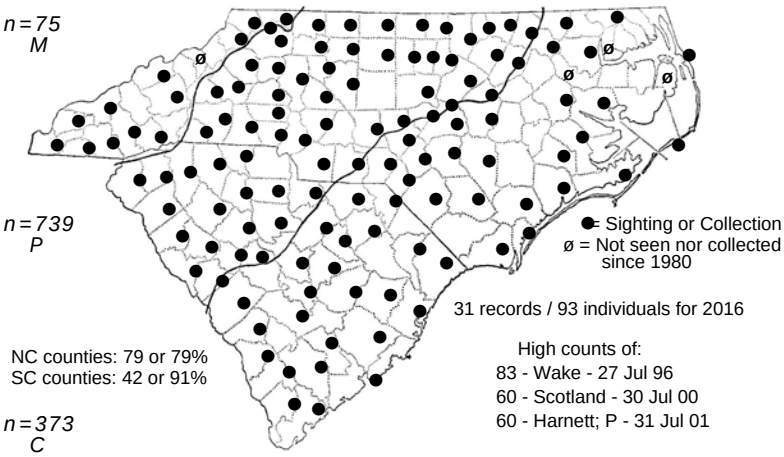
HABITAT: This is a butterfly of dry places, in partial sun. It is found in xeric, sandy open woods in the Sandhills, around rock outcrops in the Piedmont, along margins of dry woods, dry powerline clearings, old fields, etc. It is infrequently found in wetlands, though it does wander to sites such as lakeshores, where it nectars on plants such as buttonbush (Cephalanthus).

FOOD AND NECTAR PLANTS: The foodplants are herbaceous legumes, especially tick-trefoil/beggar's lice (Desmodium spp.). The species nectars on many flowers.

COMMENTS: This species is somewhat reminiscent of the much more abundant Silver-spotted Skipper, but whereas the latter is found practically anywhere, the Hoary Edge normally is scarce in damp places. It likes to perch on warm, sunny rock outcrops, and it is also characteristic of the hot sandy soils of sandhills habitats in the Coastal Plain. But, even in its favored habitats, it is usually outnumbered by its "big cousin", the Silver-spotted Skipper.

Southern Cloudywing *Thorybes bathyllus*





31 records / 93 individuals for 2016

High counts of:
83 - Wake - 27 Jul 96
60 - Scotland - 30 Jul 00
60 - Harnett; P - 31 Jul 01

NC counties: 79 or 79%
SC counties: 42 or 91%

New for 24th: Caldwell

Earliest date: Scotland 30 Mar 2012
Latest date: Wake 2 Nov 2000

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, but only scattered records for the mountains and the northeastern Coastal Plain. Likely occurs in all NC counties.

ABUNDANCE: Fairly common to locally common in the Coastal Plain (except in the northeastern counties) and lower Piedmont; uncommon in the western half of the Piedmont, rare to uncommon in the northeastern Coastal Plain, and rare in the mountains. The species is clearly more numerous in the east than in the west. For some reason, the species was shockingly scarce in much of the state in 2013, with only three records from the entire Coastal Plain.

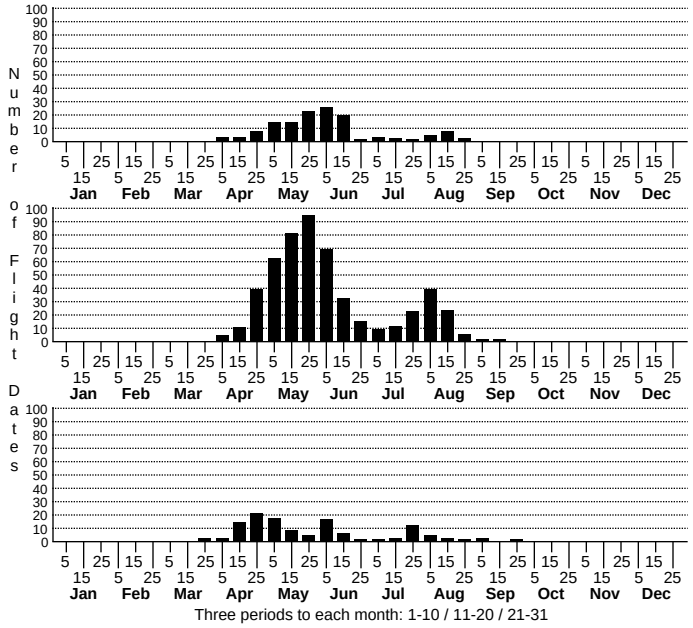
FLIGHT PERIOD: Two broods; present from early April to early October, and sparingly to early November. Broods are mainly mid-April to mid-June, and late June to mid-September. The mountain records fall between mid-April and late August; more data needed there to discern the flight periods.

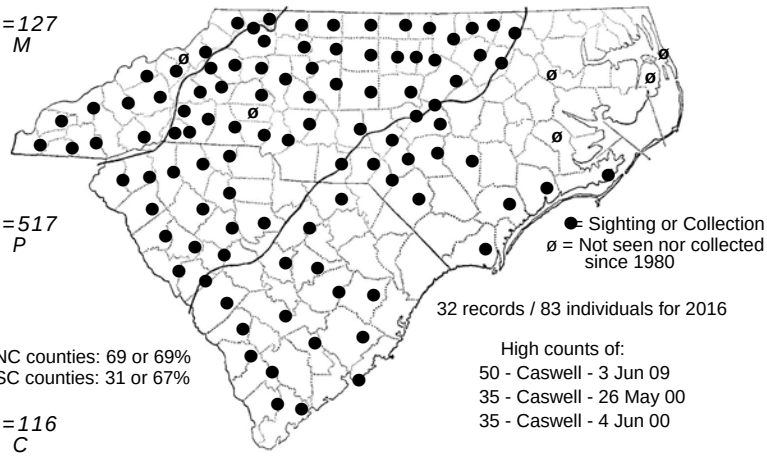
HABITAT: The species is found in typical skipper habitats -- woodland borders, old fields, powerline clearings, pine/oak scrub in the Sandhills, savannas, etc. It prefers dry or mesic places and is not typically found in wetlands.

FOOD AND NECTAR PLANTS: Herbaceous legumes, particularly goat's-rue (Tephrosia virginiana), beggar's lice (Desmodium spp.), and wild bean (Strophostyles spp.). The adults nectar on many flowers.

COMMENTS: This species is similar to the other two Cloudywing species, but it can usually be told from the Northern Cloudywing without too much trouble. I would like to say that there is a habitat separation between the Southern and the Northern Cloudywings, but I have not found any differences! The two species are often seen together, and the main differences seem to be geographic in NC.

Northern Cloudywing *Thorybes pylades*





32 records / 83 individuals for 2016

High counts of:
50 - Caswell - 3 Jun 09
35 - Caswell - 26 May 00
35 - Caswell - 4 Jun 00

Earliest date: Pender 30 Mar 1997
Latest date: Carteret 22 Sep 2014

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Essentially statewide, but widely scattered in the Coastal Plain, and no records at all from the northeastern Coastal Plain (despite considerable field work). However, as the species has been reported at several sites in SC near the coast, we can assume that it is found over nearly all of NC.

ABUNDANCE: Fairly common in the Piedmont, but uncommon in the mountains and the southwestern Coastal Plain. Definitely rare in most of the Coastal Plain, except for the Sandhills, where it is regularly seen. Possibly absent in a few northeastern Coastal Plain counties.

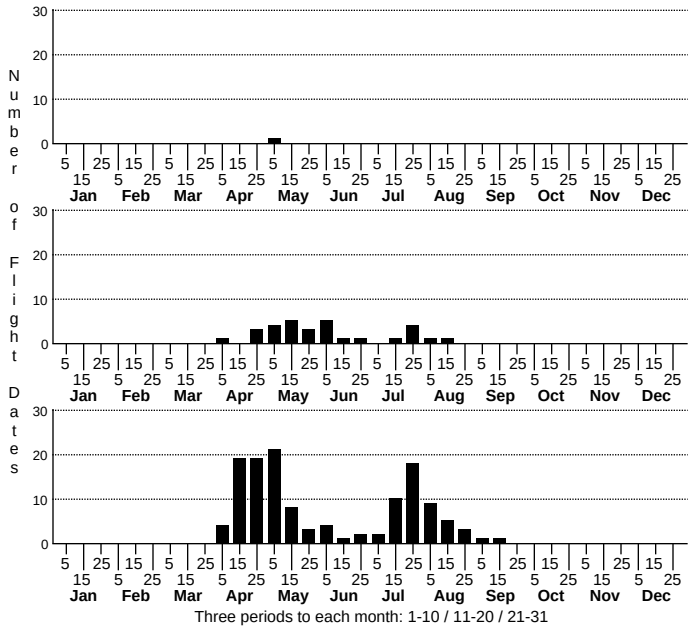
FLIGHT PERIOD: Two broods, but the second is a partial or weak one. Downstate, the main brood is from mid-April (rarely from late March) to mid- or late June; a smaller brood is from early July to late August, rarely into September. In the mountains, the two flights fall between late April and late August, rarely beginning by early April.

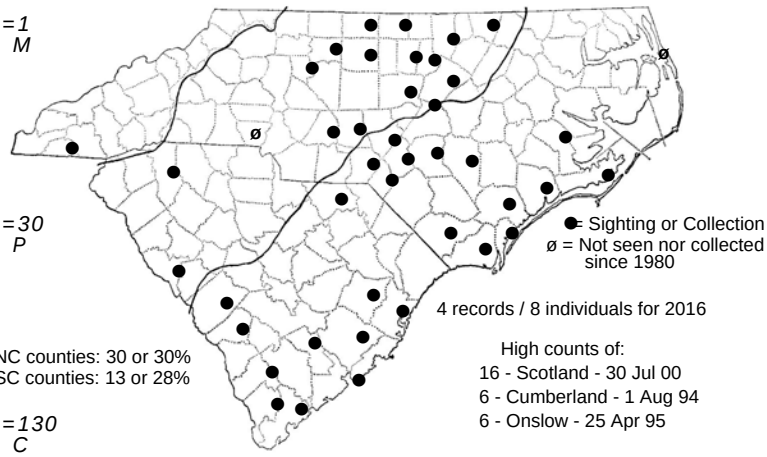
HABITAT: The habitat appears identical to that of the Southern Cloudywing -- dry to mesic sites in partial sun, such as woodland borders, powerline clearings, old fields, glades, pine/scrub oak sandhills, etc. It prefers dry places, as does the Southern.

FOOD AND NECTAR PLANTS: Foodplants are similar to those of the Southern Cloudywing, being various herbaceous legumes. The adults nectar at many flowers.

COMMENTS: Field guides and references show both of these cloudywings with ranges that include nearly all of the eastern United States. However, a review of the distribution data for NC give noticeable results. The Southern is most common in the eastern half of NC and is not numerous in the west. The Northern occurs mainly in the mountains and Piedmont. The Northern is somewhat less numerous in NC than is the Southern.

Confused Cloudywing *Thorybes confusis*





4 records / 8 individuals for 2016

High counts of:
16 - Scotland - 30 Jul 00
6 - Cumberland - 1 Aug 94
6 - Onslow - 25 Apr 95

NC counties: 30 or 30%
SC counties: 13 or 28%

Earliest date: Scotland 8 Apr 2000
Latest date: Carteret 19 Sep 2007

Status NC	Status US	Rank NC	Rank Global
W	-	S3S4	G4

Other Name: Confusing Cloudywing

DISTRIBUTION: This is a somewhat poorly-known species in NC because of the difficulty of identification. Records are scattered over most of the southern half of the Coastal Plain, plus the eastern portion of the Piedmont. Its status in the western half of the state needs study, but it may be nearly absent in the mountains, and possibly also in the extreme upper Piedmont; its range in the northern Coastal Plain is also highly uncertain, but it may be legitimately absent there.

ABUNDANCE: Uncommon in the Sandhills; rare to locally uncommon elsewhere in the southern half of the Coastal Plain, and seemingly very rare to absent north of Craven County. Apparently rare in the eastern and southern Piedmont. A specimen collected in Clay County in 2002 by Ron Gatrelle confirms the species in the mountains. Obviously, more work is needed to determine the true abundance, but it is definitely scarce in NC and much rarer than the other two cloudywings.

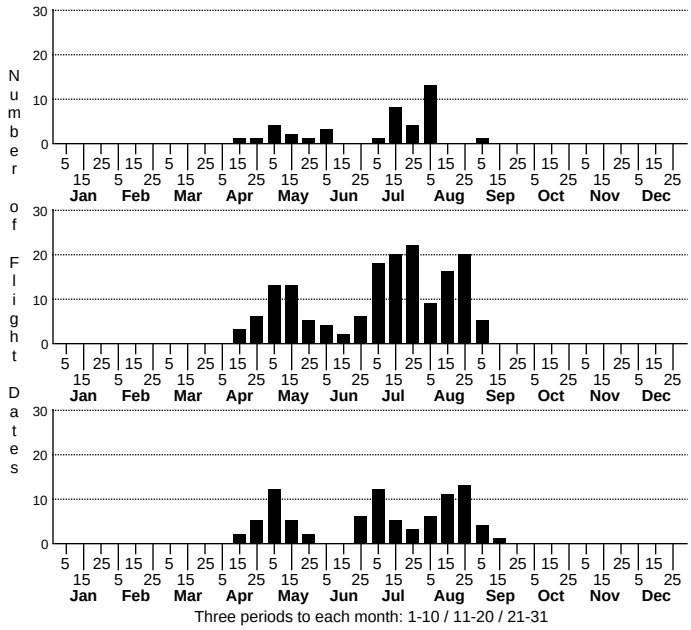
FLIGHT PERIOD: Two broods; flight periods in the Coastal Plain occur from early or mid-April to mid-June, and early July to mid-September. The flights in the Piedmont appear to be from late April to mid- or late June, and mid- or late July into August; much more data are needed.

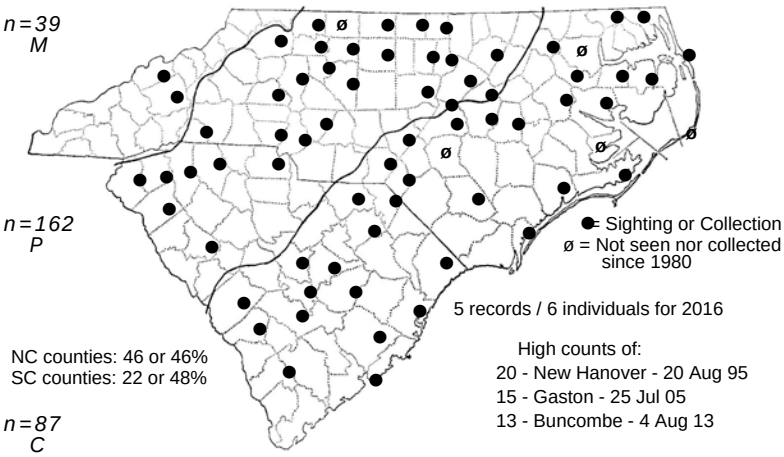
HABITAT: This species favors even drier habitats than the other two cloudywings. It is seen mostly in sandy, open sites near pinewoods, especially in xeric longleaf pine habitats. However, it often is found with the other two cloudywings, particularly the Southern, in powerline clearings and along dirt roads. Look for the Confused Cloudywing on sandy dirt roads and other bare spots in the Sandhills or lower Coastal Plain. The habitat described in Opler and Malikul (1992) -- "Woods in river valleys or near swamps and marshes" -- is baffling and certainly not correct, at least in North Carolina.

FOOD AND NECTAR PLANTS: The foodplants are legumes, generally small herbaceous species, including vines. Nectar plants are not well known, but I saw adults nectaring on lowbush blueberry (Vaccinium tenellum) in the Green Swamp. Second brood individuals often nectar on sweet pepperbush (Clethra alnifolia) and pink/purple composites such as thistles. As with other cloudywings, most first-brood Confused are seen on dirt roads or at mud, basking or gathering nutrients from the wet soil.

COMMENTS: This is one of the most difficult butterflies to identify in NC. In fact, the Butterflies and Moths of North America [BAMONA] website has recently changed the common name to Confusing Cloudywing, as the butterfly isn't "confused", but it is "confusing" (to identify)! Carefully study the descriptions and photos in Glassberg (1999, 2012). Confused can usually be told from Northern by the pale "face"; the Northern is dark faced, seldom shows a pale eye ring, and tends to be darker on the under wing outer margins. The Southern, like the Confused, has a pale face, a white ring around the eye, and much white frosting to the under wing margin (Confused more so). If the upper fore wing bars are hourglass-shaped, or even squared-off, it is generally a Southern. Confused generally has narrow, linear bars not squared-off at the ends. Ron Gatrelle (pers. comm.), after considerable study of specimens, notes that Confused can be separated from Southern by looking at the white spot in the distal carpel bar; the spot is displaced outward and is not aligned with the others above it in Confused but is larger and aligned with the others in Southern. The first brood of Southern Cloudywing has slightly thinner white fore wing bars than does the second brood, making them look somewhat like a Confused Cloudywing! Don't expect to identify every cloudywing you see in the field; in fact, it is impossible to do so. This confusion has to do mostly with individual variation in the amount of white shown by all three cloudywing species. If you see ten cloudywings in one day, you will probably see no two that look alike!

Hayhurst's Scallopwing *Staphylus hayhurstii*





Earliest date: Buncombe 13 Apr 2012
Latest date: Johnston; C 13 Sep 2000

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Other Name: Scalloped Sooty Wing, Hayhurst's Sootywing

DISTRIBUTION: Scattered throughout the Coastal Plain and Piedmont, but only recorded from two mountain counties (Buncombe and Madison). Found along the Outer Banks. Seemingly very rare to absent over nearly all of the mountain region, though the species was "re-discovered" in Buncombe County in 2009. In the mountains, it is likely limited to low elevations (below 2500 feet).

ABUNDANCE: Rare to locally uncommon; quite colonial. However, once a colony is found, it may be seen in small numbers (4 or more). Abundance pattern across the state is poorly known, other than obviously very rare to locally absent in the mountains. This species' apparent scarcity is a mystery, but it is a small butterfly that could easily be overlooked.

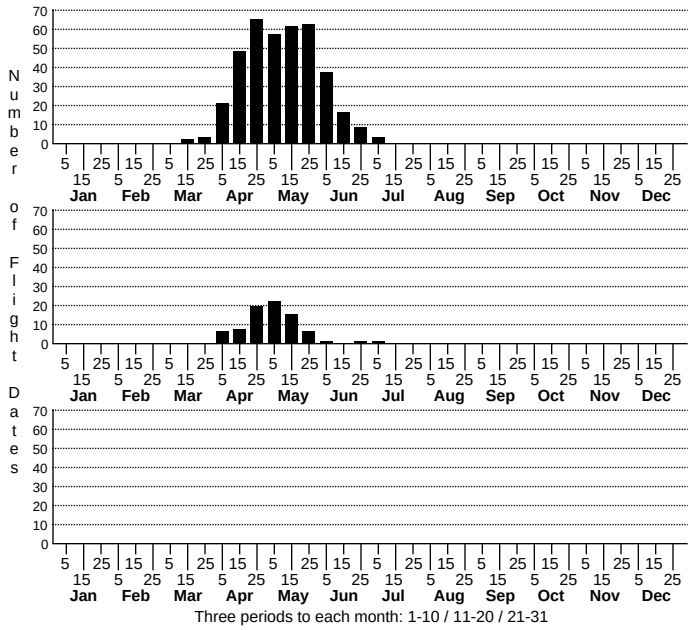
FLIGHT PERIOD: Three broods downstate, with the second and third "run together." A small brood from mid-April to early June, a much larger brood from mid-June to early August, and a third from mid-August into September. There might be just two broods in the mountains, though more data are needed; broods appear to be from the latter half of April to early June, and from early July to early or mid-August.

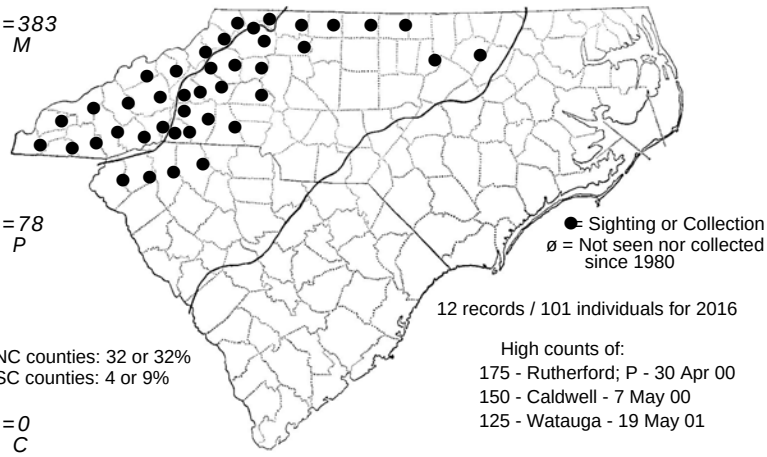
HABITAT: Generally in somewhat disturbed areas, usually where damp, such as along moist woodland edges, vacant lots, gardens, and so forth. For such a "scarce" butterfly, it has a surprising tendency to appear in gardens, particularly near moist woods. Away from gardens, it is best to look for it along the edges of moist woods, such as along margins of roads passing through bottomlands.

FOOD AND NECTAR PLANTS: The foodplants are lamb's-quarters and other weedy species in the amaranth family (Amaranthaceae). The species nectars on a variety of flowers.

COMMENTS: I do not understand why this is such a scarce butterfly, not only in NC but over much of the eastern United States. Its foodplants are abundant in weedy or disturbed places, and its habitats include gardens and vacant lots. Admittedly, these latter habitats are overlooked by most butterfliers, but still, this species is seldom encountered. You are doing well to see it just once per year. Gail Lankford and others found the species on three dates in August 2009 in Buncombe County, to re-confirm the species' seemingly precarious existence in the mountains, where we assume it occurs only at low elevations (below 2500 feet). Four more records from the county were made in 2010, and a remarkable 12 records came from that county in 2011. In 2012, six counties reported the species for the first time, including Madison in the mountain province.

Dreamy Duskywing *Erynnis icelus*





12 records / 101 individuals for 2016

High counts of:
175 - Rutherford; P - 30 Apr 00
150 - Caldwell - 7 May 00
125 - Watauga - 19 May 01

NC counties: 32 or 32%
SC counties: 4 or 9%

Earliest date: Buncombe 15 Mar 2012
Latest date: Haywood 10 Jul 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Throughout the mountains, and also into the foothills (Sauratown Mountains, Brushy Mountains, South Mountains) of the Piedmont. Found at least locally in counties in the northern Piedmont, where not known prior to 2001.

ABUNDANCE: Common to locally abundant in the mountains. Abundance in ranges in the western Piedmont is not well known, but common in some ranges (at least in the South Mountains). Rare and very local in the extreme northern Piedmont, and known from just single sites in Durham and Franklin counties, where it might be a recent colonist.

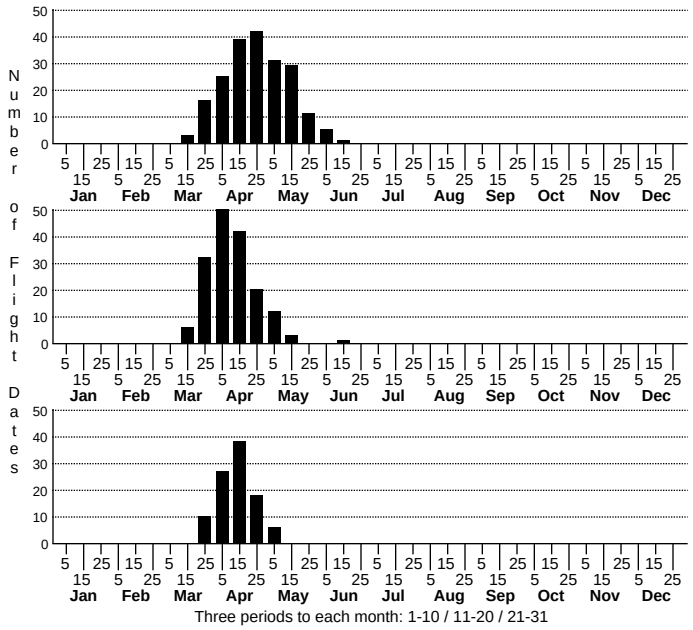
FLIGHT PERIOD: A single spring brood only. The flight begins in very early April (sparingly in late March) and extends to late June, rarely to early July. The peak numbers are in early to mid-May, or very late April in the foothills.

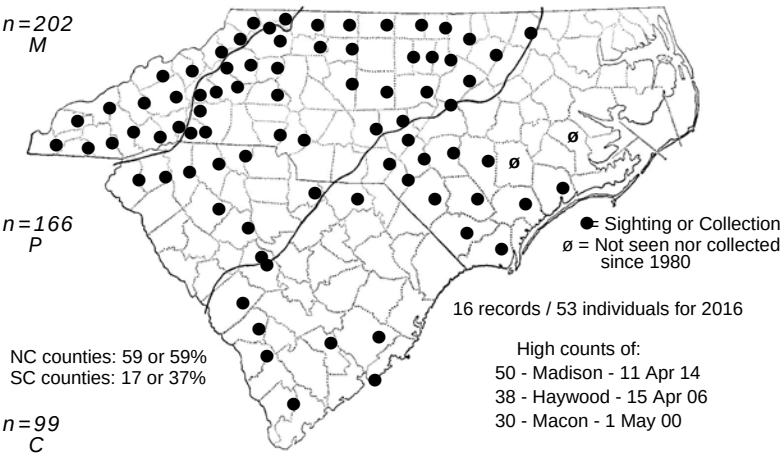
HABITAT: The species prefers openings in hardwood or mixed forests, especially along dirt roads and wood margins. It can be easily found on dirt roads and wide trails in or near forests. As it is a northern species, it is often found at high elevations, though it can be found down at least to 1200 feet in Polk County, and to 250 feet in Franklin County.

FOOD AND NECTAR PLANTS: In parts of the range, the foodplants are woody species such as willows, poplars, and birches. In NC, however, oaks might be a major foodplant. [Willows, poplars, and birches are absent in many areas where Dreamys are common in NC.] Observers who have seen the isolated populations of Dreamys in the northern Piedmont have found sizable numbers of black locust (Robinia pseudo-acacia) trees nearby; could this legume be a hostplant over much of the NC range? Adults of the species nectar to some extent, but all duskywing adults are most often seen perched on the ground, especially on dirt roads and trails.

COMMENTS: Observers were able to fill in many county gaps in the mountains, and also found them at Hanging Rock State Park in Stokes County, and in the Brushy Mountains in Alexander County, in 1995. Shocking discoveries were made in spring 2001, when Randy Emmitt discovered the species to be locally numerous in Caswell Game Land and I found a sizable population in Hill Forest in northern Durham County. It was found farther east in Franklin County in 2002. These counties are not overly out-of-range, as the species does range across nearly all of the VA Piedmont and even into that state's Coastal Plain. Despite it being a northern species, Dreamy Duskywing is one of the most often seen butterflies in May in mountain forests. Counts of 50 or more can be made on good days, and I found them quite numerous in the South Mountains (in the western Piedmont) in late April 2000.

Sleepy Duskywing *Erynnis brizo*





16 records / 53 individuals for 2016

High counts of:
50 - Madison - 11 Apr 14
38 - Haywood - 15 Apr 06
30 - Macon - 1 May 00

NC counties: 59 or 59%
SC counties: 17 or 37%

New for 24th: Onslow

Earliest date: McDowell; P 12 Mar 2012
Latest date: Caldwell 17 Jun 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Throughout the mountains and Piedmont, plus at least the southern portion of the Coastal Plain. The range in the northern 60% of the Coastal Plain needs study; however, it might well be absent in much (if not most) of the northern Coastal Plain.

ABUNDANCE: Fairly common in the mountains and in the Sandhills, but rare to uncommon in the intervening Piedmont. Rare to uncommon in the southern Coastal Plain (outside of the Sandhills), but very rare northward, seemingly absent in the northern Coastal Plain. The species is under-reported because of its brief flight period and possibly because of its similarity to other duskywing species.

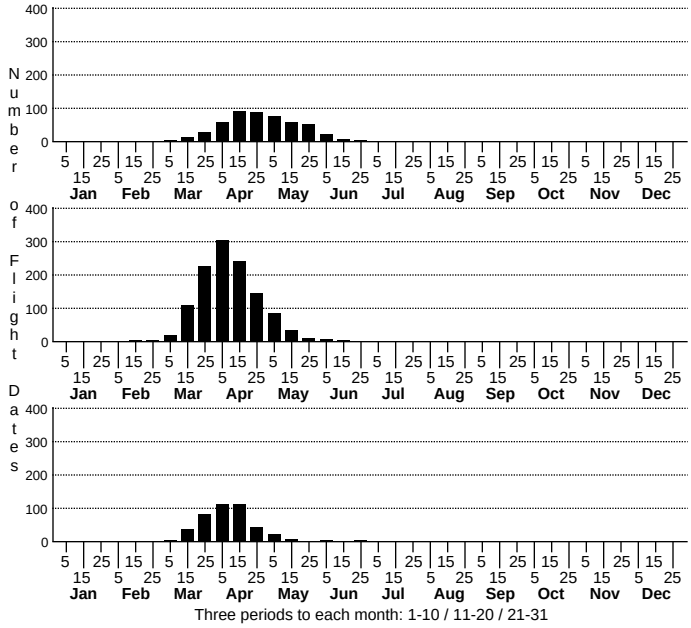
FLIGHT PERIOD: A single spring brood; the latter half of March to early or mid-May downstate, and the latter half of March to early June in the mountains.

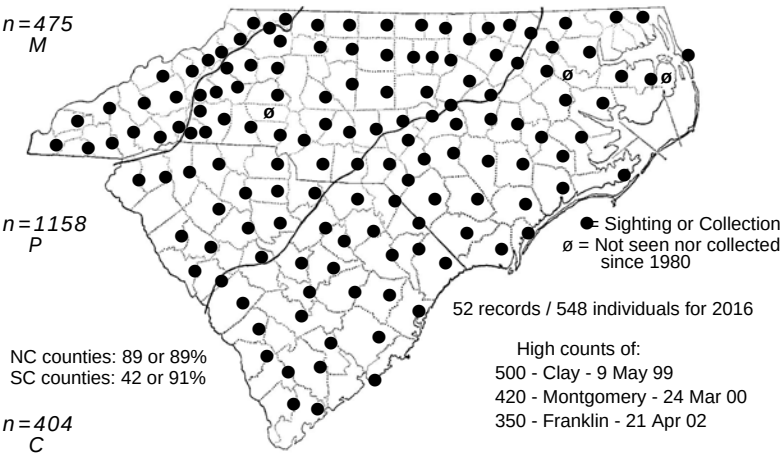
HABITAT: This duskywing likes dry places. It is found near clearcuts, margins of dry woods, rock outcrops, open mountaintops, and especially along dirt roads, powerline clearings, and trails through such dry scrubby and woody areas. It is never found in or very near wetlands, nor is it usually found in forest interiors. In the mountains, it occurs in mesic forest openings more so than downstate.

FOOD AND NECTAR PLANTS: The foodplants are oaks, primarily those characteristic of xeric habitats. The adults nectar to some extent but are seen mainly perched on the ground, such as on dirt roads and trails.

COMMENTS: This species often gets lost among the hordes of Juvenal's Duskywings. Usually you must pick through the Juvenal's to find a Sleepy, often 10 to 50 of them before you find one or two. Your chances are better in very dry scrubby places, whereas sorting through the duskywings along roads through bottomlands or edges of damp woods will usually fail to reveal the Sleepies. Very seldom are Sleepies seen without many more Juvenal's being present! In the mountains, care must be taken, as the more numerous (but smaller) Dreamy Duskywing can often be confused with the Sleepy Duskywing; also, they are frequently seen in the same habitats and at the same time of year (though the Sleepy flight period averages earlier than that of the Dreamy by one to several weeks).

Juvenal's Duskywing *Erynnis juvenalis*





52 records / 548 individuals for 2016

High counts of:
500 - Clay - 9 May 99
420 - Montgomery - 24 Mar 00
350 - Franklin - 21 Apr 02

NC counties: 89 or 89%
SC counties: 42 or 91%

Earliest date: Surry 15 Feb 2012
Latest date: Avery 30 Jun 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Apparently statewide, though distribution is spotty in the northeastern counties. I did not see the species during my 1994 surveys in the Dismal Swamp. Finally, in 2006, a report came from the Outer Banks, where the species seems mysteriously rare (at best).

ABUNDANCE: Very common to abundant in the Piedmont and mountains. Common to very common in most of the Coastal Plain, though it is obviously much less common near the coast, and in the northeastern Coastal Plain, than farther inland. This is the most numerous skipper in NC in the spring. The species has declined across the state in the last few years, likely owing to severely cold weather in late February and March in both 2013 and 2014. In fact, there were just three reports in 2014 from the entire Coastal Plain.

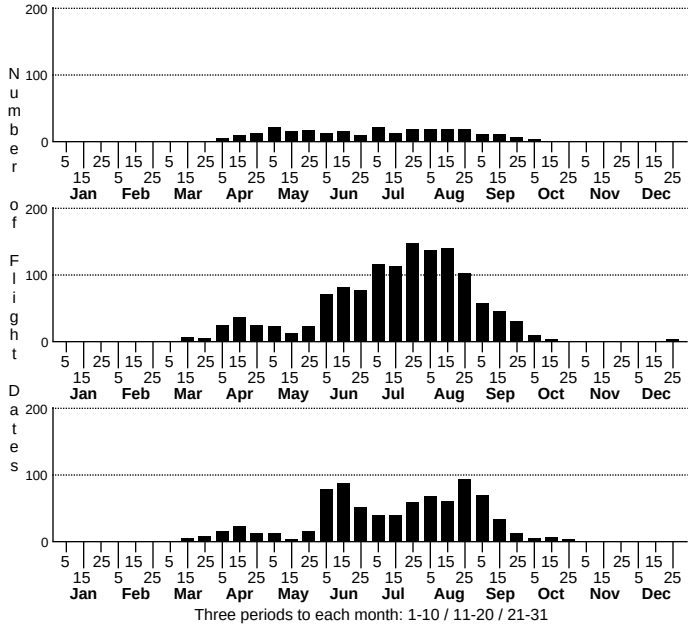
FLIGHT PERIOD: A single brood; early March to mid-May (very rarely into June) downstate, and from mid- or late March into the first half of June in the mountains.

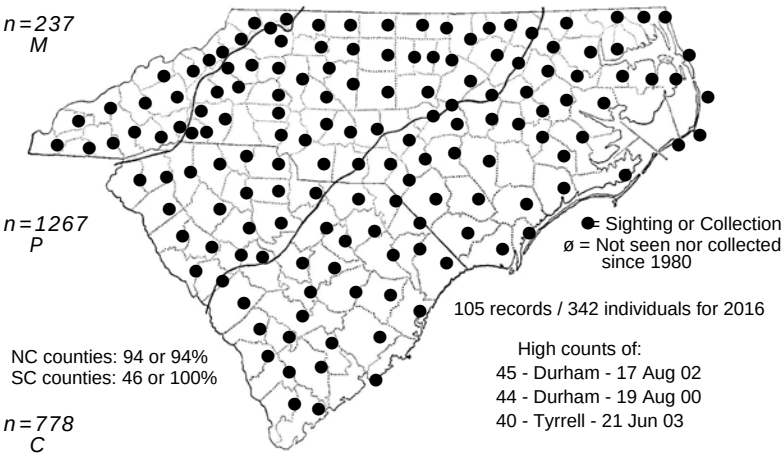
HABITAT: The species is practically ubiquitous, at least away from towns, gardens, and waste places. It favors edges and openings of hardwood and mixed forests, both dry and somewhat moist. It also occurs well inside forests, the only duskywing normally to do so. As with all duskywings, adults are often seen perched on dirt roads, trails, and other bare ground.

FOOD AND NECTAR PLANTS: The foodplants are oaks, presumably of many species. Adults may be seen nectaring at many flowers in spring, as well as taking moisture on the ground.

COMMENTS: This is the ubiquitous dark butterfly of the spring season. Observers must sort through the Juvenal's to find more desired species such as Sleepy and Wild Indigo duskywings. It is so abundant that trying to find the nearly identical Horace's Duskywing in the spring can be frustrating. Needless to say, all spring-season duskywings cannot be identified by sight.

Horace's Duskywing *Erynnis horatius*





Earliest date: Mecklenburg 12 Mar 2004
Latest date: Mecklenburg 23 Dec 2011

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, including the immediate coast, where there are many records for the Outer Banks.

ABUNDANCE: Widespread and generally fairly common to common, though never as numerous at any time as the Juvenal's is in spring. However, it is seemingly uncommon before June. The abundance seems reasonably even over the state, though slightly less numerous in the mountains. Large numbers are seldom seen; "frequently encountered" better characterizes its status, rather than an abundance label.

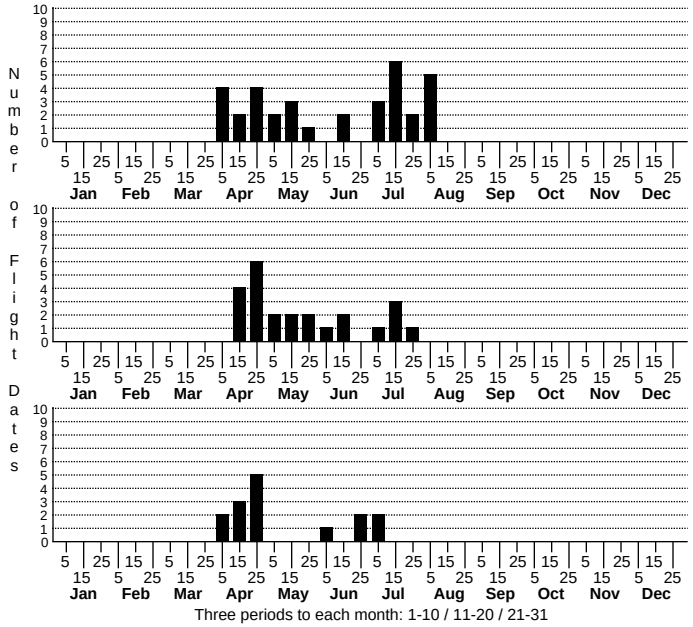
FLIGHT PERIOD: Probably three broods, but no gap in flight periods from early June through the fall season. Downstate, the first occurs from mid-March to mid-May, the second from late May or early June to early August, and the third from early August to early October. Brood dates in the mountains are not yet clear, but it flies from early April to late September. The first brood is obscured by the difficulty in separating the species from the abundant Juvenal's Duskywing, but certainly the first brood of Horace's is rather small.

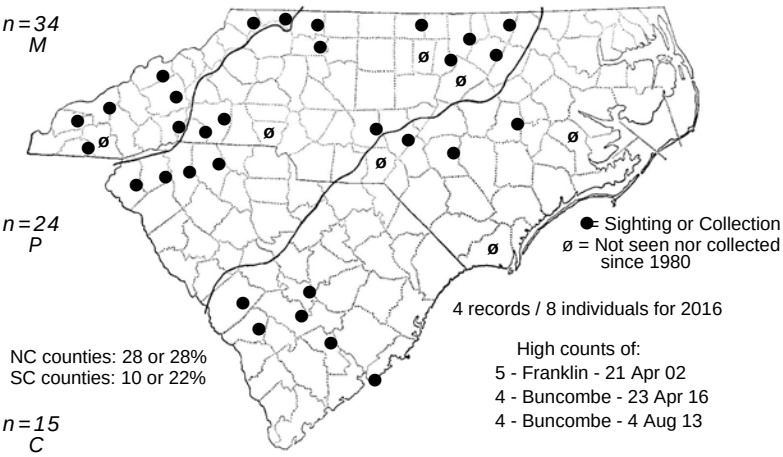
HABITAT: Widespread, but usually near hardwood forests; wooded borders and openings, dirt roads, powerline clearings, etc. are utilized. Habitats are similar to that of the Juvenal's, except that Horace's generally avoids the interior of forests, and Horace's often ventures to gardens and other suburban places. Horace's occurs near the coast more than does Juvenal's and can be numerous on coastal islands.

FOOD AND NECTAR PLANTS: The foodplants are oaks. As with other duskywings, adults nectar on many flowers but are often seen on dirt roads and trails.

COMMENTS: This species looks quite like the Juvenal's, and thus observers may need to "wait" until after the Juvenal's have finished flying in mid-May before they can be confident about identifying a Horace's. The male Horace's is somewhat darker and plainer brown than a male Juvenal's, with little if any silvery scaling. The female Horace's is slightly more checkered (especially with black blotches) on the fore wings than the female Juvenal's, but the lack of the two pale spots on the under hind wing of the Horace's is the best field mark. Male Horace's are also frequently difficult to separate from Zarucco Duskywing, a fact that many field guides overlook.

Mottled Duskywing *Erynnis martialis*





Earliest date: Madison 7 Apr 2012
Latest date: Buncombe 5 Aug 2016

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G3

DISTRIBUTION: Found at scattered sites in all three provinces, but just two known records for the northern half of the mountains. Just one recent Coastal Plain record away from the Sandhills, and no records at all from the northern half of the Coastal Plain.

ABUNDANCE: Rare in the southern half of the mountains; declining in the Piedmont, where very rare to rare, with few recent records. Very rare in the northern mountains, as well as the Sandhills. Seemingly absent from most of the Coastal Plain. The species is certainly in decline, as there are scattered counties with the last observation being more than 20 years ago, especially near the coast. And, despite all of the observers in the state these days, the fact that there were no reports in 2007, 2008, and 2009 is quite indicative of a decline. Fortunately, the only two reports in 2010 were from mountain counties (Clay and Graham) with no previous records, "filling in" gaps in the range map. Interestingly, all five reports in 2012 came from the mountains, as did all four reports in 2013 and again in 2016.

FLIGHT PERIOD: Two broods, with the first almost certainly the larger of the two. The first brood in the Coastal Plain is mainly in April (and probably into May); the second is in late June and into July. The Piedmont flight periods are from mid-April to mid-June, and most of July. In the mountains, it flies from the first half of April to early August, though it isn't clear if records from mid-June are from the first brood or the second brood.

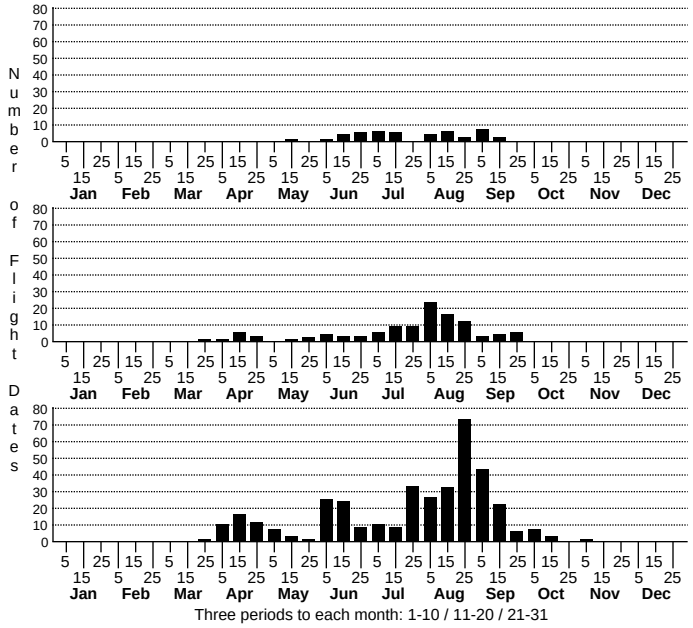
HABITAT: The species is fairly habitat-specific; it is seldom far from New Jersey tea (Ceanothus americanus). Habitats are typically the margins of upland hardwoods or mixed woods, or open dry woods. Dirt roads through upland woods, or the drier portions of powerline clearings, are favored sites, as long as New Jersey tea is nearby.

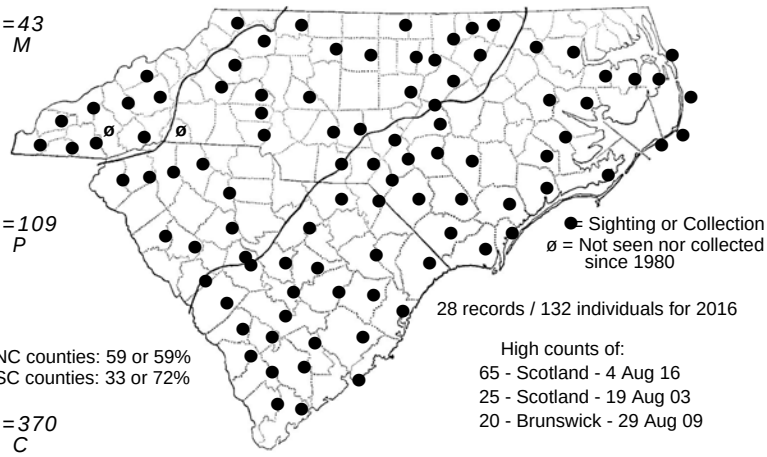
FOOD AND NECTAR PLANTS: As mentioned above, New Jersey tea appears to be the sole foodplant in the East. The species nectars on this plant, as well as other flowers. As with other duskywings, it is regularly seen on dirt roads and trails, more so than on flowers.

COMMENTS: This is an excellent find for the butterfly watcher, and it is the easiest of the duskywings to identify; otherwise, it might never be conclusively found by the observer! Fortunately, it is found in very close proximity to New Jersey tea, and this plant is conspicuous when in bloom in late May and June. The species is seldom found in numbers/colonies; almost always just a single individual (or rarely two) is found in a day. Most of my roughly 12 records in NC have been of singletons, often seen basking on dirt roads, in danger of being run over by speeding vehicles. In fact, I suggest that the increasing amount of traffic on dirt roads might be leading to greater mortality of this rare butterfly and hastening its decline.

Richard Anderson's butterfly database from his work at Fort Bragg one or two decades ago pushed our Coastal Plain flight dates from one (as of 2001) to nine, with a tenth added in 2004 for Wayne County. All of the Coastal Plain data (but one record) refer to the Sandhills region.

Zarucco Duskywing *Erynnis zarucco*





Earliest date: Scotland 22 Mar 2008
Latest date: Brunswick 2 Nov 2003

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Scattered over the state, but very rare in the northern mountains (where it might not be a resident species) and northwestern Piedmont. Still no records for the extreme northern Coastal Plain. Primarily found in the southern half of the state, but with many records in the northeastern Piedmont (where field work is greater than anywhere else).

ABUNDANCE: Fairly common in the Sandhills and in the southern tidewater areas. Uncommon over most of the Coastal Plain and the eastern and southern Piedmont; rare in the southern half of the mountains. Very rare in the northwestern Piedmont, and presumed very rare (if not locally absent) in the northern Coastal Plain. Likely absent in nearly all of the northern mountains. In 2016, Jeff Pippen and I had a remarkable one-day count of 65 individuals in Scotland County; this more than doubled the previous state one-day count.

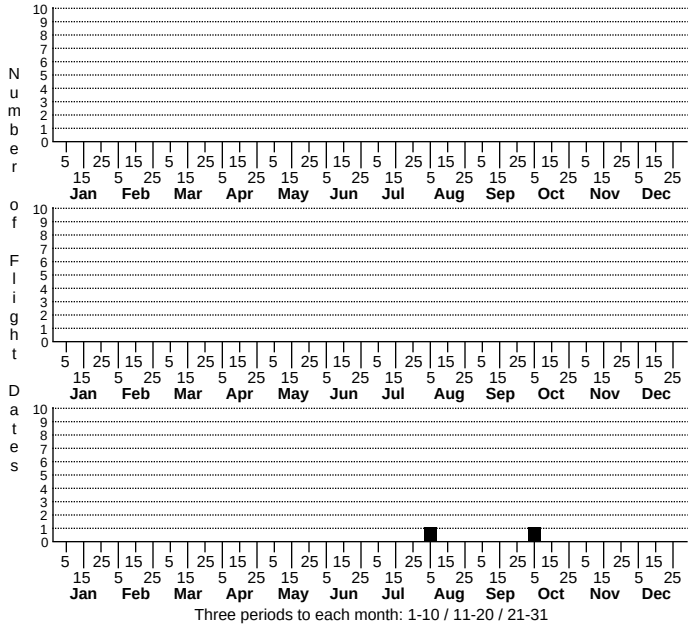
FLIGHT PERIOD: Probably three broods, but might be migratory in some areas (such as the mountains and western Piedmont). Broods in the Coastal Plain are a small one in April into May; early June to mid-July; and a primary one from mid-July to early October, sparingly into early November. The Piedmont data also seem to indicate two very small broods prior to the largest one in late July and August, but a small "peak" in late September is puzzling. Likely just two broods in the mountains (if it breeds there at all); records fall between mid-May and mid-September.

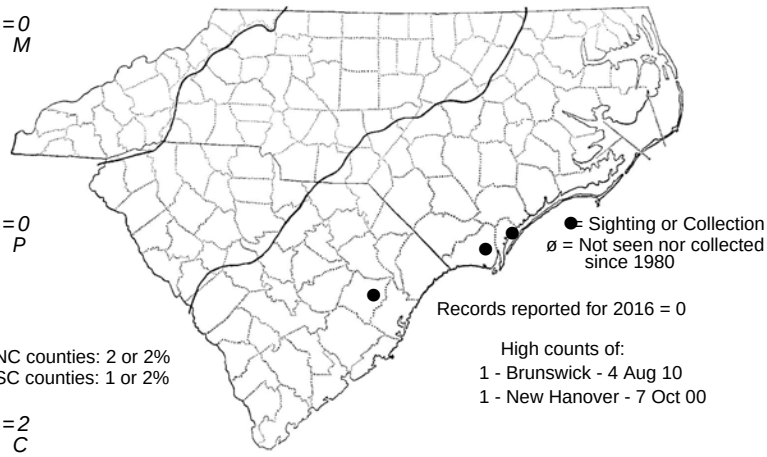
HABITAT: This species is characteristic of hot, sandy places. Habitats are usually longleaf pine/scrub oak woodlands and openings, such as dirt roads through sandhills, dry powerline clearings, sunny scrub habitats, and so forth. The "tidewater" range presumably relates mainly to records in coastal fringe sandhills, margins of dry woods, dunes, and other sandy places near the coast, etc.

FOOD AND NECTAR PLANTS: Foodplants are legumes, mostly herbaceous species. Black locust (Robinia pseudo-acacia) is a foodplant in some parts of the East but is rare in the Coastal Plain; perhaps dwarf locust (R. nana) is used in NC. The species nectars on a wide variety of flowers, but it is commonly seen taking moisture and minerals on dirt roads.

COMMENTS: In my mind, this butterfly conjures up scorching hot weather and blazing hot sands. Zaruccos often perch on white sands in open longleaf pine habitats and on the sandy dirt roads and jeep trails in these habitats. Males are quite territorial, flying back and forth along sandy roads and perching on the tips of grass stems and other vegetation 1-3' off the ground. Most references indicate that the Zarucco is most likely to be confused with the Wild Indigo Duskywing; this is indeed true for females, which are very similar. However, male Zaruccos are often confused in NC with the male Horace's Duskywing, though male Horace's are not as strongly territorial as Zaruccos are. Some Zaruccos seen in NC might be migrants from farther south, but this is mostly a speculation because the spring brood is very small.

Funereal Duskywing *Erynnis funeralis*





Earliest date: Brunswick 4 Aug 2010
Latest date: New Hanover 7 Oct 2000

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: Accidental stray; reported only from two counties (Brunswick and New Hanover). This species normally ranges east to OK, TX, and LA; however, it has strayed east to FL, SC, and PA.

ABUNDANCE: An accidental visitor, with two reports.

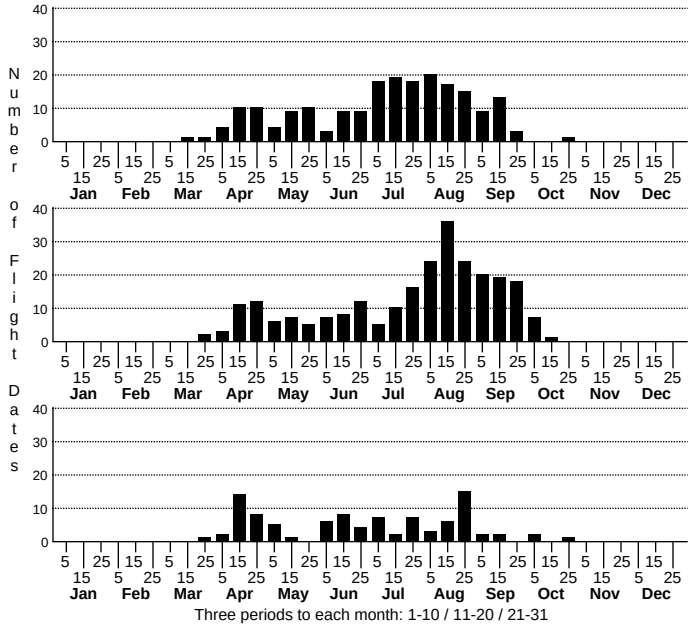
FLIGHT PERIOD: The sole reports are for August 4, 2010, and October 7, 2000. The normal flight occurs from March to October, with about three broods.

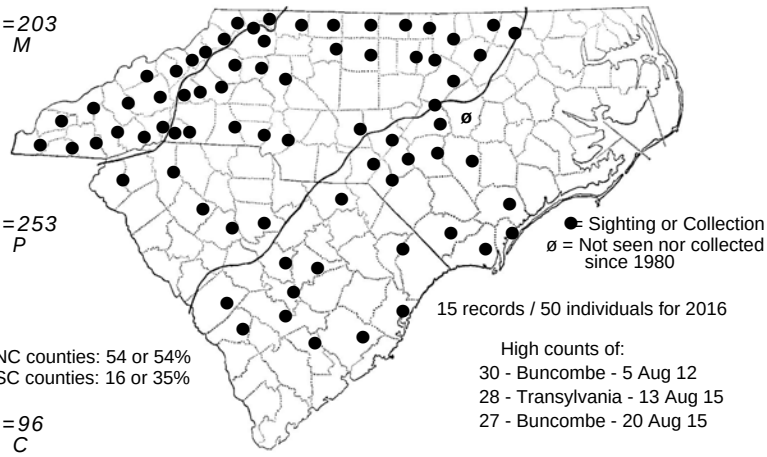
HABITAT: The first individual (New Hanover County) was seen in a weedy area on Figure Eight Island, and the second (Brunswick County) was seen in a weedy/brushy area near mixed forest. Within its normal range, the Funereal Duskywing inhabits woodland edges, thickets, scrub, and other semi-open places (and is the southwestern counterpart of the Zarucco Duskywing).

FOOD AND NECTAR PLANTS: Foodplants are various legumes. The NC individuals were seen nectaring on lantana and various other herbaceous species.

COMMENTS: I observed one, presumably of this species, at Figure Eight Island in fall 2000. The individual showed a bright white hind wing fringe, but otherwise resembled a Zarucco Duskywing, which has a buff-colored hind wing fringe (though a FL Keys population may have white fringes). John Ennis photographed a duskywing, with a white hind wing fringe, which was initially identified as a Zarucco Duskywing, until I saw the photographs in late 2010. It was apparent to me by seeing a handful of Ennis' photos from different sun angles that the white fringe was not an artifact of light. Though two lepidopterists who viewed the photos expressed some concern about the white fringe not being as bright white and as wide as some Funereals within the usual range, and the potential of the butterfly to be a mutant or odd variant of Zarucco. However, a review of dozens of photos of Funereals on websites (through Google) revealed many individuals that seem to be identical to the Brunswick County individual. In addition, there was a notable flight of this species northward and northeastward in summer and fall, reaching WI, PA, and even northeastern Canada; and there was a convincing sight report for the Coastal Plain of SC, on October 2. A few references consider the Zarucco and the Funereal to be the same species, but the Funereal is considered a valid species by the Butterflies of America website and most other recent authorities.

Wild Indigo Duskywing *Erynnis baptisiae*





15 records / 50 individuals for 2016

High counts of:
30 - Buncombe - 5 Aug 12
28 - Transylvania - 13 Aug 15
27 - Buncombe - 20 Aug 15

NC counties: 54 or 54%
SC counties: 16 or 35%

Earliest date: Buncombe 14 Mar 2012
Latest date: Moore; C 25 Oct 1996

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Somewhat spotty range in NC, but it has a rather "bimodal" distribution. Though found across the western 3/4th of the state, it is more widespread in the mountains and the Sandhills than in the Piedmont. Apparently absent from most or all of the northern two-thirds of the Coastal Plain.

ABUNDANCE: In general, uncommon over most of the state. Uncommon to locally common in the mountains, but probably only where crown vetch (Coronilla) is present. Uncommon in the Sandhills, but possibly fairly common in some Sandhills sites. Rare to uncommon elsewhere in the western and southern Coastal Plain and the lower Piedmont, west to Orange County. Seemingly rare in the central and upper Piedmont. Seemingly absent in most of the Coastal Plain, but more study needed.

FLIGHT PERIOD: Supposedly three broods, ranging from late March to mid-October. The flight charts suggest a brood from late March to mid- or late May downstate, another brood from about early June to mid-July, and a large brood from about mid-July into October. The mountain first brood seems to be from early April to early June, and then one large brood from mid-June into September. It is not clear from the flight chart that there is a third brood in the mountains. In fact, the flight charts for all three provinces are a bit "muddled", but at least this species has a nearly continuous flight from spring into mid-fall in each province.

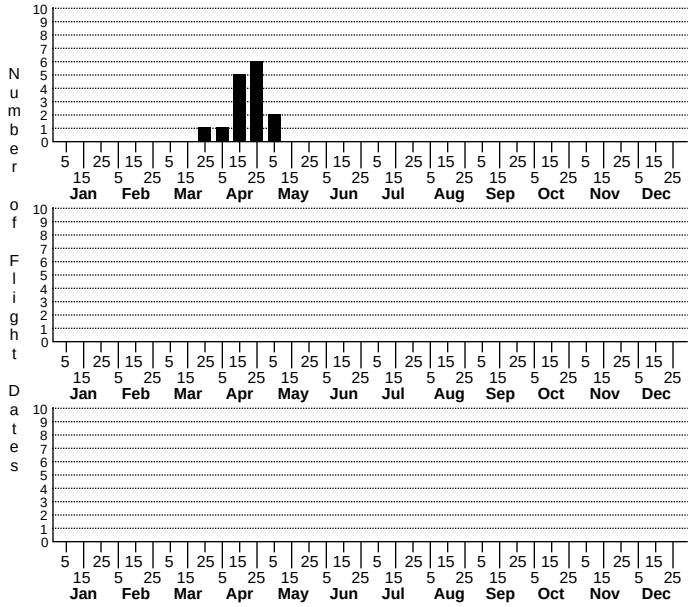
HABITAT: The habitats in NC are dry places, usually near or in open woodlands. Specific habitats are longleaf pine/scrub oak sandhills, edges and trails through dry woods, clearcuts, dry powerline clearings, and the like. In some places, it even occurs in gardens, thanks to plantings of its foodplants, mainly wild indigos (Baptisia spp.). In the mountains, the species occurs along roadbanks, other roadsides, and fields where the introduced crown vetch (Coronilla) is planted or escaped.

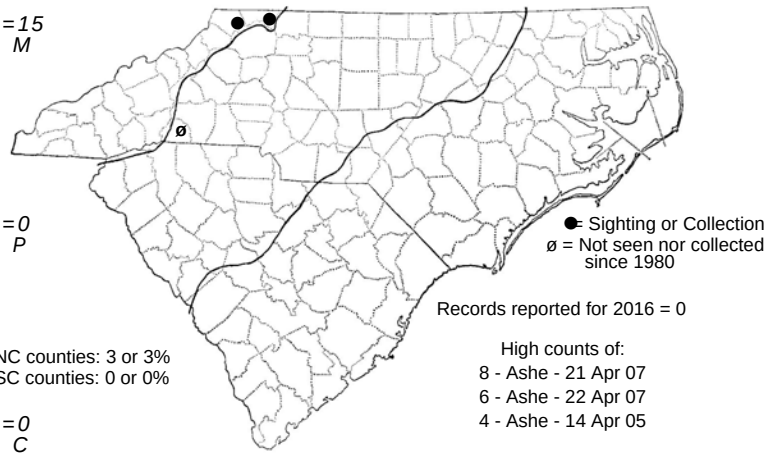
FOOD AND NECTAR PLANTS: The foodplants are herbaceous legumes. Originally, these were mainly wild indigos (Baptisia spp.) and lupines (Lupinus spp.). The caterpillars now also feed on crown vetch, which is often planted on road banks to prevent erosion; this plant is locally abundant in the mountains but is infrequent downstate. The adults often perch on sand or dirt, but they nectar on a wide variety of flowers.

COMMENTS: This species is by no means rare in the Sandhills, where it can be found on the dirt trails and bare ground amid the pines and scrub oaks. Elsewhere downstate, it is found in mostly upland areas. The species has greatly increased in states to our north, as the planting of crown vetch has helped the butterfly to expand onto roadsides and banks. In fact, in NC it is easiest to find in the mountains, if you can find sizable patches of crown vetch on roadbanks or fields. Near such patches you can sometimes find five or more Wild Indigos.

NOTE: An Erynnis species was collected in Clay County in 2001 that was initially identified as a Columbine Duskywing (E. lucilius). However, the Wild Indigo is very similar to Columbine, even in the hand; and no hostplant - eastern columbine (Aquilegia canadensis) - for the Columbine Duskywing has been seen at the collection site. As the Columbine Duskywing is known only south to southwestern VA, and the Wild Indigo Duskywing has previously been found in the vicinity of the collection site, the collector has concerns about the initial identification. Thus, this note is intended to alert the reader to the possibility of Columbine Duskywing in the mountains of NC. Another potential Columbine Duskywing was photographed at Mount Jefferson State Natural Area in 2005. However, eastern columbine was not noted in the vicinity of the sighting, and the rich woods habitat seems inappropriate, as well; Columbine Duskywing in the East is typically found on dry and rocky slopes with high pH soils, or in glade-like openings at limestone barrens.

Grizzled Skipper *Pyrgus centaureae*





Earliest date: Ashe 31 Mar 2007
Latest date: Ashe 10 May 2005

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S1	G5

Synonym: *Pyrgus wyandot*
Other Name: Southern Grizzled Skipper, Wyandot Skipper, Appalachian Checkered-Skipper

DISTRIBUTION: Until 2005, this species had been known in NC from decades-old records only at the White Oak Mountain area of Polk County and at "Montvale". This last site was apparently also in Polk County, and not from Transylvania County as previously indicated in this document. However, this very rare species was found in Ashe and Alleghany counties in April 2005, remarkable discoveries for a taxon (Pyrgus centaureae wyandot) listed as a Federal Species of Concern. Leroy Koehn stated in a text message in 2015 that he has collected this taxon in Cherokee, Haywood, Jackson, Surry, Wilkes, and Yancey counties, in addition to 18 counties in western VA, apparently all prior to the early 1980's. However, as we have not yet received data (location, date, etc.) for these collections, the county records are not included on the range map.

ABUNDANCE: Very rare in mountain counties bordering VA; based on Koehn's records noted above, it could still be present nowadays in a few places south of Ashe and Alleghany counties (and perhaps throughout most mountain counties).

FLIGHT PERIOD: A rather short brood in early spring (only), with the timing of the flight quite variable, depending on the severity of the season. In a warm early spring, the flight occurs from the end of March to about late April. In a cool spring, the flight begins around April 10-15 and extends into early May.

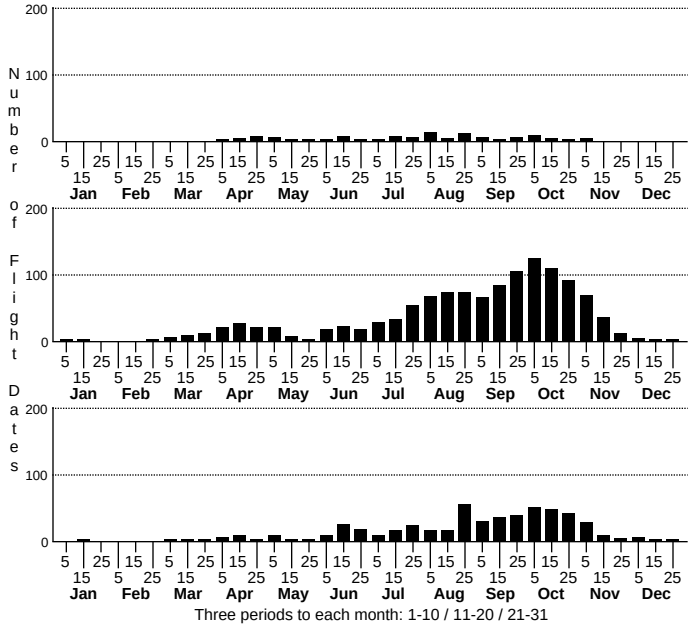
HABITAT: Somewhat restricted, though not at all in pristine habitats. Most individuals (known from several locales) have been found near summits of hills or mountains at middle elevations (3000-3500 feet), where a dirt track or road has wide, sunny margins containing considerable amounts of the foodplants and low-growing nectar species. Interestingly, and probably coincidentally, Christmas tree farms are present adjacent to most known sites. Because of the early flight season, areas of gravel or bare dirt/sand for basking are likely important habitat components. Koehn stated that he has never collected it near civilization, but always in remote and wild places.

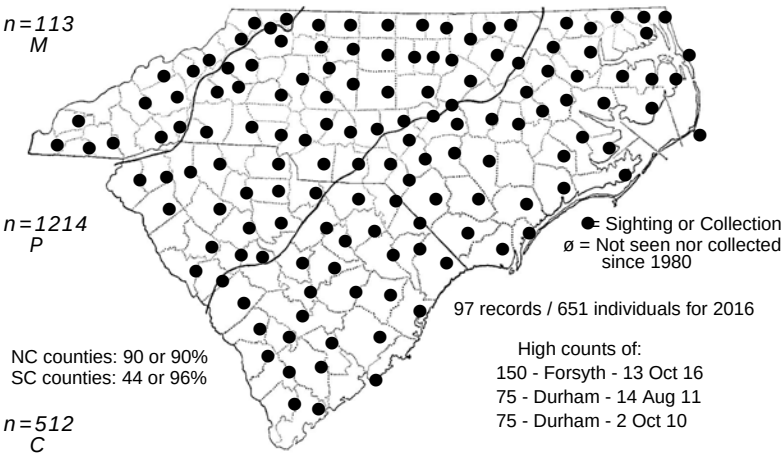
FOOD AND NECTAR PLANTS: The main foodplants are several herbs in the rose family, mainly cinquefoil (Potentilla spp.) and wild strawberry (Fragaria). At the above sites, Potentilla canadensis is likely the sole foodplant. The species nectars on low-growing flowers of the foodplants and other herbs, but also spends much time basking.

COMMENTS: Hardly any butterfly discovery in NC in the past 15 years rivals that produced by Ted Wilcox when he found an individual of this species on his sister's property in southern Ashe County on April 11, 2005. To confirm this record, he provided outstanding photographs on his website. The following weekend, Will Cook and I attempted to find the species in Ashe County, but we searched in vain along roadsides on April 16. The following day, we hit paydirt, finding one on public property in neighboring Alleghany County; Cook got several photos (visible on his website) before it took flight. Wilcox has found additional individuals at a few other sites in Ashe County in 2006-2007, and he and several other biologists had some decent one-day totals (up to eight individuals) in 2007.

Most references treat "wyandot" as a part of P. centaureae -- the Grizzled Skipper, which ranges across Canada and south into the mountains of CO and northern NM. However, NatureServe considers the Appalachian taxon to be distinct at the species level, though with some hesitation (a "Q" rank, which indicates questionable taxonomic assignment). Starting with the 17th Approximation, we have adopted the taxonomic treatment used by the Butterflies of America (2009) website checklist for all species and subspecies in the state. This taxon (wyandot) is now included within the wide-ranging Grizzled Skipper, and this is a central and southern Appalachian subspecies. However, "wyandot" is very rare and is under considerable threats, such as from gypsy moth spraying.

Common Checkered-Skipper *Pyrgus communis*





97 records / 651 individuals for 2016

High counts of:
150 - Forsyth - 13 Oct 16
75 - Durham - 14 Aug 11
75 - Durham - 2 Oct 10

NC counties: 90 or 90%
SC counties: 44 or 96%

Earliest date: Stanly 21 Feb 2002
Latest date: Forsyth 20 Jan 2015

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Essentially statewide; likely occurs in all counties, but might be migratory (non-resident) in a few of the higher mountain counties.

ABUNDANCE: Fairly common to locally common in the fall, except rare to very uncommon in the mountains. Rather rare in spring, and not numerous until after mid-July, with numbers peaking quite late (in September and October) for a skipper.

FLIGHT PERIOD: Apparently three broods in the state, but only the last is numerous. Broods are a small one from March to mid-May downstate and in April and May in the mountains, a larger one from early June to early September, and the main one from early September to mid-November, rarely into December. Whether this third brood is simply a brood hatched in NC or represents mostly migrants from farther south is not well understood. The scarcity of spring records in the Coastal Plain, compared with the many in the Piedmont, is a bit baffling.

HABITAT: This is an open country butterfly. It occurs in fields, gardens, vacant lots, powerline clearings, and other mostly disturbed places, usually well removed from forested cover. However, it can be found regularly in savannas, one of its few "wooded" habitats in NC.

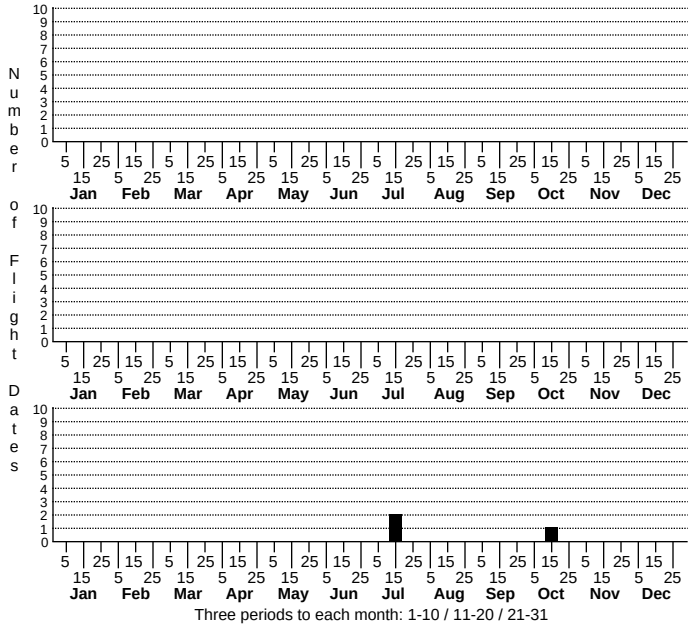
FOOD AND NECTAR PLANTS: The foodplants are mainly in the mallow family (Malvaceae), most of which are introduced. The species nectars on many plants, mostly close to the ground, such as on clovers and composites.

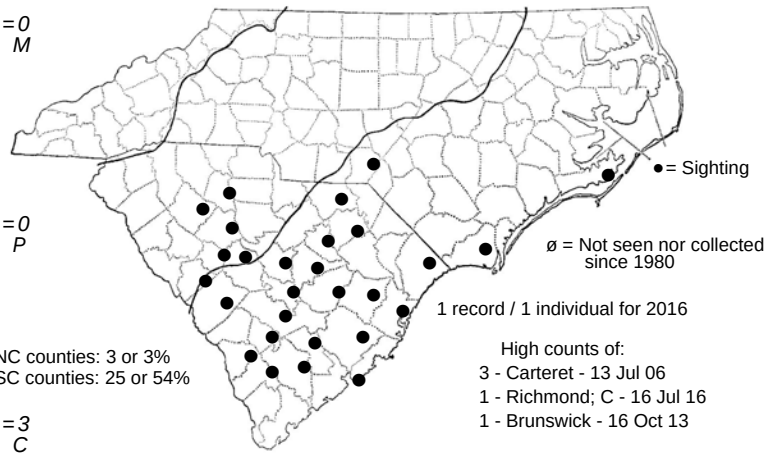
COMMENTS: Though references often mention this species and others as migrants, we suggest the term "winter-stressed" for a species showing the flight periods above (as do Phaon Crescent, Southern Skipperling, Eufala Skipper, and a few others). These species have very small first broods, and succeedingly larger following broods. To some biologists, this implies that the species migrates into the state in large numbers in summer and especially in early fall. However, we suggest that these species, being near the northern end of their breeding range, have adults that leave large numbers of eggs in the fall, but only a few adults are produced from this brood to fly in the spring, perhaps as most larvae succumb to cold weather. Those few adults flying in the spring mate, lay eggs, and a larger brood is then produced, and a third brood (if there is one) is larger still.

The extremely similar White Checkered-Skipper (Pyrgus albescens) has recently been collected in NC, as well as often in SC. In fact, most recent specimens from all but the northwestern part of SC have been determined to be White, based on examination of genitalia. Thus, this western species is clearly moving northeastward and might be widespread in NC now. The late Ron Gatrelle has dissected a number of both species from South Carolina, and had this to say about potential field marks: "Communis [Common] being noticeably larger and much darker on the underside of the hindwings. The markings on the underside of albescens [White] looks washed out in comparison. Also the ground color above in communis is darker - kind of blackish gray, while in albescens it is more a brown gray. This is all for males." John Burns provides these data for forewing length: "albescens: 12.0 to 14.9 mm (mean: 13.72 mm); communis: 13.2 to 15.6 mm (mean: 14.58 mm)". Charles Bordelon says: "... males of P. albescens also have the same basic pattern as P. philetas [Desert Checkered-Skipper] dorsally."

We will continue to treat reports of "checkered-skipper sp." in NC as Commons, as we do not want to discard such data, as there is only one definitive record for White in the state, and as recently collected individuals in Durham County were determined to be Commons.

White Checkered-Skipper *Pyrgus albescens*





Status		Rank	
NC	US	NC	Global
W	-	SU	G5

DISTRIBUTION: Poorly known in the state, and presumably a recent arrival/"invader". Specimen known from Carteret County, and recent sight reports from Brunswick (2013) and Richmond (2016) counties. There is a reported, but undocumented, specimen from Mecklenburg County. (We have removed this record from the map due to lack of corroboration of this reported specimen.) This species ranges across the southern quarter of the United States, from CA east to FL. It has been rapidly spreading northward and now is known across most of SC, except for the mountains. It has also been collected (in 2010) in northern VA.

ABUNDANCE: Not known, but certainly increasing. As the only known way to separate the species from the Common Checkered-Skipper is by dissection of the male genitalia, any picture of the abundance (and range) will be slow in coming, unless there is more collection and examination of male specimens. Currently, seemingly very rare or rare, in the southern part of the state. It is possible that it is simply a stray or visitor, with no breeding populations.

FLIGHT PERIOD: Probably summer and fall. The only dates available are July 13 (for Carteret County), July 16 (for Richmond County), and October 16 (for Brunswick County).

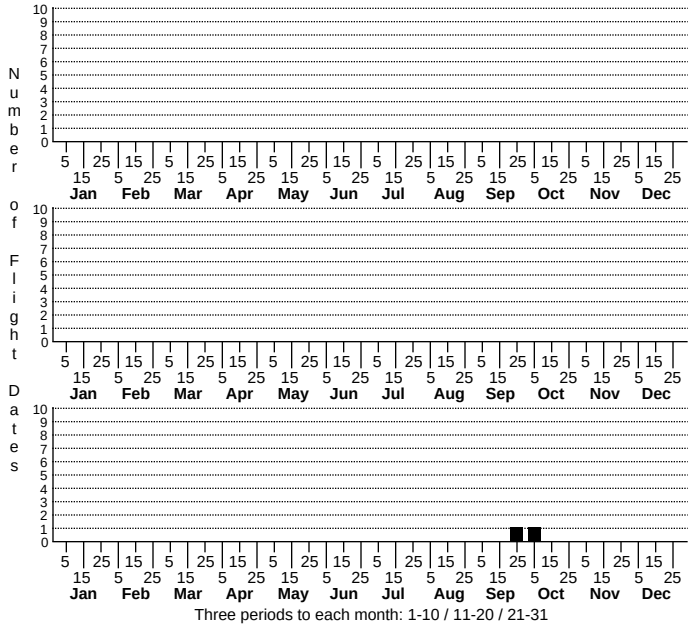
HABITAT: The Carteret record (of a male, and perhaps a female) came from sandy lawns/grassy areas immediately along the coast. The sight report from Brunswick County came from a sandy area within a pine flatwoods, also very near the coast; the sight report from Richmond County came from a sandy roadside not far from the SC border. The species might occur in sandier or drier habitats than for Common Checkered-Skipper, which is mainly found in NC around mesic disturbed places such as cultivated field margins, waste lots, lawns, and gardens. These habitat differences are speculation, especially as it occurs in desert habitats where Commons are rare to absent.

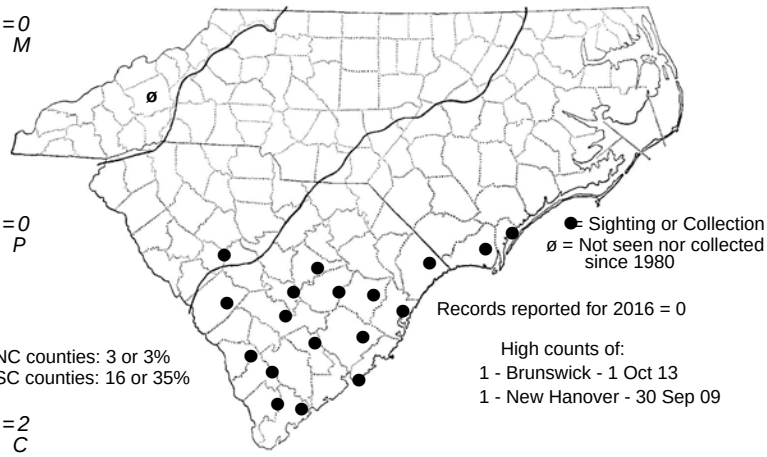
FOOD AND NECTAR PLANTS: The foodplants are mallows, chiefly or solely Sida species in the Southeast. It likely nectars on flowers growing close to the ground, as does the Common Checkered-Skipper.

COMMENTS: Randy Newman collected a male and female checkered-skipper at Fort Macon State Park in 2006, but it wasn't until fall 2012 that the male was examined through a dissecting microscope by Steve Hall, and identified as a White Checkered-Skipper. I (Harry LeGrand) have observed Pyrgus individuals in both Brunswick and Richmond counties that, based mainly on habitat, were White Checkered-Skippers. Harry Pavulaan collected the species in northern VA in October 2010. However, it is possible that the individual collected in VA was a stray, or visitor from the west or southwest. One should not assume that the "vanguard" of the species has "marched" all the way through NC and north to southern VA -- as several males collected north of Durham in October 2012 were clearly Commons (by dissection), as were other checkered-skippers collected by Pavulaan recently in northern VA.

This skipper is considered a good/separate species from Common Checkered-Skipper by many authorities, such as the Butterflies of America website. The male genitalia of White Checkered-Skipper has a rounded valve with a single tiny tooth, as opposed to a "clawlike" valve with two prongs, somewhat resembling the claw of a crab or crayfish, in Common. See the Common Checkered-Skipper account (page 123) for some suggested field marks to separate these two species. The Common is being "pushed northward" or is being eliminated by the White in FL, GA, and SC, such that the majority of those collected now in much of SC are Whites. Should we be concerned about the ultimate extirpation of a species from much of the US, if the replacement is basically the same entity? How can we, and should we, try to "protect" the Common Checkered-Skipper, for example?

Tropical Checkered-Skipper *Pyrgus oileus*





Earliest date: New Hanover 30 Sep 2009
Latest date: Brunswick 1 Oct 2013

Status NC	Status US	Rank NC	Rank Global
-	-	SA	G5

DISTRIBUTION: Fall season stray, with three records. There is an old record for Buncombe County, for which we have no data, other than the record was more than 20 years ago. There are now two recent photographic records for the southeastern corner of the state. This is a species of the Deep South, ranging regularly north to northern FL only. Observers in SC added three new county records (Hampton, Jasper, and Williamsburg) in 2006, one more (Orangeburg) in 2007, two more (Berkeley and Georgetown) in 2008, one more (Sumter) in 2014, and two more (Richland and Saluda) in 2016.

ABUNDANCE: Casual now in the extreme southern Coastal Plain, close to the coast; accidental elsewhere. Reported several times (including a specimen taken as a voucher) in fall 1999 from James Island, Charleston County, SC, and photographed in Horry County, SC, in 2003. There were a handful of SC records in 2006-2007, a moderate number in 2008, and quite a few records from 2009 to 2016. Thus, it is a bit surprising that it hasn't been reported more often in NC in recent years, considering that it has now been found in 16 SC counties.

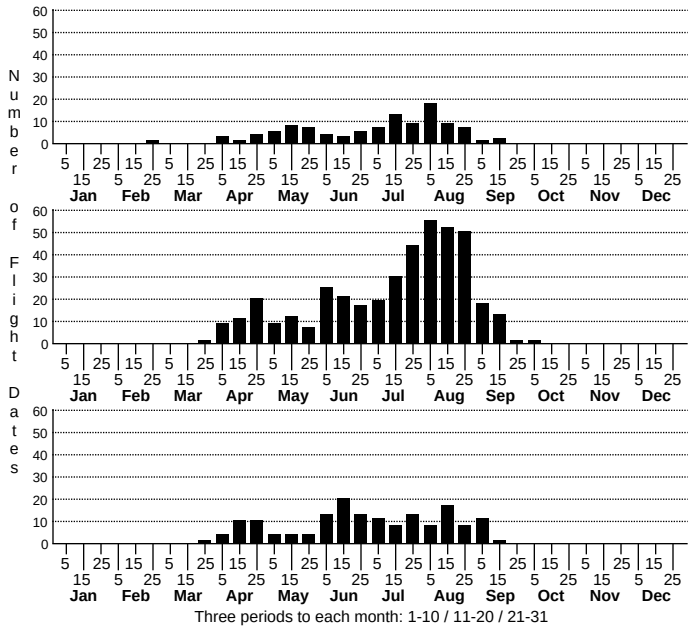
FLIGHT PERIOD: Dates of the NC records are for September 30 and October 1. Most SC dates are for the fall season, as would be expected for a southern migrant species.

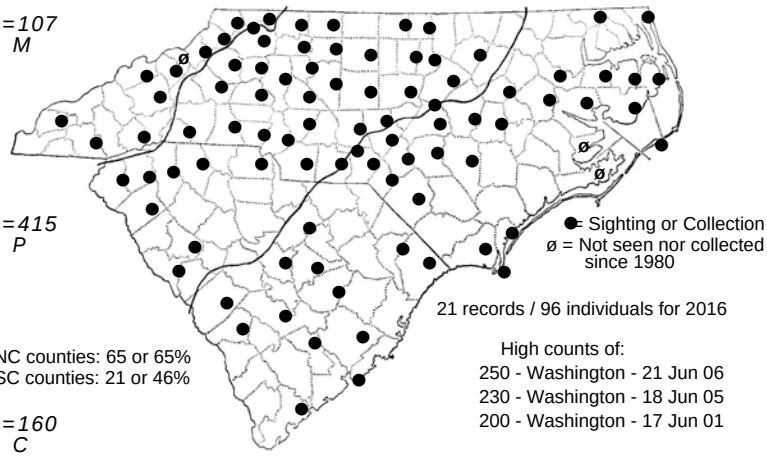
HABITAT: Open country; gardens, lawns, roadsides, fields, wooded borders, etc. -- especially within a few miles of the coast (in NC).

FOOD AND NECTAR PLANTS: The foodplants are mallows. The species presumably nectars on many flowers.

COMMENTS: At long last, NC got recent confirmation of this species. Joe Lafferty photographed a male on the mainland part of Sunset Beach (Brunswick County) on October 1, 2013. Immediately after hearing of this record, Bruce Smithson re-checked his photos of checkered-skippers taken in New Hanover County, and he found a photo of a male Tropical taken at Fort Fisher on September 30, 2009! Records in lower SC have become so regular in recent years that it is now an apparent breeding resident, at least locally. If that is the case, NC should expect more records in the near future, at least along the southern coast, though it seems unlikely that the species could survive the winter this far north.

Common Sootywing *Pholisora catullus*





21 records / 96 individuals for 2016

High counts of:
250 - Washington - 21 Jun 06
230 - Washington - 18 Jun 05
200 - Washington - 17 Jun 01

NC counties: 65 or 65%
SC counties: 21 or 46%

New for 24th: Cabarrus

Earliest date: Buncombe 23 Feb 2014
Latest date: Wake 10 Oct 2014

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Essentially statewide, but relatively few records for the southern Coastal Plain; nonetheless, it probably occurs in all counties.

ABUNDANCE: Uncommon in most places, but may be locally fairly common to common. Despite it being common in much of the East, it is seemingly not a common species in NC, at least not away from civilization. However, its abundance may be overlooked, as relatively little field work takes place in cultivated fields and their edges.

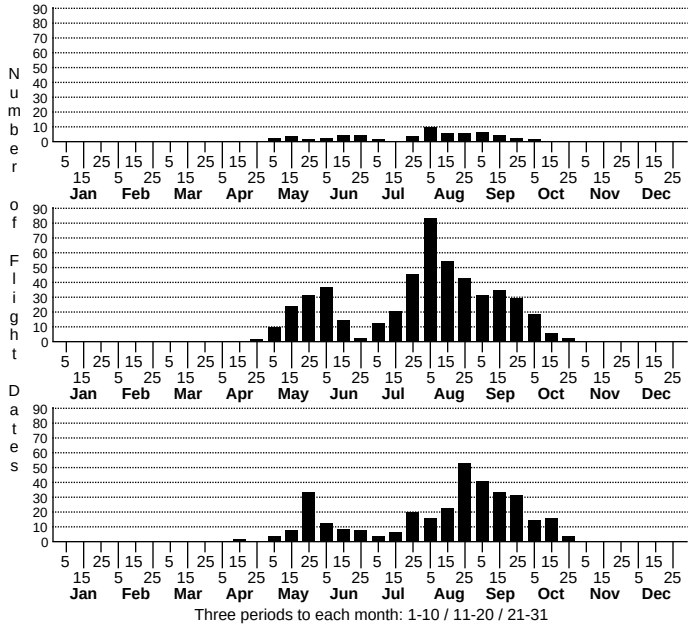
FLIGHT PERIOD: Apparently three broods in NC; a rather small brood from early April to mid-May downstate and to mid- or late June in the mountains; seemingly two larger broods downstate from late May or early June to mid-September. One or two mountain broods from late June into September.

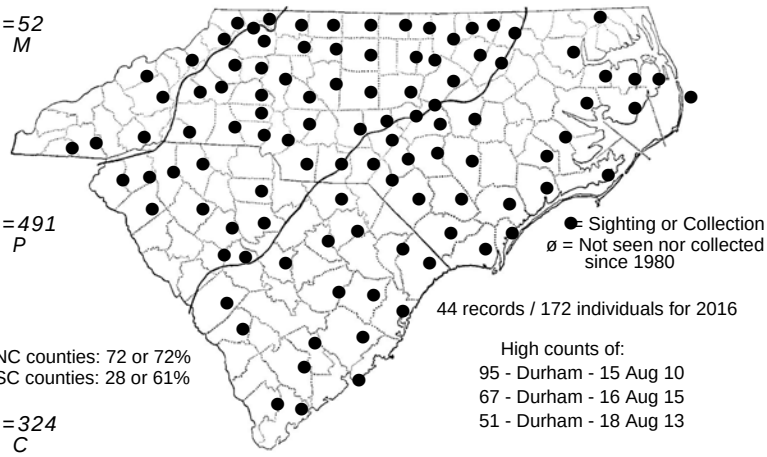
HABITAT: This species is the most urban or suburban butterfly in NC. It inhabits gardens, margins of cultivated fields and pastures, vacant lots, and other places among humans much more than it can be found along remote wooded borders or powerline clearings, though it can be found in the latter habitats. It can also occur in brackish marshes, presumably where one of its foodplants -- water hemp (Amaranthus cannabinus) -- is found.

FOOD AND NECTAR PLANTS: The foodplants are mostly weedy species such as lamb's-quarters and amaranths, which are found in vacant lots, pastures, etc. The species nectars on garden flowers, such as butterfly-bush, as well as clovers and other weedy flowers.

COMMENTS: To look for the Common Sootywing, don't waste your time along wooded edges and powerlines, but look in gardens where there are flowering plants such as butterfly-bush, or in weedy lots and margins of croplands where verbenas and other introduced plants are blooming. The weedy fields and roadsides north of Lake Phelps abound with this species, and over 200 have been tallied on the butterfly count there on several occasions.

Swarthy Skipper *Nastra lherminier*





44 records / 172 individuals for 2016

High counts of:
95 - Durham - 15 Aug 10
67 - Durham - 16 Aug 15
51 - Durham - 18 Aug 13

NC counties: 72 or 72%
SC counties: 28 or 61%

New for 24th: Caldwell

Earliest date: Brunswick 20 Apr 2012
Latest date: Gates 30 Oct 2009

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Essentially statewide, but not widespread in the mountains; might occur in all counties, but more widespread downstate. Just three county records for the southern mountains, and also just two county records for the extreme northern Coastal Plain. Might be absent in the extreme northeastern Coastal Plain, but there has been a relative lack of field work in this part of the state.

ABUNDANCE: Fairly common and widespread in the Coastal Plain (at least in the southern half) and in the eastern and southern Piedmont; sometimes common in savannas in the lower Coastal Plain. Uncommon in the upper Piedmont, locally uncommon in the mountains, and rare in the northern Coastal Plain. Certainly, it is more numerous in the eastern half of NC than in the western half, even though this is not obvious from the range map.

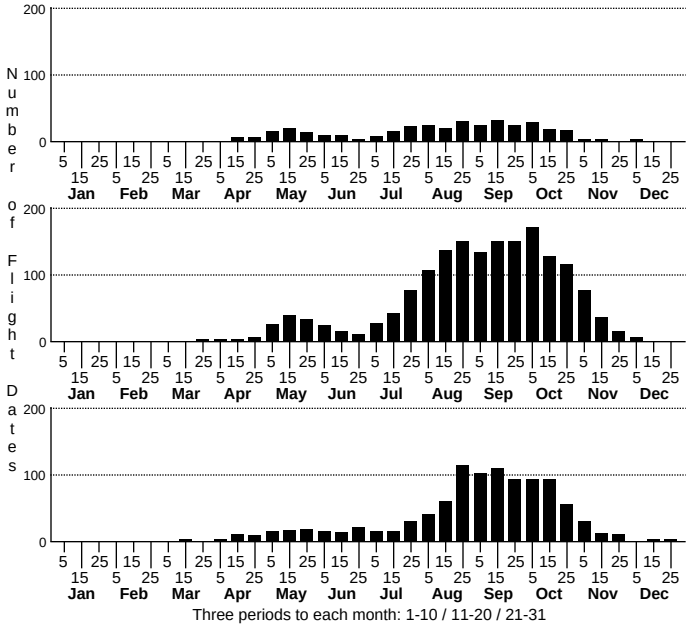
FLIGHT PERIOD: Two broods; early May to mid- or late June, and early or mid-July to late October. More data needed for the mountains, but two broods there also; apparently from early or mid-May into early July, and from late July through September.

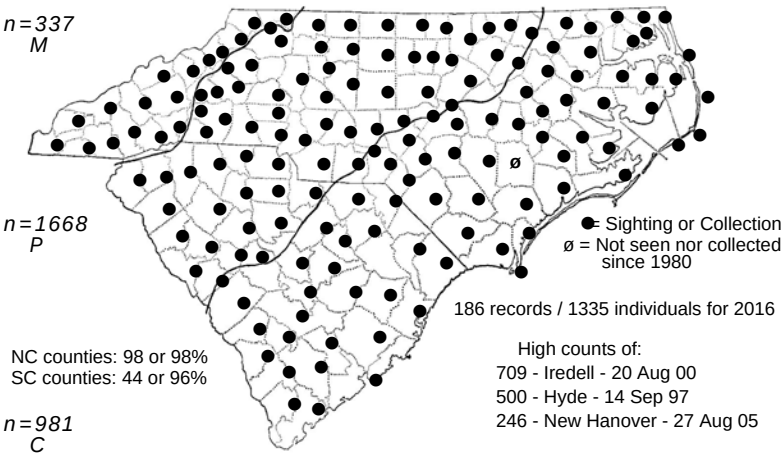
HABITAT: Widespread and not particularly choosy in habitat, though usually where moderately thick to dense grass/herb cover is present. Habitats include savannas, overgrown fields, powerline clearings, woodland borders, glades, and edges of marshes. It is not generally thought of as a wetland species, but it does occur (as indicated above) along marsh edges and savannas.

FOOD AND NECTAR PLANTS: Little bluestem (Schizachyrium [Andropogon] scoparius) is the most common foodplant, if not the only host. The species has a wide array of nectar plants; most are low growing herbs, with flowers within a foot of the ground.

COMMENTS: The Swarthy Skipper is one of the plainest-looking skippers and is easily overlooked and misidentified; it quickly drops into grassy cover when clouds block the sun. It is a widespread species, but is seldom really numerous anywhere. But, because of its many habitats, it is a numerous species in NC. More field work is needed in the mountains and northern Coastal Plain to determine its true abundance there.

Clouded Skipper *Lerema accius*





Earliest date: New Hanover 20 Mar 2012
Latest date: Brunswick 31 Dec 2011

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, occurring in all provinces on numerous occasions, and doubtless present in all counties.

ABUNDANCE: In late summer and fall, it is very common to locally abundant in the southeastern corner of the state; common to at times very common elsewhere in the Coastal Plain and the eastern half of the Piedmont; and uncommon to fairly common in the western Piedmont and mountains. It is generally uncommon, at best, in any province prior to late July or early August.

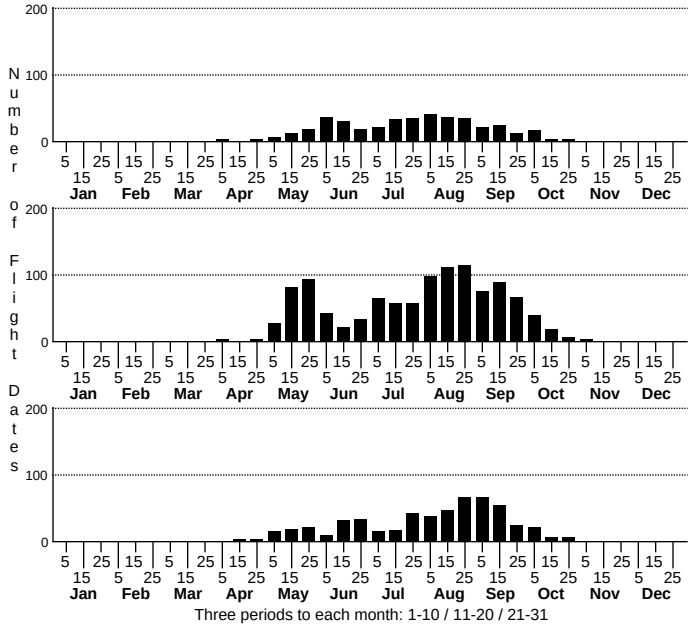
FLIGHT PERIOD: The primary flight period, seemingly of one long brood, is early July to early November, rarely well into December. The first brood in NC is comparatively small; this flight period is from mid-April through June. Though often considered as partly migratory, the Clouded Skipper in NC may be more of a "winter-stressed" species instead.

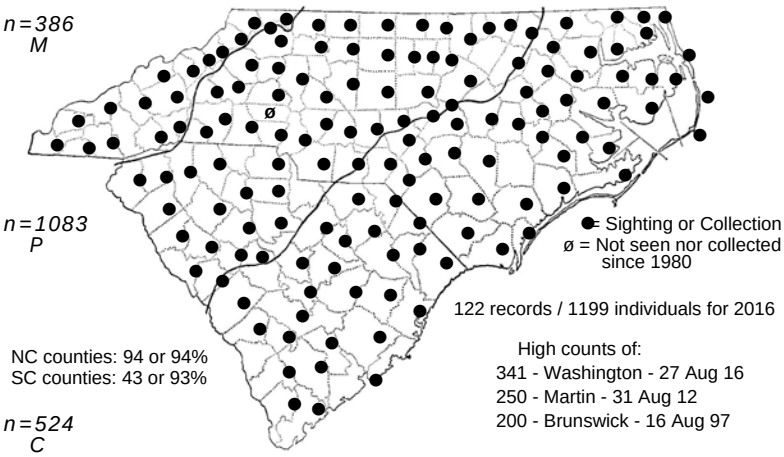
HABITAT: This is a widespread butterfly of partly forested to semi-open grassy places, such as savannas, forest borders, and powerline clearings. It also occurs in open longleaf pine/turkey oak woods. It is especially common in any grassy places near the coast, particularly near the margins of maritime forests and bottomland/swamp forests. Some references mention "woods edges and clearings near swamps and rivers" (Opler and Malikul 1992) and "prefers moist grassy areas" (Glassberg 1993). It does favor moist areas over dry, sandy places, but it really is not to be considered one of the "wetland" skippers (a la many Coastal Plain species in the genera Euphyes, Amblyscirtes, and Poanes).

FOOD AND NECTAR PLANTS: The foodplants are a wide array of grasses. The species nectars on a great array of flowering plants. Unlike most skippers, it often nectars on tubular (campanulate) flowers such as gerardias (Agalinis) and morning-glories (Ipomoea).

COMMENTS: This is the most common dark brown to blackish skipper in the fall season in NC, though it may at times be outnumbered by the Ocola Skipper. Counts of 50 or more can be made close to the southeastern coast in September or October, when it is one of the latest skippers on the wing. It also is one of the earliest flying butterflies, especially skippers, in the morning, often perching on leaves with wings partly opened, while dew is still on the vegetation.

Least Skipper *Ancyloxypha numitor*





122 records / 1199 individuals for 2016

High counts of:
341 - Washington - 27 Aug 16
250 - Martin - 31 Aug 12
200 - Brunswick - 16 Aug 97

NC counties: 94 or 94%
SC counties: 43 or 93%

Earliest date: Madison 7 Apr 2012
Latest date: Orange 6 Nov 2004

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Common Least Skipper

DISTRIBUTION: Statewide, but in somewhat local colonies; present in all provinces, and undoubtedly occurs in all 100 counties.

ABUNDANCE: Local in occurrence, but common to occasionally abundant where found. More numerous in the lower Coastal Plain than elsewhere, and it is also quite common on the Outer Banks.

FLIGHT PERIOD: Apparently three broods statewide. Downstate, the first brood is clearly from very late April or early May to June 5-10. Later broods (two or possibly three) run together and are difficult to discern from the flight data, but the species is present consistently from mid-June to mid-October. In the mountains, the first brood occurs from early or mid-May to late June, with the second and third broods occurring from the beginning of July to early October.

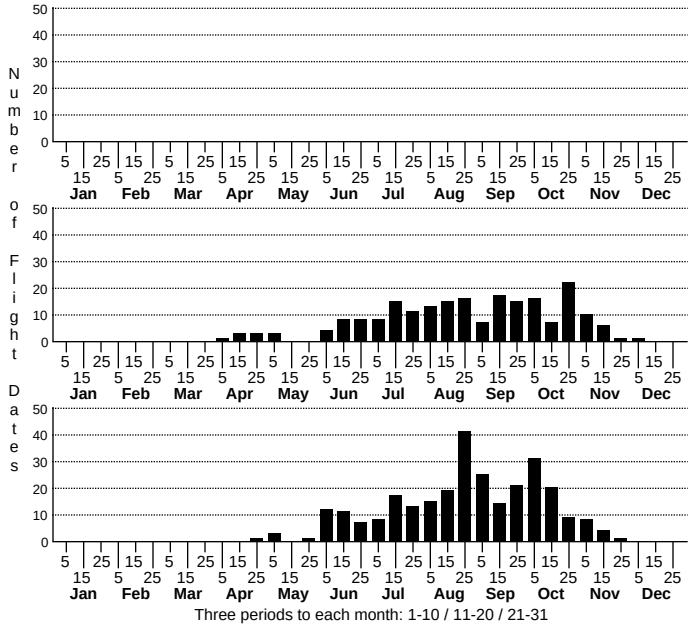
HABITAT: This is strictly a marsh species. It is found in discrete colonies that stay close to the grasses. It favors medium-height (1-3 feet) grasses of fresh to slightly brackish marshes, ditches, pond margins, wet meadows, wet savannas, and the like. It seldom strays to dry grassy areas.

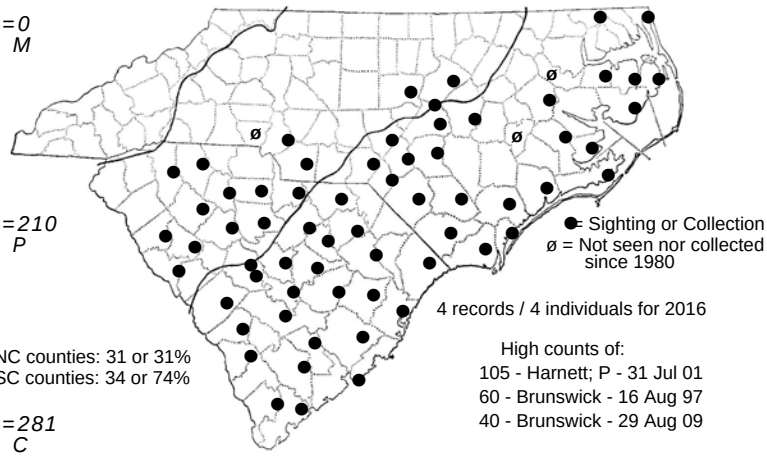
FOOD AND NECTAR PLANTS: Grasses, undoubtedly wetland species, are the foodplants of the caterpillars. Adults nectar less commonly than many other skippers, favoring low flowers within a foot of the ground.

COMMENTS: This is one of the most colonial of our butterflies in NC. It is difficult to find just one Least Skipper; with a little search five to ten or more can often be seen nearby. It has a distinct weak bouncing flight, very like a satyr, as it flies amid (as opposed to above) the reeds of its marshy habitat.

It is surprising that the NABA Checklist (2001), the Butterflies and Moths of North America [BAMONA] website, and the Butterflies of America website still call the species "Least Skipper". As there is the Tropical Least Skipper (Ancyloxypha arene) in AZ, the name of "Least Skipper" is a nested name, of which NABA disapproves. NatureServe now has adopted the common name of "Common Least Skipper", with no hyphen. We will retain the name of "Least Skipper" for now, but do not be surprised to see this name come into disfavor and/or disuse in upcoming years. As we have "Checkered-Skipper" for the genus Pyrgus, "Roadside-Skipper" for Amblyscirtes, etc., "Least-Skipper" should be used for the genus Ancyloxypha.

Southern Skipperling *Copaeodes minima*





4 records / 4 individuals for 2016

NC counties: 31 or 31%
SC counties: 34 or 74%

High counts of:
105 - Harnett; P - 31 Jul 01
60 - Brunswick - 16 Aug 97
40 - Brunswick - 29 Aug 09

Earliest date: Harnett; P 10 Apr 1999
Latest date: Harnett; P 7 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: The southeastern half of the state, occurring over most of the Coastal Plain and along the southern border of the Piedmont (where at least a resident in some areas). Absent from most of the Piedmont and all of the mountains. NC lies at the northern end of the species' range, though it strays to VA.

ABUNDANCE: Apparently declining. Somewhat variable from year to year. Uncommon to locally fairly common, but easily overlooked, in the extreme southeastern Coastal Plain; uncommon north to the Sandhills and Craven County; rare in the southern Piedmont and in the Coastal Plain north of Craven County. This apparent scarcity is perhaps in part due to its tiny size, making it easy to overlook; however, one to several dozen individuals can be seen in a few favored fields. The species was shockingly scarce in 2015, with nary a single report from the entire Coastal Plain. There were also just four state reports in 2016, and this suggests that the species is on the decline in NC due to habitat loss and other factors.

FLIGHT PERIOD: Apparently four broods. A very small brood in April and early May, a small brood from early June into July, and seemingly two much larger broods from early August through November, with a slight "valley" in early to mid-September. Most books indicate two broods at the northern edge of the range, but the flight chart seems to indicate as many as four broods in the state.

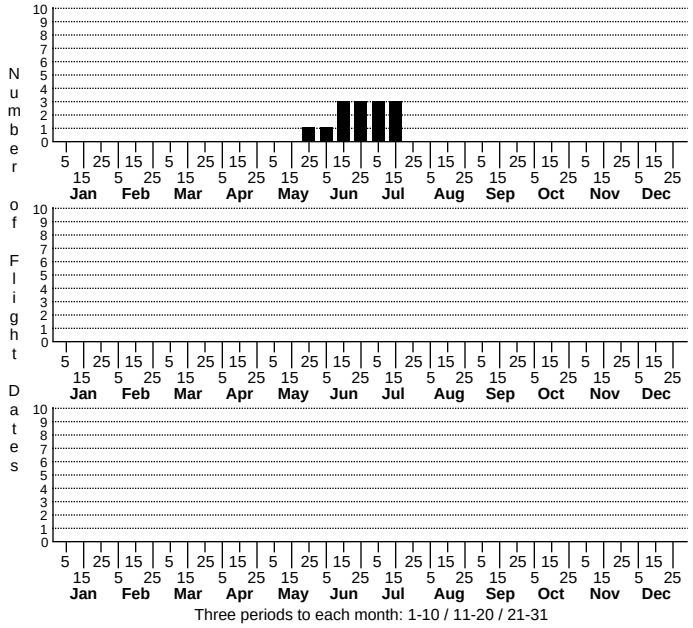
HABITAT: This species favors areas of short grasses, generally less than a foot tall. Its tolerance of habitats is fairly broad, but it generally avoids the wet areas, such as marshes, that are the habitats of the Least Skipper. Habitats in NC include savannas, grassy woodland edges, roadsides, open fields, weedy lawns, and openings in longleaf pine/turkey oak scrub.

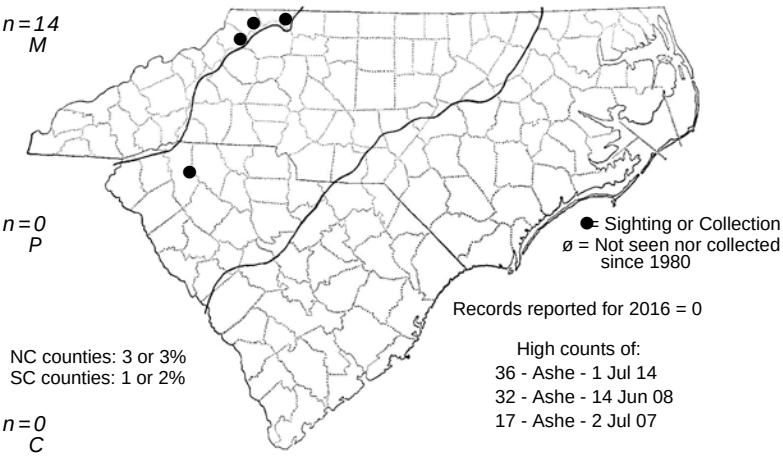
FOOD AND NECTAR PLANTS: Bermuda grass (Cynodon dactylon) is the main foodplant, though other grasses are presumably used. The species nectars on many species, but generally within about a foot of the ground.

COMMENTS: This species, as do all tiny species, keeps close to the ground. It has a relatively quick and darting flight like most other skippers, rather than the weak, bobbing flight of the larger but similar Least Skipper. Its apparent absence north of the extreme southern Piedmont counties is probably real, as NC lies at the northern edge of the range. Paul Hart has recorded the species often in his yard at Raven Rock State Park in Harnett County, greatly contributing to the surprising (and misleading) number of records from the Piedmont. Jeff Pippen found an individual in 2002 in Chatham County, apparently a stray, as this is a well-covered area; and I saw one in 2003 at the N.C. State University Arboretum in Wake County, clearly a stray at this well-worked area. However, I have seen a few individuals along a grassy roadside just south of Raleigh (Wake County) in several recent years, suggesting a small resident population there, at the northern edge of the range. Recent observations by others in eastern Wake County and in Mecklenburg County suggest that there are likely resident populations in these areas, as well, especially considering that the Southern Lake Norman butterfly count in the latter county tallied an excellent 16 individuals on August 11, 2013.

There is some recent concern for this species, as it is most frequently found in dry to mesic grassy fields and grassy vacant lots that can be easily cleared or mowed. In addition, its habitats can quickly become overgrown by saplings if not constantly mowed or otherwise kept in a grassy condition.

European Skipper *Thymelicus lineola*





Earliest date: Ashe 29 May 2014
Latest date: Ashe 13 Jul 1997

Status NC	Status US	Rank NC	Rank Global
-	-	SE	G5

DISTRIBUTION: Known only from the extreme northern mountains, where found in Alleghany County in 1993, in Ashe County in 1997, and in Watauga County in 2007. This introduced species was thought in the 1990's and 2000's to still be expanding its range southward; however, that expansion seems to have slowed or stopped now. The single record from SC, assuming a correct identification, appears to be somewhat old.

ABUNDANCE: Quite local within its small range in the state, but can be common at a few sites in Ashe County; seemingly rare elsewhere despite much apparently suitable habitat, especially so along or near the Blue Ridge Parkway.

FLIGHT PERIOD: A single brood; very late May to mid-July.

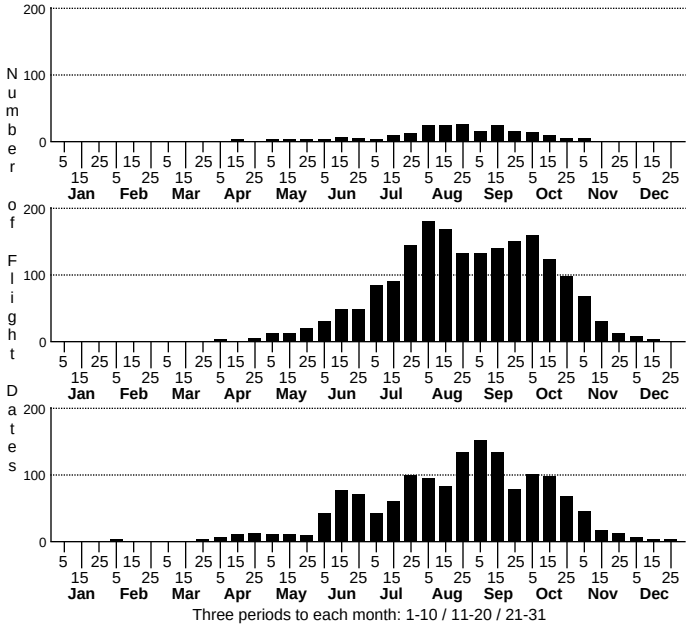
HABITAT: This is a denizen of pastures, meadows, and other fields, including grassy balds -- mainly where there are non-native grasses. These grassy places can range from somewhat moist meadows to high elevation "balds".

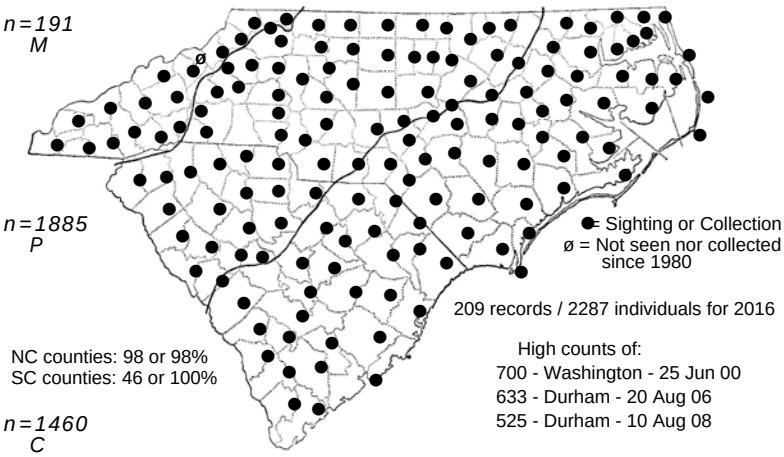
FOOD AND NECTAR PLANTS: Timothy (Phleum pratense), an introduced grass, is the usual host, but other grasses are certainly used. These skippers often nectar, at low plants. Red clover (Trifolium pratense) is the main nectar source in NC.

COMMENTS: It is not at all surprising that the species is now found in NC, at least close to the VA border. In 1993, I found two or three European Skippers in the same meadow as Peck's Skippers, nectaring on red clovers. Tom Howard and several other members of the Carolina Butterfly Society found a colony of four individuals in Ashe County in a meadow in July 1997, and I relocated the colony on the next day. I photographed several of the nine individuals that Jeff Pippen and I encountered in this same Ashe County meadow in late June 1998. This is likely the first documentation of the species in the state. Jonathan Mays observed one at a new site in Alleghany County in 2005, the first record for the state since 1998. In 2007 Ted Wilcox found the species at several sites in Ashe County and at one in Watauga County; and he recorded the first double-digit daily count for this species in NC, including 32 in one day. In 2014, it was found at two locations on Pond Mountain; and Brian Bockhahn had a state record of 36 adults there on July 1.

Oddly, the European Skipper has not been found in the numerous meadows along the Blue Ridge Parkway in VA or NC by Clyde Kessler (pers. comm.) over the past few years, nor has any other observer found the species in NC in meadows along the Parkway. Such meadows, generally leased to local farmers, often contain timothy grass and much red clover, seemingly excellent habitat. Then again, as this is an introduced species, maybe its apparent absence is "good news", though there are likely few native species that would be impacted by European Skippers (at least in small or moderate numbers).

Fiery Skipper *Hylephila phyleus*





Earliest date: Craven 10 Feb 2008
Latest date: Dare; OBU 28 Dec 2016

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, found in all three provinces, but rare in the northern mountains (despite records from all such counties).

ABUNDANCE: Common to often abundant in the Coastal Plain, and in the eastern and southern Piedmont; generally common in the central Piedmont. Uncommon to fairly common in the western Piedmont and in the southern mountains, but rather rare in the northern mountains.

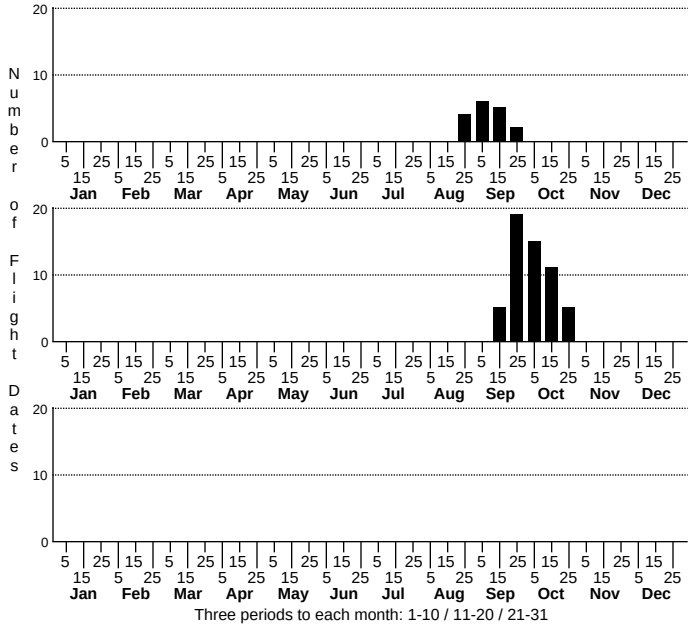
FLIGHT PERIOD: Probably three broods. A small brood from April to early July, and likely two overlapping ones from early July to mid-November, rarely mid-December. The species does not become common until mid-June in NC. Some of the populations in NC might be migrants from farther south.

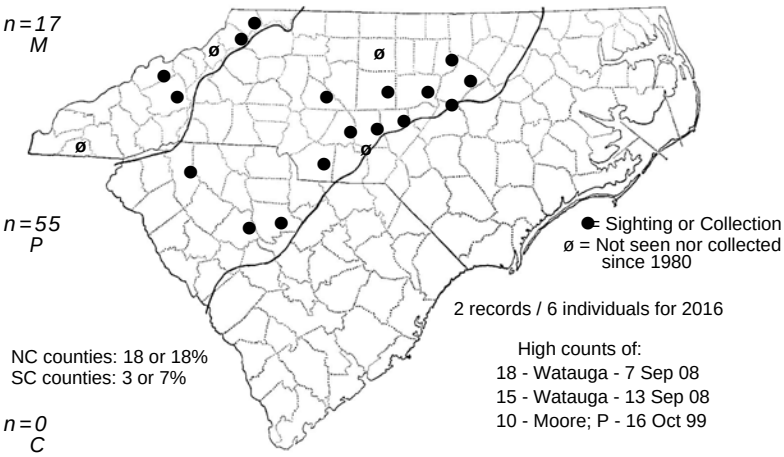
HABITAT: This species likes sunny, hot places. It is widespread in fields, open pine/scrub oak sandhills, roadsides, powerline clearings, savannas, and many other open country places. It is also one of the more common butterflies in gardens, lawns, and vacant lots.

FOOD AND NECTAR PLANTS: The foodplants are mostly weedy species such as Bermuda grass (Cynodon) and crab grass (Digitaria). The species nectars on a great variety of flowers, mostly low-growing species such as clovers, but also on blazing-stars and many others. It often teems on lantana flowers in gardens and yards later in summer and fall.

COMMENTS: The Fiery Skipper is the most often encountered orange skipper in much of the state, especially in late summer and fall in the Coastal Plain. It is often the most commonly seen butterfly in gardens, particularly in the Coastal Plain and eastern Piedmont. Hundreds can occasionally be seen nectaring on verbena north of Pettigrew State Park in June.

Leonard's Skipper *Hesperia leonardus*





Earliest date: Watauga 22 Aug 2010
Latest date: Union 23 Oct 1999

Status NC	Status US	Rank NC	Rank Global
W	-	S3	G4

DISTRIBUTION: Scattered in the mountains and the Piedmont, east to Wake, Harnett, and Richmond counties. Probably occurs over nearly all of the counties in these two provinces, but presently we have records for just 18 counties (six in the mountains, 12 in the Piedmont/Fall Line).

ABUNDANCE: Seemingly has declined in the past few years, at least in the Piedmont. Formerly, uncommon in the southeastern quarter of the Piedmont, from the Fall Line west to the Uwharrie Mountains (west to Randolph and Stanly counties); however, now rare to quite uncommon in this region. Rare at best in the northeastern portion of the Piedmont, where it has been looked for without success in recent years. Seemingly very rare (but almost certainly not absent) in the western half of the Piedmont. In the mountains, rare to locally uncommon south to Buncombe County, being most numerous in the northern counties. Very rare to absent in the southern 40% of the mountains, with only one old record known. Interestingly, a one-day count of 18 individuals from a meadow in Watauga County in 2008 almost doubled our previous single day count.

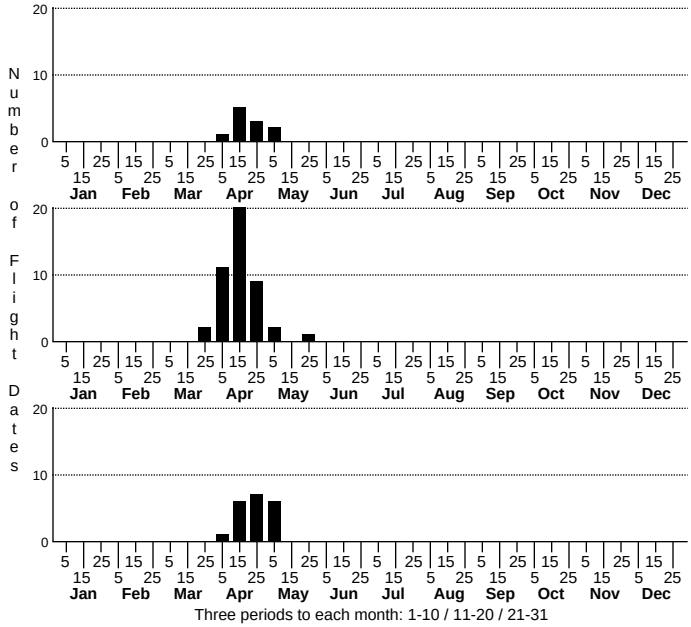
FLIGHT PERIOD: A single autumn brood -- the only eastern butterfly with a single brood in the fall season. In the Piedmont, it flies from roughly September 20 to October 20. In the mountains, the flight is from late August to late September.

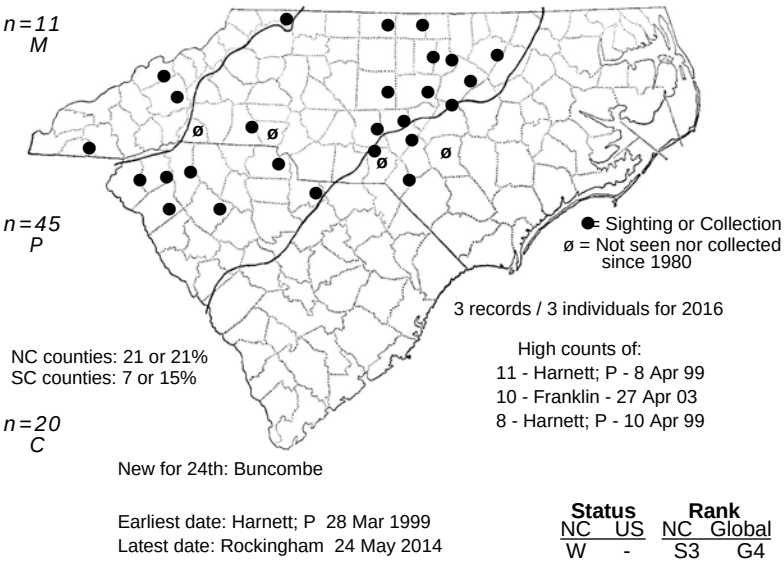
HABITAT: In the Piedmont, this species occurs along woodland borders, openings in upland woods (along powerline cuts), and in brushy fields, usually not far from woods. Unlike in the northern states, where it occurs in meadows, often where moist, most seen in NC have been in wide wooded edges along dirt roads. However, the colony found by Ted Wilcox in Watauga County in 2008 was at a wet meadow. The presence of purple-flowering composites seems to be an important habitat factor. It is usually found not far from blooming asters and blazing-stars in the Piedmont, or thistles or ironweed, among other pink/purple flowering species, in the mountains.

FOOD AND NECTAR PLANTS: The main foodplants are various grasses such as broomsedges and bluestems (Andropogon spp.). The species nectars on many flowers, particularly on pink or purple ones. Most of the Leonard's that I have seen were nectaring on asters, particularly purple-flowered species, such as Aster grandiflorus; blazing-star (Liatris graminifolia) is another favored nectar plant.

COMMENTS: This is a poorly-known species in NC that is probably not overly rare, because its preferred habitats are abundant. I have seen many in Wake, Chatham, Moore, Stanly, Randolph, and Montgomery counties, in powerline clearings, clearcuts, and wooded margins. However, I (and several others) have spent many hours looking in suitable habitat in northern Piedmont counties from Caswell east to Franklin without success, and the species is clearly much more numerous in the southeastern Piedmont counties. On the other hand, I get a feeling that very few lepidopterists have collected (or observed) butterflies in the upper Piedmont or mountains in September or October. It is a fairly large and colorful skipper that is hard to mis-identify, if the under wing pattern can be seen; however, a female Sachem can be "turned into" this and other Hesperia species by eager or inexperienced observers. Sadly, the species has declined in the past several years in the Piedmont, and numbers of more than just one or two in a single outing are rarely reported nowadays. Whether this decline is due to collecting or some other factor is unknown, but most other skippers seem to be in normal numbers in the fall season.

Cobweb Skipper *Hesperia metea*





Status NC	Status US	Rank NC	Rank Global
W	-	S3	G4

DISTRIBUTION: Scattered across the Piedmont and Sandhills, and found in the southern mountains in 2002. Still no records for the northwestern 40% of the Piedmont; but the species was finally found in the northern mountains in 2006, and in the central mountains in 2012. Rockingham County was a rare newly-added Piedmont county to the known range in 2014, thanks to a photo on the surprisingly late date of May 24. A photograph documented the species from Buncombe County in 2016; there are now four counties in the mountains where it has been recorded. Nonetheless, the species ought to be present in nearly all of the Piedmont and mountain counties.

ABUNDANCE: Possibly declining. Although we have relatively few records, this species is easily overlooked and under-surveyed. Rare to locally uncommon in the lower Piedmont and the Sandhills, but absent farther to the east. Seemingly very rare in the upper Piedmont and in the mountains; status in these regions needs much elucidation, but there is no logical reason why it should be "absent" in much of the western Piedmont.

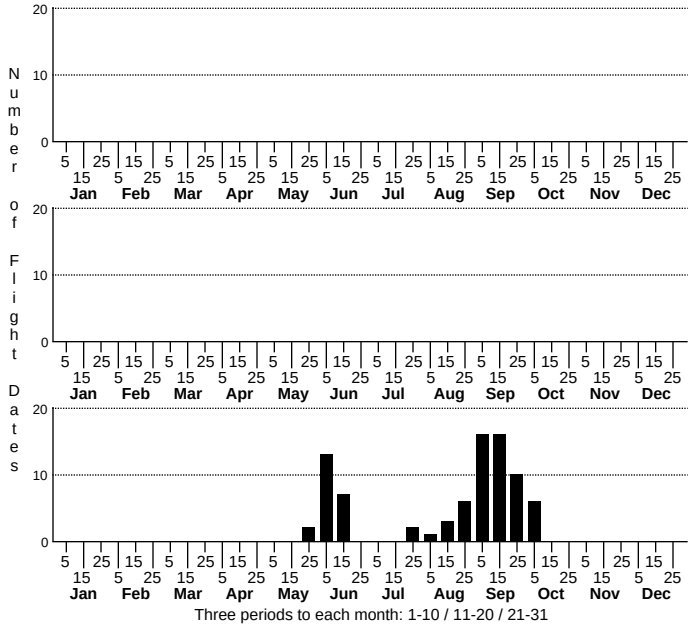
FLIGHT PERIOD: A single spring flight; extremely late March to very early May. Formerly in the Sandhills into early May, but now terminates its flight there by late April. The mountain flight is apparently between mid-April and early May. This narrow flight period is part of the reason that there are relatively few records for NC. This is one of the earliest grass skippers in the state.

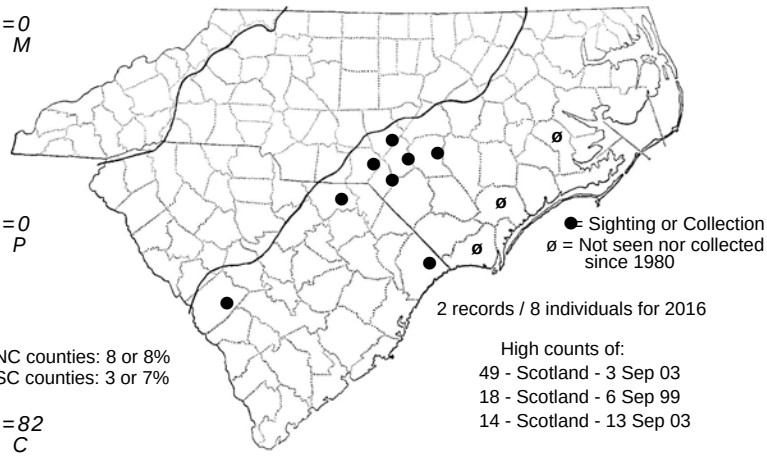
HABITAT: This species has habitats similar to that of the Leonard's Skipper. They include dry powerline clearings, wooded edges, brushy fields, and so forth; wet places are avoided. Habitats typically look "dead", as areas with broomsedges and bluestems in April tend to look brown or golden, as opposed to green; usually nectar sources are few, as well.

FOOD AND NECTAR PLANTS: The foodplants are various broomsedges and bluestems (Andropogon spp.). The adults nectar on low-growing flowers of a number of species.

COMMENTS: This is a rather small and easily overlooked skipper, and it tends to stay low in grasses in powerline clearings and other grassy areas. As with most other Hesperia skippers, this species has a narrow flight period, partly explaining its "rarity". Observers may have only two or three weekends in which to look for this species! Several active field observers have been looking for this species in recent years, at known sites, and have come up empty. One has to keep looking, especially in powerline clearings. It is too early to be certain if there has been a population decline in the state, but most Hesperia skippers have been reported in fewer numbers in recent years, for unknown reasons.

Dotted Skipper *Hesperia attalus*





Earliest date: Scotland 27 May 2003
Latest date: Cumberland 9 Oct ?

Status NC	Status US	Rank NC	Rank Global
SR	-	S2S3	G3G4

DISTRIBUTION: Scattered records for the southern half of the Coastal Plain, including the Sandhills. Presumably not present in the Piedmont or mountains, and apparently absent also from the northern half of the Coastal Plain. And, the species might now be extirpated from the southeastern Coastal Plain; all recent records are from the Sandhills region.

ABUNDANCE: Possibly declining in recent years. Uncommon to fairly common (in fall) in the Sandhills; very rare farther eastward (if still extant there). The records fall in the longleaf pine belts, of the lower Coastal Plain (Craven, Pender, and Brunswick) and of the Sandhills (Moore, Richmond, Scotland, Hoke, and Cumberland).

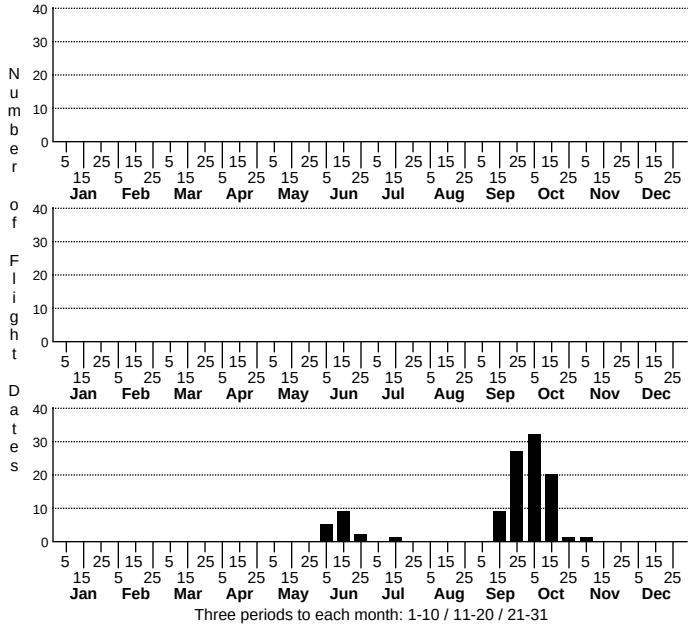
FLIGHT PERIOD: Two broods; dates in NC are from late May to mid-June, and very late July to early October; peak numbers in early September.

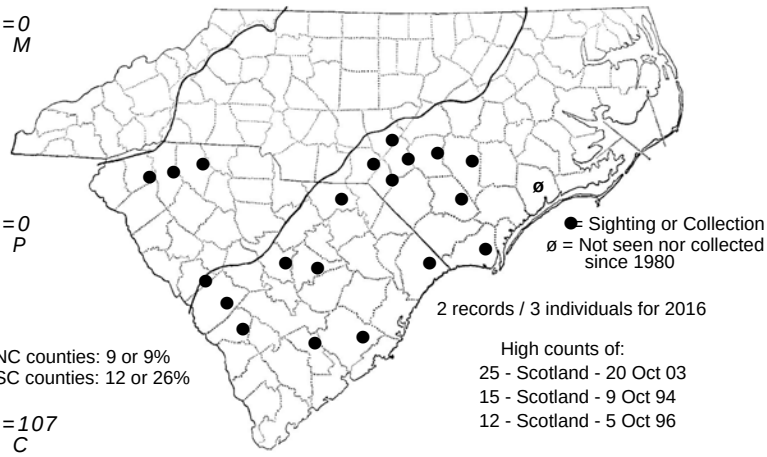
HABITAT: This species favors sunny and somewhat dry longleaf pine habitats, as opposed to the fairly shady stands of typical longleaf pine/scrub oak forests. Favored areas are broomsedge fields, and open areas near or within longleaf pine stands. It seems to be very rare in savannas and wet flatwoods in the lower Coastal Plain, at least nowadays. Areas of frequent fire produce high-quality habitat for this skipper, though it does occur in fields that are kept open by mowing.

FOOD AND NECTAR PLANTS: The foodplants are not well known, but switchgrass (Panicum virgatum) has been suggested as one host. The species nectars on a variety of flowers.

COMMENTS: This is one of the rarer skippers in the eastern United States, with major gaps in the range and many life history features poorly known. Fortunately, I and a number of other butterfliers have found them on many occasions in the Sandhills. Thus, it is not rare in the Sandhills region. However, it could not be found in 1995 in the extensive savannas and flatwoods at Holly Shelter Game Land in Pender County. The males have an ochre ground color with less contrasting white spots below; the females are browner and the white spots are quite contrasting. Interestingly, Glassberg's books (1993, 1999) show both sexes below but fail to point out that the variation is a sexual difference. This discrepancy is corrected with excellent photographs in Cech and Tudor (2005).

Meske's Skipper *Hesperia meskei*





NC counties: 9 or 9%
SC counties: 12 or 26%

2 records / 3 individuals for 2016

High counts of:
25 - Scotland - 20 Oct 03
15 - Scotland - 9 Oct 94
12 - Scotland - 5 Oct 96

Earliest date: Hoke 5 Jun 2012
Latest date: Moore; C 1 Nov 1999

Status NC	Status US	Rank NC	Rank Global
SR	-	S3	G3G4

DISTRIBUTION: The southern Coastal Plain, mainly in the Sandhills. Because the species occurs well into the Piedmont of GA, as well as in northwestern SC, it may occur in the extreme southern Piedmont of NC. NC lies at the northern edge of the species' range.

ABUNDANCE: Apparently declining in the past few years. In the Sandhills, it is uncommon, but may be fairly common in October. Very rare elsewhere in the southern Coastal Plain, where the only county records are Bladen, Brunswick, Sampson, and Onslow. The recent (2008) records of three individuals at two sites in Brunswick County by Jeff Pippen and Ricky Davis give hope that other populations exist in coastal counties farther northward.

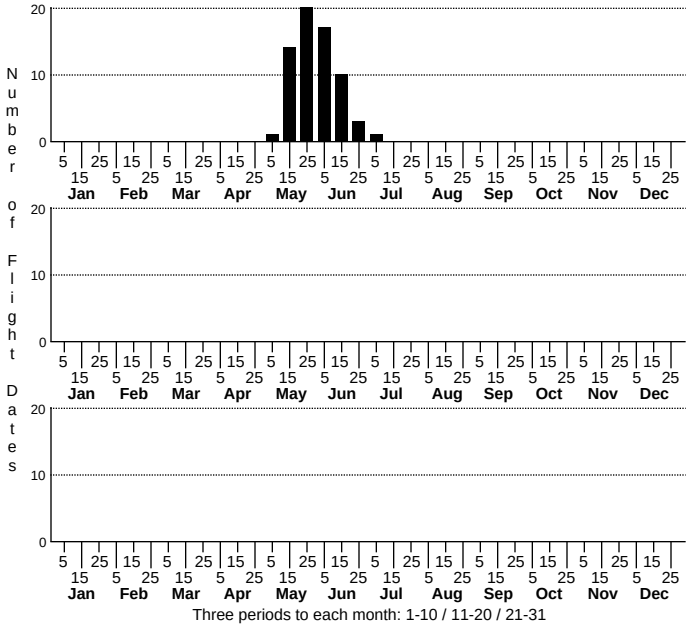
FLIGHT PERIOD: There are two broods, but the species is scarce in the first brood. Broods occur from early June to late June (and possibly to mid-July), and from the latter half of September through October.

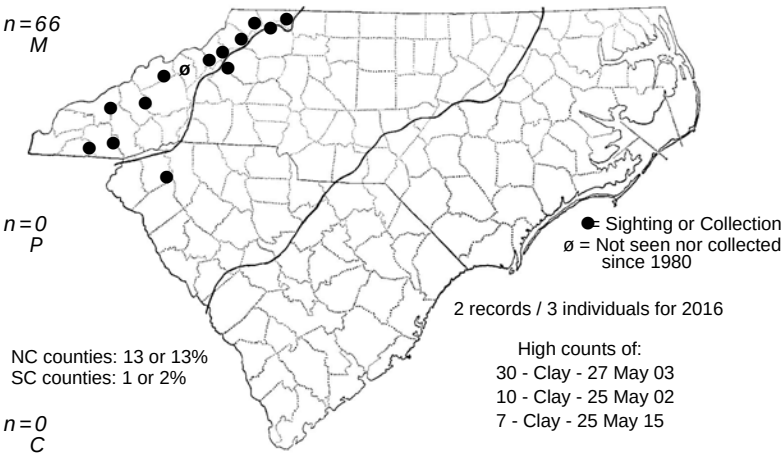
HABITAT: As with the Dotted Skipper, the Meske's Skipper in NC is associated with drier longleaf pine habitats. The literature says it is found in open sparse woods, which is true, but also is too "generic" to be of much help in finding the species. In NC, it is found in fairly typical, longleaf pine/scrub oak woodlands with an abundance of pink or purple flowers (mostly Carphephorus bellidifolius). It seems to be absent in the moister longleaf pine habitats such as flatwoods and savannas. It is less likely to occur in full sun (fields) than is the Dotted Skipper, but as with all skippers, Meske's prefers sunlit places, such as openings within the pine lands and along sandy roads through the forests.

FOOD AND NECTAR PLANTS: The foodplants are grasses; Derb Carter and I saw two females ovipositing on little bluestem (Schizachyrium [Andropogon] scoparius). The species favors pink or purple flowers in October; nearly all I observed nectared on Carphephorus or Liatris.

COMMENTS: To find the Meske's in NC, one should visit open upland longleaf pine forests where there is an abundance of pink or purple flowers in bloom. I found 19 Meske's Skippers, at many sites in Scotland and Moore counties, on October 9, 1994; and I was surprised to count 25 individuals, mostly females, on the rather late date of October 20, 2003. Despite considerable field work in the Sandhills in late May and June, I have seen the species only several times during the first flight period. A specimen was reported having been collected in Carteret County in 2013; however, the date and condition (worn) of the specimen were seemingly too early in the second brood, this county lies to the east of the known range, and it has been well worked by Bo Sullivan and others. Thus, this specimen report is not included here.

Indian Skipper *Hesperia sassacus*





2 records / 3 individuals for 2016

High counts of:
30 - Clay - 27 May 03
10 - Clay - 25 May 02
7 - Clay - 25 May 15

NC counties: 13 or 13%
SC counties: 1 or 2%

Earliest date: Clay 10 May 2003
Latest date: Alleghany 9 Jul 2007

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G4G5

DISTRIBUTION: Middle and higher mountains (generally above 3000 feet elevation), where NC is at or near the southern edge of the range. Occurs perhaps in most mountain counties, especially in the northern half of the region. It is quite surprising that the species has still never been recorded from heavily worked Buncombe County, though most locations where field work has taken place are likely lower in elevation than the species prefers.

ABUNDANCE: Uncommon in the northern mountains, but rare to locally uncommon in the southern half of the mountains. More field work needed, but recent field work in the southern mountains has turned up the species in a number of sites, and (oddly for a northern species) our two highest counts are from Clay County, at the southern edge of the range.

FLIGHT PERIOD: A single brood; mid-May to late June.

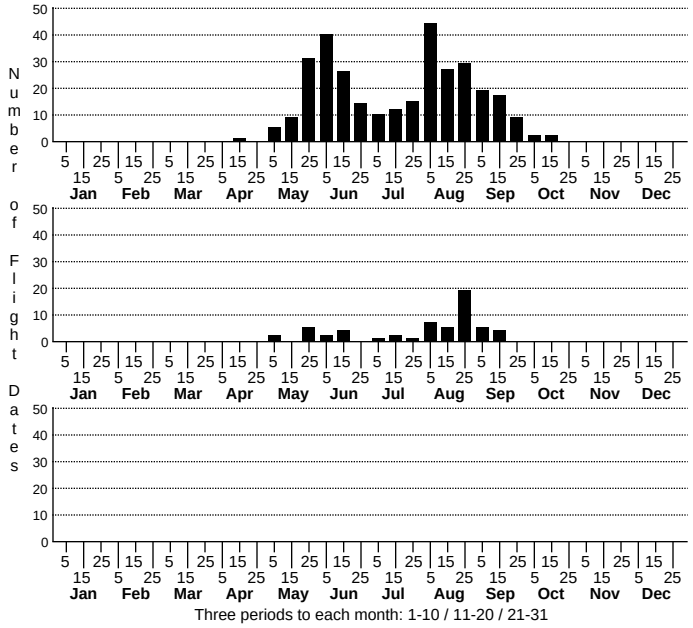
HABITAT: The habitats in NC are meadows, grass balds, powerline clearings, and other grassy or rocky openings, mainly over 3000 feet elevation. This is the northernmost of the five Hesperia skippers found in NC.

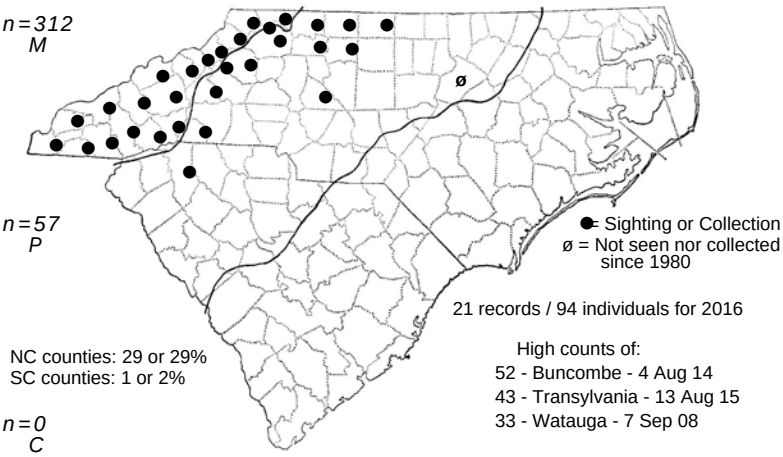
FOOD AND NECTAR PLANTS: The foodplants are a number of species of grasses. The species commonly nectars on a variety of flowers, with a fondness in NC for red clover.

COMMENTS: I found the species at the top of Mount Jefferson, at bare spots/openings, in 1995 and 1996; and Derb Carter found them there in 1997. Jeff Glassberg reported it on Jones Knob in 1996, and Steve Hall and I saw one there in 1998. In 1997, I saw one in meadows at Roan Mountain, where suitable habitat is abundant. I found a total of 11 individuals at several sites in Watauga County in June 1999, and Derb Carter located a colony in the Cataloochee area of Haywood County in May 2001. In 2002, Ron Gatrelle and others found Indian Skippers at a handful of new sites from Madison to Clay counties, including our first double-digit one-day count; and Gatrelle saw a remarkable 30 individuals in Clay County in late May 2003. Ted Wilcox has found the species at a number of sites in Ashe and nearby counties in the past few years.

Though the species has probably not increased in recent years, records have been accumulating at a steady rate. Thus, in 2014 the NC Natural Heritage Program removed the species from its Watch List, especially as the habitats are mostly man-made (meadows, etc.).

Peck's Skipper *Polites peckius*





21 records / 94 individuals for 2016

High counts of:
52 - Buncombe - 4 Aug 14
43 - Transylvania - 13 Aug 15
33 - Watauga - 7 Sep 08

NC counties: 29 or 29%
SC counties: 1 or 2%

New for 24th: Caldwell

Earliest date: Buncombe 15 Apr 2012
Latest date: Macon 18 Oct 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Polites coras*

DISTRIBUTION: Throughout the mountains, and also the western and northwestern Piedmont. An old record for Wake County might have been of a vagrant, as more recent records are eastward only to Rockingham, Forsyth, Rowan, and Polk counties.

ABUNDANCE: Fairly common to locally common in the northern and central mountains, but uncommon and somewhat local south of Asheville. Rare to uncommon along the northwestern and far western Piedmont. This is a common to very common butterfly in states to our north, but in NC it is much less numerous.

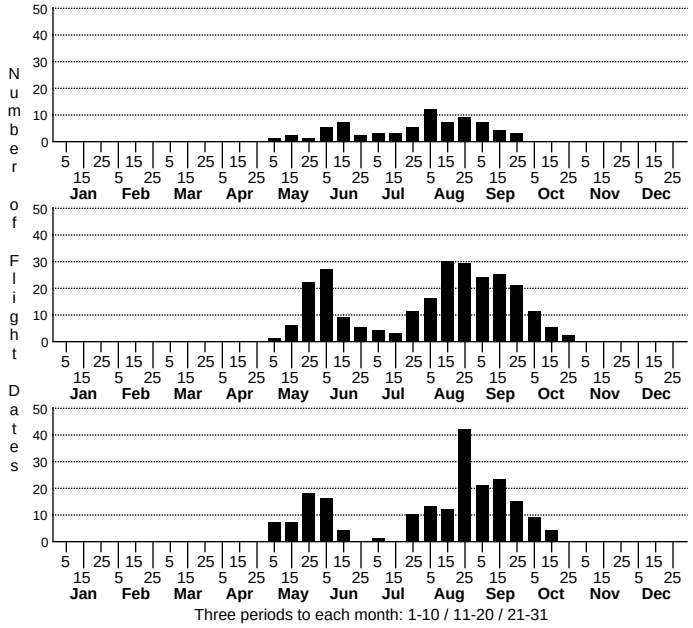
FLIGHT PERIOD: Two broods, with the possibility of a small third brood, in October. In the mountains it flies from early May to early or mid-July, and the second brood is from mid-July to late September, with a possible tiny third brood in October. More flight data are needed for the Piedmont, but it appears that the flight periods are somewhat similar to those in the mountains, with a small brood from early May to mid- or late June, and a larger one from early July into September; it ought to occur in the Piedmont into October.

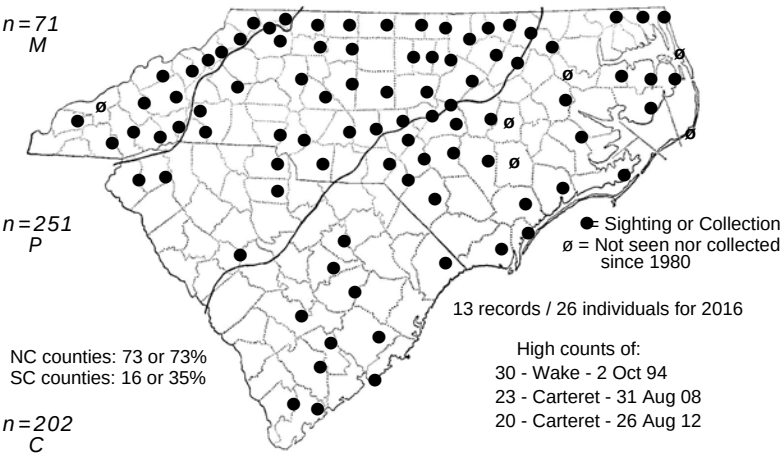
HABITAT: This species favors sunny, open places -- old fields, meadows, wooded edges, and roadsides. It is reasonably widespread, and prefers dry places to moist ones. It prefers full sun, away from wooded margins; pastures with an abundance of red clover (Trifolium pratense) are favored.

FOOD AND NECTAR PLANTS: The foodplants are various grasses. The adults are fond of nectaring; they show a strong preference for red clover.

COMMENTS: This is one of the smaller skippers in NC, but fortunately it is active and brightly patterned on the hind wings, rendering it easy to identify. Ted Wilcox, who lives in Ashe County, has added numerous records for the species in the northern mountains from 2005 to 2007, and at long last we have respectable high counts. (Prior to 2005, the previous single-day high count for the state was a "measly" 11 individuals.) The Buncombe County butterfly count in 2014, held on August 4, tallied a state record 52 individuals, especially notable for being so far to the south in the mountains.

Tawny-edged Skipper *Polites themistocles*





13 records / 26 individuals for 2016

High counts of:
30 - Wake - 2 Oct 94
23 - Carteret - 31 Aug 08
20 - Carteret - 26 Aug 12

NC counties: 73 or 73%
SC counties: 16 or 35%

New for 24th: Washington

Earliest date: Harnett; C 2 May 2002
Latest date: Granville 22 Oct 1994

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Essentially statewide, with records for all three provinces. It is present on the Outer Banks.

ABUNDANCE: Uncommon but widespread across the state; locally numerous in a few savannas and other dense, diverse grasslands with many flowers. Somewhat more numerous in the eastern half of the state than in the western half. This species is not as common in NC as one would surmise by reading field guides, because of the "northern" bias of most guides.

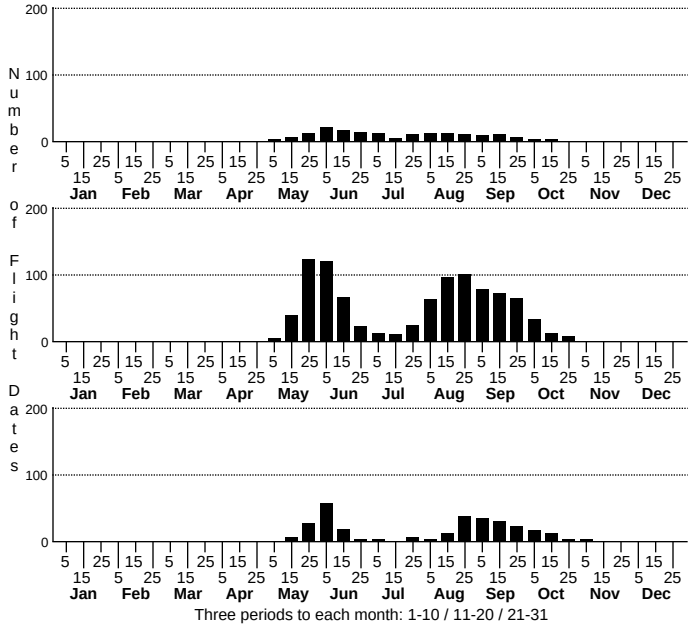
FLIGHT PERIOD: Two broods; downstate it is present from early May to early July, and mid- or late July to mid-October. In the mountains, it is found from early or mid-May to late September.

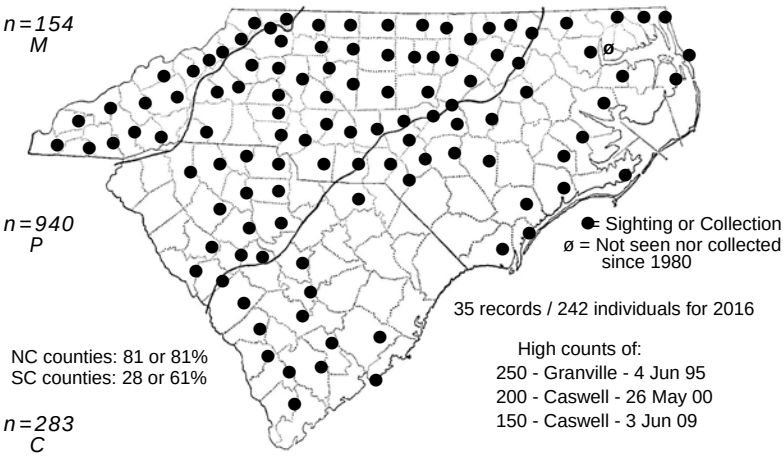
HABITAT: The species is found in fields, woodland borders, powerline clearings, savannas, and other places with abundant and usually thick grass cover. It is more numerous in slightly damp grasslands (such as savannas) than in truly dry places, but it is not a marsh skipper.

FOOD AND NECTAR PLANTS: The foodplants are grasses, particularly panic grasses (Panicum spp.). The species nectars on a wide variety of flowers, with no particular groups dominating (unlike the preference for red clover by the Peck's Skipper).

COMMENTS: Both the Peck's Skipper and the Tawny-edged Skipper are considered by references to be among the most abundant skippers in the northeastern states. However, neither is all that common in NC. I have seen Tawny-edged more frequently in rich grass/forb places such as savannas and diabase glades than elsewhere. It is outnumbered in NC by the very similar Crossline Skipper, especially in the drier grassy areas. Because of the similar appearance of Tawny-edged and Crossline skippers -- even photos of the two can be very difficult to differentiate -- abundance and distribution of both species need further clarification. And, I suspect that a moderate number of reports of "Tawny-edged" refer to the much more common Crossline; fortunately, Tawny-edged does occur statewide, so errors of accepting incorrect reports do not affect range maps but can affect flight charts and details of abundance.

Crossline Skipper *Polites origenes*





Earliest date: Buncombe 6 May 2012
Latest date: Moore; C 1 Nov 1999

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G4G5

DISTRIBUTION: Statewide; found in all three provinces, though of spotty distribution in parts of the Coastal Plain. However, presumed to occur in all counties.

ABUNDANCE: Fairly common to locally common in the Piedmont and Sandhills; can be locally very common in some areas during the first brood, at least in the northern Piedmont; somewhat less common elsewhere, but fairly common in the mountains; least numerous in the Coastal Plain, and rare to uncommon in many areas there. This is a much more common species in NC than the Tawny-edged Skipper, though the latter can be the more numerous of the two over parts of the Coastal Plain (such as in savannas and flatwoods near the coast).

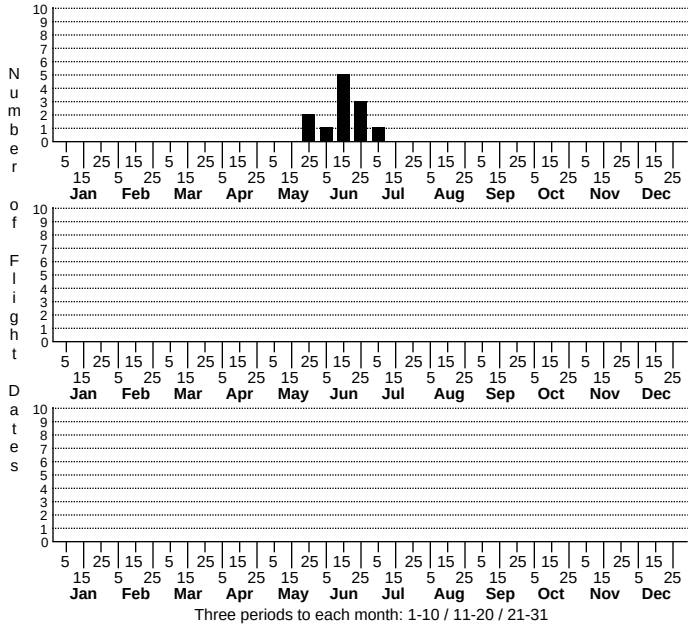
FLIGHT PERIOD: Two broods in NC; present from mid-May to early July, and mid- or late July to mid-October, in each of the three provinces.

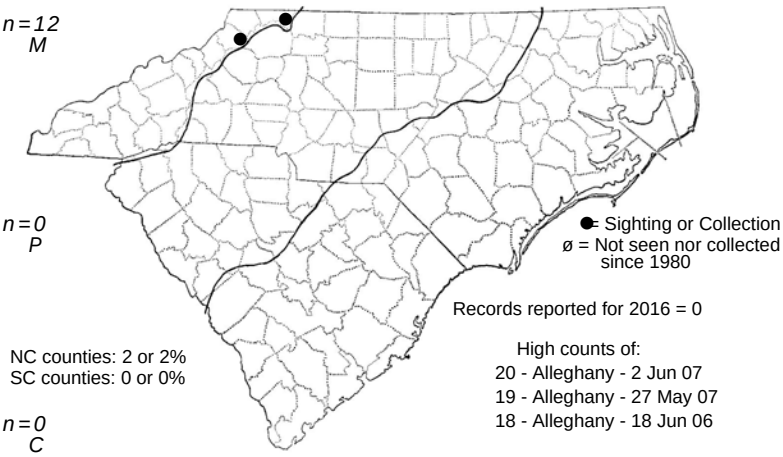
HABITAT: Widespread in dry to mesic grassy areas; habitats include overgrown fields, wooded edges, powerline clearings, openings in longleaf pine/scrub oak woods, etc. Present in savannas, but less numerous there than the previous species. Far outnumbers the similar Tawny-edged Skipper in dry sites. Neither species occurs in gardens, arboretums, and cultivated weedy fields (except in very rare cases).

FOOD AND NECTAR PLANTS: The foodplants are native grasses, with purple top (Tridens flavus) being favored, according to the literature. The nectar plants are very varied. Colicroot (Aletris farinosa) is favored by individuals of the first brood; in fact, it is often the most commonly seen skipper nectaring on this flower. Blazing-stars (Liatris spp.) are a favorite of the second brood.

COMMENTS: This species can easily be confused with the Tawny-edged Skipper, and worn individuals of both can be confused with worn individuals of darker species such as Northern Broken-dash, Dun Skipper, and Little Glassywing. Do not expect to identify every Crossline and Tawny-edged; I frequently have trouble, and I undoubtedly have mis-identified them on a number of occasions. Nonetheless, the Crossline is often the most common skipper seen along dry woodland borders and upland powerline clearings, especially in the Piedmont and Sandhills.

Long Dash *Polites mystic*





Earliest date: Alleghany 27 May 2007
Latest date: Alleghany 1 Jul 2006

Status		Rank	
NC	US	NC	Global
SR	-	S1	G5

DISTRIBUTION: Only in the extreme northern mountains, where first found in the state in 2006 in Alleghany County, and found in Watuaga County in 2007. This is a "northern" species, ranging southward only in the central Appalachians to WV, western VA, and now northern NC.

ABUNDANCE: Only known from three or four sites in the state, but common at the Alleghany County one. A remarkable 18 individuals were counted on the date of discovery, and as many as 20 were seen there in 2007. Presumed to be very rare in the northern mountains, if found anywhere else in NC.

FLIGHT PERIOD: A single brood, in early summer; in NC from late May to very early July. The flight in 2007 was about two weeks earlier than that in 2006, thanks to a warm spring season.

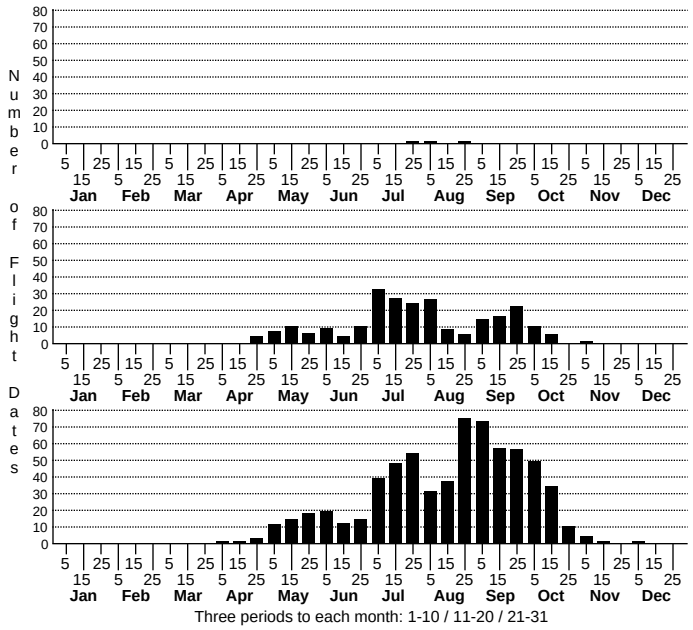
HABITAT: This is a species of open wetlands, but it can and does range into adjacent uplands (fields). The sites in NC are a wet meadow/bog complex, which is the preferred habitat type in states to our north, and a marshy pond margin.

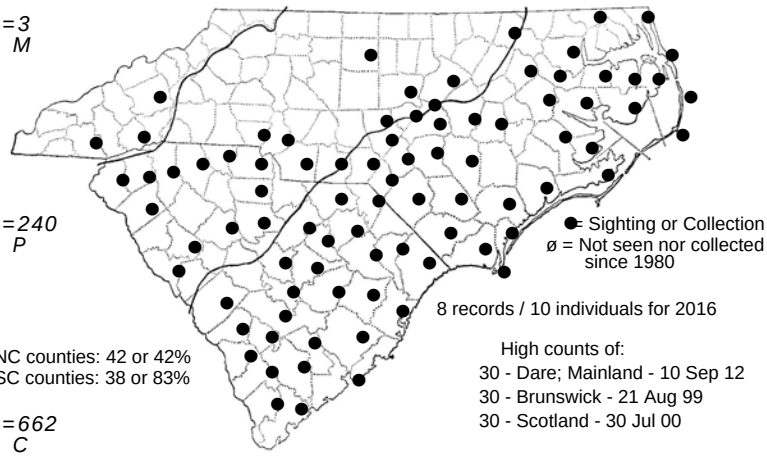
FOOD AND NECTAR PLANTS: The primary food plants are grasses; bluegrasses (Poa) have been mentioned in the literature. One individual in NC was seen nectaring on a wild azalea, though it is expected to nectar on milkweeds and a great variety of other species (such as red clover).

COMMENTS: Though the Long Dash was one of the more likely new species to be discovered in NC, word of discovery of a large population was quite a surprise. Ted Wilcox and Will Cook got landowner permission to survey a bog area where several rare butterflies (of other species) had been seen in the past. Though they missed their targets, especially Baltimore Checkerspot, they encountered a "gold mine" of skippers -- at least 18 individuals of Long Dash (first record south of VA) and 16 individuals of Two-spotted Skipper, a first state record west of the Coastal Plain and eastern edge of the Piedmont. Both of these species have been recorded in a handful of mountain counties in western VA, and the range of both has been extended roughly 60 miles to the south. Wilcox and Cook each obtained numerous photographs of both skipper species, and the photos can be viewed on their websites. The site remained strong on several dates in 2007, and Wilcox found a new site well to the south, in northern Watauga County, which extends the range southwestward. I found several at bogs and adjacent meadows at a new site in Watauga County in 2012.

NOTE: There is a reported specimen, of unknown whereabouts, of a Long Dash collected by R.M. McKenzie on July 4, 1936 from what is now Crowders Mountain State Park in Gaston County. This record appears to have been omitted by nearly all reference books and field guides, either because authors have dismissed the record as a likely misidentification or because they had no knowledge of it. As the species has essentially finished its flight by July 1 even at 2000 feet elevation in Alleghany County along the VA border, because Gaston County lies in the Piedmont foothills along the SC border, at least 90 miles farther to the south, and because the park seems to lack suitable bog or wet meadow habitat, it seems best not to accept this report here. We hope that the specimen can be relocated and re-examined to determine its identity.

Whirlabout *Polites vibex*





8 records / 10 individuals for 2016

NC counties: 42 or 42%
SC counties: 38 or 83%

High counts of:
30 - Dare; Mainland - 10 Sep 12
30 - Brunswick - 21 Aug 99
30 - Scotland - 30 Jul 00

Earliest date: Carteret 8 Apr 2000
Latest date: Carteret 1 Dec 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Nearly throughout the Coastal Plain, and the extreme southeastern and southern Piedmont; a stray to the southern mountains and central Piedmont (if correctly identified in these areas). Possibly absent from a few counties in the northwestern Coastal Plain, as the species is practically absent in VA except as a stray. The extent of resident populations in the Piedmont is uncertain, but clearly it is not a resident in the mountains and nearly all of the Piedmont.

ABUNDANCE: Seemingly declining in the past few years. Formerly fairly common in counties near the SC border, from the Sandhills to the Wilmington area; in the past several years, mostly now uncommon to occasionally fairly common. Now uncommon in the central Coastal Plain, but very rare near the VA border. Rare in the Piedmont portion of the range, and likely a vagrant to the southern half of the mountains and central Piedmont.

FLIGHT PERIOD: Seemingly three broods between late April and early November. Dips in the flight charts around mid-June and mid-August seem to indicate the breaks between broods. The highest numbers occur from late July to early October.

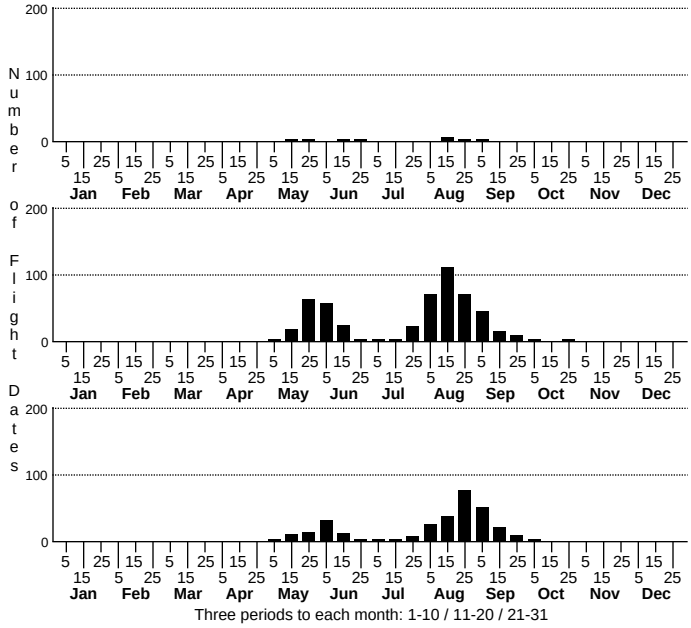
HABITAT: Even more so than the Fiery Skipper, the Whirlabout favors hot, barren places. Sunny, sandy roadsides, barren fields, openings in longleaf pine/scrub oak sandhills, dunes, and other somewhat "sterile-looking" places are favored by this skipper. It does visit gardens, but it is greatly outnumbered there by the Fiery Skipper.

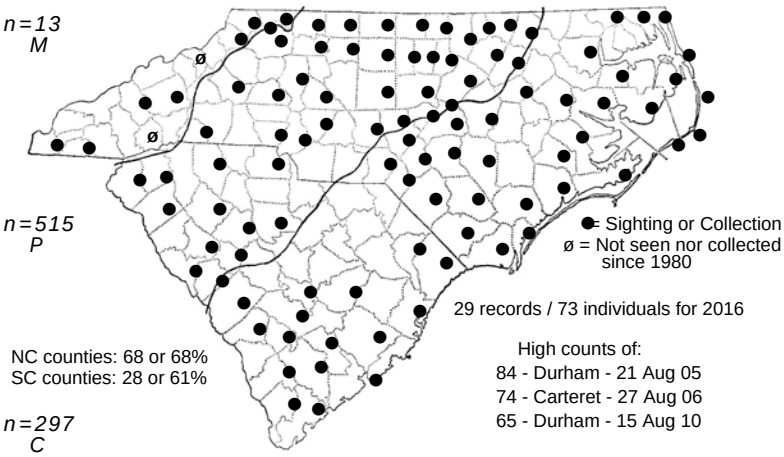
FOOD AND NECTAR PLANTS: Various grasses, including Bermuda grass (Cynodon dactylon), are the foodplants. The species nectars on many flowers, especially those blooming close to the ground, within a few inches.

COMMENTS: This is one of the characteristic species of hot, sandy barrens. It frequently perches on warm to hot sand, and usually flies close to the ground. It is usually outnumbered by the other common orange skipper of sandy places -- the Fiery Skipper. The latter species, however, will more often nectar on flowers several feet above ground, and the Fiery occurs over nearly all the state. Paul Hart has added many Piedmont records of the Whirlabout from Raven Rock State Park in Harnett County from 1998 to 2005.

This species has been seemingly mis-identified often in the central and western Piedmont and mountain regions. Though many field guides have excellent photographs of all skippers, it appears that some observers are mis-identifying Sachems, and perhaps Fiery Skippers, as Whirlabouts. This last species is completely unknown in the well-studied Durham and Orange counties, and any reports away from counties along the Fall Line or the SC border need to be thoroughly documented. There seem to be no specimens, and few or no photographs, to document these mountain and north-central Piedmont reports, so the range map might be misleading and incorrect.

Southern Broken-dash *Wallengrenia otho*





29 records / 73 individuals for 2016

High counts of:
84 - Durham - 21 Aug 05
74 - Carteret - 27 Aug 06
65 - Durham - 15 Aug 10

NC counties: 68 or 68%
SC counties: 28 or 61%

Earliest date: Cumberland 4 May ?
Latest date: Chatham 31 Oct 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Broken Dash, Southern Broken-Dash

DISTRIBUTION: Throughout the Coastal Plain and Piedmont; scattered in the mountains. Possibly absent in some mountain counties, though likely present in all counties downstate. The lack of records for some of the middle Coastal Plain is presumably due to poor coverage in this region.

ABUNDANCE: Fairly common over most of the Coastal Plain and the eastern Piedmont. Uncommon in the central Piedmont, rare in the western Piedmont, and very rare in the mountains. In the mountains, probably absent above 3500 feet.

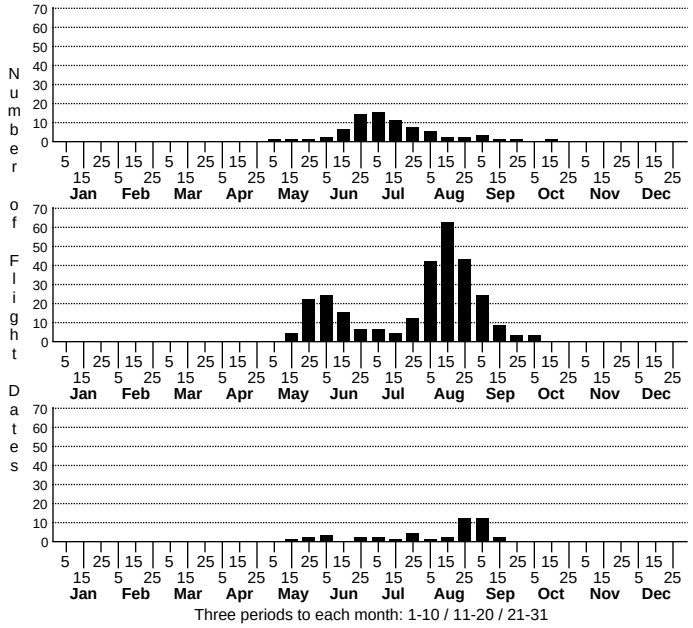
FLIGHT PERIOD: Two broods downstate; mid-May to mid-June, and mid- or late July to late September, very rarely to early October. Much more data needed for the mountains.

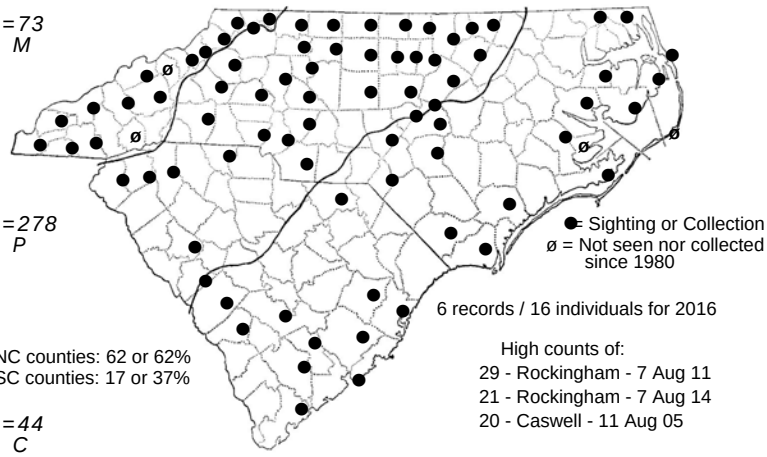
HABITAT: The species has a tendency to occur in or near wetlands, but not in truly wet places. Typical habitats are the edges of bottomlands or pocosins, marsh borders, moist powerline clearings, and particularly savannas. It can be seen in drier places, but it is not to be intentionally searched for in uplands. In fact, it can be locally numerous in some gardens/arboretums, as long as the foodplants are nearby.

FOOD AND NECTAR PLANTS: Various grasses are the foodplants. The species nectars on many plants, such as forbs growing in savannas -- blazing stars (Liatris spp.), etc. Individuals even visit gardens and nurseries, such as the N.C. State's Raulston Arboretum and the Sarah Duke Gardens.

COMMENTS: This is a widespread, though seldom very numerous, species of damp places in the Coastal Plain and lower Piedmont. Savannas are the best places to look for them, but I have seen them on a number of occasions along powerline clearings where the ground is damp. Though similar in pattern to the Northern Broken-dash, I have seldom had trouble distinguishing the two (unless they are very worn), as the Southern Broken-dash has a rich or warm rusty color, as opposed to a cold or dull brown of the Northern Broken-dash.

Northern Broken-dash *Wallengrenia egeremet*





6 records / 16 individuals for 2016

High counts of:
29 - Rockingham - 7 Aug 11
21 - Rockingham - 7 Aug 14
20 - Caswell - 11 Aug 05

NC counties: 62 or 62%
SC counties: 17 or 37%

New for 24th: Stokes

Earliest date: Buncombe 10 May 2012
Latest date: Watauga 15 Oct 2008

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Other Name: Northern Broken-Dash

DISTRIBUTION: Scattered across the state; as with the Southern Broken-dash, found in all three provinces. However, unlike the latter, it is more "numerous" in the Piedmont and mountains than in the Coastal Plain. Recorded along the Outer Banks. Possibly present in all counties, despite an absence of records for most of the western and central Coastal Plain, where there are relatively few observers.

ABUNDANCE: Uncommon in the northern Piedmont and northern mountains; rare to uncommon in the central and southern portions of these provinces, and often rare near the SC border. Very rare to rare in the Coastal Plain. It has been found in some numbers in meadows in Ashe County, at Mayo River State Park, at Caswell Game Land, and at Kerr Reservoir. All of these above four places are in counties along the VA state line, and thus it is clearly more numerous in northern counties than farther south, though the range map does not indicate such an abundance pattern. Much of its apparent scarcity might be due to its difficulty of identification.

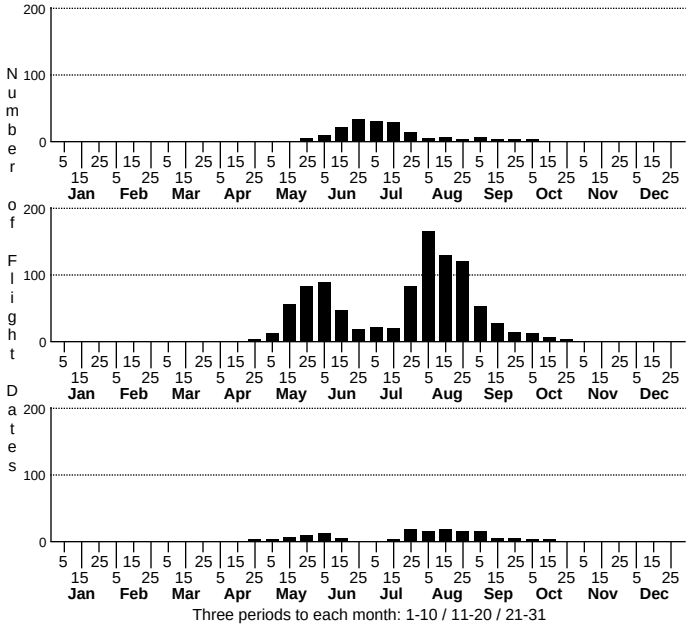
FLIGHT PERIOD: Two broods downstate; the latter half of May to early July, and mid- or late July to mid-September. One main brood in the mountains, probably early June to early August, with a small brood in late August and September.

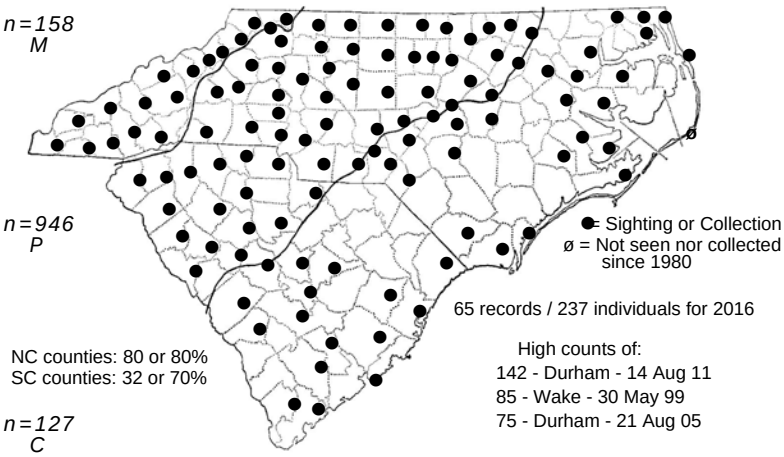
HABITAT: As with the Southern Broken-dash, this species favors damp ground, and is infrequent in dry places. It can be found in wet meadows or bogs in the mountains, moist powerline clearings, lake and marsh edges, savannas, and edges of bottomlands. It does occur in weedy fields and other mesic places such as upland mountain meadows, but it is not to be intentionally looked for in dry sites. Thus, the habitat is nearly identical to that of the Southern Broken-dash, but it occurs more often in cooler climates, throughout the Piedmont and mountains.

FOOD AND NECTAR PLANTS: Foodplants are panic grasses (Panicum spp.), particularly large species. The species nectars on many flowers; I have had particular luck with finding them nectaring on buttonbush in the Piedmont.

COMMENTS: Comparisons of abundance and habitat in NC with those in the Northeast yield interesting results. The references all indicate that the Northern Broken-dash is common in the Northeast and widespread in "open fields and meadows, most common in moist but not wet situations" (Glassberg 1993). Opler's references do not even mention a preference for moist areas. Away from the mountains, I nearly always see it in moist places, even though I spend 60-70% of my time in upland habitats. However, in Ashe County I have found it in meadows away from damp places. Thus, it seems to prefer less damp areas in the mountains than downstate.

Little Glassywing *Pompeius verna*





65 records / 237 individuals for 2016

High counts of:
142 - Durham - 14 Aug 11
85 - Wake - 30 May 99
75 - Durham - 21 Aug 05

NC counties: 80 or 80%
SC counties: 32 or 70%

New for 24th: Jones

Earliest date: Pitt 21 Apr 2012
Latest date: Durham 21 Oct 1993

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide, occurring in all three provinces, but very few records from the southeastern portion of the state. However, there are numerous records for coastal SC; thus, it should occur in most (if not all) Coastal Plain counties in NC.

ABUNDANCE: Fairly common and widespread, to locally common, in the mountains and Piedmont; uncommon in the northern and western Coastal Plain (including the Sandhills); seemingly rare to very rare in the outer (eastern) and the southern Coastal Plain.

FLIGHT PERIOD: Two broods downstate; mid-May to early July, and mid- or late July to late September, rarely to mid-October. This species has a distinct gap in the flight period in early summer in the Piedmont and Coastal Plain. However, it flies in the mountains in July; the primary brood there is from early June to early August. There is a small second brood in the mountains in late August and September, but more data needed for these months.

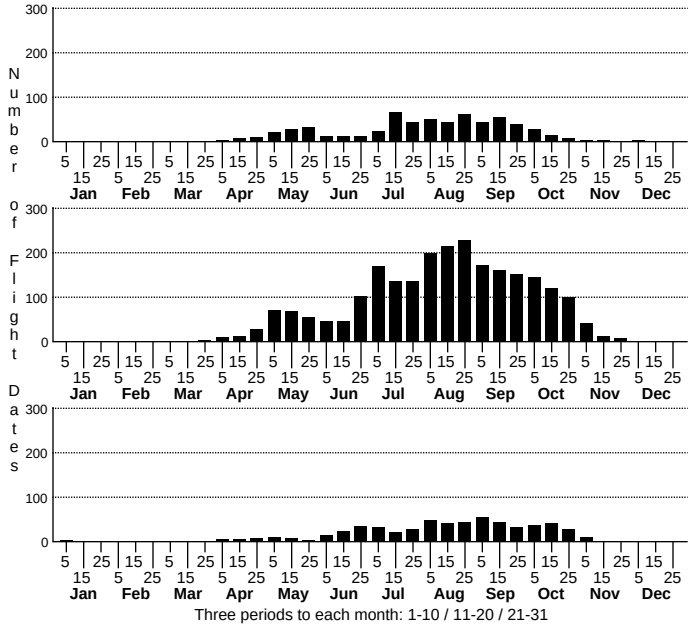
HABITAT: This is a species of mesic to somewhat damp places, and is not numerous in dry sites. It also has a tendency toward wooded edges and is not characteristic of open fields. It is usually seen along borders of hardwood or mixed forests, along powerline clearings through forests, along roads and wide trails through forests, and so forth. In the Coastal Plain, it favors damp places more so than upstate.

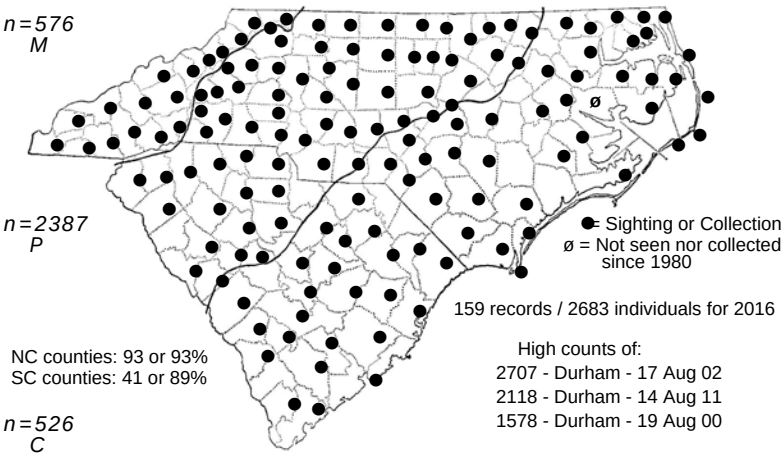
FOOD AND NECTAR PLANTS: Purple top (Tridens flavus) is the most often reported foodplant, but other tall grasses are likely used. The species nectars on a great variety of flowers; mountain-mint (Pycnanthemum incanum) is a favorite in the Piedmont, and Indian hemp (Apocynum cannabinum) is used throughout the state.

COMMENTS: This species can be difficult to separate from both the Northern Broken-Dash and the Dun Skipper; worn individuals can also be confused with the Crossline Skipper. Powerline clearings are good places to find them. The species can be surprisingly local; I often can find 10 or more in an hour at Umstead State Park or Durant Nature Park in Wake County, but it can be hard to find in seemingly similar-looking places elsewhere. Nonetheless, it is a numerous skipper in NC.

It is difficult to explain the unusual "gap" in records for the southern Coastal Plain, considering its presence in a great number of Coastal Plain counties in SC. This has not been for lack of field work in NC, and margins of moist hardwood forests, powerline cuts, etc., are abundant. Is purple top or other foodplants scarce there?

Sachem *Atalopedes campestris*





159 records / 2683 individuals for 2016

High counts of:
2707 - Durham - 17 Aug 02
2118 - Durham - 14 Aug 11
1578 - Durham - 19 Aug 00

NC counties: 93 or 93%
SC counties: 41 or 89%

Earliest date: Harnett; P 28 Mar 1997
Latest date: Carteret 4 Jan 2007

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; occurring in all provinces, and presumably present in all 100 counties.

ABUNDANCE: Common to abundant in the Piedmont, common in the mountains, fairly common to common in the upper Coastal Plain, but generally uncommon in the lower half of the Coastal Plain. This is one of the most often seen skippers in the state (at least in the Piedmont and mountains) from July onward.

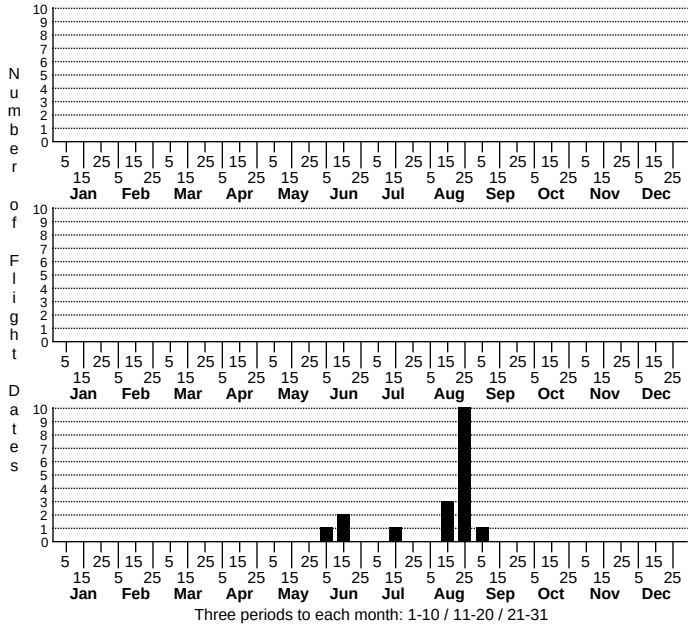
FLIGHT PERIOD: Probably three broods, but the first is a small one. The first brood downstate is from early April to late May or early June, and in the mountains from late April to mid-June. There are apparently two large and overlapping broods downstate from mid-June to early November, and from early July to early November in the mountains. This is one of the few skippers that is common in the Piedmont from late June to mid-July, when most other grass skippers are between broods.

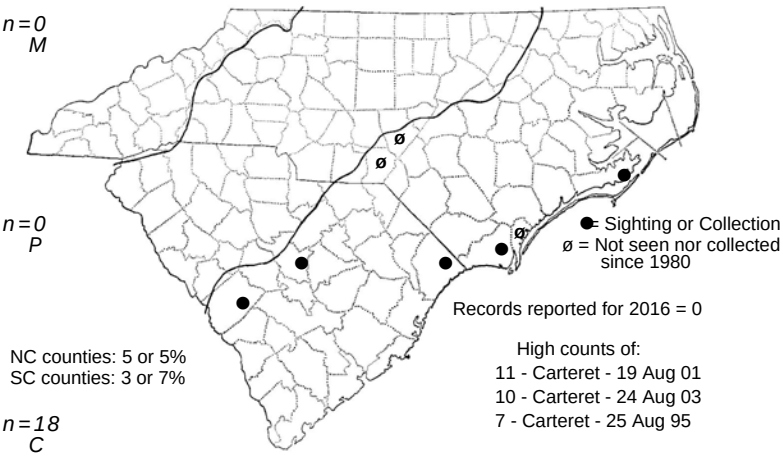
HABITAT: This is one of the most "urban" of skippers, almost always seen in places strongly impacted by man. Favored habitats are gardens, vacant lots, fields, roadsides, and clearcuts. It can be numerous along wooded borders and powerline clearings, but it typically favors areas of full sun.

FOOD AND NECTAR PLANTS: The foodplants are mostly weedy grasses such as crabgrass (Digitaria) and Bermuda grass (Cynodon). The species nectars on a wide variety of flowers, including garden species such as butterfly-bush.

COMMENTS: The Sachem is one of the most often seen butterflies around gardens and weedy places in the Piedmont and mountains. Beginning butterfliers likely will be confused by the species; I was for the first year! The male has a dull orange underside with some subtle brown to sooty patches, but the very large black stigma on the bright orange upper fore wing clinches the identification. The female's underside shows a chevron like many of the Hesperia skippers, which are often targets of the butterfliers. (Hesperia species do not occur in gardens or other urban areas.)

Arogos Skipper *Atrytone arogos*





Records reported for 2016 = 0

NC counties: 5 or 5%
SC counties: 3 or 7%

High counts of:
11 - Carteret - 19 Aug 01
10 - Carteret - 24 Aug 03
7 - Carteret - 25 Aug 95

Earliest date: Moore; C 1 Jun 1951
Latest date: Carteret 9 Sep 2001

Status NC	Status US	Rank NC	Rank Global
SR	FSC	SH	G3

Other Name: Beard Grass Skipper

DISTRIBUTION: Now of historical occurrence. Restricted to the Coastal Plain, with known records only from the southern half; thus far, recorded only (historically) from the Sandhills (Moore and Richmond counties) and the southeastern Coastal Plain (Brunswick, New Hanover, and Carteret).

ABUNDANCE: Until about 2009, very rare and local in savannas, and exceedingly rare in other grassy areas near or under longleaf pine. Essentially was absent in the Coastal Plain away from longleaf pine regions. This species is on the verge of extirpation in the eastern states, though a number have recently been found in central FL, and it still likely is present in NJ and in a few Gulf Coast states. Unfortunately, it has not been re-discovered at its last known site in NC in Carteret County, despite intensive search; it is now considered to be historical in the state.

FLIGHT PERIOD: Two broods; late May or mainly early June to late June, and early or mid-August to early September; more data needed, especially for the first brood.

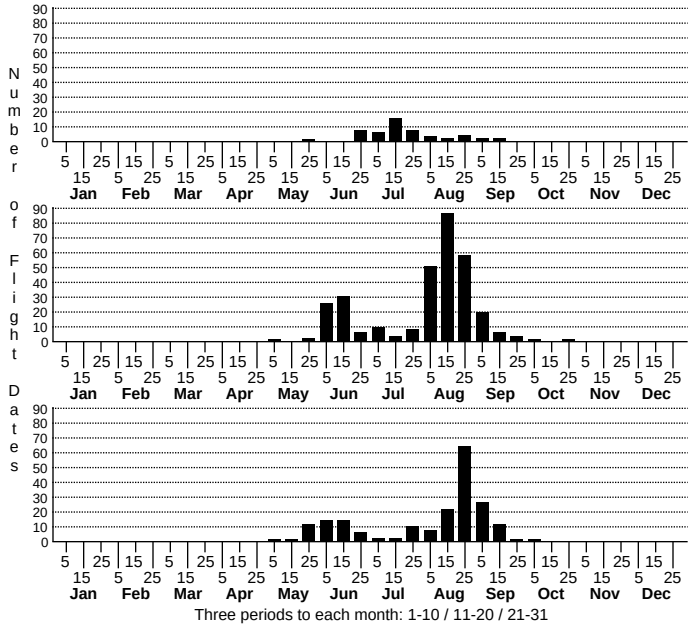
HABITAT: This is a species of relatively undisturbed grasslands. It is a prairie species for the most part; in the East it occurs in serpentine barrens and open longleaf pine grasslands such as savannas and flatwoods. In NC, it has been found mostly in savannas and very open flatwoods, with considerable bluestems and broomsedges. Frequent fire is important in maintaining the herbaceous vegetation.

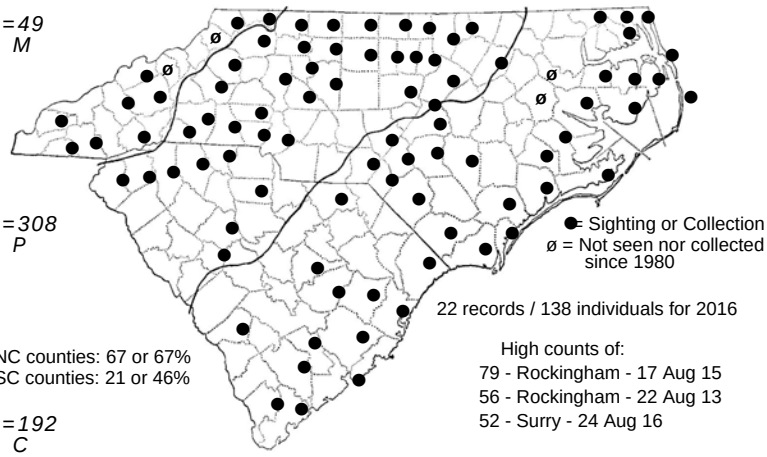
FOOD AND NECTAR PLANTS: The major foodplant of the species elsewhere is believed to be big bluestem (Andropogon gerardii) and other bluegrasses and broomsedges. However, Dale Schweitzer (pers. comm. to Steve Hall) believes that the relatively rare grass Calamovilfa brevipilis is a foodplant in NJ and NC. The species nectars on many flowers, such as thistles. The 1994 sighting of two individuals by Steve Hall and Bo Sullivan was made at a savanna, where the butterflies were nectaring on Venus' flytraps (Dionaea muscipula)!

COMMENTS: The eastern subspecies is a Federal Species of Concern, and it ought to be Federally listed as Endangered or Threatened. It has a very disjunct range, mainly now in FL, with scattered populations in GA, SC, NC, and NJ. Bo Sullivan, who has experience with the species in NC, has found it within a year after burning of savannas, but seldom after the savannas have gone unburned for several years. Obviously, the extensive natural fires, and perhaps grazing by large mammals, in pre-settlement times provided extensive grasslands in the East for this species. Such is no longer the case. Observers should look for the species mostly in savannas or flatwoods that have a thick grass/forb cover and have been burned within the past year.

A concerted effort by at least one-half dozen people at its only known "current" site on the annual Croatan National Forest butterfly count failed to find the species in 2007. The count in 2008 turned up only one individual. Unfortunately, an untimely wildfire and man-made backfire occurred in southern Croatan National Forest around August 1, 2009, charring the only currently known site. The timing was bad because the species is not on the wing in early August, and thus most or all larvae or pupae were likely killed. Not surprisingly, no adults were seen in late August 2009, and none were again seen on the butterfly counts in 2010, 2012, and 2013. The NC Natural Heritage Program now considers it to be of historical occurrence, though it could be discovered somewhere else in the Coastal Plain, if not again in Croatan National Forest; it is a very small and easily overlooked species and the main foodplant is not overly rare in NC. Also, because it can easily be confused with other species, such as the Delaware Skipper, Swarthy Skipper, Crossline Skipper, or Tawny-edged Skipper, future NC records should be documented with photos.

Delaware Skipper *Anatrytone logan*





22 records / 138 individuals for 2016

High counts of:
79 - Rockingham - 17 Aug 15
56 - Rockingham - 22 Aug 13
52 - Surry - 24 Aug 16

NC counties: 67 or 67%
SC counties: 21 or 46%

New for 24th: Caldwell

Earliest date: Rockingham 2 May 2012
Latest date: Forsyth 31 Oct 2002

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

Synonym: *Atrytone logan*

DISTRIBUTION: Generally throughout, but spottily distributed in the mountains, the southeastern Piedmont, and the inner Coastal Plain. Though it has a roughly statewide range, it is most widespread in the lower Coastal Plain and the northwestern Piedmont.

ABUNDANCE: Fairly common in the tidewater counties of the lower Coastal Plain. Uncommon in the inner half of the Coastal Plain, except rather rare in the Sandhills. Oddly, in the Piedmont the abundance pattern is reversed; it is rare to uncommon in the eastern portion but uncommon to locally fairly common in the central and western portions. Generally rare to locally uncommon in the mountains. Most numerous in counties bordering VA in the northwestern Piedmont.

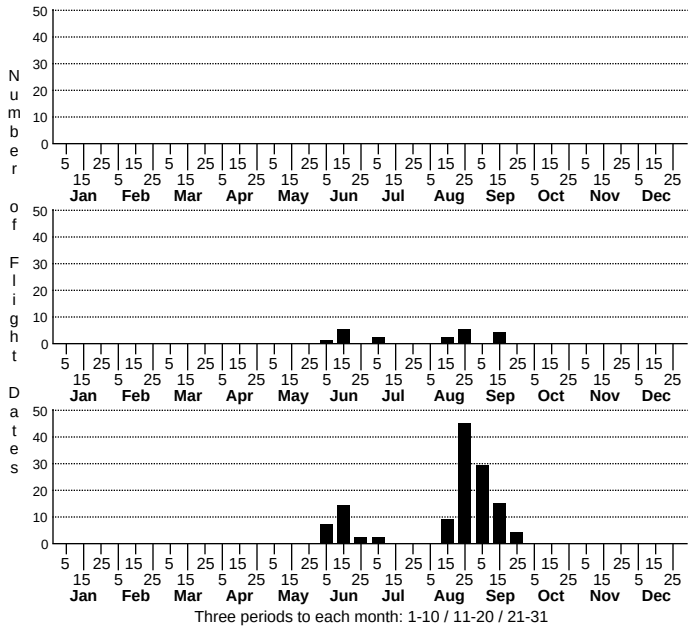
FLIGHT PERIOD: Two broods. In the Coastal Plain and Piedmont, mainly from late May (rarely mid-May) to early July, and late July to late September, very rarely to early October. The gap between broods downstate is very narrow. In the mountains, the main flight is from late June to late July, with a second flight from mid-August into September. More data needed for the mountains.

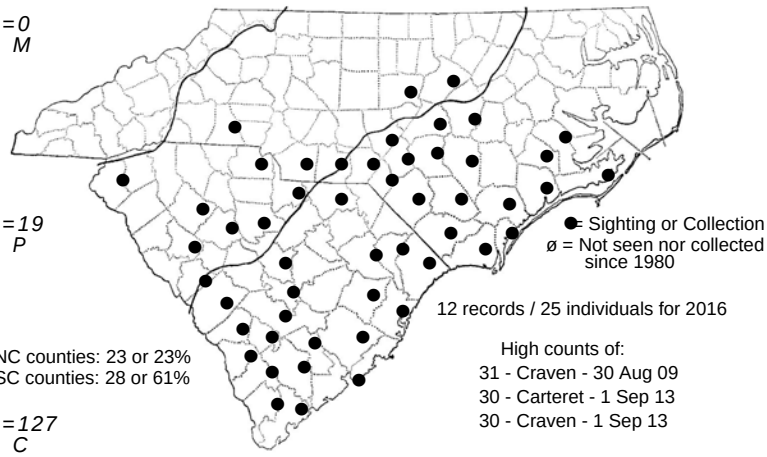
HABITAT: This is primarily a wetland skipper of open or partly open conditions. It is found in savannas, fresh to slightly brackish marshes, wet meadows, margins of pocosins, swamps, and bottomlands, moist powerline clearings, etc. Where found in uplands, it is generally in open meadows well away from forested areas; this upland habitat usage is especially true in the northwestern Piedmont and northern mountains.

FOOD AND NECTAR PLANTS: The foodplants are a variety of grasses, presumably tall species near or in wetlands. The species nectars on many flowers, such as milkweeds, thistles, buttonbush, and others.

COMMENTS: Although quite common to our north, it is only fairly common at best in NC. This brightly-colored skipper could be misidentified as an Arogos Skipper or as a Rare Skipper, both of which are very rare in NC. Also, freshly emerged male Sachems, which have bright golden-orange scales covering the brown blotches below, at least briefly, are frequently misidentified as Delaware Skippers. The Rockingham County count in 2015 tallied a remarkable 79 individuals, breaking their previous state record count of 56 from 2013. The Surry County count also had an excellent total of 52 individuals, in August 2016.

Byssus Skipper *Problema byssus*





12 records / 25 individuals for 2016

High counts of:
31 - Craven - 30 Aug 09
30 - Carteret - 1 Sep 13
30 - Craven - 1 Sep 13

NC counties: 23 or 23%
SC counties: 28 or 61%

New for 24th: Union

Earliest date: Hoke 5 Jun 2012
Latest date: Craven 28 Sep 2013

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G3G4

DISTRIBUTION: The species is essentially limited in NC to the southern half of the Coastal Plain, mainly in the coastal counties, but it was found in the Piedmont in Crowders Mountain State Park (Cleveland) in 2001, near Jordan Lake (Chatham) in 2008, and at Yates Pond (Wake) in 2011. The species is expanding its range northward, as new records in 2011 came from Wake, Moore, and Hoke counties. New records in 2012 came from Anson, Johnston, and Jones counties; and Richmond County was added in 2013. Union County was added in 2016, and heavily worked Mecklenburg County ought to get its first record very soon. As it is not known from VA or northward, the edge of the range, as now known, is Cleveland, Chatham, Wake, and Craven counties.

ABUNDANCE: Slowly increasing and spreading northward. Uncommon to locally fairly common in the southern coastal counties, but can be common in Croatan National Forest. Rare in the inner Coastal Plain west to Cumberland and Robeson counties, but very rare in the Sandhills region; extremely rare to very rare in the southeastern Piedmont (Cleveland, Union, Anson, Chatham, and Wake counties). The species is a bit colonial, and four or more can be found in a small area of habitat.

FLIGHT PERIOD: Two broods, with a small first brood from early June to early July. The main brood is mid-August to late September.

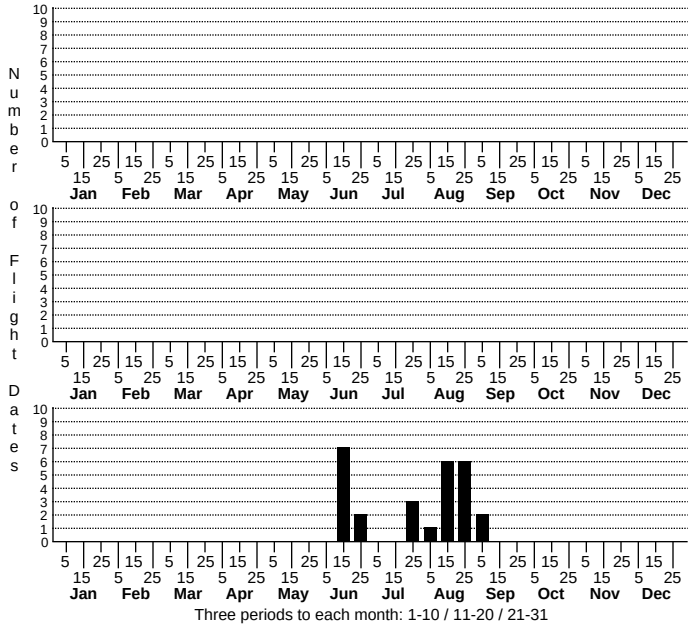
HABITAT: This species is found in tall, moist grassy areas, generally near ecotones of moist woods and open areas. Habitats include savanna edges, margins of swamps and bottomlands, damp powerline clearings, and fresh marshes. Stands of gamma grass (Tripsacum) are a habitat indicator, as this tall grass seems to be the primary foodplant in NC.

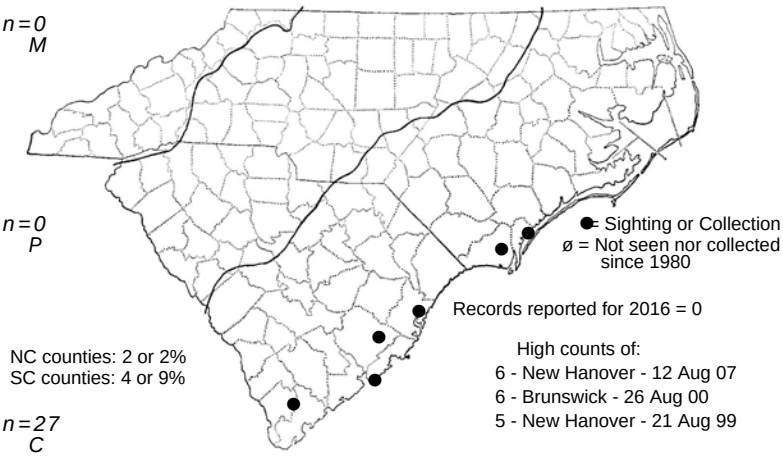
FOOD AND NECTAR PLANTS: Eastern gamma grass (Tripsacum dactyloides) is the primary foodplant in the Southeast, but it certainly must use other grasses, as gamma grass is apparently absent in some areas where the butterfly occurs. The species nectars on many species.

COMMENTS: This species can be confused with both the Rare Skipper and the Delaware Skipper, which may occur with Byssus. However, the Byssus almost always has a vertical pale patch on the hind wing below, whereas Rare and Delaware are unmarked below. The species was considered to be quite rare about ten years ago, but many colonies or isolated records have been found in the past decade, probably just a matter of more thorough field work rather than a population increase. To find this species, it helps to be familiar with gamma grass, as I found the species twice in the Carolinas in 1997 by first noting patches of this tall grass. Interestingly, gamma grass is found throughout NC, so some other factors limit the butterfly to the southeastern part of the state.

Researchers in SC have found that some female Byssus Skippers there, at least at one to several locales, lack any pale patch/chevron on the under hind wing; they can thus be confused with Berry's Skipper. Whether any "Berry's Skipper" reports from NC are actually Byssus Skippers is not known, though this situation needs further study in NC.

Rare Skipper *Problema bulenta*





Earliest date: Brunswick 13 Jun 1998
Latest date: New Hanover 7 Sep 1926

Status		Rank	
NC	US	NC	Global
SR	FSC	S1	G2G3

DISTRIBUTION: At the present time, it has been found only near Wilmington in Brunswick and New Hanover counties. Might occur elsewhere along the coast and tidewater areas; however, it is strictly coastal in range.

ABUNDANCE: Rare to uncommon, in the extensive fresh to slightly brackish marshes near Wilmington. It has been searched for in other fresh to brackish marshes along the coast without success. It might well be limited in NC just to the Cape Fear River marshes.

FLIGHT PERIOD: Two broods, with a seemingly small gap between flight periods. Apparently early June to late June, and mid- or late July to early September. More data are needed.

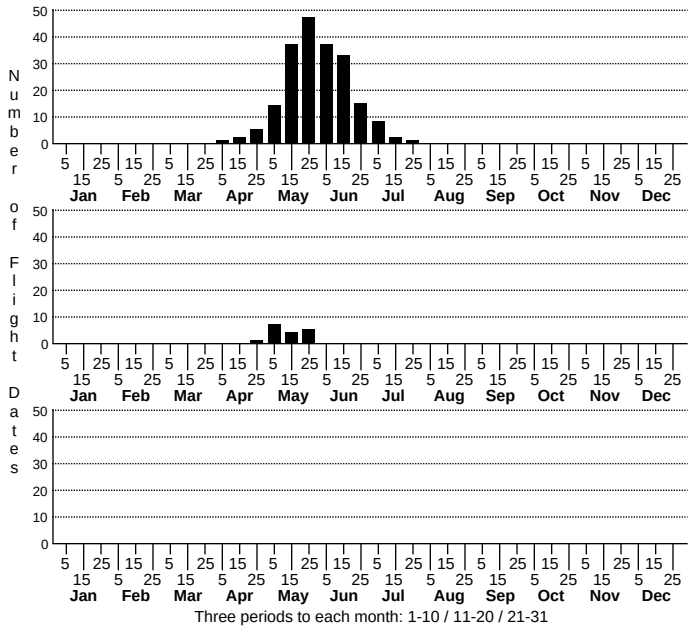
HABITAT: This skipper has one of the most restricted habitats of any species in the eastern United States. It is found only amid tall vegetation of coastal tidal marshes, where fresh to brackish. In NC, these are only the tidal fresh to slightly brackish marshes along the Cape Fear River near Wilmington. Characteristic marsh species are cattails (Typha spp.), big cordgrass (Spartina cynosuroides), and common reed (Phragmites australis). It does forage in adjacent uplands, such as formerly along the dikes at Eagle Island.

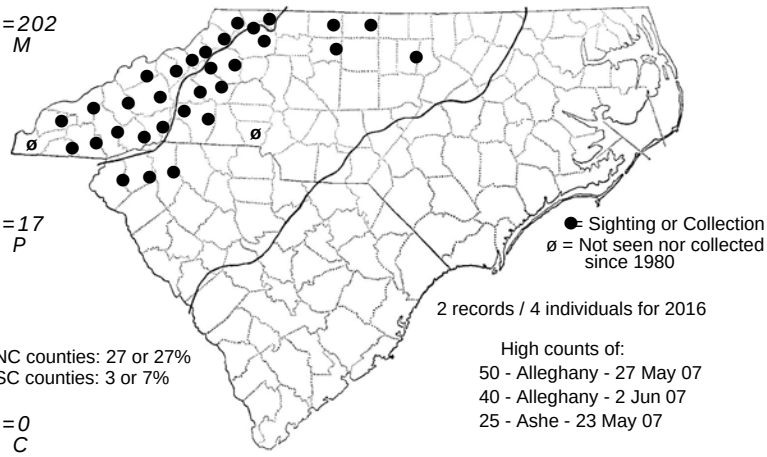
FOOD AND NECTAR PLANTS: The foodplants are very tall grasses, thought to be mostly big cordgrass in NJ, and southern wild rice (Zizaniopsis miliacea) in GA. In NC, either southern wild rice, or wild rice (Zizania aquatica), might be foodplants; both are present in marshes around Wilmington but are rare in other coastal marshes. Within their range, adults nectar mostly on swamp milkweed and pickerelweed; in NC, we have seen them nectaring on tall verbenas at Eagle Island and on pickerelweed and arrowhead (Sagittaria sp.) at a nearby site.

COMMENTS: This is one of the genuinely scarce butterflies in the eastern United States because of its restricted habitat. I suspect that Zizania is a foodplant in the Wilmington area. I have checked extensive stands of big cordgrass along the mainland shore of Pamlico Sound of Hyde and Dare counties, and in the Mackay Island National Wildlife Refuge area, with no success. After these dismal failures, I truly doubt that big cordgrass is a foodplant in NC! In fact, swamp milkweed was blooming profusely at Mackay Island; yet there were no Rare Skippers on them.

Portions of the habitat most easily accessible on foot are under considerable threats. Construction work on the dikes at Eagle Island has removed most of the verbena used as a nectar source. Common reed has been increasing near highways and other disturbances along marsh margins. A boat may be necessary to best survey for Rare Skippers now, as most of the marshes are difficult to reach on foot. A second option is wading, which is the method Jeff Pippen and John Dole used in 2006 to "re-discover" the species after a five-year lapse in records for NC. Another group of observers, including me, tallied six Rare Skippers at this site in 2007. Sadly, few people make the effort anymore to look for this highly localized and scarce species in NC. Thankfully, observers in SC have been finding a few new coastal sites in that state in recent years, some of which are much more accessible than are the NC sites.

Hobomok Skipper *Poanes hobomok*





Earliest date: Madison 9 Apr 2012
Latest date: Clay 31 Jul 2001

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Throughout the mountains; scattered in the western Piedmont, where found mostly in foothill ranges. Ranges into the central and eastern Piedmont only in the northern counties, east to Rockingham (added in 2014) and Orange.

ABUNDANCE: Fairly common and widespread in the mountains; locally common in some areas in the northern mountains. Rare in the extreme western and northern Piedmont, but likely absent from the southeastern 60-70% of the province. The species does, however, occur south to the Atlanta, GA, area; thus, it is expected to be found in other Piedmont counties in NC (and SC).

FLIGHT PERIOD: A single brood; in the Piedmont it flies from the end of April at least to late May. However, in the mountains the flight occurs from the latter half of April to mid-July.

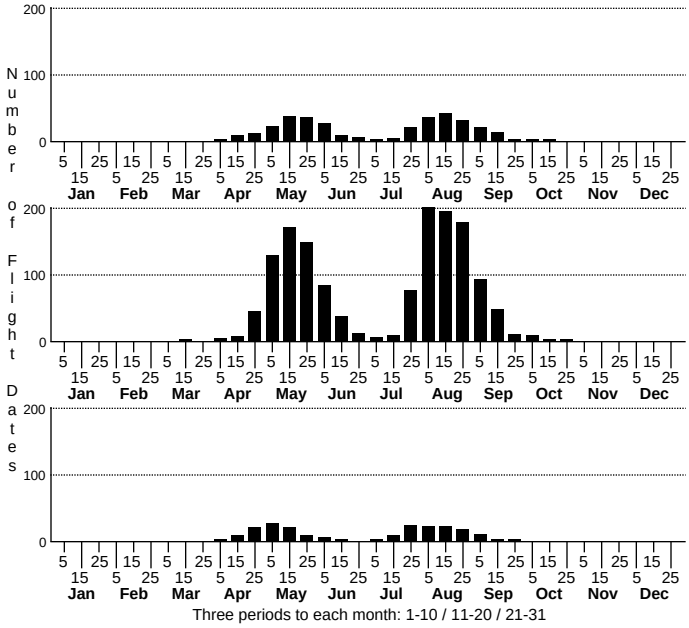
HABITAT: This species favors woodland edges and wide openings in woods (such as margins of logging roads), both where somewhat damp or in uplands. It can be found in old fields and other brushy areas, but it usually remains fairly close to woods. Some references indicate that it is usually found in damp places, but in NC it has a wide range of moisture tolerance, from bog edges to the margins of sunlit logging roads on the upper slopes of mountains.

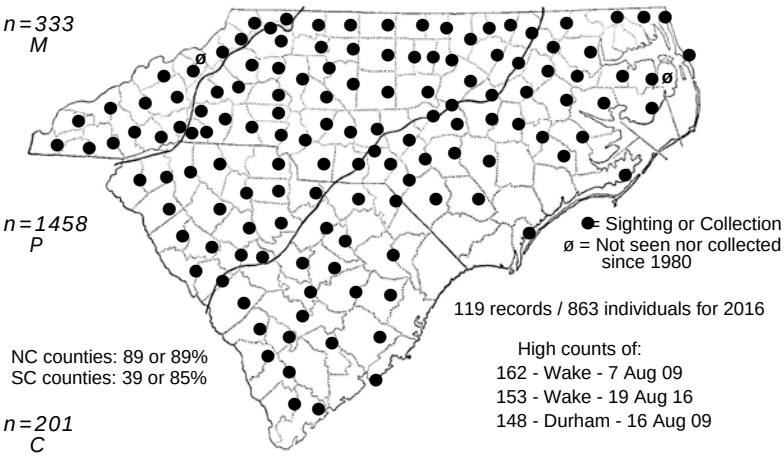
FOOD AND NECTAR PLANTS: Panic grasses (Panicum spp.) and blue grasses (Poa spp.) are among the many foodplants; all are grasses. The species nectars on many flowers, but males are often seen perched on leaves along wooded edges, where they are quite territorial.

COMMENTS: This is by no means a scarce butterfly in the mountains. The main difficulty in identification is the Hobomok's and the Zabulon's insistence on perching with the wings partly spread, making viewing of the crucial field marks on the lower hind wing very frustrating. In addition, the two species occur in similar habitats in the mountains, such as the edge of hardwoods along road margins. It is not found in damp habitats as much as the Zabulon Skipper.

I was stunned to find single individuals at two sites in Eno River State Park, Orange County, in May 2004. This county has been well-worked in the past, as has the park. One was inside an upland forest, and the second was in an upland powerline clearing; the similar Zabulon Skipper tends to occur in and near wetland woods, but it also was seen in the same powerline clearing, for comparison.

Zabulon Skipper *Poanes zabulon*





Earliest date: Wake 17 Mar 2016
Latest date: Durham 31 Oct 2004

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Southern Golden Skipper

DISTRIBUTION: Essentially statewide, but only one known record for the extreme southeastern Coastal Plain. This scarcity there is bizarre, as there are a number of records for the lower Coastal Plain of SC.

ABUNDANCE: Common to locally very common in the Piedmont; fairly common in the mountains; uncommon to fairly common in the northern half of the Coastal Plain, but seemingly very rare south of Cumberland and Craven counties. The species is clearly more common west of the Fall Line than in the Coastal Plain.

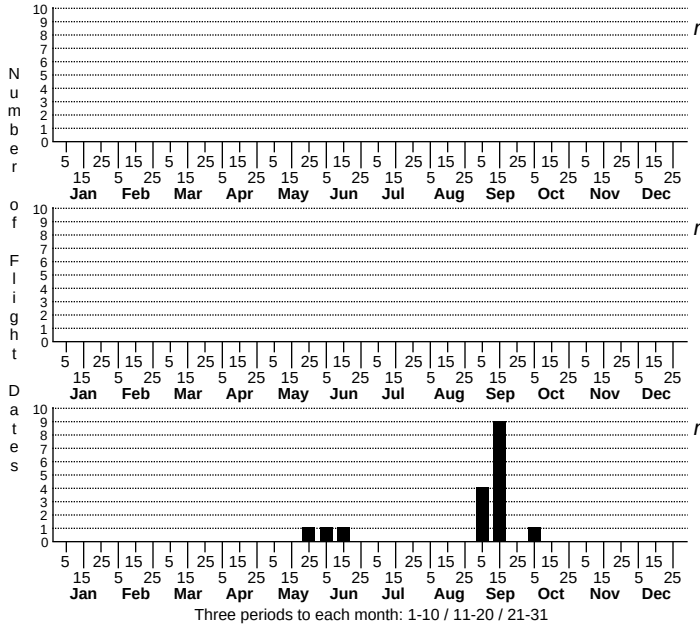
FLIGHT PERIOD: Two distinct broods. Downstate, mainly from late April to mid-June (Coastal Plain) or late June (Piedmont), and mid- or late July to late September, sparingly into late October. In the mountains, the brood periods are very similar to those in the Piedmont, which is quite unusual for grass skippers; most such skippers have peak mountain flights in midsummer rather than a hiatus in July.

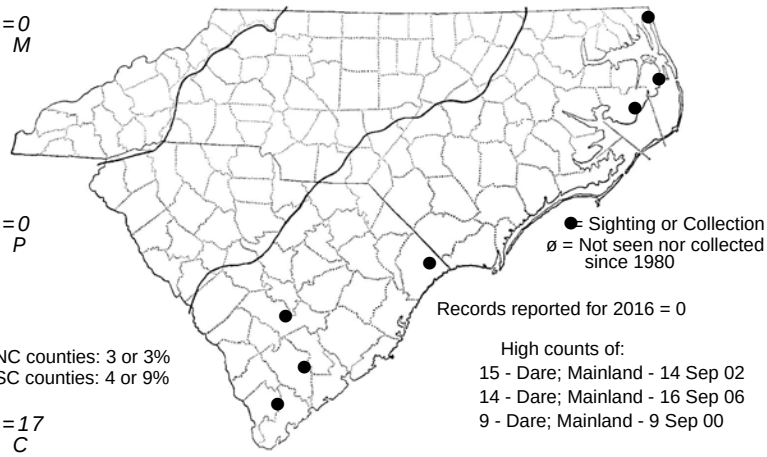
HABITAT: This species, closely related to the Hobomok Skipper, clearly favors damp places near hardwoods. It is often found along moist wooded edges, powerline or sewerline clearings in bottomlands, along dirt roads or wide trails in moist areas, along sunlit streams, and along marsh and lake edges. It does occur into upland places, but it shows a strong affinity for partly shaded wet places.

FOOD AND NECTAR PLANTS: The foodplants are various grasses. The species nectars frequently, on a great variety of flowers.

COMMENTS: The males are the commonest of the orange skippers of damp wooded areas of the Piedmont. The females, however, are dark and look like Clouded Skippers. They are much less frequently seen than the males. Males characteristically perch on sunlit leaves along the margin of a wet forest or in sunlit openings in a bottomland forest, and dart out after anything that flies. They can often be identified by their behavior, without seeing the distinctive markings on the under hind wing, which is often held parallel to the leaf surface and may be difficult to see well.

Aaron's Skipper *Poanes aaroni*





Earliest date: Dare; Mainland 21 May 1993
Latest date: Dare; Mainland 2 Oct 2005

Status NC	Status US	Rank NC	Rank Global
SR	-	S1S2	G4

DISTRIBUTION: So far as known, found only along the northern coast, from Currituck County south to the mainland of Hyde County. The species ranges along and near the coast as far north as NJ and south to FL. It seems that the northern subspecies -- P. a. aaroni -- ranges south to Hyde County, and the southern subspecies -- P. a. howardi -- ranges north only to SC. The gap along the southern NC coast, thus, appears to be real.

ABUNDANCE: Rare, along the northern portion of the coast, but uncommon to locally fairly common in southern mainland Dare County near Pamlico Sound. Should occur in (or near) other brackish marshes along the northern coast. Abundance there is uncertain at the present time, but it seems to be absent along the southern coast.

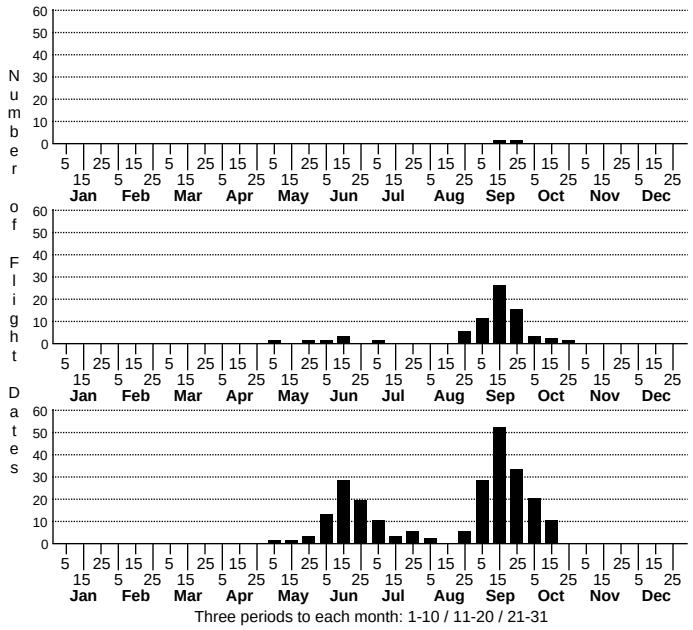
FLIGHT PERIOD: Two broods; mid-May to mid-June (probably), and perhaps late August to early October. More data are needed to clarify the flight periods, but there is a large gap between broods.

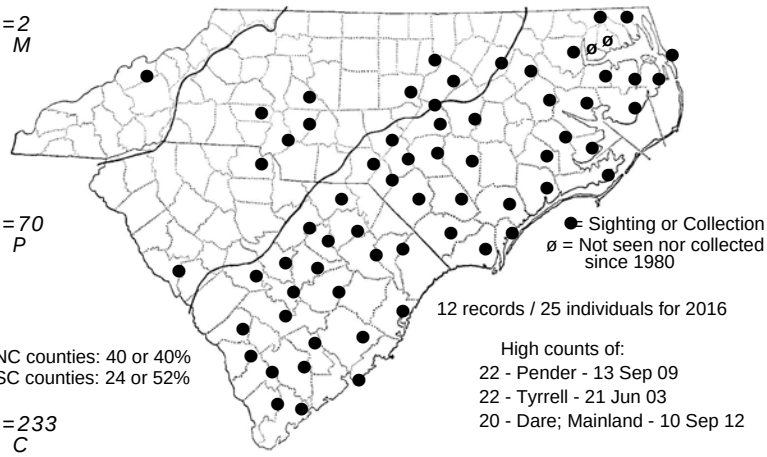
HABITAT: In NC, the primary habitat is brackish marshes, but the species moves well away from marshes to find suitable nectar sources. Thus, they can be seen in fields, wood margins, and marsh edges, as long as these habitats are within several hundred yards (?) of a brackish marsh.

FOOD AND NECTAR PLANTS: Some references say that smooth cordgrass (Spartina alterniflora) is the major foodplant, but Glassberg (1993) says that saltgrass (Distichlis spicata) may be a foodplant. (Smooth cordgrass appears to be absent at the marshes near Pamlico Sound and Long Shoal River and almost certainly is not a foodplant in NC, especially as it is the abundant grass that forms the salt marshes along the southern half of the coast, where the butterfly appears to be absent.) The skipper nectars on many flowers in the marshes and adjacent fields. I have seen them nectaring on yellow thistle (Cirsium horridulum) in May; and on mistflower (Eupatorium coelestinum), camphorweed (Pluchea sp.), and various goldenrods (Solidago spp.) in September-October.

COMMENTS: This species has been found to be locally numerous in some marshes north of NC. However, it is seemingly very local or scarce south of VA. I suspect it is truly absent south of Dare and adjacent Hyde counties, for marshes in Carteret County and in the Wilmington area have been worked reasonably well. Sadly, in recent years few observers have been looking for butterflies in our coastal marshes, and working out the details of the range and flight period of this and several other species (such as the Rare Skipper) will probably be years in coming.

Yehl Skipper *Poanes yehl*





NC counties: 40 or 40%
SC counties: 24 or 52%

12 records / 25 individuals for 2016

High counts of:
22 - Pender - 13 Sep 09
22 - Tyrrell - 21 Jun 03
20 - Dare; Mainland - 10 Sep 12

Earliest date: Pender 10 May 1991
Latest date: Harnett; P 31 Oct 1999

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

DISTRIBUTION: Essentially throughout the Coastal Plain; also sparingly in the eastern and southern portions of the Piedmont, where recorded inland to Durham, Chatham, Rowan, and Lincoln counties. An apparently small, isolated colony has been found at a low elevation in the mountains in Madison County, where first found in 2013 and again in 2014. Otherwise, it is absent from the mountains and nearly all of the western and northern Piedmont.

ABUNDANCE: Generally uncommon but widespread; may be fairly common at a few local sites (such as Alligator River National Wildlife Refuge and just north of Pettigrew State Park). It is somewhat more numerous in tidewater counties than in the upper 2/3rds of the Coastal Plain. Uncommon to very locally fairly common in the Sandhills; rare to very rare along the edge of the Piedmont, where its status as a breeding resident is uncertain, though known to be resident at a few sites. Extremely rare at low elevations in the mountains (Madison County).

FLIGHT PERIOD: Two broods. In the Coastal Plain the first brood is from mid-or late May to late July, but June is the primary month. The second brood, clearly larger than the first, is generally from early September (rarely in August) to mid-October. The limited Piedmont population has a very small first brood, apparently from mid- or late May to early July; the second brood is from late August to mid-October. The two mountain records are only in September, and thus much is to be learned about its broods in Madison County.

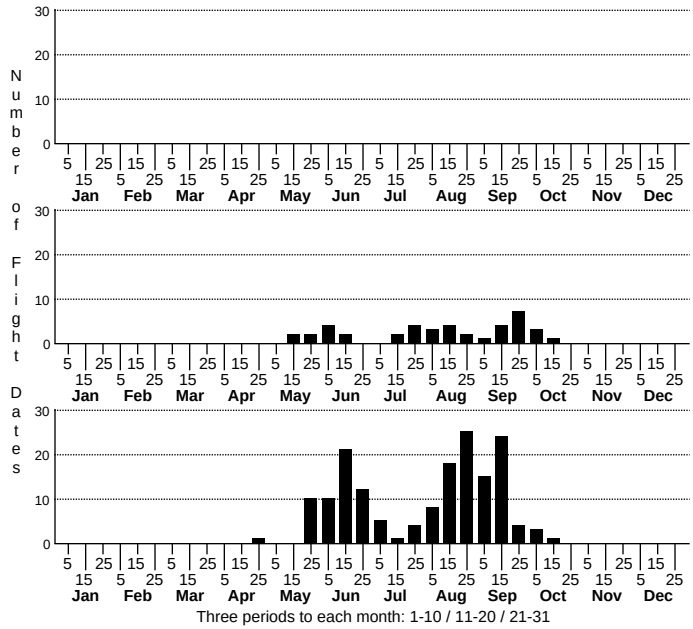
HABITAT: This is supposedly a wetland species, though it is often found several hundred yards from wet places. It is typically found along edges of swamps or other wet woods, along trails or dirt roads through such woods, ditches, savannas, and edges of marshes. It is not a marsh species, and it favors partly shaded places. However, many adults nectar on flowers hundreds of yards from wetlands, such as in dry longleaf pinewoods. If the foodplant is cane or some other wetland species, the adults certainly wander well away from such areas.

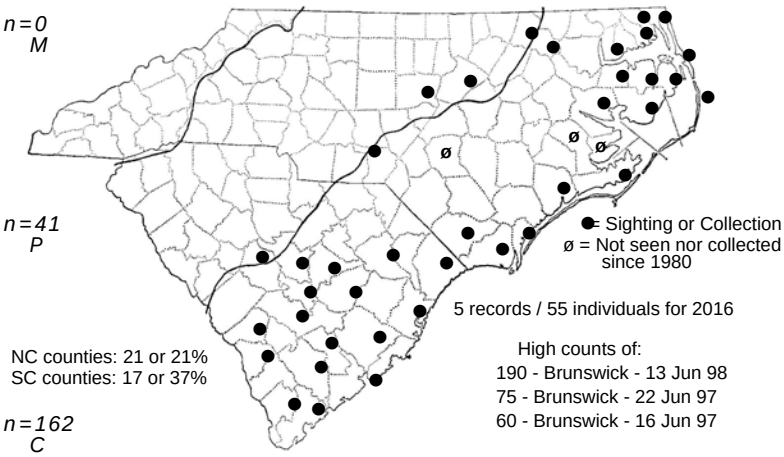
FOOD AND NECTAR PLANTS: Cane (Arundinaria) is supposedly the (sole?) foodplant, but it does not seem to be the foodplant in NC. Rather, some other grasses are likely. There is no affinity between Yehl Skippers and cane stands in NC, especially in the fall. It nectars on many plants of wetlands, such as pickerelweed and swamp milkweed. The second brood, and perhaps the first also, often nectars on blazing-star (Liatris) and other upland composites.

COMMENTS: This species is considered rare by some references. Though not common in NC, it certainly is not rare. The species is definitely baffling in some respects, as I have seen many in the fall in Sandhills uplands, far from cane and wetland habitats. Randy Emmitt and Will Cook observed the species in southeastern Lincoln County in 1999 for a slight inland range extension into the southern Piedmont. Beth Brinson photographed one (confirmed by the authors) "out of range" in Rowan County in 2008. Most shocking was the photographing of two or three female Yehls along the French Broad River in Madison County by Sue Perry and Gail Lankford, on September 24, 2013; the photos were confirmed by other biologists. The species was seen again at the same site in September 2014 to confirm a resident population there.

The scarcity of first brood records in the Piedmont, as compared with the obvious and strong first brood in the Coastal Plain, where certainly a resident, is very striking. Skippers in the genus Poanes are not thought to be migratory, so likely this is evidence of a winter-stressed species, such that very little of the fall-season progeny in the Piedmont is able to survive the winter.

Broad-winged Skipper *Poanes viator*





Earliest date: Carteret 30 Apr 2007
Latest date: Wake 18 Oct 2014

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Mainly restricted to the tidewater section of the state, from the VA border to the SC line. In 2001, the species was found in Richmond County along the Pee Dee River, a first record for the Piedmont. In 2004, a colony was discovered in southeastern Chatham County; another colony was discovered in neighboring Wake County in 2009, and a second one was found in Wake in 2010. Several additional inland colonies were found in Halifax County in 2012, and a new slightly inland site was found in Columbus County in 2013. Thus, an old record for Cumberland County was likely not just a "fluke" or a stray.

ABUNDANCE: Common to locally abundant in tidal marshes. Away from tidal marshes, very rare to locally numerous, but only near stands of its robust grass foodplant (mainly along lake and pond shores and along rivers).

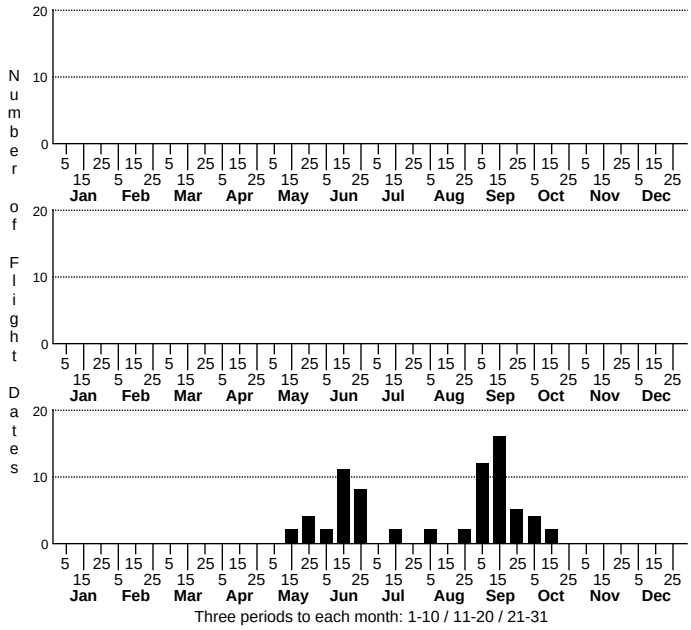
FLIGHT PERIOD: Two broods. Flight dates in coastal areas range from mid- or late May to early July, and late July to late September (rarely to mid-October). The gap between broods is very small. The Piedmont records fall between mid-May and mid-October, with a seemingly early (as compared with the lower Coastal Plain) gap in late June and early July. The Piedmont gap between broods ought to also be around mid-July, and thus first brood individuals should occur there into early July (with more field work).

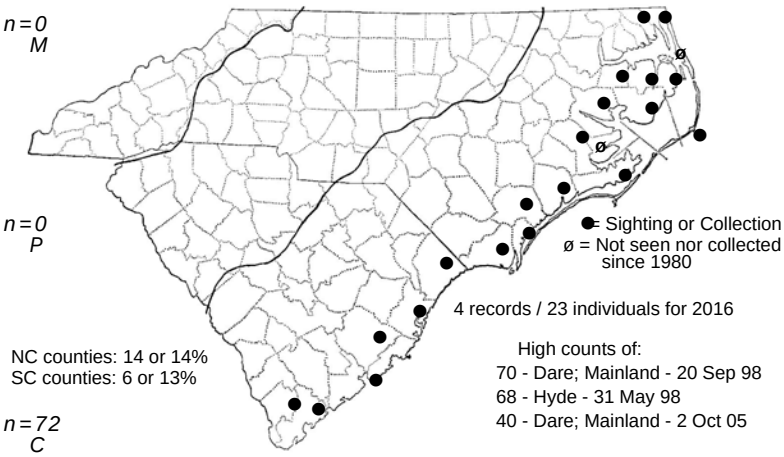
HABITAT: This is a species of tall grasses of the fresh to brackish marshes near the coast. It also is found in ditches near marshes, but it is generally found near common reed (Phragmites communis), big cordgrass (Spartina cynosuroides), and other marsh grasses at least 5 feet tall. Inland colonies have all been found very close to, or within, stands of southern wild rice (Zizaniopsis miliacea). These habitats inland tend to be along edges of lakes and ponds, or close to rivers -- all in rather sunny conditions.

FOOD AND NECTAR PLANTS: The foodplant is mainly common reed, but big cordgrass is used, as well as other tall grasses (e.g., southern wild rice in the Piedmont). The species nectars on many plants. Salt marsh fleabanes (Pluchea spp.) are commonly used, as are pickerelweed, milkweeds, thistles, and others.

COMMENTS: This species can be quite common near common reed, an introduced species in NC that is spreading in our marshes. It is likely that the Broad-winged Skipper is more common in the state than formerly, as it has spread along with the reed. This is often the most frequently seen butterfly in tall brackish marshes, such as at Eagle Island and in the Currituck Sound area. The southern wild rice appears to be spreading inland, and even though it is a native grass, it appears to readily colonize some lake and pond margins, as well as some sandbars and edges of rivers, as long as the conditions are open and sunny. As a result, the occurrence of Broad-winged Skipper well inland near the Fall Line is presumed to be a recent phenomenon; this large and slow-flying skipper would have been hard to overlook by earlier collectors and biologists prior to 2000.

Palatka Skipper *Euphyes pilatka*





Earliest date: New Hanover 15 May 2004
Latest date: Dare; Mainland 16 Oct 2016

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G3G4

DISTRIBUTION: The tidewater region of the lower Coastal Plain only; recorded from 14 counties, ranging from Currituck on the north to Brunswick on the south. It ranges "inland" to Beaufort County.

ABUNDANCE: Local; may be locally common to abundant, at least from Craven and Pamlico counties northward, but uncommon and local southward.

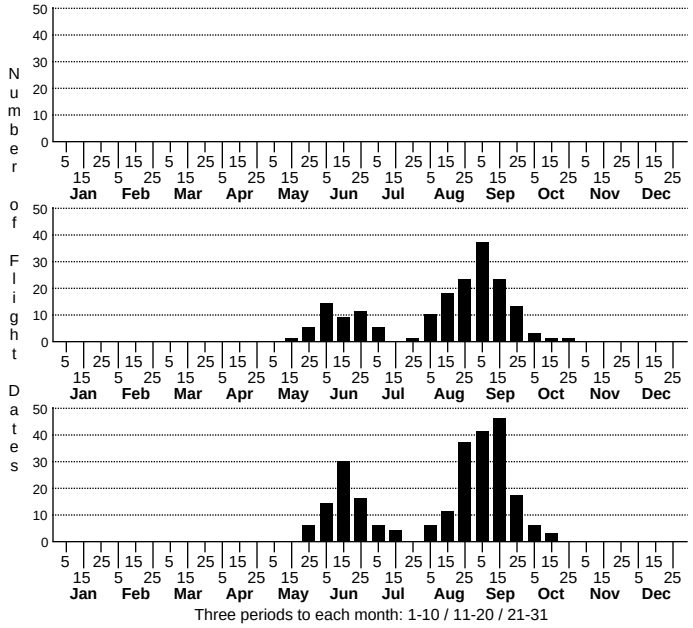
FLIGHT PERIOD: Two broods; mid- or late May to mid-July, and early September to mid-October. The second brood seems somewhat brief; most skippers have second broods that extend over two months or more.

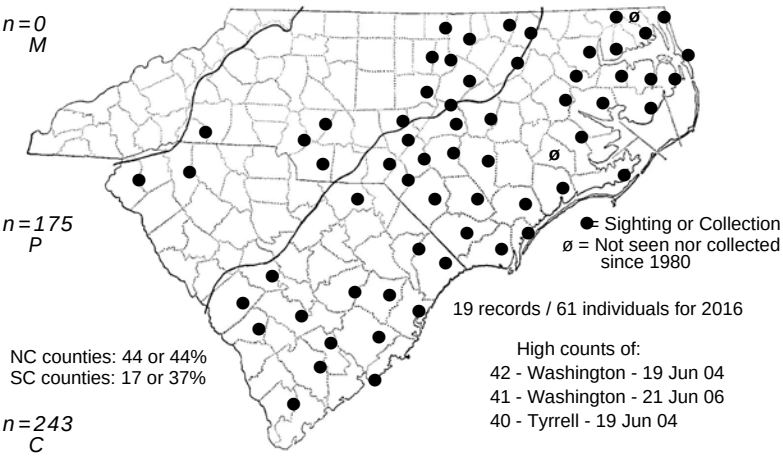
HABITAT: The species is closely tied to sawgrass (Cladium jamaicensis). Thus, it is found almost exclusively at tall, slightly brackish marshes in the tidewater area. This butterfly's abundance is tied to the abundance of sawgrass; very common where the grass is abundant, such as parts of mainland Hyde and Dare counties along Pamlico Sound. Because nectar plants are often scarce in or near sawgrass marshes, the species can range a mile or more away from such marshes; for example, they have been seen in powerline savannas, along canal banks (such as north of Lake Phelps), and even at a school yard with plantings of lantana.

FOOD AND NECTAR PLANTS: The only known foodplant is sawgrass. The adults nectar on many flowers, such as milkweeds; I have seen much nectaring on thistles and pickerelweed.

COMMENTS: This is a large skipper of the sawgrass marshes. It is somewhat similar in pattern below to an Aaron's Skipper, but that species has a more obvious ray on the hind wing and is smaller in size. Actually, the Palatka looks very much below like a giant Tawny-edged Skipper! Though sawgrass marshes have relatively few plant species with suitable nectar flowers for butterflies, I have had little problem finding Palatkas on suitable nectar sources.

Dion Skipper *Euphyes dion*





19 records / 61 individuals for 2016

High counts of:
42 - Washington - 19 Jun 04
41 - Washington - 21 Jun 06
40 - Tyrrell - 19 Jun 04

NC counties: 44 or 44%
SC counties: 17 or 37%

Earliest date: Halifax; P 16 May 2012
Latest date: Chatham 31 Oct 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

DISTRIBUTION: Scattered throughout the Coastal Plain (both tidewater and inland); also found along the eastern and southern edges of the Piedmont, inland to Person, Orange, Chatham, Cabarrus, Mecklenburg, and Polk counties. Absent from the mountains and the northwestern 50% of the Piedmont. The range was expanded to the west in 2007 by two biologists' finding of the species in both Union and Mecklenburg counties, and in 2010 with photographic documentation from southern Polk County (in the Piedmont).

ABUNDANCE: Uncommon to locally common in the lower Coastal Plain; rare to uncommon elsewhere in the Coastal Plain, but very rare to rare in the Sandhills. Uncommon but widespread in the northeastern Piedmont, but rare in the southern Piedmont (i.e., close to the SC border).

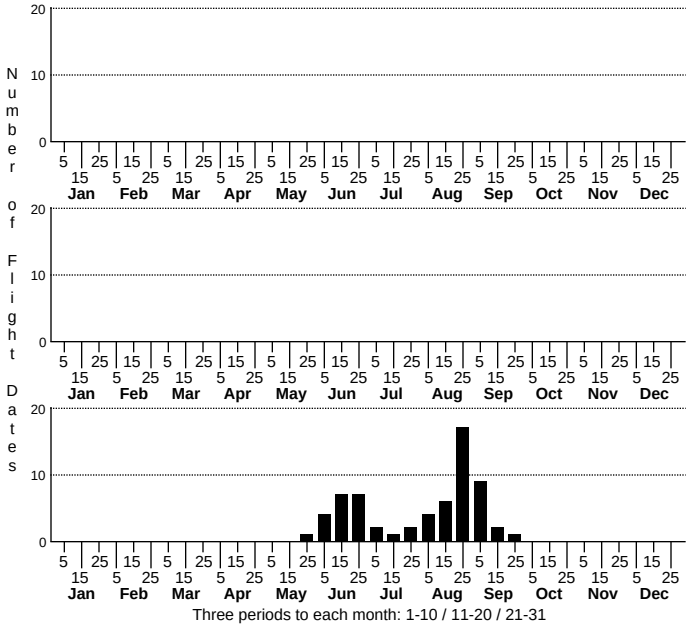
FLIGHT PERIOD: Two broods in NC; late May to early July, and early August to early October, casually to late October. It is most numerous in mid-June and in the first 10 days of September.

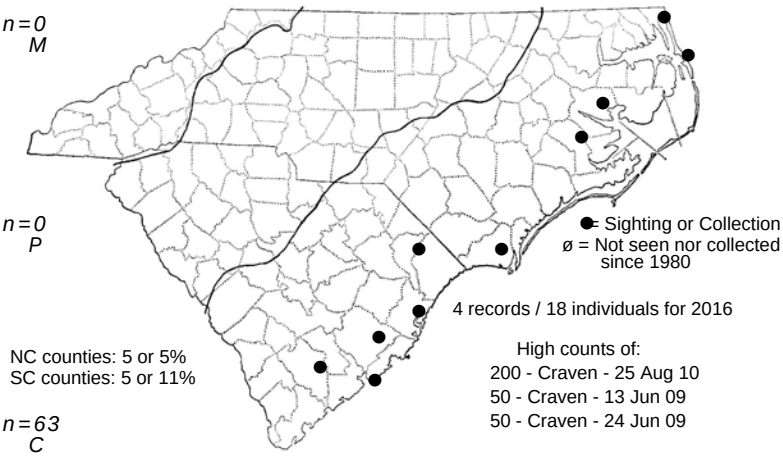
HABITAT: This is a wetland species, mainly a freshwater marsh inhabitant. It is found in wet savannas, ditches and canals, marshy lake and pond margins, beaver pond marshes, and (of course) freshwater to slightly brackish marshes. It is not as associated with forested wetlands as much as the Dukes' or Yehl skippers, though it is often found nectaring on pickerelweed in ditches next to swamps and bottomlands.

FOOD AND NECTAR PLANTS: The foodplants are various sedges (Carex and Scirpus spp.), which are characteristic of open wetlands. It nectars on many plants, such as buttonbush, pickerelweed, milkweeds, and others.

COMMENTS: This species is found in small colonies in a fairly wide range of open to somewhat open wetlands. In the Piedmont, biologists have found colonies along the margins of a lake at Umstead State Park and at beaver ponds in Moore, Durham, and Orange counties. In the Coastal Plain, I have seen it at savannas and several types of marshes, even in small ditches filled with pickerelweed. Chris McEwen photographed several at a quarry in Mecklenburg County in 2007, to considerably extend the range westward in the Piedmont. Shay Garriock found the species in adjacent Union County in 2007, for another rare southern Piedmont record. Simon Thompson and others found the species in Polk County in 2010, a notable range extension, to near the base of the mountain province.

Dukes' Skipper *Euphyes dukesi*





Earliest date: Brunswick 28 May 2003
Latest date: Craven 24 Sep 2010

Status NC	Status US	Rank NC	Rank Global
SR	-	S1S2	G3

DISTRIBUTION: So far, found only at a few places in the tidewater section of the Coastal Plain, though extending from Currituck County to Brunswick County; finally recorded on the Outer Banks (Dare County) in 2008.

ABUNDANCE: Rare and very local in the tidewater section, but perhaps absent from some tidewater counties. Though it can be quite common where found (occurs in colonies), it is one of the least numerous butterflies in the state, though suitable habitat appears to be common. Almost certainly not as rare as the few county records (Currituck, Dare, Beaufort, Craven, and Brunswick counties) indicate, as there are now three single-day counts of 50 individuals, and one (in 2010) of a remarkable 200 individuals.

FLIGHT PERIOD: Two broods; late May or early June to early July, and late July to mid-September. The gap between the flight periods in July is rather small.

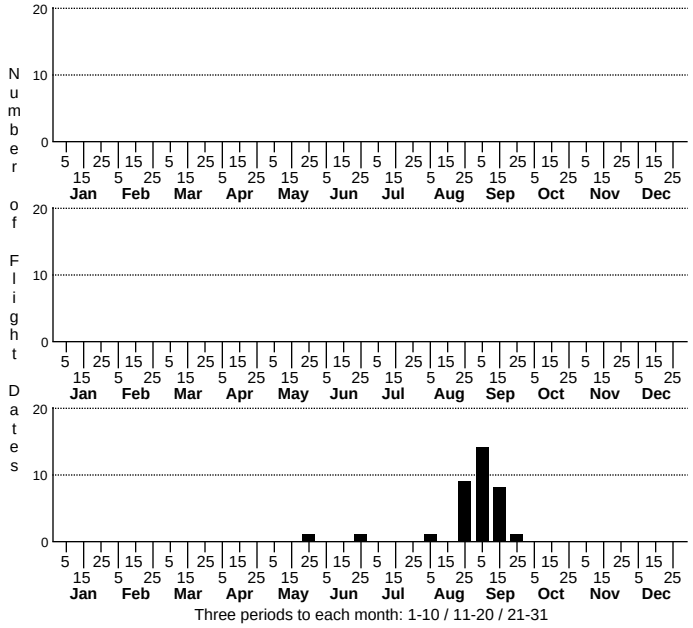
HABITAT: The species occurs near freshwater or very slightly brackish forested wetlands. It is found mainly along the edge of a wet woods and marsh ecotone, supposedly where tupelos (Nyssa biflora or N. aquatica) are present. Steve Hall and I have seen it at three locales in NC -- one site is the edge of a wet woods along a dirt road (with marsh nearby), and the other two are where slightly brackish marsh meets wet woods. John Fussell found large numbers in 2009 and 2010 in Craven County in several wet forests with abundant sedges.

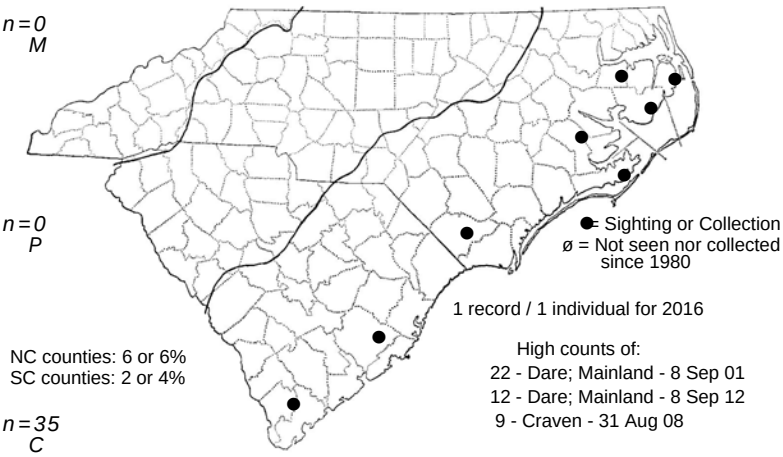
FOOD AND NECTAR PLANTS: The foodplants are various sedges (Carex spp.); whether a particular species is favored in NC is not known, though the large colonies in Craven County use Carex hyalinolepis as a foodplant. The species nectars on pickerelweed, blue mistflower (Eupatorium coelestinum), tall verbenas, and others.

COMMENTS: This species ought not be rare, as suitable habitat in NC is certainly not scarce. It is possible that the species is selective of its foodplant (Carex), which might be local species in the state. Steve Hall found a colony at Goose Creek State Park. I counted 11 Dukes' Skippers at Mackay Island National Wildlife Refuge in mid-June 1994 in a purposeful search for the species, as the habitat "looked right", based on habitats described for adjacent sites in VA. The population at Eagle Island in Brunswick County exploded in 2004, perhaps owing to a forest block that was cleared a year earlier. I surmise that the butterfly's foodplant was one of the many species of sedges and rushes that colonized this damp ground in that year. John Fussell found large numbers in 2009 along wooded creeks in Craven County, using a single species of sedge as a foodplant. The species should be looked for where roads or trails bisect a swamp and extend into a marsh, or where marshy openings in wet woods, such as along canals and sunny ditches, are present.

One of the highlights of the 2008 field season in the state was the discovery by Jeff Lewis (and follow-up visits by Tom Stock) of a sizable population of Dukes' Skippers at Duck on the Dare County coast. Both observers documented butterflies from this first new NC site in 15 years with photographs. Interestingly, the site (a local park) is only a few acres in size, suggesting that the species can occupy tiny areas of suitable marsh/swamp ecotone habitat in the coastal zone. Several additional new sites have been found in Craven County in 2013-2014, especially by John Fussell, and he found a new site (along a different creek) in that county in 2016. Nick Flanders found a new site in Currituck County in 2016. Fussell checked one or two sites in Jones County in 2016 that had the requisite foodplant, but failed to find any skippers.

Berry's Skipper *Euphyes berryi*





Earliest date: Dare; Mainland 31 May 1998
Latest date: Washington 21 Sep 2015

Status		Rank	
NC	US	NC	Global
SR	-	S1	G1G3

DISTRIBUTION: Known only from a handful of sites near the coast, from Albemarle Sound south to Croatan National Forest (Craven and Carteret counties), but found much farther south, in Columbus County, in 2009. Expected to occur only in the lower Coastal Plain. The range was extended westward in 2013, by the finding of a population in Washington County.

ABUNDANCE: Very rare and poorly known. NC lies at the northern edge of the species' range, but even within the range it is one of the scarcest butterflies in the Southeast.

FLIGHT PERIOD: Two broods, but the flight period -- at least the first brood --is somewhat confusing. Seemingly a small brood from late May to late June [only two records for this first brood], and a much larger brood from late August to late September. An August 10 record is an anomaly, likely from the first brood, as the individual was a worn female. Much more data are needed to solve this confusing pattern.

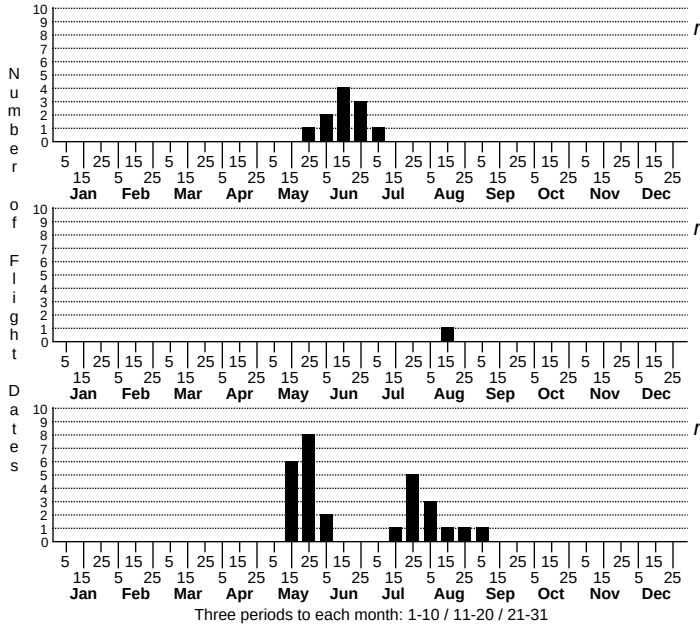
HABITAT: This is another wetland skipper. The Dare/Hyde site is a swampy and marshy area alongside a canal, which is a typical habitat in FL. The Carteret County record is from a savanna/pocosin ecotone (fide Bo Sullivan), and Craven County records are from a wet powerline clearing. The Columbus County record, documented by a collected adult, is from the margin of a canal, thus similar to the habitat at Dare/Hyde counties. The new Washington County site lies along ditches though disturbed marshy wetlands.

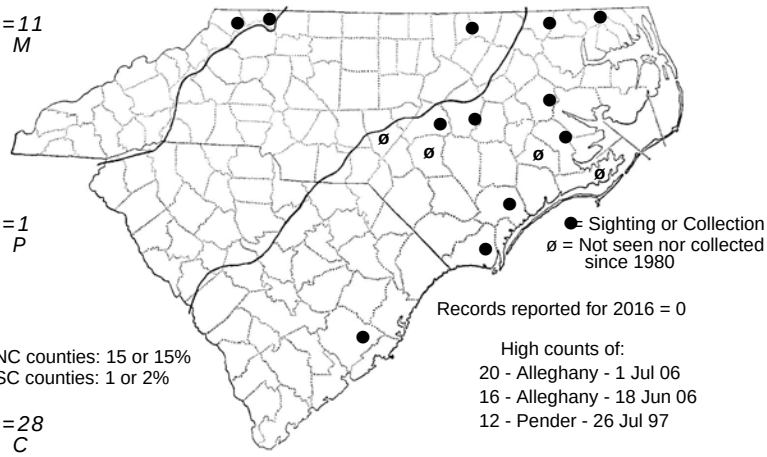
FOOD AND NECTAR PLANTS: The foodplants are apparently not reported in the literature, but Will Cook photographed a female ovipositing on an unidentified sedge (Carex sp.) in Croatan NF. Thus, sedges (and not grasses) are the likely foodplants, at least in NC. The species has a strong affinity for nectaring at pickerelweed in FL. The butterflies at Dare/Hyde most frequently nectar on mistflower (Eupatorium coelestinum); those in Craven County favor blazing-star (Liatris spicata).

COMMENTS: The Carteret County record is for 1991, but the species has not been seen there since. Bo Sullivan found the species a few years later in Craven County, and it has been found at this same Craven site in several more recent years, including a remarkable count of nine individuals in 2008. The species had been recorded on the mainland of Dare County prior to 1991, but it was feared extirpated there. Jeff Pippen and I found a moderate-sized colony in the Dare/Hyde area in September 1997, where now seen regularly on the "Fourth of July" count in September. Interestingly, a mystery skipper photographed in August a few years ago by Steve Hall not far from this site was determined by Steve and me (after viewing photos I took of the 1997 butterflies) to be a Berry's. Quite gratifying was the observation of three individuals by Brian Bockhahn just south of Lake Phelps on September 8, 2013; his photos were carefully reviewed by experts and confirmed as Berry's. Additional records came from this latter site in fall 2014.

In the field, Berry's Skipper is slightly smaller than Dion Skipper and is unicolored below on the hind wing, mostly an orange-brown or copper-brown with somewhat paler veins. Even though Dion -- a habitat associate -- has one or two broad yellow rays (which may be obscure) on the hind wing and is rather orange below, a Berry's may look like a Dion without the rays. Researchers in SC have found that some female Byssus Skippers there, at least at one to several locales, lack any pale patch/chevron on the under hind wing; they can thus be confused with Berry's Skipper. Whether any "Berry's Skipper" reports from NC are actually Byssus Skippers is not known, though this situation needs further study in NC. Careful review of all known NC Berry's Skipper photos on websites seem to clearly rule out Byssus Skipper, especially as Byssus Skippers from the same general area in the Croatan National Forest, also fresh in late August, clearly show a pale and broad hind wing chevron or patch, and somewhat different fore wing markings.

Two-spotted Skipper *Euphyes bimacula*





Earliest date: Harnett; C 12 May 2006
Latest date: Craven 5 Sep 2012

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G4

DISTRIBUTION: Very widely scattered in the Coastal Plain (12 counties), both in the lower Coastal Plain and near the Fall Line. Also found in the lower Piedmont (in 1997). Found for the first time in the mountains in 2006, extending the montane portion of the species' range from VA south to extreme northwestern NC.

ABUNDANCE: Very rare and poorly known in the Coastal Plain; extremely rare in the lower Piedmont. In the northern mountains, it is common at one site, and it was found at two additional sites; however, it is certainly very rare on the whole in this region of NC. Unlike the Dukes' and Berry's skippers, this is a northern species, ranging widely south to WV and VA, but found only sparingly southward.

FLIGHT PERIOD: Two broods in the Coastal Plain: mid-May to early June, and mid-July to mid- or late August, with one photo record for early September. Of the double-brooded skippers in the NC Coastal Plain, this species terminates its second brood about as early as any. Piedmont flight periods are unknown (two broods?), whereas we assume there is just one brood in the mountains, from early June to very early July.

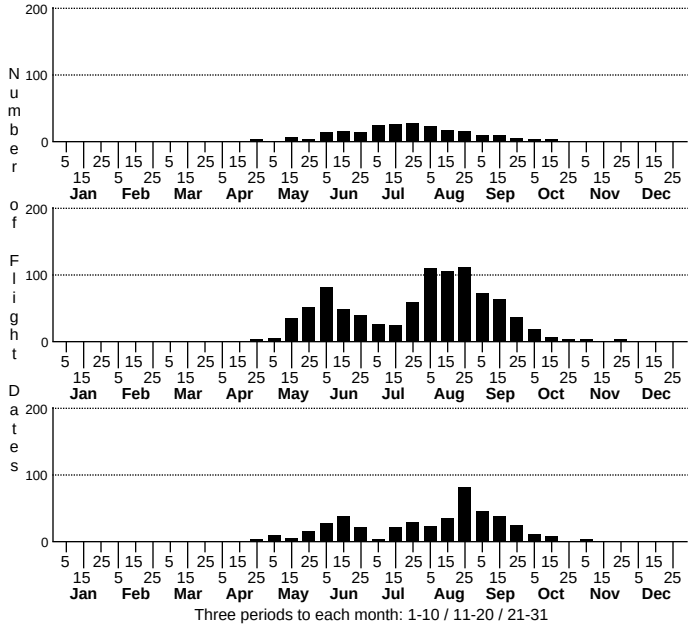
HABITAT: This is still another wetland skipper. It seems to be quite particular about its habitat. It is generally found in open, sunny savannas or "bogs", with relatively short vegetation (less than 1' tall). It favors the wettest part of savannas, where an abundance of sedges are found. In NC, it has also been seen in other open wetlands with sedges, such as wet clearcuts and moist powerline clearings. In the mountains, it is found in bogs and wet meadows.

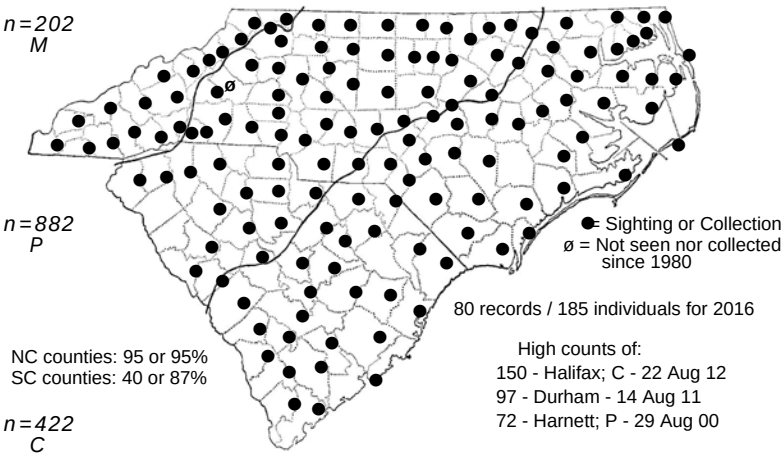
FOOD AND NECTAR PLANTS: Sedges (Carex spp.) are the foodplants of the caterpillars. Bo Sullivan (pers. comm.) says that the butterflies do not nectar often, spending most of their time in the thick grasses. I saw several individuals in Johnston County in 2000 nectaring on sweet pepperbush (Clethra alnifolia).

COMMENTS: In 1997, this species was discovered in three new counties. I found a small colony in Harnett County, plus a female in Vance County in the Piedmont. Bo Sullivan discovered a large colony in a wet savanna at Holly Shelter Game Land in Pender County. In 1994, he found several in a wet powerline clearing in Craven County, where he also found a Berry's Skipper! In 2005, observers found the species in Harnett, Gates, and Brunswick counties, representing two new sites. Jeff Pippen and I discovered a good colony in a wet powerline clearing in Harnett County; interestingly, the skippers were nectaring on slender blue flag (Iris prismatica), which also is very rare in NC. Ted Wilcox and Will Cook discovered the first record for the species in the NC mountains, at the same site (and date) where they found Long Dash. Wilcox later added two new sites. The species was remarkably numerous at the "Long Dash site", with Jeff Pippen and John Dole counting about 20 individuals on July 1. The first new county records for the Coastal Plain in perhaps ten years were made in 2013. Ed Corey photographed one at a Voice of America site in Pitt County on May 30, quickly followed by one photographed by Nick Flanders along a ditch in Northampton County on June 2.

Fresh individuals are stunning below, with white fringes, veins, anal margin to the hind wing, and lower body color. Females are fairly tame and nectar often, but males tend to perch on vegetation and seemingly do not spend much time nectaring.

Dun Skipper *Euphyes vestris*





Earliest date: Sampson 26 Apr 2002
Latest date: Harnett; P 25 Nov 2002

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

DISTRIBUTION: Statewide; found in all three provinces and undoubtedly occurs in all 100 counties.

ABUNDANCE: Fairly common and widespread in the Piedmont; locally fairly common in the Coastal Plain, but rather uncommon in the mountains. This is a common and widespread species to our north, but it is somewhat less numerous in NC than in states to our north.

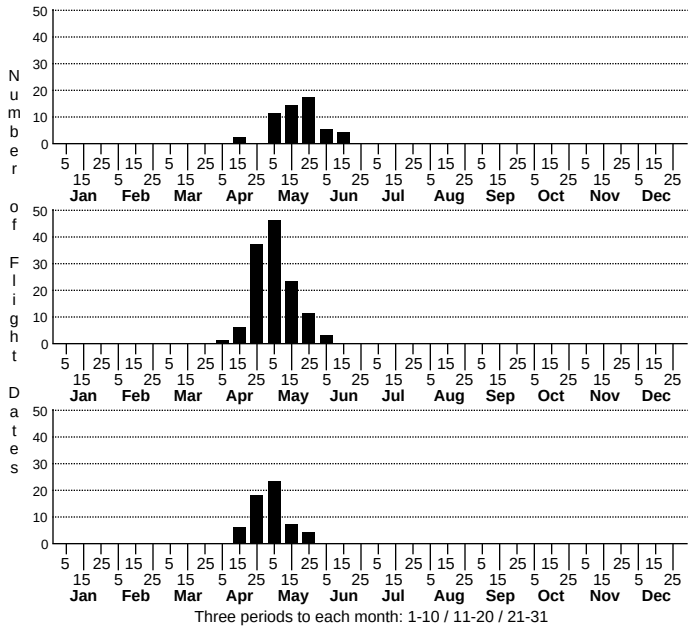
FLIGHT PERIOD: Two broods, which are quite extended in time relative to other Euphyes skippers. Downstate, early or mid-May to early or mid-July, and mid-July to mid-October, very rarely to early November. The main flight in the mountains is from late May to early August, but there is a small second brood in August and September.

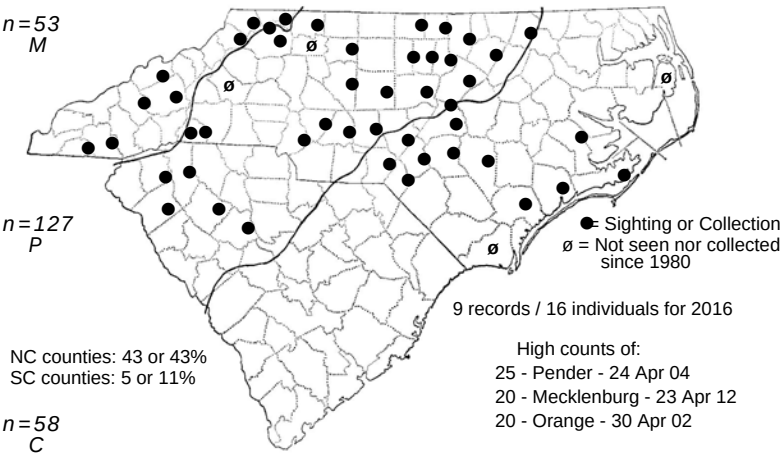
HABITAT: This is a species of a very wide range of habitats, but as with other Euphyes, it favors wetlands. It is found along moist woodland borders, ditches, roads and trails through damp woods, and powerline clearings, especially where damp. However, it also ranges into upland brushy areas such as weedy fields and even in gardens. Surprisingly, it is scarce in savannas and slightly brackish marshes; near the coast it is most often found in ditches and edges of moist woods.

FOOD AND NECTAR PLANTS: Various sedges, not only Carex but Scirpus is also used by caterpillars. Adults nectar on many flowers, with no species predominating.

COMMENTS: This is one of the more numerous of the small dark brown skippers, at least in the Piedmont and parts of the Coastal Plain. It can be easily confused with the Little Glassywing and the Northern Broken-Dash, and certainly I have mis-identified these three on a fair number of occasions. I usually see only one to three Dun Skippers in a day of searching, but I see it on most days afield at the appropriate season.

Dusted Skipper *Atrytonopsis hianna*





9 records / 16 individuals for 2016

High counts of:
25 - Pender - 24 Apr 04
20 - Mecklenburg - 23 Apr 12
20 - Orange - 30 Apr 02

NC counties: 43 or 43%
SC counties: 5 or 11%

Earliest date: Harnett; P 6 Apr 1997
Latest date: Alleghany 18 Jun 2006

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4G5

DISTRIBUTION: Almost statewide, though seemingly absent from nearly all of the northern half of the Coastal Plain, for unknown reasons. A number of holes in the Piedmont and mountains part of the range, though it is likely present in nearly all counties in these provinces.

ABUNDANCE: Uncommon in the eastern Piedmont, but seemingly rare in the western Piedmont; uncommon in the Sandhills. Elsewhere in the Coastal Plain it is very rare (to possibly absent in some central and northern counties), though it does occur in some coastal counties and can be numerous in a few places. Rare to locally uncommon in the mountains.

FLIGHT PERIOD: A single rather brief flight period; flies from mid-April to early June downstate, and from early May to mid-June in the mountains. The peak in the Piedmont is late April to mid-May.

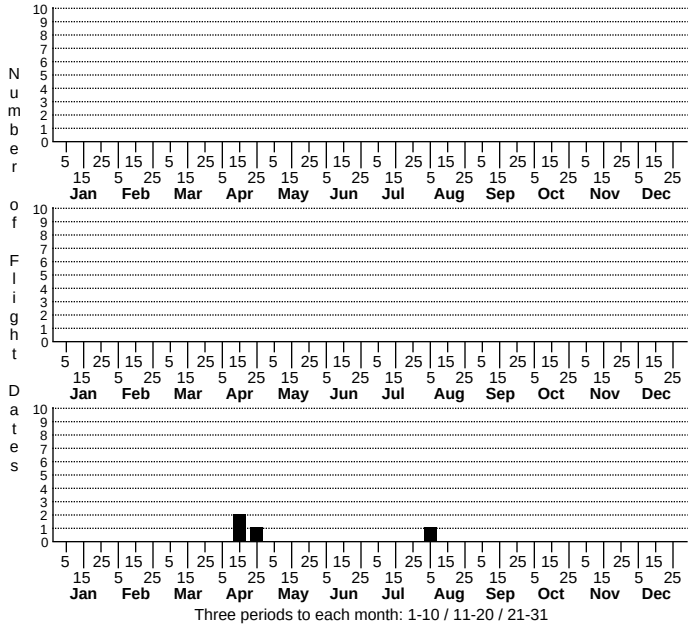
HABITAT: This species occurs in upland brushy places with much bluestem grasses. Habitats include powerline clearings, old fields, brushy wooded borders, and open pine/scrub oak sandhills. In the lower Coastal Plain, it occurs in pine flatwoods. It is seldom, if ever, found in damp areas.

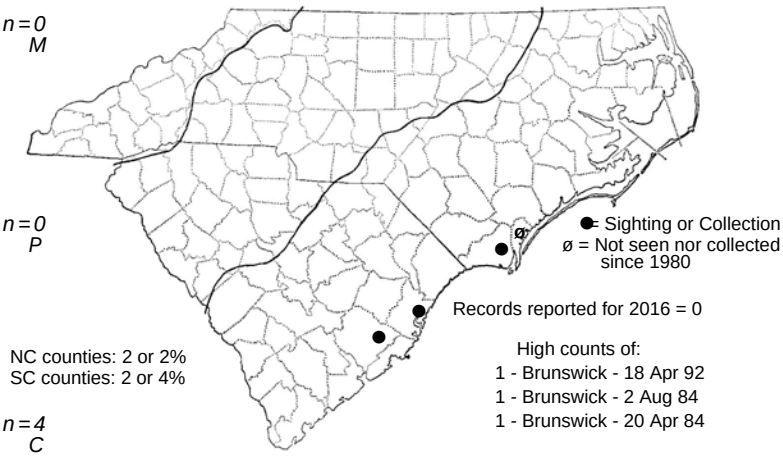
FOOD AND NECTAR PLANTS: The foodplants are bluestems (Andropogon spp.). The species nectars on many flowers that bloom in the spring, such as red clover, blackberry, and others. Like many other spring-flying skippers, they are frequently seen basking on dirt and other bare ground.

COMMENTS: Dot maps can be misleading for single-brooded species that are on the wing for just a month or so. If observers are not in the right place in that narrow window, they will have to wait a full year to try again. The Dusted Skipper is certainly not common, but it can be found with a purposeful search. Late April to mid-May is the peak time in the Piedmont, and a little effort along an upland powerline clearing at that time can yield one to several Dusted Skippers. Its status, however, in the mountains, upper Piedmont, and much of the Coastal Plain needs more work.

In the southern coastal counties, two additional taxa of Atrytonopsis are present -- (A. loammi [perhaps extirpated] and the newly described A. quinteri). See the next two accounts for more details. Some references include all within Dusted Skipper (A. hianna), though most recent ones consider the Dusted Skipper to be distinct from them, in part (if not mainly) because Dusted is single-brooded and the others are multiple-brooded.

Loammi Skipper *Atrytonopsis loammi*





Earliest date: Brunswick 18 Apr 1992
Latest date: Brunswick 2 Aug 1984

Status		Rank	
NC	US	NC	Global
SR	FSC	SH	G1

Synonym: *Atrytonopsis hianna loammi*
Other Name: Southern Dusted Skipper, Loamm's Skipper

DISTRIBUTION: This taxon, often considered a subspecies of Dusted Skipper, is found in parts of FL, west along the Gulf coast to LA, and north near the Atlantic coast to southern NC (Scott 1986). In NC it is apparently known from Brunswick County and New Hanover County. The taxon is definitely known from Berkeley County, SC, and I decided to place a record of "Dusted Skipper" from Georgetown County on the Loammi Skipper map instead of the Dusted Skipper map, based on my best guess as to range and other factors. The taxon found on the coast of Carteret and Onslow counties -- recently described and named as A. quinteri -- is considered to be a separate entity (see page 163) by the Butterflies of America checklist.

ABUNDANCE: This skipper is believed to be of historical occurrence in the state. It has not been seen in Brunswick and New Hanover counties in over 15 years, despite more recent searches at the single known Brunswick County site. Interestingly, Bo Sullivan had as many as 10-12 individuals in a day at this Brunswick site.

FLIGHT PERIOD: Loammi Skipper in FL has several, apparently two, broods between February and November (Glassberg et al. 2000, Cech and Tudor 2005). Gatrelle (J. Lep. Soc. 1975, pp. 56-59) noted that the species flies in April, July, and August at the only SC site known to him at that time (Berkeley County). The few dates available for NC are for the last half of April and in early August, with the August record clearly from a second brood.

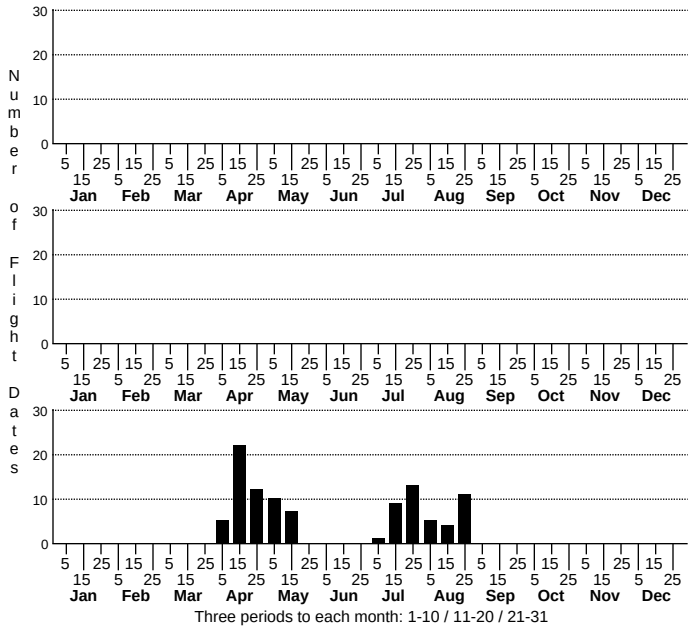
HABITAT: The habitat for the taxon in Brunswick County was "old field or clearcut now growing in herbs and some saplings". This site was adjacent to flatwoods/savanna habitat. In FL, the habitat is mainly drier flatwoods, prairies, and perhaps sandy woods.

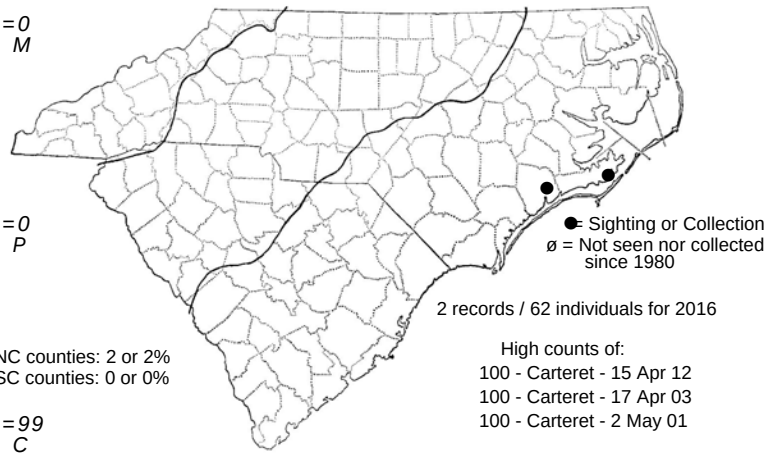
FOOD AND NECTAR PLANTS: The foodplants are presumably bluestems or broomsedges (Andropogon spp.). There is no information about nectar plants used in NC.

COMMENTS: Scott (1986), Opler and Malikul (1992), Glassberg (1993, 1999), and NABA (2001) consider this taxon to be a subspecies of Dusted Skipper. However, biologists who know the genus Atrytonopsis well in the Southeast consider Loammi to be a valid species. This is the treatment also used by Harris (1972), Gatrelle (1975), Brock and Kaufman (2003), NatureServe Explorer, and Butterflies of America (2013).

Perhaps the chief separating factor between Dusted Skipper and the Loammi Skipper is the brood sequence. Dusted is single-brooded throughout its range (which extends south to southern GA). Loammi is at least double-brooded. Dusted flies early enough in the spring, particular in coastal NC, SC, and GA, that there is sufficient time for a second brood in summer or fall (as there is for Loammi and the newly described Crystal Skipper); no such brood is present. The Loammi Skipper and the Crystal Skipper tend to have numerous white spots scattered over the hind wing below, almost always with a well-formed and striking chevron, whereas Dusted generally has very few spots, and the spots tend to be "dots" rather than "spots" (see Plate 47 in Scott 1986). However, some Dusteds can look quite strikingly spotted on the hind wing, one reason for the hesitancy of some entomologists to consider the Loammi as a separate species. There may well be other distinguishing characters, but if so, I am not familiar with them. Needless to say, we know very little about the Loammi Skipper north of FL, and it may well be extirpated in NC. And, there is still some uncertainty about the NC taxon to which this particular population truly belongs. Bo Sullivan (pers. comm.) does indicate that it is "loammi" and not "hianna" nor "quinteri" [Crystal Skipper].

Crystal Skipper *Atrytonopsis quinteri*





NC counties: 2 or 2%
SC counties: 0 or 0%

Earliest date: Carteret 1 Apr 2008
Latest date: Carteret 31 Aug 2004

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S1	G1Q

Synonym: *Atrytonopsis hianna loammi, Atrytonopsis loammi, Atrytonopsis sp.*
Other Name: Southern Dusted Skipper, Seaside Dusted-Skipper, Loammi Skipper, Loamm's Skipper

DISTRIBUTION: This newly described species, often considered a subspecies of Dusted Skipper, is known only from several islands in Carteret and Onslow counties (i.e., is endemic to NC).

ABUNDANCE: This skipper is locally common to very common within its tiny range. The first brood is the larger of the two, though it can be fairly common to common locally during the second brood. Despite seemingly suitable dune habitat, and containing populations of the foodplant, the skipper has not been found in adjacent coastal counties.

FLIGHT PERIOD: This species has two broods; the flights occur from early April to mid-May, and from mid-July to late August. Though the spring brood is the larger (more adults flying), each brood lasts for about six weeks. (Note that the Dusted Skipper has only one brood, in the spring.)

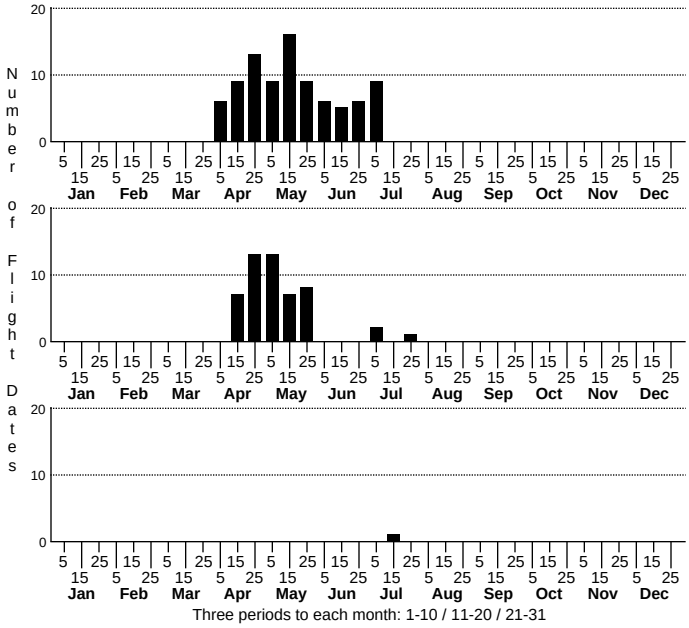
HABITAT: The habitats in NC are low dunes, sandy grasslands, weedy dredge spoil deposits, and old weedy fields, particularly where broomsedges and bluestems are common.

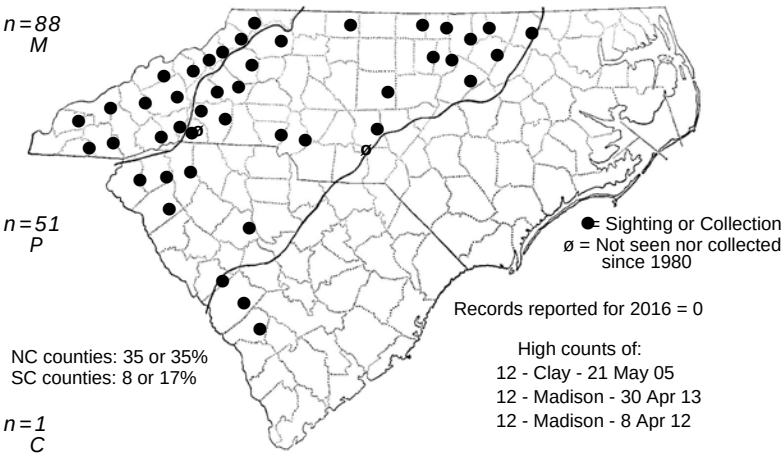
FOOD AND NECTAR PLANTS: The foodplant appears to be a single species -- seaside little bluestem (Andropogon littorale). Yellow thistle (Cirsium horridulum) is a favored nectar source for the first brood, and morning-glories (Ipomoea spp.) are used by the second brood.

COMMENTS: In late November 2015, John Burns published a paper that described this taxon as a new species -- Atrytonopsis quinteri, named after Eric Quinter, who first observed these butterflies in the 1980's and realized that they represented a new taxon. Burns studied these butterflies in the mid-1980's, and Steve Hall and Allison Leidner also studied this unusual beach/dune taxon in more recent years and published their findings. However, Burns did not provide a suggested common name in his paper. In fact, it was Leidner who coined the common name as "Crystal Skipper", because it is found primarily on Bogue Banks, known in the travel and tourism lingo as the Crystal Coast. Disappointingly, in his 2015 paper, Burns did not study the Loammi Skipper (the populations in peninsular Florida), and thus he left that taxon "in limbo" as to whether it is specifically distinct from A. hianna [Dusted Skipper]. But, he seems to make it clear that A. quinteri is a valid species distinct from any other species.

Cech and Tudor (2005) provides several photographs and considerable text on this Carteret/Onslow taxon, calling it the "Seaside Dusted-Skipper" and posing that it might be a good species. Unfortunately, this latter reference has a photo of the FL Loammi included under the Dusted Skipper account, and refers to "loammi" (that population in FL) as a subspecies of the Dusted Skipper, though stating that "Some argue these two variable forms are sibling species."

Pepper and Salt Skipper *Amblyscirtes hegon*





NC counties: 35 or 35%
SC counties: 8 or 17%

Records reported for 2016 = 0

High counts of:
12 - Clay - 21 May 05
12 - Madison - 30 Apr 13
12 - Madison - 8 Apr 12

Earliest date: Buncombe 5 Apr 2012
Latest date: Burke; P 25 Jul 1996

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Occurs throughout the mountains and presumably most or all of the Piedmont, but few records for the upper 2/3rds of the Piedmont (except for foothill ranges). Thus, the currently known range is mainly the mountains, Piedmont foothills, and the lower Piedmont, but it should be assumed to be present throughout these two provinces. The range extends eastward to Halifax, Wake, and Richmond counties.

ABUNDANCE: Uncommon (but easily overlooked) in the mountains and adjacent Piedmont foothills; rare to uncommon in the northeastern Piedmont, but rare (presumably) in most of the Piedmont. Whether it is actually more numerous in the northeastern Piedmont than in the central or western parts of the province is uncertain and may be an artifact of field work. Absent (so far as known) from the Coastal Plain.

FLIGHT PERIOD: Primarily a spring brood, but it has a smaller second brood in early summer. Mainly early or mid-April to late May (Piedmont) and to early June (mountains); the second brood occurs from mid-June to early or mid-July in the mountains. The mysteriously tiny second brood in the Piedmont occurs in July, but much more data are needed.

HABITAT: This is one of the few skippers found inside rich or moist hardwood forests. Of course, it is not found in the deep shade, but it occurs along sunny trails or roads through such rich areas. Favored habitats are trails or logging roads through coves, or dirt roads through other moist hardwood forests or along creeks. In 1994, I also saw them along a trail in an upland forest and even along the margin of a thicket!

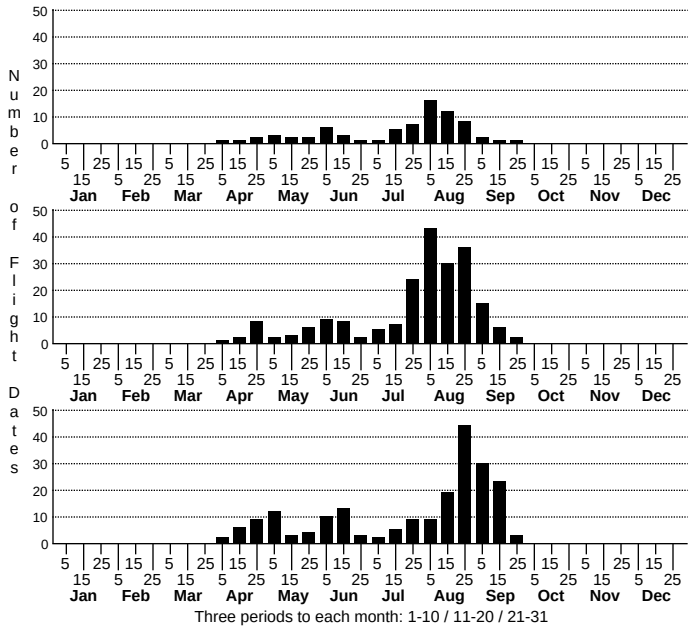
FOOD AND NECTAR PLANTS: The foodplants are various grasses, presumably those adapted to growing in shade or partial shade of moist forests. The species nectars infrequently; it usually is seen perched on moist dirt of trails and dirt roads, or perched on leaves on the ground.

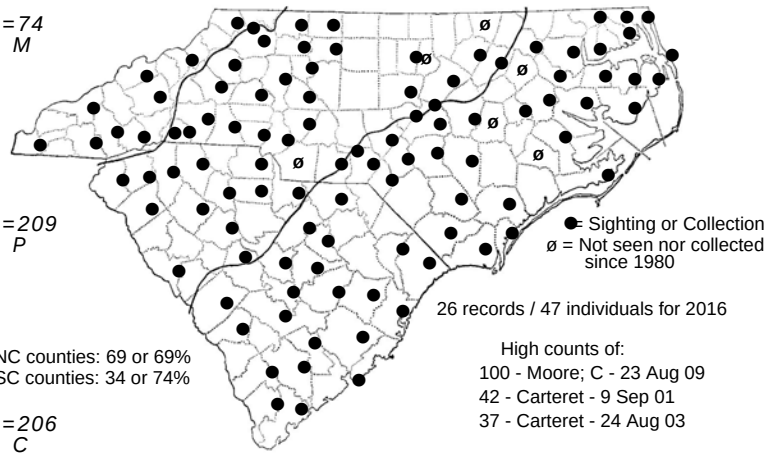
COMMENTS: This tiny skipper is always a thrill to spot. It is a tame species, which will allow an observer to "belly up" to it to see it well as it perches on the ground. It has a unique ground color on the under wings, a somewhat olive-gray-buff color with a peppered look that is easily recognized in the field, regardless of the pattern of buffy spots and patches. It is typically the first grass skipper flying in the mountains in spring.

I assume the near absence of records for the northwestern quarter of the Piedmont is an artifact of field work. Certainly, spring and summer field work has been conducted in the region, so it obviously is not numerous. But, plenty of habitat appears to be present at places such as the Brushy Mountains, Pilot Mountain and Hanging Rock state parks, and other heavily wooded sites.

The species has very odd flight phenograms. In the mountains, the second brood follows very quickly on the heels of the spring brood, as fresh individuals (denoting a new brood) are seen in the latter half of June. But, where is the second brood in the lower Piedmont? Many observers see the species in late April and May in the northeastern Piedmont, but despite heavy field work in June and July, essentially no second brood can be found! How can a species have a clear second brood in the mountains/foothills and basically lack one farther downstate? (No other butterfly in NC has this type of flight pattern!)

Lace-winged Roadside-Skipper *Amblyscirtes aesculapius*





26 records / 47 individuals for 2016

High counts of:
100 - Moore; C - 23 Aug 09
42 - Carteret - 9 Sep 01
37 - Carteret - 24 Aug 03

NC counties: 69 or 69%
SC counties: 34 or 74%

Earliest date: Bladen 1 Apr 2000
Latest date: Craven 28 Sep 2013

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G3G4

DISTRIBUTION: Throughout the Coastal Plain, throughout nearly all of the Piedmont, and scattered over most of the mountains. Probably occurs in nearly all counties in NC (with a possible absence in a few extreme north-central Piedmont counties), though likely absent from the higher mountains.

ABUNDANCE: Widespread, though uncommon to locally common, in the Coastal Plain. Rare to locally uncommon over most of the Piedmont, but very rare in the northern counties. Rare in the southern and central mountains, and very rare in the northern mountains (i.e., north of Madison and Buncombe counties).

FLIGHT PERIOD: Probably three broods in the Coastal Plain and Piedmont, from early April to mid-May, mid-May to about early July, and mid-July to late September. It is possible that the flight prior to July consists of just one long brood. The mountain flight period appears somewhat similar to that downstate, but more data are needed.

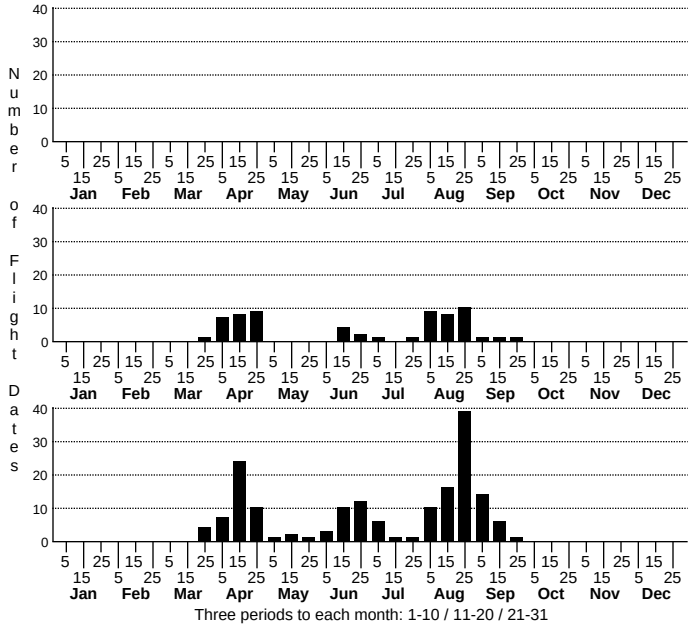
HABITAT: This species is almost always found in or near wetlands, generally moist woods. It has a wide array of habitats, including edges of moist woods, sewerline or powerline clearings through bottomlands, dirt roads through floodplains, and in marshes or ditches near woods. It is seldom found more than about 50 yards from moist hardwoods, perhaps because its foodplant is cane.

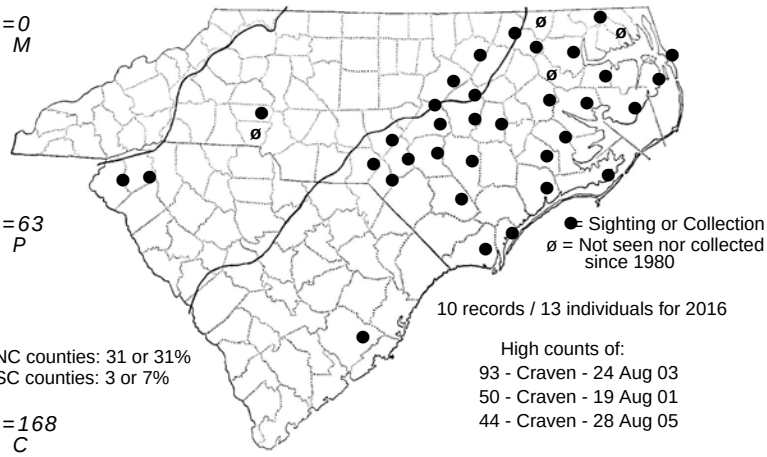
FOOD AND NECTAR PLANTS: Cane (Arundinaria) is apparently the only foodplant of the caterpillars. The adults nectar frequently, for an Amblyscirtes. They nectar on the usual butterfly plants such as milkweeds, Indian hemp, and mistflower.

COMMENTS: This is one of the most beautiful skippers, as the intricate lacing on the under wings is most unusual. Though not really common, it is nonetheless the most numerous of the six Amblyscirtes skippers in NC. It also nectars far more often than do others in the genus. The sight of one of these butterflies on a large flower such as yellow coneflower is sure to be a memorable moment in your year of butterflying!

The flight period "curves" have taken better shape in recent years, with more data. Distinct peaks and gaps are showing now. However, can a species of skipper really complete two broods between early or mid-April and early July? A few other roadside-skippers also have three broods in NC, but the middle brood is typically in July (or into early August).

Carolina Roadside-Skipper *Amblyscirtes carolina*





10 records / 13 individuals for 2016

High counts of:
93 - Craven - 24 Aug 03
50 - Craven - 19 Aug 01
44 - Craven - 28 Aug 05

NC counties: 31 or 31%
SC counties: 3 or 7%

Earliest date: Gates 27 Mar 2012
Latest date: Harnett; P 27 Sep 2003

Status NC	Status US	Rank NC	Rank Global
W	-	S3S4	G3G4

DISTRIBUTION: Throughout the Coastal Plain, and along the extreme eastern and southern edge of the Piedmont, inland to southwestern Halifax, Franklin, Wake, and Lincoln counties.

ABUNDANCE: Uncommon and somewhat local in the Coastal Plain, though common in a few areas; very rare in the narrow Piedmont range. Seemingly quite scarce in the southern portion of the Coastal Plain (not even any records for Pender County), despite an abundance of habitat.

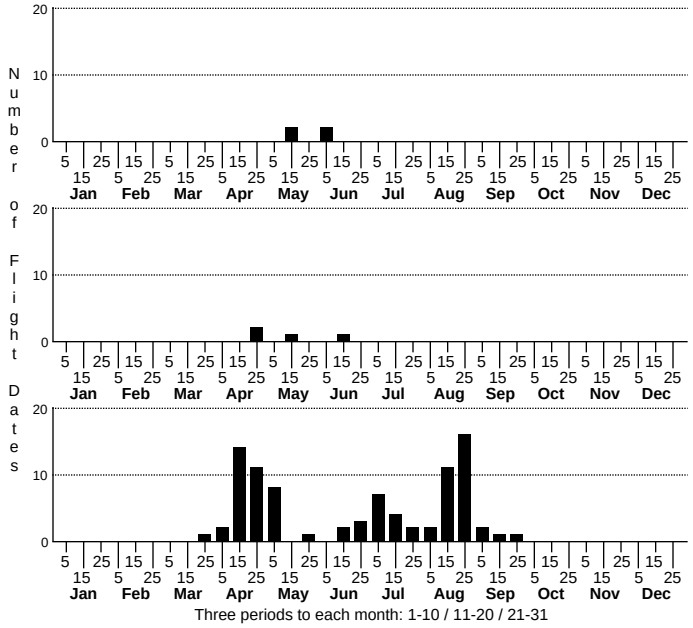
FLIGHT PERIOD: Three broods; very late March to mid-May, early or mid-June into early July, and late July to late September. The second brood seems small, whereas the third is certainly the largest.

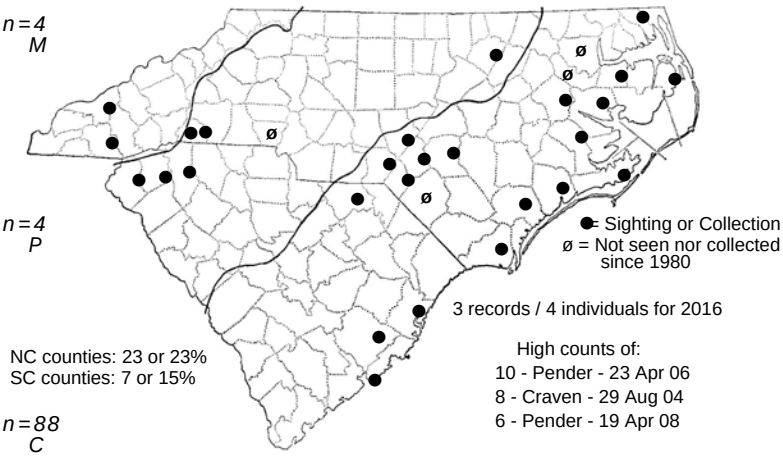
HABITAT: This cane feeder (caterpillars) is, not surprisingly, always found near cane in wet places. Habitats are edges and openings in swamps and bottomlands, borders of pocosins, and canals or ditches near cane. It is usually associated with cane in hardwoods, as opposed to pinewoods.

FOOD AND NECTAR PLANTS: The foodplant is apparently only cane. The species nectars on moderate occasions, on a variety of species.

COMMENTS: This is an uncommon species in its range, which extends from the Great Dismal Swamp west to the Mississippi River. Surprisingly, the species is not found in FL or near the Gulf Coast, and records from SC are spotty and very rare. The species is more numerous, and best known, in NC than in any other state. I found the species quite numerous at many sites in Johnston County in 2000, with a remarkable 35 observed on August 10. To top those totals, several of us tallied a stunning 113 individuals on a count in Croatan National Forest in 2003, with 93 in Craven County. The 113 individuals is, by far, the record one-day count for North America.

Reversed Roadside-Skipper *Amblyscirtes reversa*





NC counties: 23 or 23%
SC counties: 7 or 15%

3 records / 4 individuals for 2016

High counts of:
10 - Pender - 23 Apr 06
8 - Craven - 29 Aug 04
6 - Pender - 19 Apr 08

Earliest date: Scotland 30 Mar 2012
Latest date: Pender 22 Sep 2014

Status NC	Status US	Rank NC	Rank Global
SR	-	S3	G3G4

DISTRIBUTION: Scattered over the Coastal Plain, with records for Gaston and Polk counties along the southern Piedmont and a record for Franklin County in the eastern Piedmont. Remarkably, a few small populations were found in 2004 in the mountains in Swain County, and a photographic record documented Macon County in 2015. Records are clustered mainly in the Sandhills and the southeastern coastal counties. At long last, a 2014 record from Camden County filled in the "ugly" gap between Albemarle Sound and the VA state line; the species has long been known from southeastern VA.

ABUNDANCE: Very uncommon in the Sandhills and the southern half of the coast; rare and local elsewhere in the Coastal Plain. Extremely rare in the southern and eastern Piedmont and in the southern mountains. It appears to be as equally numerous as the Carolina Roadside-Skipper in the Sandhills, but it is rarer than that species over much of the remainder of the Coastal Plain. It outnumbers the Carolina only in savannas/flatwoods in the extreme southeastern corner of the state in Pender and Brunswick counties.

FLIGHT PERIOD: Three broods in the Coastal Plain; early April to mid-May, mid-June to late July, and early August to early September. No idea how many broods are present at the tiny populations in the Piedmont and mountains.

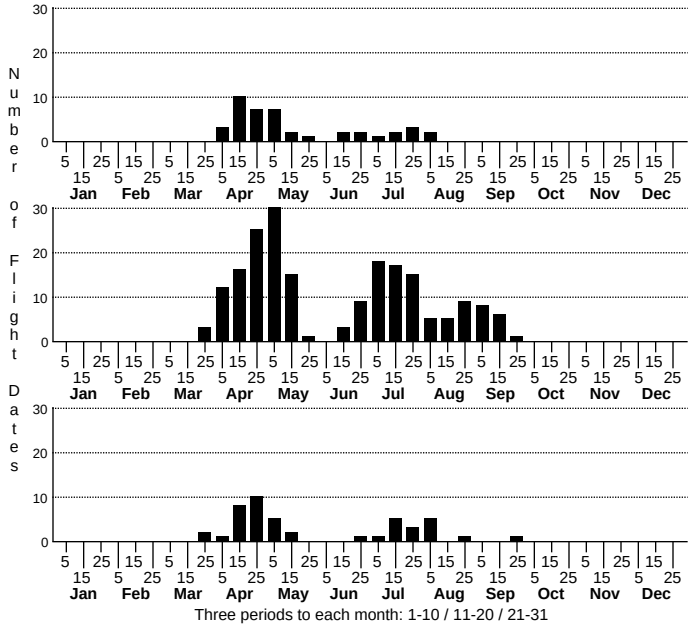
HABITAT: This is another wetland species, again with a preference for areas near cane. However, there is some difference in habitats between this species and the similar Carolina Roadside-Skipper. The Reversed has a tendency to occur in longleaf pine or pond pine wetlands, such as savannas, flatwoods, and margins of pocosins. These habitats also tend to be more open and "sunnier" than habitats for the Carolina. We have few if any records from swamps or bottomlands away from pine-dominated habitats.

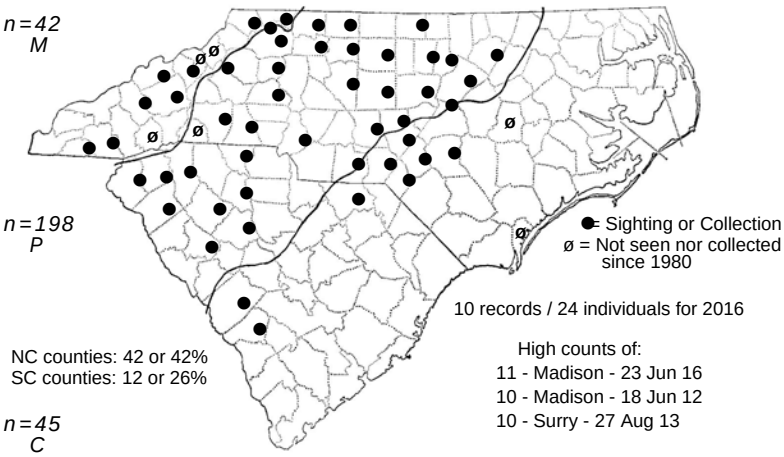
FOOD AND NECTAR PLANTS: The foodplant is cane, perhaps exclusively. I have always seen the species near cane stands, even perching on the leaves. It nectars on a variety of flowers.

COMMENTS: This species was considered just a "color variety" of the Carolina Roadside-Skipper by Klots (1951), but the Reversed has since been split as a separate species. The ranges of the two are quite similar, and the Reversed is even less well known over its range than the Carolina. Even so, it is probably better known, and more numerous, in NC than in any other state (though a recent one-day count of 65 was made in Francis Marion National Forest in SC). Both may occasionally be seen together, as in Fort Bragg and Croatan National Forest. However, the Reversed favors somewhat more open sites, near or under longleaf or pond pine, than does the Carolina, which likes wetlands adjacent to hardwood forests.

The year 2004 was a "good" one for the species. Shay Garriock discovered the first colonies of the species in the NC mountains, in Great Smoky Mountains National Park. In addition, two of our highest counts ever came in 2004, in Croatan National Forest and in Holly Shelter Game Land. However, a Carolina Butterfly Society field trip to Holly Shelter Game Land in 2006 finally recorded a double-digit one-day count, tallying 10 individuals on April 23. Jason Love photographed one in his yard near Otto in Macon County in June 2015 to provide just the second record for the mountains.

Common Roadside-Skipper *Amblyscirtes vialis*





10 records / 24 individuals for 2016

High counts of:
11 - Madison - 23 Jun 16
10 - Madison - 18 Jun 12
10 - Surry - 27 Aug 13

NC counties: 42 or 42%
SC counties: 12 or 26%

Earliest date: Harnett; P 26 Mar 2002
Latest date: Surry 29 Sep 2013

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G4

DISTRIBUTION: Scattered over the mountains, Piedmont, and the Sandhills portion of the Coastal Plain, with an isolated record for New Hanover County (if correctly identified). Range extends east to Wayne and Cumberland counties, plus the New Hanover record; nearly all records from the Coastal Plain are from the Sandhills region.

ABUNDANCE: Rare to uncommon, and easily overlooked, in most parts of the Piedmont, as well as the Sandhills. Generally rare in the mountains, but can be locally uncommon. Accidental in the southeastern corner of the state (if a valid record), and apparently absent over most of the Coastal Plain. Unlike some of the other roadside-skippers, this species does not occur in colonies, though modest numbers have been seen in recent years at Pilot Mountain State Park (Surry County) and at low elevations in Madison County, where a state record count of 11 was made in 2016.

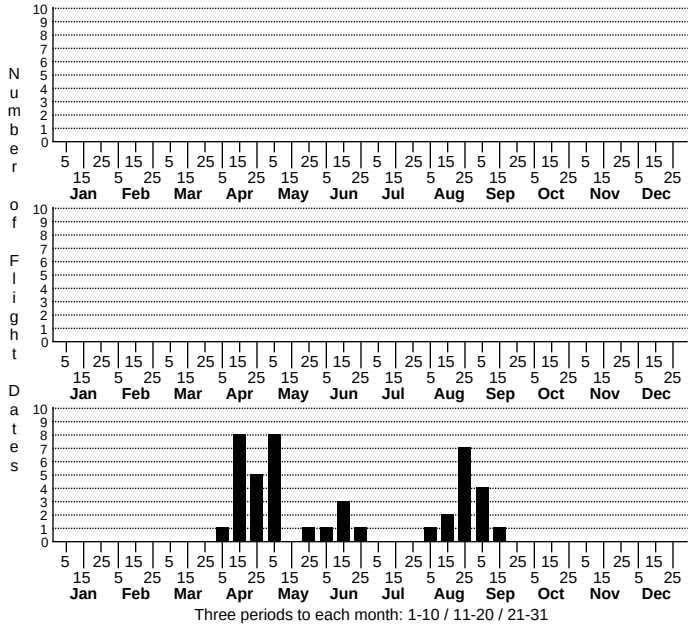
FLIGHT PERIOD: Three broods in the Piedmont and Coastal Plain, but apparently just two in the mountains. Flights in the Piedmont and Coastal Plain are from late March to mid-May, late June to early August, and mid- or late August to mid-September. The first brood seems to be the largest. In the mountains, the spring brood is the larger of the two; broods appear from early April to late May, and mid-June to early August.

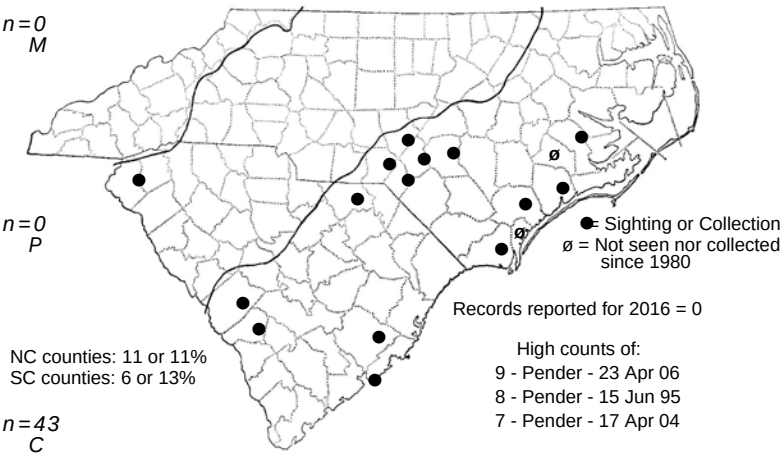
HABITAT: This species has a potentially wide range of partly open to semi-wooded habitats. It is mostly found in openings in mesic hardwood forests, or in powerline clearings near hardwoods. It is most often seen on the ground on dirt roads through woods or in powerline clearings near woods. Unlike most other roadside-skippers, it shows little or no affinity for wetlands; it may be seen in the same habitats as the Pepper and Salt Skipper.

FOOD AND NECTAR PLANTS: The foodplants are various grasses. The species does not nectar often, or at least not as often as most other skippers. Low blue flowers are favored (Opler and Krizek 1984).

COMMENTS: This is a very small, blackish skipper that perches on dirt or bare ground more often than on flowers. It keeps low to the ground and can be difficult to follow when on the wing because of its small size. Though this is a very widespread species in North America, and is common in many places in the Midwest, it is rare to uncommon everywhere in eastern North America (and not just in NC). Detailed observations by Paul Hart at Raven Rock State Park and Gene Schepker at Pilot Mountain State Park, in particular, have been very helpful in elucidating the flight periods. Until a few years ago, we assumed that there were just two broods in the state, but there is clearly a third. Flight data collected by Richard Anderson at Fort Bragg also suggest three broods at that Sandhills locale.

Dusky Roadside-Skipper *Amblyscirtes alternata*





Earliest date: Brunswick 2 Apr 1999
Latest date: Cumberland 15 Sep ?

Status NC	Status US	Rank NC	Rank Global
SR	-	S2	G2G3

Other Name: Least Florida Skipper, Blue-dusted Roadside Skipper

DISTRIBUTION: Recorded in NC only from the southern half of the Coastal Plain, north to Moore, Jones, and Craven counties. A sighting in the Craven County portion of Croatan National Forest in 2007 extends the range in NC slightly northward. Its range extends north to extreme southeastern VA (though probably now historical); thus, it might occur in the northern Coastal Plain of NC. However, with continued loss of suitable pine stands and with fire suppression, the hope of any future records north of Croatan National Forest is increasingly very slim.

ABUNDANCE: Rare (or easily overlooked); perhaps locally uncommon in a few lower Coastal Plain sites. Recorded only from 11 counties, six in the lower Coastal Plain and five in the Sandhills. As far as known, rare in the longleaf pine regions of the Coastal Plain, and very rare to absent elsewhere.

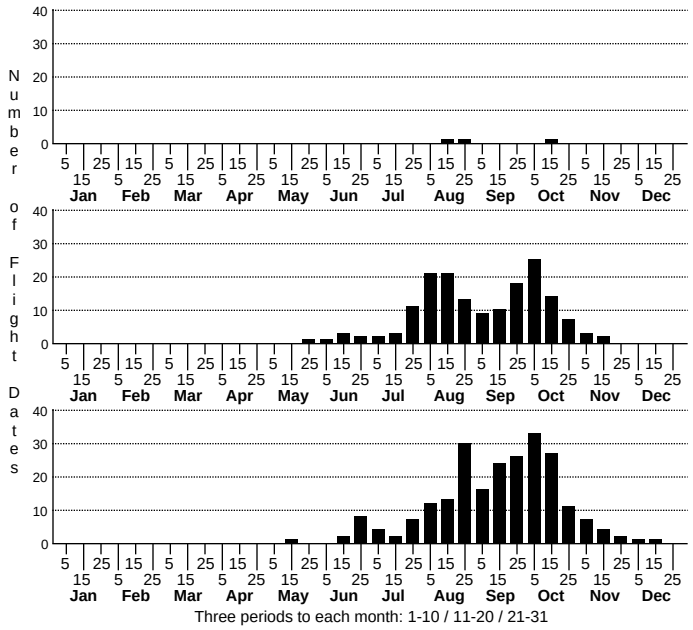
FLIGHT PERIOD: Two, if not three, broods; in VA, dates range from April 26 to June 5, and July 15 to August 15 (Opler and Krizek 1984). Dates in NC span early April to mid-June, and early August to mid-September. More data are needed to clarify the broods, but it may be that there is a small brood in late May and June (rather than one "long" brood from early April to mid-June). Though the flight chart clearly shows three clusters of records, there is still some question whether this species could complete two full broods by the end of June; most other roadside-skippers have their second broods well into July, though the Lace-winged may have a second brood that also seems to finish by the end of June.

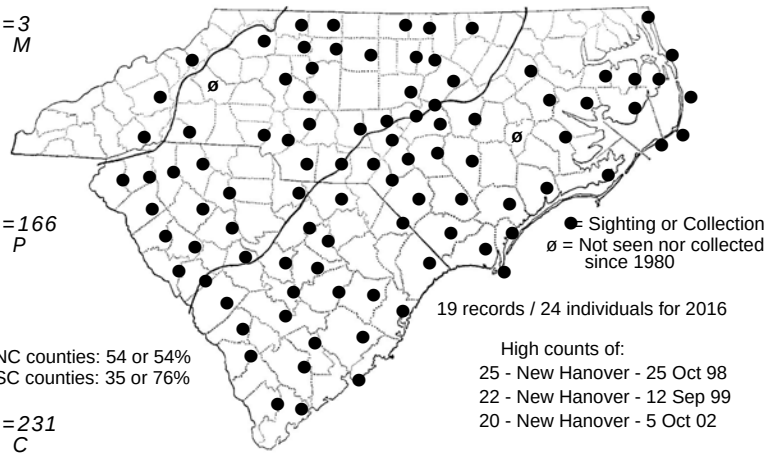
HABITAT: This skipper shows a strong affinity in NC to longleaf pine forests, both xeric places and wetlands. Habitats include dry longleaf pine/turkey oak sandhills, flatwoods, and drier savannas. As with other Amblyscirtes, it frequently perches on dirt or other bare ground.

FOOD AND NECTAR PLANTS: The foodplants have apparently not been reported, but we can assume that various grasses, but not cane, are used; these species are also assumed to grow in longleaf pine associated places, at least in NC. The species nectars infrequently; it is more often seen on the ground than on flowers.

COMMENTS: As with most other Amblyscirtes skippers in NC, finding one is always a thrill, as most species are scarce, small, and easily overlooked as they perch on or close to the ground. This tiny species is so obscurely marked that the faint dusting of pale blue or gray spots on the ventral hind wing can be seen well only at close range. Worn individuals are nearly impossible to identify when the faint pale scales are worn away. It can be mistaken for a Common Roadside-Skipper, and Carolina Butterfly Society field trip participants puzzled over a Dusky/Common in April 1999; fortunately, photographs were used to identify it as a Dusky a few days later! Some individuals look similar to Bell's Roadside-Skipper, and confusion of these two has occurred in SC, where Bell's is known to be present.

Eufala Skipper *Lerodea eufala*





19 records / 24 individuals for 2016

High counts of:
25 - New Hanover - 25 Oct 98
22 - New Hanover - 12 Sep 99
20 - New Hanover - 5 Oct 02

NC counties: 54 or 54%
SC counties: 35 or 76%

New for 24th: Buncombe, Surry, Yadkin

Earliest date: Carteret 14 May 2004
Latest date: New Hanover 20 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Throughout most of the Coastal Plain and Piedmont, but scarce in the northern portions of these provinces. Only three records from the mountains, where certainly just a migrant/vagrant. How much of our population is migratory is unknown, but it is probably not a resident in much of the Piedmont, at least in the northwestern portion. Gratifyingly, there were three new counties added in 2016, mainly documented with photos -- Buncombe, Surry, and Yadkin.

ABUNDANCE: Generally scarce in the state prior to late August. Usually uncommon to locally fairly common, but easily overlooked, in the extreme southeastern corner of the state (Brunswick and New Hanover counties) in the fall season. Uncommon in the Sandhills and most of the southern half of the Coastal Plain, and quite scarce in the northern Coastal Plain. In the Piedmont, rare to uncommon in the southern counties; rare to very uncommon north of Moore and Cabarrus counties. Sadly, the species went completely unreported from the entire Coastal Plain in 2014.

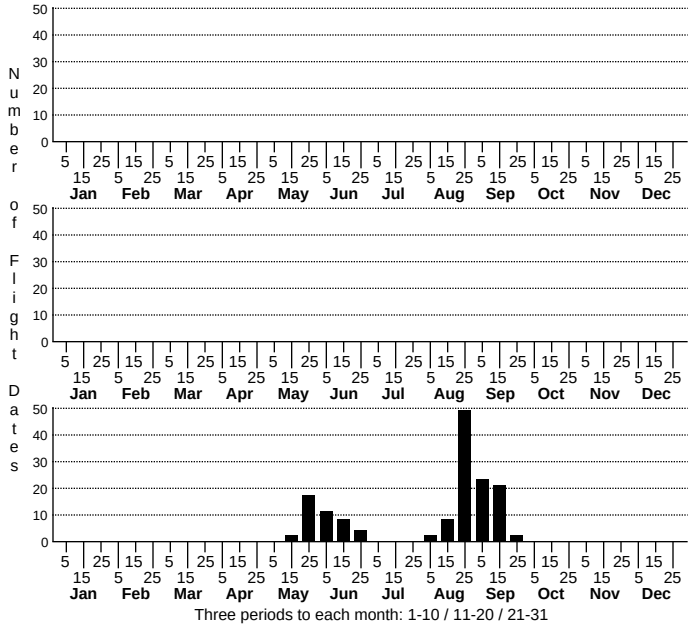
FLIGHT PERIOD: Two broods in NC, but much of the population in late summer and fall might be composed of migrants. Most numerous after mid-September, with peak numbers well into October. Though there is a dip in records in the Piedmont in September, hinting at two broods, there is only a weak gap in the Coastal Plain. These flight charts might suggest a migrant species, but whether this species truly migrates into the state is not certain; it certainly isn't obvious to observers as being "migratory". We would consider it a "winter-stressed" species, whereby stages of the life cycle take such a hit over the winter season that few adults are on the wing during the first half of the year. However, based on the very meager 2014 records, it does seem that the species is at least partly migratory, as most migrant species had very poor years in the state in 2014.

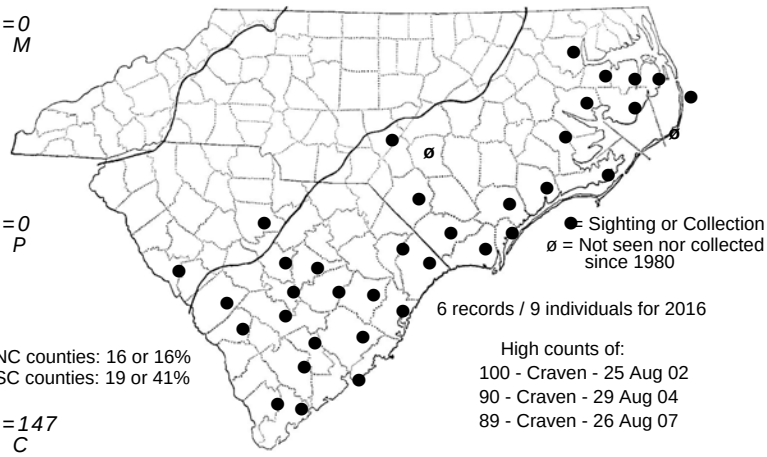
HABITAT: This species likes various open country where the vegetation is low. Habitats include weedy fields, roadsides, wood margins, powerline clearings, savannas, gardens, and vacant lots. It is usually seen on or close to the ground, even when nectaring.

FOOD AND NECTAR PLANTS: Various grasses are the foodplants. The species nectars on a wide array of flowers, but it favors those that bloom very close to the ground; the species is seldom seen on flowers a foot or higher above ground.

COMMENTS: This can be a reasonably numerous species in the southeastern part of the state in late summer and fall, at least in some years. It is a small species, and all small species seem to favor flowers close to the ground, such as fog-fruit (Lippia nodiflora) or Richardia, where they are easily overlooked by the observer. It looks at first glance like a Swarthy Skipper, but the Eufala has no pale veins on the ventral hind wing, may or may not have a few faint spots in a vertical line on the ventral hind wing, but always has two or three white spots and a white bar on the upper fore wing, which the Swarthy lacks. The white body of the Eufala, as seen from below, is also a good mark.

Twin-spot Skipper *Oligoria maculata*





6 records / 9 individuals for 2016

High counts of:
100 - Craven - 25 Aug 02
90 - Craven - 29 Aug 04
89 - Craven - 26 Aug 07

NC counties: 16 or 16%
SC counties: 19 or 41%

Earliest date: Onslow 15 May 2012
Latest date: Carteret 24 Sep 2013

Status NC	Status US	Rank NC	Rank Global
-	-	S3S4	G4

Other Name: Twin-spotted Skipper

DISTRIBUTION: Restricted to the Coastal Plain, primarily to the tidewater section north to mainland Dare, Tyrrell, and Washington counties, where it is at the northern edge of the total range. The only records away from the lower Coastal Plain are from Cumberland, Moore, and Robeson counties, plus new records in 2012 from Bertie County.

ABUNDANCE: Generally uncommon, to locally common, in the lower Coastal Plain part of the range. Very rare away from the lower Coastal Plain.

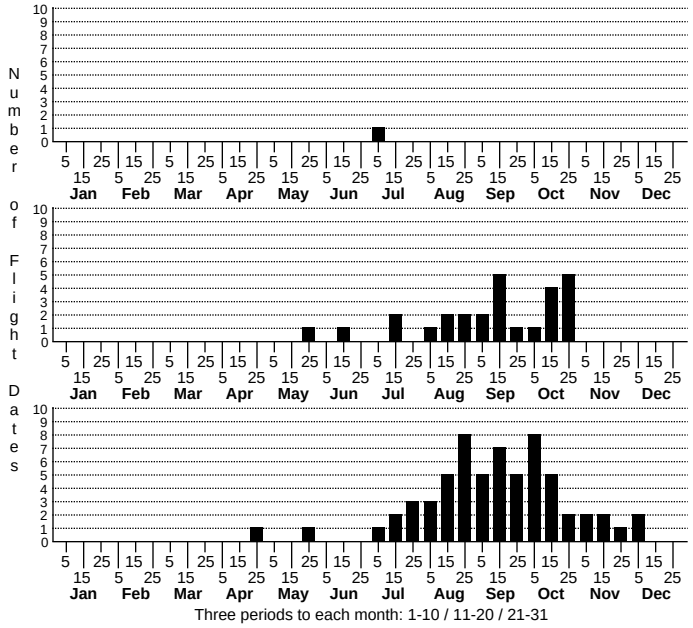
FLIGHT PERIOD: Two broods; present from late May to late June, and from mid-August to mid-September. We have no records for July; thus, the gap between broods is quite clear.

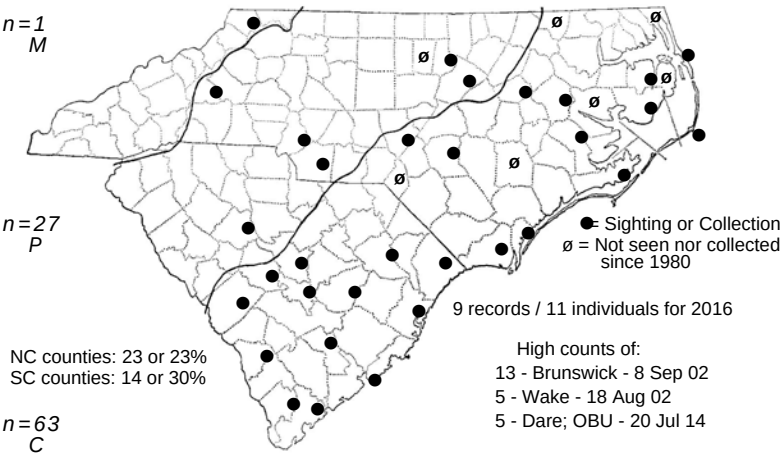
HABITAT: This is a species of many divergent wetland habitats. It is found in savannas, ditches, wet powerline clearings, fresh to slightly brackish marshes (mainly along margins), and margins of wet woods. It typically is found in somewhat open areas, as opposed to along roads or trails within a swamp.

FOOD AND NECTAR PLANTS: The foodplants are apparently not known, but grasses are suspected. The species nectars on many flowers, but pickerelweed is a favorite. I have seen them nectaring several times on that flower, as well as on thistle (Cirsium smallii and C. virginianum), beard-tongue (Penstemon australis), blazing-star (Liatris spp.), and other species.

COMMENTS: The Twin-spot is a rather unusual skipper; it has no close relatives in NC and it should be unmistakable, though some people have mistakenly called female Yehl Skippers as Twin-spot Skippers. It is not as colonial as many other wetland species. However, I have found several sites in mainland Hyde and Dare counties where over a dozen have been found in an hour or two; and observers encountered 25 individuals, all in a single powerline clearing, on a butterfly count in Craven County in 1999, 30 in the same clearing in 2000, 40 there in 2001, and a whopping 100 estimated there in 2002. A sight record from Moore County in 2003 extends the range inland slightly, but the status of the species in the inner half of the Coastal Plain is very poorly known (other than being seemingly absent northeast of Cumberland County). I found the species at two sites in Bertie County in 2012, extending the range to the northwest by perhaps 30 miles.

Brazilian Skipper *Calpodes ethlius*





9 records / 11 individuals for 2016

NC counties: 23 or 23%
SC counties: 14 or 30%

High counts of:
13 - Brunswick - 8 Sep 02
5 - Wake - 18 Aug 02
5 - Dare; OBU - 20 Jul 14

New for 24th: Ashe

Earliest date: Carteret 28 Apr 2006
Latest date: New Hanover 10 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	SZB	G5

DISTRIBUTION: Widely scattered records throughout the Coastal Plain, and a handful of records for the eastern and southern edges of the Piedmont, with a first record for the foothills (McDowell County) in 2012. A belated record from the mountains, in Ashe County, was made in 2014 (but not reported until two years later). It has been found on the Outer Banks. This is a migrant from the south, though it does breed in the state.

ABUNDANCE: Rare; somewhat erratic from year to year. In most years, a few are reported. As might be expected, it is more frequently reported from the extreme southern coast (Brunswick and New Hanover counties) than elsewhere.

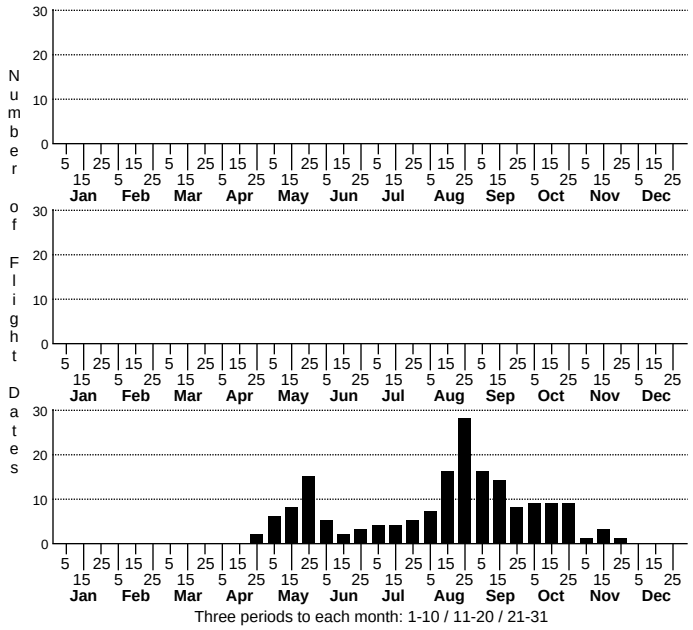
FLIGHT PERIOD: This migrant occurs mostly in late summer and fall, from mid-July to early December. Quite amazing was an individual photographed on April 28, 2006, by Randy Newman; this is our first spring record. The Ashe County sighting was on July 10, one of the earliest records in the state.

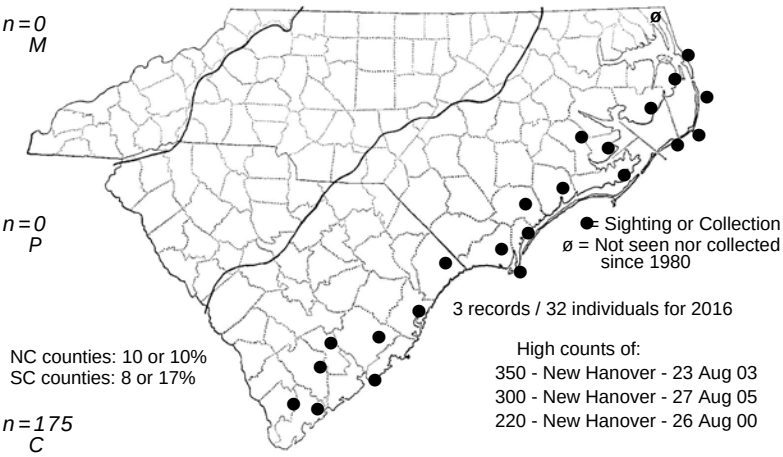
HABITAT: This species is found in the usual places for southern migrants -- weedy fields, roadsides, gardens, and other sunny and disturbed places. Stands of canna are the best places to look for the species; as this plant isn't native to NC, residential areas, golf courses, nurseries, arboretums, etc., that have canna patches are additional places to search.

FOOD AND NECTAR PLANTS: The foodplants are well known to be robust herbs in the canna family (Marantaceae), especially Canna flaccida. The adults nectar on many flowers; males often patrol stands of canna when in bloom.

COMMENTS: This is a large, robust species that can scarcely be confused. Some, or perhaps most, of the individuals seen in NC have been fresh. They might have come from eggs laid in the state. Obviously, complete details of the flight period and life history of the species are not well known in NC. Some of the records are based on caterpillars found on cannas. In fact, searching for caterpillars is the easiest way to document the presence of the species, and the 2003 records for Durham, Orange and Scotland counties are based on such larval records. John Dole's report of five adults flying around canna stands at a nursery in Wake County in August 2002 was the precursor of a good fall season. Jeff Pippen and I, while scanning mostly lantanas at a golf course near Sunset Beach for southern strays, stumbled onto adult Brazilian Skippers "guarding" most sizable stands of canna along the roadsides, in September 2002. Our count of 13 adults has been, by far, the highest count reported in NC. Jamie Cameron made a remarkable discovery of an adult seen at a garden at Lake James State Park in McDowell County on August 24, 2012. Unfortunately, no adult Brazilian Skippers were reported in the state in 2013. Thankfully, despite a very poor year for migrant species (in general), there were 11 reports of adults in 2014, including three reports from the Piedmont. Lastly, 2016 was a rather good year for them, with nine reports, from both the Piedmont and the Coastal Plain.

Salt Marsh Skipper *Panoquina panoquin*





Earliest date: New Hanover 28 Apr 1995
Latest date: Carteret 30 Nov 2005

Status NC	Status US	Rank NC	Rank Global
-	-	S4	G5

DISTRIBUTION: Along the entire coast, from the VA line to the SC line. It is found not only in salt marshes near the coast, but it is also found at brackish marshes along the mainland side of Pamlico Sound, such as at mainland Dare and Hyde counties.

ABUNDANCE: Common to abundant, and easily found, in the vicinity of tidal salt marshes. Also common in some brackish marshes on the mainland.

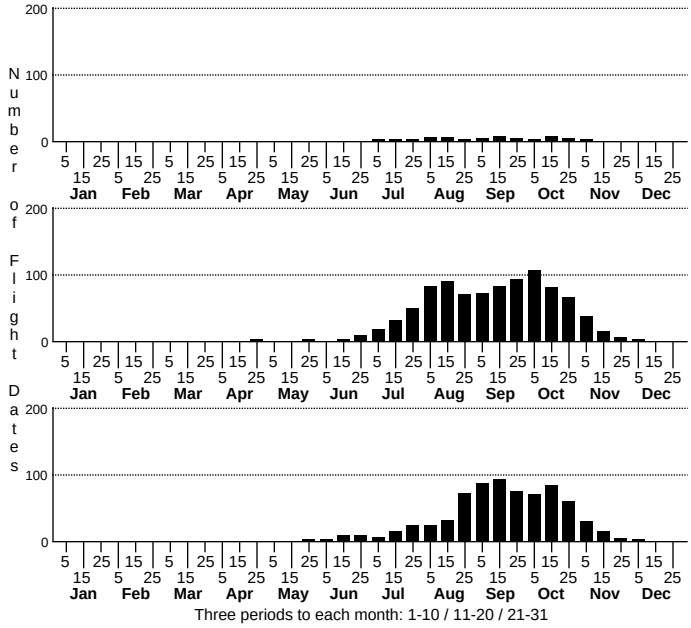
FLIGHT PERIOD: The species has two or three broods in NC. Flights extend from very late April to late October, and sparingly to late November -- a long spread of dates for just two broods -- with several records for each month in-between. There is a slight dip in records in mid-June; if this represents a break between flights, there would likely be three broods, as mid-June into November is too long a period for a single brood of a small skipper. It is most common in late August and September.

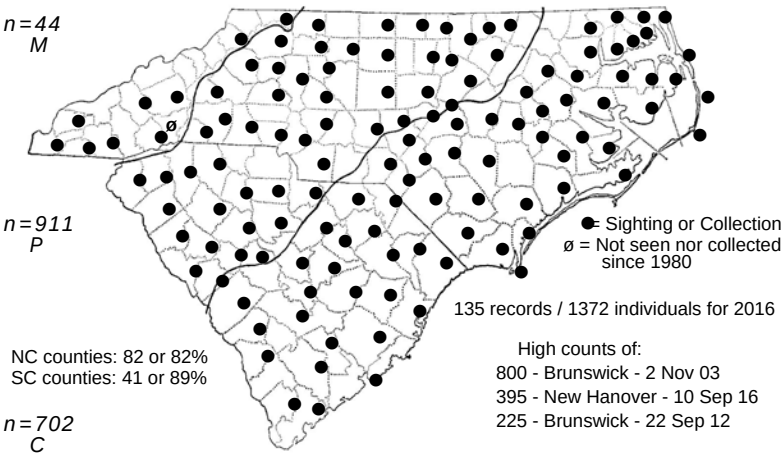
HABITAT: The species is closely tied to salt and strongly-brackish marshes. It may be found in the salt marshes dominated by smooth cordgrass (Spartina alterniflora) and also in brackish marshes dominated by black needlerush (Juncus roemerianus). However, it does move away from such marshes for several hundred yards to nectar on flowers in fields, gardens, and the like. Interestingly, the first record for Pender County (in 2011) came from the northeastern corner of the county, at least 10 air-miles from salt water; a photo was provided by Mike Turner for confirmation.

FOOD AND NECTAR PLANTS: The foodplant is suspected to be saltgrass (Distichlis spicata). This small grass is difficult to see amid the smooth cordgrass and black needlerush, but it is present in most tidal marshes. The adults nectar at many flowers, though relatively few species bloom in tidal marshes. Salt marsh fleabane (Pluchea spp.), asters (Aster tenuifolius and others), sea lavender (Limonium), and thistles are among those used. They often nectar at lantana and other garden plants near marshes.

COMMENTS: This is one of the easiest butterflies in NC to search for, as it is quite common and is closely tied to salt or strongly-brackish marshes. Sometimes the only problem in finding them is the often scarcity of suitable nectar plants found in tidal marshes! When you are searching for the elusive Aaron's Skipper, you are likely to encounter many Salt Marsh Skippers. Despite its abundance, flight periods still need more elucidation -- are there two broods, or three?

Ocola Skipper *Panoquina ocola*





135 records / 1372 individuals for 2016

High counts of:
800 - Brunswick - 2 Nov 03
395 - New Hanover - 10 Sep 16
225 - Brunswick - 22 Sep 12

NC counties: 82 or 82%
SC counties: 41 or 89%

New for 24th: Caldwell

Earliest date: Guilford 26 Apr 2009
Latest date: Harnett; P 7 Dec 1998

Status NC	Status US	Rank NC	Rank Global
-	-	S5	G5

Other Name: Long-winged Skipper

DISTRIBUTION: Throughout the Coastal Plain and Piedmont; scattered records for the southern half of the mountains. Only two records for the northern mountain counties, and perhaps absent from a few of them. It may be simply a visitor to most mountain and upper Piedmont counties, as the species is quite migratory.

ABUNDANCE: Very erratic in time and place, as it is partly migratory. Along or near the southern coast, it may be common to abundant in fall. Elsewhere in the Coastal Plain and eastern Piedmont, it averages fairly common, but may be quite uncommon in some years and occasionally common in others, in late summer and fall. Rare to uncommon and sporadic farther west in the Piedmont, but rare in the southern mountains; very rare at best in the northern mountains.

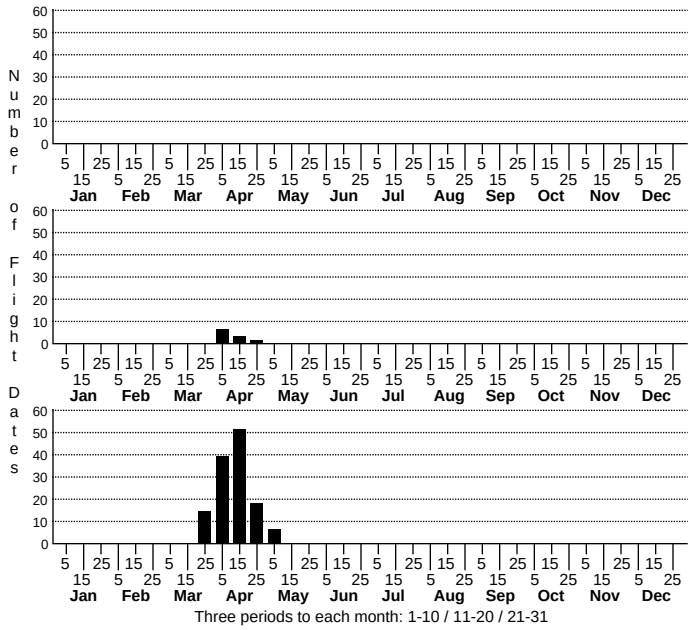
FLIGHT PERIOD: The flight period is essentially a single one (presumably composed of two broods) from midsummer through the fall, mainly from mid-July to late August, and late August to mid-November, rarely to early December. Peak numbers occur in October. There is a tiny brood in the Coastal Plain and eastern Piedmont in late May and June.

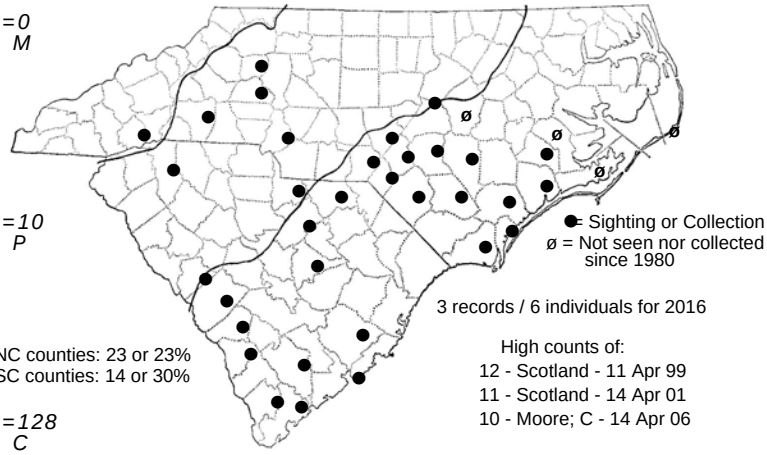
HABITAT: As with nearly all southern migrants, Ocolas are not particularly choosy in habitat, but will occur wherever nectar plants are abundant. Near the coast they can occur in dunes, maritime shrub thickets, vacant lots, roadsides, fields, savannas, gardens, etc. Farther inland, they can be found in powerline clearings, weedy fields, gardens, and other places with an abundance of flowers. Some references indicate a preference for damp places; I have not noticed this preference in NC, though they are not normally seen in dry longleaf pine/scrub oak habitats.

FOOD AND NECTAR PLANTS: Grasses are the main foodplants. The species nectars frequently; common flowers are camphorweed (Heterotheca subaxillaris), sea lavender (Limonium), groundsel-tree (Baccharis), and others. I have seen dozens nectaring on mountain-mint (Pycnanthemum incanum) in Umstead State Park. Most of the 150 that Jeff Pippen and I saw in September 2002, and the 800 I saw in November 2003, were nectaring on lantana.

COMMENTS: This species can occur in swarms! It is unpredictable from year to year, and from site to site. I was stunned to find at least 35 in a single hour along a powerline clearing at Umstead State Park. However, it is near the coast where numbers can truly be impressive, especially in October, when it is possible to find over 50 in a few hours. I found over 100 a day in savannas at Holly Shelter Game Land in fall 1995; however, 1996, 2000, and 2001 were rather poor flight years for most migrant species, including the Ocola Skipper. The species had a boom year in 2003, and again in 2014 (100 records for the Piedmont alone and an excellent 67 records for the less well-worked Coastal Plain). Another boom year was in 2015, with well over 150 total reports in the state; and 2016 was nearly as good, with 135 reports and our second highest one-day count (395 individuals). Other good flights were in 2002 and 2012.

Yucca Giant-Skipper *Megathymus yuccae*





3 records / 6 individuals for 2016

High counts of:
12 - Scotland - 11 Apr 99
11 - Scotland - 14 Apr 01
10 - Moore; C - 14 Apr 06

NC counties: 23 or 23%
SC counties: 14 or 30%

Earliest date: New Hanover 25 Mar 1995
Latest date: Moore; C 4 May 2005

Status NC	Status US	Rank NC	Rank Global
W	-	S3S4	G5

Other Name: Yucca Skipper

DISTRIBUTION: The southern half of the Coastal Plain, plus a few widely scattered Piedmont sites, north to Alexander and Harnett counties. The species formerly ranged north to southeastern VA, but it is considered to be of historical occurrence there, and NC has no recent records from Dare, Craven, and Carteret counties. However, it still should be present in the Croatan National Forest portion of the latter two counties. Recent records from Mecklenburg and Transylvania counties are based on observations of larval tents, whereas adults were seen in 2015 by David Campbell in Catawba and Rutherford counties.

ABUNDANCE: Local, and closely tied to patches of yuccas. Rare to uncommon in the southern Coastal Plain, and practically absent in the Piedmont and southern mountains, where known from only a few sites.

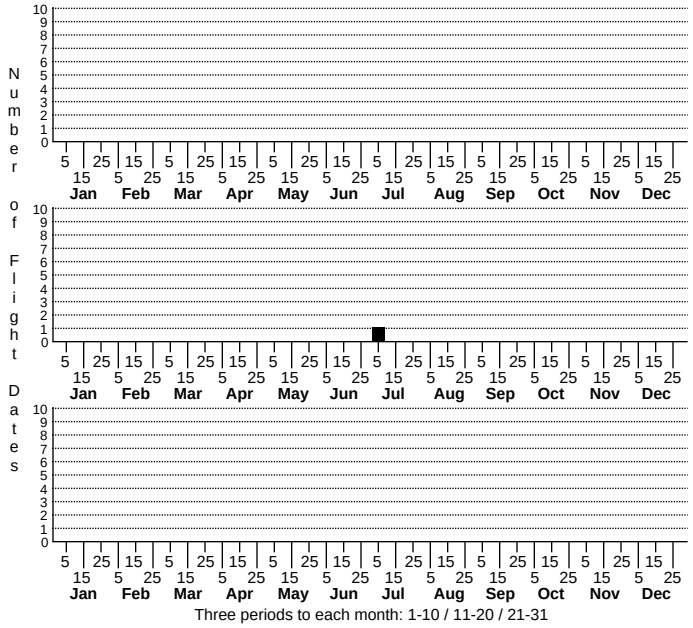
FLIGHT PERIOD: A single spring flight; in the Coastal Plain, from late March to very early May. In the Piedmont, probably from early April to late April.

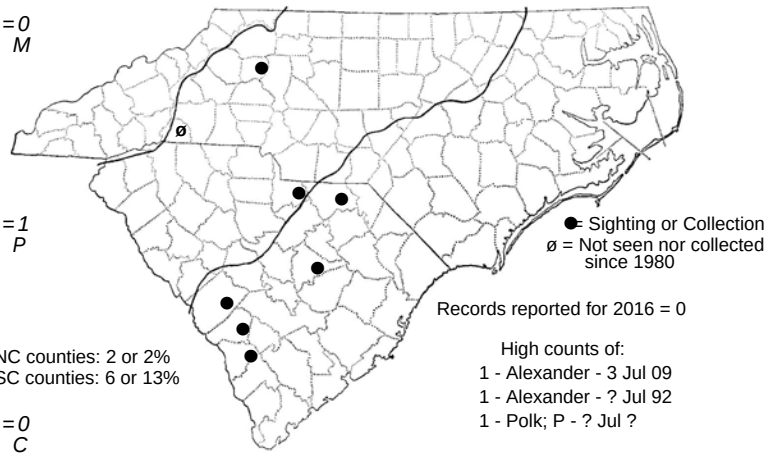
HABITAT: The species is found only near yuccas. The habitats are mainly somewhat sandy woods or other open woods where yucca or beargrass (Yucca filamentosa) is found. It is known to occur along barrier islands, at dunes and maritime forest edges along the southern coast where aloes (Yucca aloifolia and Y. gloriosa) are found. In the Brushy Mountains, it is found around rock outcrops with much yucca in the adjacent woods. Other Piedmont sites are near flatrocks or in other rocky areas.

FOOD AND NECTAR PLANTS: The foodplants are strictly yuccas. The caterpillars build a tunnel near the root of a yucca plant, where the larvae later pupate. These silk tents can often be found, and it is likely that some or many of the county records are of tents, as opposed to records of adults. The adults do not nectar, but may take moisture at wet or damp soil.

COMMENTS: This is a wonderful, unusual butterfly that seems to be part moth and part locust! Adults are very explosive, noisy, and fast in flight, being quite hard to follow. They are best looked for in mid-morning, as they warm up in sunny places near the yuccas; they do not nectar, so don't look for them on flowers. This can be a tough species to find, but if you search enough patches of yucca, you just might get rewarded. In fact, I found them at four sites in 1995, all by purposefully walking through yucca stands, after four futile years of looking. Scott Hartley found a colony on yuccas planted near his house at Weymouth Woods-Sandhills Nature Preserve in 1997, and four individuals from this colony put on a show for a Carolina Butterfly Society field trip in 1998! A Society field trip encountered a colony of at least a dozen individuals in the Sandhills Game Lands in 1999. David Campbell has found larval tents at several counties in the western half of the state in the past few years.

Cofaqui Giant-Skipper *Megathymus cofaqui*





Earliest date: Alexander 3 Jul 2009
Latest date: Alexander 3 Jul 2009

Status NC	Status US	Rank NC	Rank Global
SR	-	S1?	G3G4

Other Name: Cofaqui Skipper

DISTRIBUTION: Known only from monadnocks in the extreme western Piedmont and foothills, in Alexander and Polk counties (Kilian Roever, pers. comm.). To be looked for in the Sandhills and extreme southern Piedmont, as it has been found in adjacent counties (Lancaster and Chesterfield) in SC.

ABUNDANCE: Extremely rare; NC is at the northern edge of the range of the species. David Campbell reported seeing an adult at Rocky Face Mountain in Alexander County, in 2009; he and Lori Owenby observed larval tents there in 2010, and he observed a recently hatched egg there in 2013.

FLIGHT PERIOD: A single brood in midsummer. Kilian Roever has collected it in July in the two counties named above; these are apparently the only confirmed state records. In GA, the species' flight is from early July to mid-August, with a few September records (Opler and Krizek 1984). Rick Cech, Emily Peyton, Derb Carter, and I observed several in GA from the end of July into early August in 1999, further corroborating the flight period. The July 3 report in 2009 appears to be quite early and is at the very beginning of the flight period. Considering that a recently hatched egg was seen on August 18, the NC flight presumably goes well into August.

HABITAT: As with the Yucca Giant-Skipper, it is restricted to areas with yuccas; in NC, found only on mountains with yuccas near rock outcrops. GA sites are also primarily extensive granitic flatrocks or monadnocks, where yuccas are common.

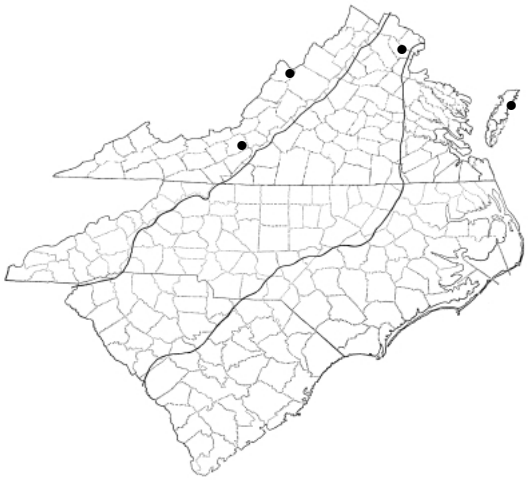
FOOD AND NECTAR PLANTS: The foodplants are also yuccas or beargrasses. In northern GA, this would be Yucca filamentosa. Adults supposedly do not nectar.

COMMENTS: This is one of the most poorly-known butterflies in the eastern United States. Roever has collected it from Rocky Face Mountain in Alexander County and from White Oak Mountain in Polk County; however, he indicated that the habitat has been destroyed at the latter site (pers. comm.). Jeff Pippen talked to another out-of-state lepidopterist in 2016 who told him that the species is still present at Rocky Face Mountain. Though this is good news, at the same time it is disturbing that out-of-state "lepsters" know more about its status within NC than do the butterfliers here.

Much is still to be learned about the Piedmont (and possibly extreme southern mountain) range of the two yucca-skippers. I have failed to find the Cofaqui on five July visits (four in late afternoon/dusk) to Rocky Face, including in 2009, each time with one or two other observers to spread out over a number of rock faces. However, David Campbell has observed larval tents of both Yucca and Cofaqui giant-skippers on the mountain in 2010. The species' behavior is completely unlike any other Eastern butterfly. The adults that we observed in central GA in 1999 flew only at dusk! There was an approximately 30-minute period centered around sunset when they appeared, presumably out of trees near the flatrocks. Individuals flew 1-2' above the rocks patrolling for mates, including a number of chases. They perched only briefly. We spent much time walking through the woods where the yuccas were present, plus waited for hours one morning where we saw them the evening before, without seeing any. We assume, then, that the adults rest all day and night well-up on tree trunks or limbs, coming down to mate only at twilight! For more on the behavior of this unusual species, see Cech and Tudor (2005).

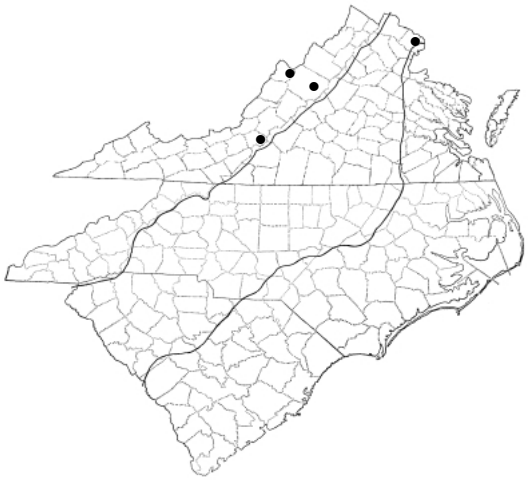
Pink-edged Sulphur *Colias interior*

This species inhabits high elevation, exposed heath thickets, where the foodplants are mainly blueberries (Vaccinium spp.). It is highly unlikely to occur in NC. It has a single brood everywhere, generally from mid-June into August.



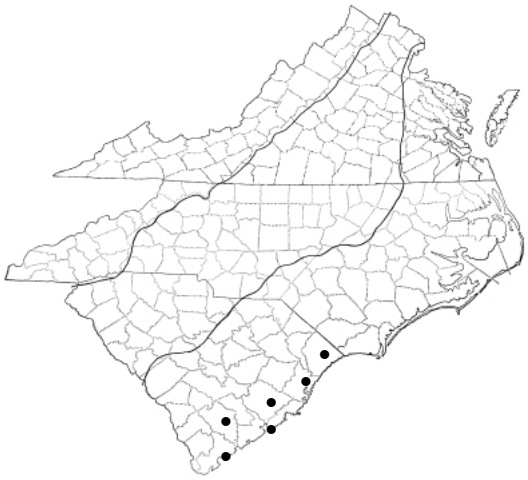
Bronze Copper *Lycaena hyllus*

This species is found in marshy areas around its main foodplant, water dock (Rumex orbiculatus). This plant is present in many sunny NC wetlands, and thus it is to be looked for in northern counties both in mountain wetlands and in coastal freshwater marshes. It has three broods, ranging from mid-May into October. Interestingly, the National Biological Service's county distribution atlas on the Internet shows a "Confirmed Record" of Bronze Copper for Madison County, NC! Yet, no such record appears in Opler and Malikul (1992) or in the Nekola/Opler atlas for the state. There is a photo record from eastern TN (Meigs County) in 2016. This location is less than 40 miles west of the NC state line, and thus this species could potentially occur in sunny wetlands at low elevations close to the TN border, such as in Madison, Graham, or Cherokee counties.



Hoary Elfin *Callophrys polios*

This spring-flying species occurs in pine barrens and heath thickets, always close to its foodplant, bearberry (Arctostaphylos uva-ursi). This plant does not occur in NC, and likely it would be futile to expect this species to be found in NC.

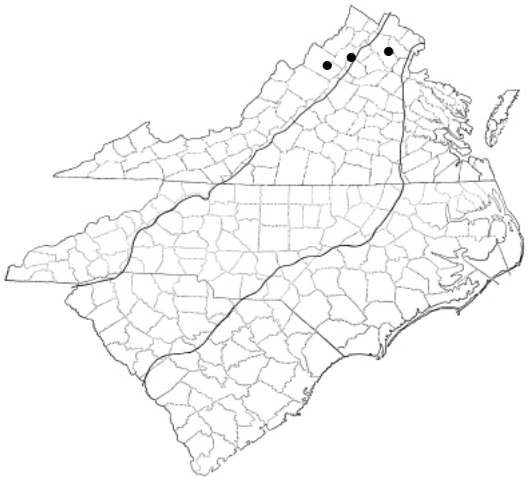


Eastern Pygmy-Blue *Brephidium pseudofea*

This tiny species occurs in salt flats in the vicinity of Salicornia along the SC coast, at least north to the Georgetown area. The species has a number of flights, ranging from late March into October. It has been looked for on a number of occasions in Brunswick County, NC, where good-looking habitat is present. So far, efforts have failed to find the species.

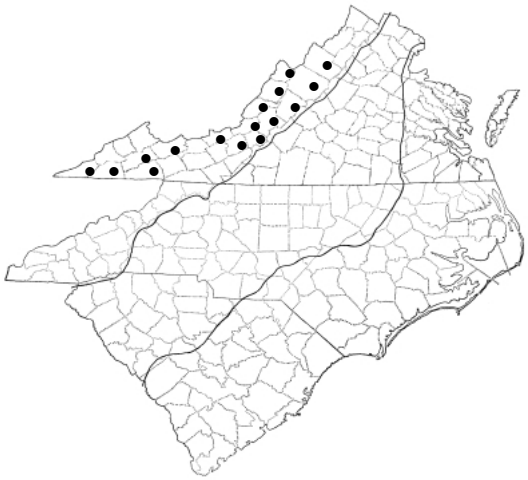
Cherry Gall Azure *Celastrina serotina*

This species was only described in December 2005, a split from the Spring Azure complex. It is a northern azure ranging south to the mountains of northern VA; previous reports from farther south in the VA mountains, nearly to NC, were in error. Nonetheless, it is to be looked for in the higher mountains of northern NC. It has a late spring flight, being on the wing from mid-May to mid-June, about the same time frame as the flight of Appalachian Azure. It is present in a wide variety of wooded and semi-wooded areas. The food of the larvae is primarily leaf galls of black cherry (Prunus serotina).



Northern Azure *Celastrina lucia*

This taxon, accepted as a valid species by Opler and Warren (2004), was originally described in 1837, though some references have not given it full species status. It flies from March into April or May, in a variety of wooded and shrubby habitats. Larvae feed on buds of many trees and shrubs, such as blueberries, cherries, and viburnums. As the common name implies, this is another azure that occurs to our north, southward (so far as known) only to northern VA.



Northern Metalmark *Calephelis borealis*

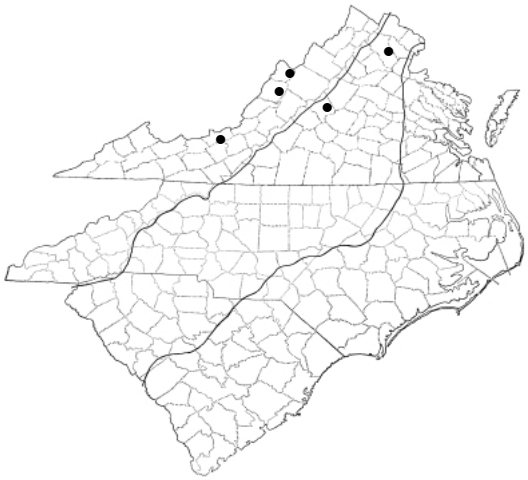
This species flies in late June and July around open rocky outcrops, generally in limestone areas. Its foodplant, however, round-leaved ragwort (Senecio obovatus), does occur at scattered sites in western NC, mainly in moist woods on high pH soils. Thus, this species might be present in northwestern NC.

Julia *Dryas iulia*

This species is a resident in the southern half of FL, as well as in TX (and southward into MX). Though not known as much of a migrant species, a worn female was carefully observed by Dennis Forsythe in Charleston County, SC, on October 16, 2013, for a first record for the Carolinas. Though there is a chance that the individual could have escaped from a butterfly house, the fact that fall 2013 was characterized by a fairly large number of Zebra Longwings, White Peacocks, and several other mostly "Floridian" species reaching coastal SC suggests that the Julia was a true vagrant. NOTE: Another common name for the species is Julia Heliconian.

Atlantis Fritillary *Speyeria atlantis*

This boreal species is unlikely to be found in NC even though violets, the foodplants, are widespread. It is found in cool forests and can easily be confused with Aphrodite Fritillary. It has a single brood from mid-June to August. It has been reported from the Great Smoky Mountains National Park, probably in error.



Silver-bordered Fritillary *Boloria selene*

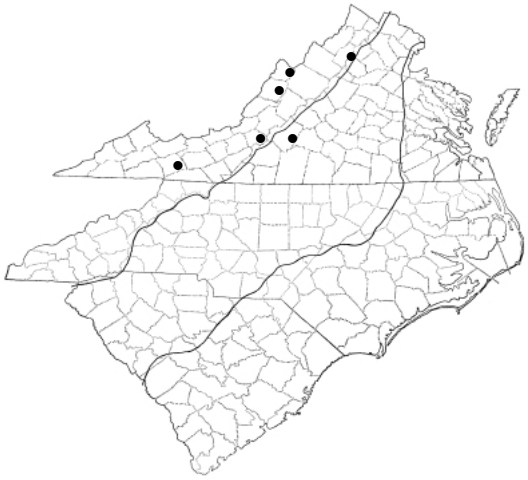
This is a marsh and bog dweller that also has violets as foodplants. It would not be out of the question for it to be found in a few bogs in northern NC. It looks quite similar to Meadow Fritillary in flight, but the underwings are quite distinctive. It has three broods, flying from May through September in VA.

Harris' Checkerspot *Chlosyne harrisii*

This is another marsh and bog dweller, with a range somewhat like that of the Silver-bordered Fritillary in the East. A tall aster -- parasol whitetop (Doellingeria umbellata) -- is the only known foodplant. It can be easily confused with the Silvery Checkerspot on the dorsal surface, but the ventral side has alternating rufous and white/cream bands. This checkerspot has been known from several counties in eastern WV for several decades; thus, its discovery in adjacent Highland County, VA, in 2007 was not a great surprise.

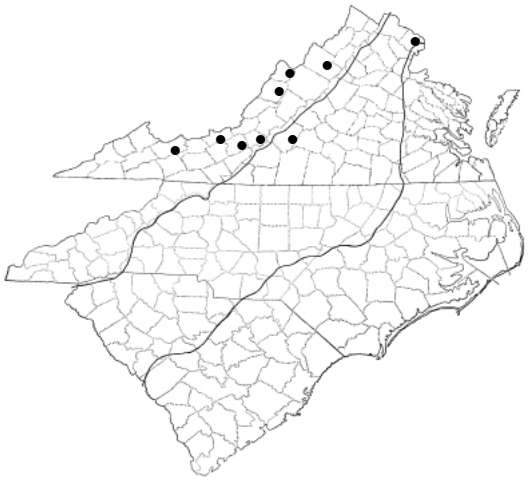
Small Tortoiseshell *Aglais urticae*

This is a species whose normal range covers most of Eurasia -- from the Atlantic to the Pacific. However, there are now a handful of records for the United States, mainly for Long Island, NY, where almost certainly an escape; life stages are presumed to have arrived by ship arriving at harbors in the New York city area. Interestingly, there are now two recent records for SC, also from presumed life stages that arrived by ship to the Charleston, SC, and the Savannah, GA, areas. The records are for April 3, 1998 across from the entrance to Savannah NWR in Jasper County, documented by a photo; and a specimen taken in downtown Charleston on October 10, 2003.



Columbine Duskywing *Erynnis lucilius*

This species might be found in NC some day, and possible reports have been made in 2001 and 2005 (see Wild Indigo Duskywing species account). It is always found near its foodplant -- eastern columbine (Aquilegia canadensis) -- generally in rocky woods. It is very similar to Wild Indigo Duskywing but averages smaller in size. It has three broods in WV; two main ones from mid-April to late July, and a weak one in late August and September (Allen 1997).

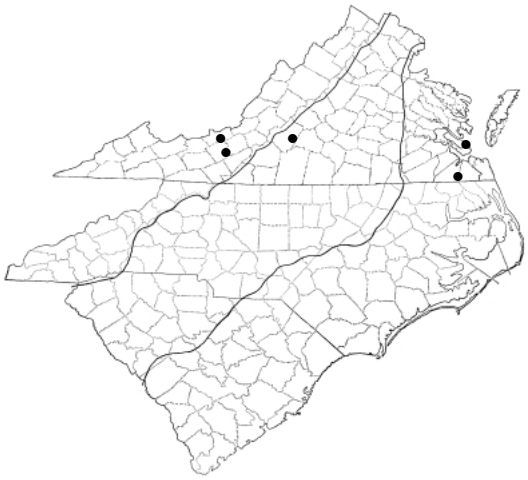


Persius Duskywing *Erynnis persius*

This is a very poorly known butterfly in the East, and it appears to have been extirpated in most of its Eastern range. Apparently its foodplant is lupine (Lupinus perennis), which appears to be absent in the NC mountains but does occur in the VA mountains (and in the NC Coastal Plain). This skipper looks very similar to Wild Indigo Duskywing. Its habitat is openings in dry forests; it has a single brood, from late April to early June in VA.

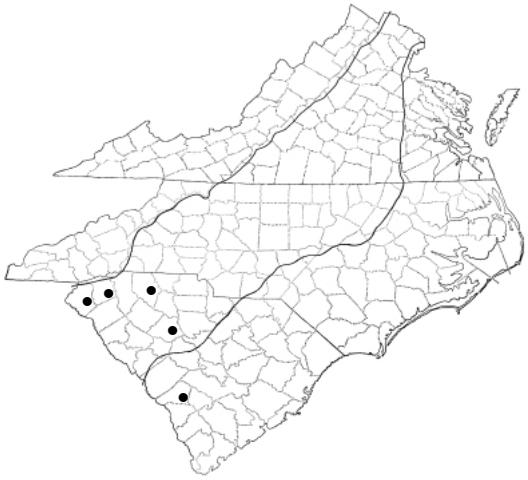
Neamathla Skipper *Nastra neamathla*

This species, previously limited in the US only to FL, TX, and AZ, was collected in Berkeley County, SC, on May 3, 1995 by Brian Scholtens. The genitalia of the specimen had to be checked to confirm the identification, as the species looks quite similar to the Swarthy Skipper. It can even be confused by field observers with Eufala Skipper and possibly even Dun Skipper. In FL, the species is usually found in open, mesic to damp, short grass habitats, such as roadsides, ditches, grassy fields, and open savannas.



Black Dash *Euphyes conspicua*

This skipper flies in June and July in marshes and bogs. Its foodplants, sedges (Carex spp.), are widespread. It has been found on the VA side of the Great Dismal Swamp! Thus, there is a reasonable likelihood that it can be found in NC.



Bell's Roadside-Skipper *Amblyscirtes belli*

This skipper is found in extreme northwestern SC, northern GA, and southeastern TN and is to be looked for in the low mountains of southwestern NC (where there are practically no observers). It is found in moist woods and bottomlands, generally along trails, edges, or other openings. It has several broods from mid-April to mid-September. I, and several others, managed to see this species at Clemson in Pickens County, SC, (a known site) in May and in early August, 1999. This species was photographed in Spartanburg County, SC, in 2014, and thus there is the potential for it to occur in NC in the nearby southwestern Piedmont province, as well as being of potential occurrence in the state's extreme southern mountains.

Listing of NC Butterflies
by number of species (out of 177) per county

Sorted Alpha

Alamance - 67
Alexander - 65
Alleghany - 95
Anson - 65
Ashe - 100
Avery - 80
Beaufort - 80
Bertie - 68
Bladen - 79
Brunswick - 114
Brunswick; BHI - 30
Buncombe - 113
Burke; M - 54
Burke; P - 87
Cabarrus - 77
Caldwell - 79
Camden - 68
Carteret - 106
Caswell - 87
Catawba - 82
Chatham - 99
Cherokee - 68
Chowan - 28
Clay - 94
Cleveland - 63
Columbus - 79
Craven - 98
Cumberland - 112
Currituck - 68
Dare; Mainland - 88
Dare; OBL - 61
Dare; OBM - 50
Dare; OBU - 86
Davidson - 69
Davie - 63
Duplin - 37
Durham - 101
Edgecombe - 51
Forsyth - 91
Franklin - 80
Gaston - 98
Gates - 79
Graham - 88
Granville - 82
Greene - 36
Guilford - 82
Halifax; C - 58
Halifax; P - 74
Harnett; C - 80
Harnett; P - 94
Haywood - 91
Henderson - 73
Hertford - 27
Hoke - 91
Hyde - 64
Hyde; OB - 34
Iredell - 78
Jackson - 67
Johnston; C - 81
Johnston; P - 47
Jones - 67
Lee - 64
Lenoir - 34
Lincoln - 62
Macon - 105
Madison - 102
Martin - 71
McDowell; M - 49
McDowell; P - 66
Mecklenburg - 98
Mitchell - 82
Montgomery - 78
Moore; C - 116
Moore; P - 63
Nash - 61
New Hanover - 100
Northampton - 53
Onslow - 89
Orange - 98
Pamlico - 41
Pasquotank - 40
Pender - 93
Perquimans - 17
Person - 81
Pitt - 82
Polk; M - 46
Polk; P - 101
Randolph - 73
Richmond; C - 109
Richmond; P - 42
Robeson - 71
Rockingham - 76
Rowan - 79
Rutherford; M - 51
Rutherford; P - 60
Sampson - 78
Scotland - 99
Stanly - 55
Stokes - 82
Surry - 89
Swain - 94
Transylvania - 98
Tyrrell - 69
Union - 69
Vance - 70
Wake - 110
Warren - 73
Washington - 80
Watauga - 94
Wayne - 59
Wilkes; M - 72
Wilkes; P - 89
Wilson - 37
Yadkin - 83
Yancey - 83

County splits respected.

Sorted Numeric

Moore - 118
Brunswick - 114
Buncombe - 113
Richmond - 113
Cumberland - 112
Wake - 110
Carteret - 106
Macon - 105
Dare - 104
Polk - 104
Madison - 102
Durham - 101
New Hanover - 100
Ashe - 100
Scotland - 99
Chatham - 99
Gaston - 98
Harnett - 98
Transylvania - 98
Orange - 98
Craven - 98
Mecklenburg - 98
Alleghany - 95
Swain - 94
Clay - 94
Wilkes - 94
Watauga - 94
Pender - 93
Burke - 93
Hoke - 91
Forsyth - 91
Haywood - 91
Onslow - 89
Surry - 89
Graham - 88
Caswell - 87
Johnston - 85
Yadkin - 83
Yancey - 83
Halifax - 83
Pitt - 82
Stokes - 82
Mitchell - 82
Granville - 82
Catawba - 82
Guilford - 82
Person - 81
Beaufort - 80
Franklin - 80
Washington - 80
Avery - 80
Rowan - 79
Bladen - 79
Caldwell - 79
Columbus - 79
Gates - 79
Iredell - 78
Montgomery - 78
Sampson - 78
McDowell - 77
Cabarrus - 77
Rockingham - 76
Henderson - 73
Randolph - 73
Warren - 73
Hyde - 72
Rutherford - 72
Martin - 71
Robeson - 71
Vance - 70
Davidson - 69
Tyrrell - 69
Union - 69
Cherokee - 68
Camden - 68
Currituck - 68
Bertie - 68
Jackson - 67
Jones - 67
Alamance - 67
Anson - 65
Alexander - 65
Lee - 64
Cleveland - 63
Davie - 63
Lincoln - 62
Nash - 61
Wayne - 59
Stanly - 55
Northampton - 53
Edgecombe - 51
Pamlico - 41
Pasquotank - 40
Wilson - 37
Duplin - 37
Greene - 36
Lenoir - 34
Chowan - 28
Hertford - 27
Perquimans - 17

County splits ignored.

Number of Counties = 100

Listing of NC Butterflies
by number of counties (out of 100) in which found

100 - American Lady
100 - Cabbage White
100 - Cloudless Sulphur
100 - Common Buckeye
100 - Eastern Tiger Swallowtail
100 - Pearl Crescent
99 - Spicebush Swallowtail
99 - Silver-spotted Skipper
99 - Red-spotted Purple
99 - Red Admiral
98 - Variegated Fritillary
98 - Sleepy Orange
98 - Orange Sulphur
98 - Fiery Skipper
98 - Clouded Skipper
97 - Viceroy
97 - Summer Azure
97 - Monarch
97 - Eastern Tailed-Blue
96 - Carolina Satyr
95 - Dun Skipper
95 - Gray Hairstreak
94 - Red-banded Hairstreak
94 - Question Mark
94 - Least Skipper
94 - Horace's Duskywing
93 - Black Swallowtail
93 - Sachem
90 - Zebra Swallowtail
90 - Little Yellow
90 - Common Checkered-Skipper
89 - Juvenal's Duskywing
89 - Zabulon Skipper
87 - Mourning Cloak
87 - Little Wood-satyr
87 - Eastern Comma
85 - Common Wood-Nymph
85 - Falcate Orangetip
85 - Painted Lady
85 - Pipevine Swallowtail
82 - American Snout
82 - Ocola Skipper
81 - Clouded Sulphur
81 - Crossline Skipper
80 - Little Glassywing
79 - Gemmed Satyr
79 - Southern Cloudywing
74 - Long-tailed Skipper
73 - Gulf Fritillary
73 - Tawny-edged Skipper
72 - Swarthy Skipper
71 - Hoary Edge
70 - Spring Azure
69 - Lace-winged Roadside-Skipper
69 - Northern Cloudywing
68 - Southern Broken-dash
67 - Delaware Skipper
66 - Southern Pearly-eye
65 - Common Sootywing
64 - Harvester
64 - Creole Pearly-eye
64 - Banded Hairstreak
64 - Appalachian Brown
62 - Great Purple Hairstreak
62 - Great Spangled Fritillary
62 - Northern Broken-dash
61 - White-M Hairstreak
59 - Northern Pearly-eye
59 - Sleepy Duskywing
59 - Zarucco Duskywing
57 - Hackberry Emperor
56 - Silvery Checkerspot
55 - Tawny Emperor
54 - Eastern Pine Elfin
54 - Eufala Skipper
54 - Wild Indigo Duskywing
53 - Henry's Elfin
49 - Juniper Hairstreak
48 - Checkered White
47 - Palamedes Swallowtail
46 - Hayhurst's Scallopwing
45 - Coral Hairstreak
44 - Dion Skipper
43 - Dusted Skipper
42 - Common Roadside-skipper
42 - Whirlabout
40 - Yehl Skipper
37 - Striped Hairstreak
35 - Pepper and Salt Skipper
34 - Diana Fritillary
33 - American Copper
32 - Dreamy Duskywing
31 - Southern Skipperling
31 - Carolina Roadside-Skipper
31 - Brown Elfin
30 - Confused Cloudywing
29 - Holly Azure
29 - Peck's Skipper
28 - Giant Swallowtail
28 - Mottled Duskywing
27 - Hobomok Skipper
25 - Oak Hairstreak
24 - Meadow Fritillary
23 - Yucca Giant-Skipper
23 - Reversed Roadside-Skipper
23 - Byssus Skipper
23 - Brazilian Skipper
21 - Broad-winged Skipper
21 - Cobweb Skipper
21 - King's Hairstreak
21 - West Virginia White
20 - Helicta Satyr
19 - Aphrodite Fritillary
19 - Appalachian Tiger Swallowtail
18 - Golden Banded-Skipper
18 - Leonard's Skipper
18 - Zebra Longwing
16 - Twin-spot Skipper
16 - Hessel's Hairstreak
16 - Appalachian Azure
15 - Two-spotted Skipper
15 - Southern Dogface
15 - Frosted Elfin
15 - Early Hairstreak
15 - Dainty Sulphur
15 - Baltimore Checkerspot
14 - Palatka Skipper
13 - Northern Crescent
13 - Indian Skipper
12 - Queen
11 - Barred Yellow
11 - Dusky Roadside-Skipper
10 - Salt Marsh Skipper
10 - Green Comma
10 - Georgia Satyr
10 - Dusky Azure
9 - Edwards' Hairstreak
9 - Little Metalmark
9 - Meske's Skipper
8 - Silvery Blue
8 - Gray Comma
8 - Dotted Skipper
7 - Dorantes Longtail
7 - Phaon Crescent
7 - Tawny Crescent
6 - Hickory Hairstreak
6 - Berry's Skipper
5 - Arogos Skipper
5 - Dukes' Skipper
5 - White Peacock
4 - Regal Fritillary
4 - Intricate Satyr
4 - Great Southern White
3 - White Checkered-Skipper
3 - Tropical Checkered-Skipper
3 - Olympia Marble
3 - Mimic
3 - Grizzled Skipper
3 - Goatweed Leafwing
3 - European Skipper
3 - Ceraunus Blue
3 - Aaron's Skipper
2 - Mitchell's Satyr
2 - Orange-barred Sulphur
2 - Rare Skipper
2 - Soldier
2 - Texan Crescent
2 - Long Dash
2 - Loammi Skipper
2 - Large Orange Sulphur
2 - Gorgone Checkerspot
2 - Funereal Duskywing
2 - Crystal Skipper
2 - Cofaqui Giant-Skipper
1 - Cassius Blue
1 - Compton Tortoiseshell
1 - Milbert's Tortoiseshell

NC BUTTERFLIES BY PROVINCE

Mountain	Piedmont	Coastal Plain
136 species	132 species	148 species
TRUE BUTTERFLIES - 84	TRUE BUTTERFLIES - 78	TRUE BUTTERFLIES - 83
Pipevine Swallowtail	Pipevine Swallowtail	Pipevine Swallowtail
Zebra Swallowtail	Zebra Swallowtail	Zebra Swallowtail
Black Swallowtail	Black Swallowtail	Black Swallowtail
Giant Swallowtail	Giant Swallowtail	Giant Swallowtail
Eastern Tiger Swallowtail	Eastern Tiger Swallowtail	Eastern Tiger Swallowtail
Appalachian Tiger Swallowtail	Spicebush Swallowtail	Spicebush Swallowtail
Spicebush Swallowtail	Palamedes Swallowtail	Palamedes Swallowtail
Palamedes Swallowtail	Checkered White	Checkered White
Checkered White	West Virginia White	Cabbage White
West Virginia White	Cabbage White	Great Southern White
Cabbage White	Great Southern White	Falcate Orangetip
Olympia Marble	Falcate Orangetip	Clouded Sulphur
Falcate Orangetip	Clouded Sulphur	Orange Sulphur
Clouded Sulphur	Orange Sulphur	Southern Dogface
Orange Sulphur	Southern Dogface	Cloudless Sulphur
Southern Dogface	Cloudless Sulphur	Large Orange Sulphur
Cloudless Sulphur	Large Orange Sulphur	Orange-barred Sulphur
Orange-barred Sulphur	Barred Yellow	Barred Yellow
Barred Yellow	Little Yellow	Little Yellow
Little Yellow	Sleepy Orange	Sleepy Orange
Sleepy Orange	Dainty Sulphur	Dainty Sulphur
Dainty Sulphur	Harvester	Harvester
Harvester	American Copper	American Copper
American Copper	Great Purple Hairstreak	Great Purple Hairstreak
Great Purple Hairstreak	Coral Hairstreak	Coral Hairstreak
Coral Hairstreak	Edwards' Hairstreak	Edwards' Hairstreak
Edwards' Hairstreak	Banded Hairstreak	Banded Hairstreak
Banded Hairstreak	King's Hairstreak	King's Hairstreak
Hickory Hairstreak	Striped Hairstreak	Striped Hairstreak
King's Hairstreak	Oak Hairstreak	Oak Hairstreak
Striped Hairstreak	Brown Elfin	Brown Elfin
Oak Hairstreak	Frosted Elfin	Frosted Elfin
Brown Elfin	Henry's Elfin	Henry's Elfin
Frosted Elfin	Eastern Pine Elfin	Eastern Pine Elfin
Henry's Elfin	Juniper Hairstreak	Juniper Hairstreak
Eastern Pine Elfin	White-M Hairstreak	Hessel's Hairstreak
Juniper Hairstreak	Gray Hairstreak	White-M Hairstreak
White-M Hairstreak	Red-banded Hairstreak	Gray Hairstreak
Gray Hairstreak	Ceraunus Blue	Red-banded Hairstreak
Red-banded Hairstreak	Eastern Tailed-Blue	Cassius Blue
Early Hairstreak	Spring Azure	Ceraunus Blue
Eastern Tailed-Blue	Holly Azure	Eastern Tailed-Blue
Spring Azure	Summer Azure	Spring Azure
Summer Azure	Appalachian Azure	Holly Azure
Appalachian Azure	American Snout	Summer Azure
Dusky Azure	Gulf Fritillary	Little Metalmark
Silvery Blue	Zebra Longwing	American Snout
American Snout	Variegated Fritillary	Gulf Fritillary
Gulf Fritillary	Diana Fritillary	Zebra Longwing
Variegated Fritillary	Great Spangled Fritillary	Variegated Fritillary
Diana Fritillary	Aphrodite Fritillary	Great Spangled Fritillary
Great Spangled Fritillary	Meadow Fritillary	Silvery Checkerspot
Aphrodite Fritillary	Silvery Checkerspot	Texan Crescent
Regal Fritillary	Pearl Crescent	Phaon Crescent
Meadow Fritillary	Question Mark	Pearl Crescent

Mountain

Gorgone Checkerspot
Silvery Checkerspot
Pearl Crescent
Northern Crescent
Tawny Crescent
Baltimore Checkerspot
Question Mark
Eastern Comma
Green Comma
Gray Comma
Mourning Cloak
American Lady
Painted Lady
Red Admiral
Common Buckeye
Red-spotted Purple
Viceroy
Goatweed Leafwing
Hackberry Emperor
Tawny Emperor
Southern Pearly-eye
Northern Pearly-eye
Creole Pearly-eye
Appalachian Brown
Gemmed Satyr
Carolina Satyr
Little Wood-Satyr
Common Wood-Nymph
Monarch

SKIPPERS - 52 species
Silver-spotted Skipper
Long-tailed Skipper
Dorantes Longtail
Golden Banded-Skipper
Hoary Edge
Southern Cloudywing
Northern Cloudywing
Confused Cloudywing
Hayhurst's Scallopwing
Dreamy Duskywing
Sleepy Duskywing
Juvenal's Duskywing
Horace's Duskywing
Mottled Duskywing
Zarucco Duskywing
Wild Indigo Duskywing
Grizzled Skipper
Common Checkered-Skipper
Tropical Checkered-Skipper
Common Sootywing
Swarthy Skipper
Clouded Skipper
Least Skipper
European Skipper
Fiery Skipper
Leonard's Skipper
Cobweb Skipper

Piedmont

Eastern Comma
Mourning Cloak
Milbert's Tortoiseshell
American Lady
Painted Lady
Red Admiral
Mimic
Common Buckeye
Red-spotted Purple
Viceroy
Hackberry Emperor
Tawny Emperor
Southern Pearly-eye
Northern Pearly-eye
Creole Pearly-eye
Appalachian Brown
Gemmed Satyr
Carolina Satyr
Helicta Satyr
Little Wood-Satyr
Common Wood-Nymph
Monarch
Queen

SKIPPERS - 54 species
Silver-spotted Skipper
Long-tailed Skipper
Dorantes Longtail
Golden Banded-Skipper
Hoary Edge
Southern Cloudywing
Northern Cloudywing
Confused Cloudywing
Hayhurst's Scallopwing
Dreamy Duskywing
Sleepy Duskywing
Juvenal's Duskywing
Horace's Duskywing
Mottled Duskywing
Zarucco Duskywing
Wild Indigo Duskywing
Grizzled Skipper
Common Checkered-Skipper
Common Sootywing
Swarthy Skipper
Clouded Skipper
Least Skipper
Southern Skipperling
Fiery Skipper
Leonard's Skipper
Cobweb Skipper
Peck's Skipper
Tawny-edged Skipper
Crossline Skipper
Whirlabout
Southern Broken-dash
Northern Broken-dash
Little Glassywing

Coastal Plain

Question Mark
Eastern Comma
Compton Tortoiseshell
Mourning Cloak
American Lady
Painted Lady
Red Admiral
Mimic
Common Buckeye
White Peacock
Red-spotted Purple
Viceroy
Hackberry Emperor
Tawny Emperor
Southern Pearly-eye
Northern Pearly-eye
Creole Pearly-eye
Appalachian Brown
Gemmed Satyr
Carolina Satyr
Intricate Satyr
Georgia Satyr
Helicta Satyr
Mitchell's Satyr
Little Wood-Satyr
Common Wood-Nymph
Monarch
Queen

SKIPPERS - 65 species
Soldier
Silver-spotted Skipper
Long-tailed Skipper
Dorantes Longtail
Golden Banded-Skipper
Hoary Edge
Southern Cloudywing
Northern Cloudywing
Confused Cloudywing
Hayhurst's Scallopwing
Sleepy Duskywing
Juvenal's Duskywing
Horace's Duskywing
Mottled Duskywing
Zarucco Duskywing
Funereal Duskywing
Wild Indigo Duskywing
Common Checkered-Skipper
White Checkered-Skipper
Tropical Checkered-Skipper
Common Sootywing
Swarthy Skipper
Clouded Skipper
Least Skipper
Southern Skipperling
Fiery Skipper
Cobweb Skipper
Dotted Skipper

NC BUTTERFLIES BY PROVINCE

Mountain	Piedmont	Coastal Plain
Indian Skipper	Sachem	Meske's Skipper
Peck's Skipper	Delaware Skipper	Tawny-edged Skipper
Tawny-edged Skipper	Byssus Skipper	Crossline Skipper
Crossline Skipper	Hobomok Skipper	Whirlabout
Long Dash	Zabulon Skipper	Southern Broken-dash
Whirlabout	Yehl Skipper	Northern Broken-dash
Southern Broken-dash	Broad-winged Skipper	Little Glassywing
Northern Broken-dash	Dion Skipper	Sachem
Little Glassywing	Two-spotted Skipper	Arogos Skipper
Sachem	Dun Skipper	Delaware Skipper
Delaware Skipper	Dusted Skipper	Byssus Skipper
Hobomok Skipper	Pepper and Salt Skipper	Rare Skipper
Zabulon Skipper	Lace-winged Roadside-Skipper	Zabulon Skipper
Yehl Skipper	Carolina Roadside-Skipper	Aaron's Skipper
Two-spotted Skipper	Reversed Roadside-Skipper	Yehl Skipper
Dun Skipper	Common Roadside-Skipper	Broad-winged Skipper
Dusted Skipper	Eufala Skipper	Palatka Skipper
Pepper and Salt Skipper	Brazilian Skipper	Dion Skipper
Lace-winged Roadside-Skipper	Ocola Skipper	Dukes' Skipper
Reversed Roadside-Skipper	Yucca Giant-Skipper	Berry's Skipper
Common Roadside-Skipper	Cofaqui Giant-Skipper	Two-spotted Skipper
Eufala Skipper		Dun Skipper
Brazilian Skipper		Dusted Skipper
Ocola Skipper		Loammi Skipper
Yucca Giant-Skipper		Crystal Skipper
		Pepper and Salt Skipper
		Lace-winged Roadside-Skipper
		Carolina Roadside-Skipper
		Reversed Roadside-Skipper
		Common Roadside-Skipper
		Dusky Roadside-Skipper
		Eufala Skipper
		Twin-spot Skipper
		Brazilian Skipper
		Salt Marsh Skipper
		Ocola Skipper
		Yucca Giant-Skipper

Checklist of North Carolina Butterflies
sorted by State Rank

Species with NC Rank = S1

PIERIDAE

___ Checkered White	SR - S1S2
___ Olympia Marble	SR - S1

LYCAENIDAE

___ Hickory Hairstreak	SR - S1

NYMPHALIDAE

___ Gorgone Checkerspot	SR - S1?
___ Green Comma	SR - S1S2
___ Gray Comma	SR - S1
___ Helicta Satyr	SR - S1?
___ Mitchell's Satyr	SR - S1

HESPERIIDAE

___ Grizzled Skipper	SR - S1
___ Long Dash	SR - S1
___ Rare Skipper	SR - S1
___ Aaron's Skipper	SR - S1S2
___ Dukes' Skipper	SR - S1S2
___ Berry's Skipper	SR - S1
___ Crystal Skipper	SR - S1

HESPERIIDAE

___ Cofaqui Giant-Skipper	SR - S1?

Species with NC Rank = S2

PAPILIONIDAE

___ Giant Swallowtail	SR - S2S3

LYCAENIDAE

___ Edwards' Hairstreak	SR - S2
___ Frosted Elfin	SR - S2
___ Early Hairstreak	SR - S2S3
___ Dusky Azure	SR - S2
___ Silvery Blue	W - S2S3

RIODINIDAE

___ Little Metalmark	SR - S2

NYMPHALIDAE

___ Tawny Crescent	SR - S2
___ Baltimore Checkerspot	SR - S2
___ Georgia Satyr	SR - S2

HESPERIIDAE

___ Golden Banded-Skipper	SR - S2
___ Mottled Duskywing	SR - S2
___ Dotted Skipper	SR - S2S3
___ Two-spotted Skipper	SR - S2
___ Dusky Roadside-Skipper	SR - S2

Species with NC Rank = S3

PIERIDAE

___ West Virginia White	S3S4

LYCAENIDAE

___ King's Hairstreak	W - S3S4
___ Striped Hairstreak	S3S4
___ Oak Hairstreak	SR - S3
___ Hessel's Hairstreak	SR - S3
___ Appalachian Azure	W - S3S4

NYMPHALIDAE

___ Diana Fritillary	W - S3S4
___ Phaon Crescent	W - S3
___ Northern Crescent	W - S3?
___ Creole Pearly-eye	S3S4

HESPERIIDAE

___ Confused Cloudywing	W - S3S4
___ Leonard's Skipper	W - S3
___ Cobweb Skipper	W - S3
___ Meske's Skipper	SR - S3
___ Indian Skipper	S3S4
___ Byssus Skipper	S3S4
___ Palatka Skipper	S3S4
___ Carolina Roadside-Skipper	W - S3S4
___ Reversed Roadside-Skipper	SR - S3
___ Twin-spot Skipper	S3S4
___ Yucca Giant-Skipper	W - S3S4

Species with NC Rank = S4

PAPILIONIDAE

___ Appalachian Tiger Swallowtail	S4
___ Palamedes Swallowtail	S4

PIERIDAE

___ Falcate Orangetip	S4S5
___ Clouded Sulphur	S4S5
___ Little Yellow	S4

LYCAENIDAE

___ Harvester	S4
___ American Copper	S4
___ Great Purple Hairstreak	S4
___ Coral Hairstreak	S4
___ Banded Hairstreak	S4S5
___ Brown Elfin	S4
___ Henry's Elfin	S4
___ Eastern Pine Elfin	S4
___ Juniper Hairstreak	S4
___ White-M Hairstreak	S4
___ Spring Azure	S4S5
___ Holly Azure	S4

NYMPHALIDAE

___ Gulf Fritillary	S4
___ Aphrodite Fritillary	S4
___ Meadow Fritillary	S4

Checklist of North Carolina Butterflies sorted by State Rank

Species with NC Rank = S4

NYMPHALIDAE

___	Tawny Emperor	S4
___	Southern Pearly-eye	S4
___	Northern Pearly-eye	S4
___	Appalachian Brown	S4
___	Monarch	S4

HESPERIIDAE

___	Long-tailed Skipper	S4B
___	Hayhurst's Scallopwing	S4
___	Zarucco Duskywing	S4
___	Wild Indigo Duskywing	S4
___	Southern Skipperling	S4
___	Peck's Skipper	S4
___	Northern Broken-dash	S4
___	Delaware Skipper	S4
___	Hobomok Skipper	S4
___	Yehl Skipper	S4
___	Broad-winged Skipper	S4
___	Dion Skipper	S4
___	Dusted Skipper	S4
___	Pepper and Salt Skipper	S4
___	Lace-winged Roadside-Skipper	S4
___	Common Roadside-Skipper	S4
___	Eufala Skipper	S4
___	Salt Marsh Skipper	S4

Species with NC Rank = S5

PAPILIONIDAE

___	Pipevine Swallowtail	S5
___	Zebra Swallowtail	S5
___	Black Swallowtail	S5
___	Eastern Tiger Swallowtail	S5
___	Spicebush Swallowtail	S5

PIERIDAE

___	Orange Sulphur	S5
___	Cloudless Sulphur	S5
___	Sleepy Orange	S5

LYCAENIDAE

___	Gray Hairstreak	S5
___	Red-banded Hairstreak	S5
___	Eastern Tailed-Blue	S5
___	Summer Azure	S5

NYMPHALIDAE

___	American Snout	S5
___	Variegated Fritillary	S5
___	Great Spangled Fritillary	S5
___	Silvery Checkerspot	S5
___	Pearl Crescent	S5
___	Question Mark	S5
___	Eastern Comma	S5

Species with NC Rank = S5

NYMPHALIDAE

___	Mourning Cloak	S5
___	American Lady	S5
___	Red Admiral	S5
___	Common Buckeye	S5
___	Red-spotted Purple	S5
___	Viceroy	S5
___	Hackberry Emperor	S5
___	Gemmed Satyr	S5
___	Carolina Satyr	S5
___	Little Wood-Satyr	S5
___	Common Wood-Nymph	S5

HESPERIIDAE

___	Silver-spotted Skipper	S5
___	Hoary Edge	S5
___	Southern Cloudywing	S5
___	Northern Cloudywing	S5
___	Dreamy Duskywing	S5
___	Sleepy Duskywing	S5
___	Juvenal's Duskywing	S5
___	Horace's Duskywing	S5
___	Common Checkered-Skipper	S5
___	Common Sootywing	S5
___	Swarthy Skipper	S5
___	Clouded Skipper	S5
___	Least Skipper	S5
___	Fiery Skipper	S5
___	Tawny-edged Skipper	S5
___	Crossline Skipper	S5
___	Whirlabout	S5
___	Southern Broken-dash	S5
___	Little Glassywing	S5
___	Sachem	S5
___	Zabulon Skipper	S5
___	Dun Skipper	S5
___	Ocola Skipper	S5

Species with NC Rank = SA

PIERIDAE

___	Great Southern White	SA
___	Large Orange Sulphur	SA
___	Orange-barred Sulphur	SA
___	Barred Yellow	SA

LYCAENIDAE

___	Cassius Blue	SA
___	Ceraunus Blue	SA

NYMPHALIDAE

___	Texan Crescent	SA
___	Compton Tortoiseshell	SA
___	Milbert's Tortoiseshell	SA

Checklist of North Carolina Butterflies
sorted by State Rank

Species with NC Rank = SA

NYMPHALIDAE

___	Mimic	SA
___	Goatweed Leafwing	SA
___	Soldier	SA

HESPERIIDAE

___	Funereal Duskywing	SA
___	Tropical Checkered-Skipper	SA

Species with NC Rank = SE

PIERIDAE

___	Cabbage White	SE

HESPERIIDAE

___	European Skipper	SE

Species with NC Rank = SH

___	Arogos Skipper	SR - SH
___	Loammi Skipper	SR - SH

Species with NC Rank = SX

NYMPHALIDAE

___	Regal Fritillary	SR - SX

Species with NC Rank = SU

___	Intricate Satyr	W - SU

HESPERIIDAE

___	White Checkered-Skipper	W - SU

Species with NC Rank = SZ

PIERIDAE

___	Southern Dogface	SZN
___	Dainty Sulphur	SZN

NYMPHALIDAE

___	Zebra Longwing	SZN
___	Painted Lady	SZB
___	White Peacock	SZN
___	Queen	SZB

HESPERIIDAE

___	Dorantes Longtail	SZN
___	Brazilian Skipper	SZB

See Page v of the Table of Contents for explanation of codes.

Distribution of NC Butterfly Records by Year

		Date ?	<60	60s	70s	80s	90s	00-06	07	08	09	10	11	12	13	14	15	16	% Change	Totals
6	Pipevine Swallowtail	33	5			4	251	635	108	158	89	105	79	122	80	73	81	91	5	1,914
7	Zebra Swallowtail	37	1		1	6	260	459	55	57	115	105	81	125	65	55	57	51	-34	1,530
7	Black Swallowtail	21				3	333	802	97	93	95	130	58	160	120	89	97	68	-35	2,166
7	Giant Swallowtail	11				1	33	65	13	14	10	17	9	7	12	8	15	8	-27	223
6	Eastern Tiger Swallowtail	30	7		1	12	1292	2564	370	434	347	433	279	360	459	364	438	395	4	7,785
7	Appalachian Tiger Swallowtail	1				1		74	11	5	4	1	3	12	5	10	6	4	-50	137
6	Spicebush Swallowtail	20			2	6	733	1208	167	194	156	177	141	203	168	159	182	194	13	3,710
6	Palamedes Swallowtail	27	1		1	3	327	422	94	93	101	68	41	104	64	53	92	83	17	1,574
7	Checkered White	14					54	90	6	21	5	7	21	13	5	12	3	4	-64	255
7	West Virginia White	8	1			9	36	96	13	7	10	3	6	7	15	8	3	5	-38	227
7	Cabbage White	38				2	790	1256	200	214	227	220	165	262	228	302	251	202	-17	4,357
u	Great Southern White	1					1	1		2										5
7	Olympia Marble							1					3	4	3	5		1	-67	17
7	Falcate Orangetip	20	1			3	219	451	87	81	63	58	92	92	72	68	93	43	-49	1,443
7	Clouded Sulphur	28	2			2	348	461	77	99	64	70	56	77	56	88	80	44	-39	1,552
7	Orange Sulphur	21			1	2	662	1111	183	227	215	179	128	234	178	203	168	129	-30	3,641
7	*Southern Dogface*	*16*	*3*					*3*		*2*				*1*					*ns*	*25*
6	Cloudless Sulphur	21	3	1		3	843	1266	285	279	221	217	88	360	289	173	234	288	26	4,571
7	*Large Orange Sulphur*							*1*					*1*						*ns*	*2*
u	Orange-barred Sulphur		1								1									2
u	Barred Yellow	6	9				1													16
6	Little Yellow	42			1	2	264	259	19	28	20	96	5	167	12	61	31	99	77	1,106
7	Sleepy Orange	31				5	851	1555	220	202	219	240	157	289	203	220	290	224	-3	4,706
7	Dainty Sulphur	1			1			10	1					35				1	-86	49
7	Harvester	21			1	1	41	151	11	35	40	13	17	31	18	34	34	16	-41	464
7	American Copper	34	1		1		44	109	36	34	11	8	7	5	10	8	2	4	-43	314
7	Great Purple Hairstreak	41					76	131	22	18	14	20	8	17	18	15	19	10	-38	409
7	Coral Hairstreak	20			1	1	50	123	12	10	12	10	7	3	6	10	8	3	-57	276
6	Edwards' Hairstreak	9		1	2	1	10	23	5	1	3		2	2	2	7	4	6	50	78
7	Banded Hairstreak	19				4	41	133	18	16	22	39	28	20	7	19	12	6	-67	384
4	Hickory Hairstreak	2					1	8						2	2			1	aa	16
6	King's Hairstreak	14			1		10	38	3	5	5	1	3	5	4	9	10	12	71	120
7	Striped Hairstreak	17			2	2	21	36	4	3	6	15	7	6	1	5	1	1	-75	127
4	Oak Hairstreak	18			1	3	7	15	4	1	2	7	2		1	1	6	2	aa	70
6	Brown Elfin	10				3	40	102	13	9	13	20	10	5	12	10	12	13	30	272
7	Frosted Elfin	20	3			1	11	28		2	1	1	1	4		5	6	1	-75	84
7	Henry's Elfin	23			1	4	70	179	21	20	24	32	36	15	9	23	16	15	-25	488
7	Eastern Pine Elfin	25					47	89	6	6	10	7	15	7	14	10	17	5	-62	258
7	Juniper Hairstreak	9				2	111	202	34	21	14	24	20	28	26	30	31	9	-67	561
7	Hessel's Hairstreak	16			7	5	19	28	1	1		1	1		3	4	3	2	-33	91
6	White-M Hairstreak	36			1		60	111	15	17	9	17	4	12	11	18	13	21	75	345
6	Gray Hairstreak	57			2	3	528	886	116	132	100	156	98	158	109	144	135	157	22	2,781
7	Red-banded Hairstreak	57			1	5	438	827	162	154	130	87	93	195	84	113	131	86	-31	2,563
6	**Early Hairstreak**	**5**	**1**	**1**	**2**	**2**	**9**	**4**			**6**	**3**	**1**			**3**	**1**	**3**	**200**	**41**
u	Cassius Blue							1	1			1								3
u	Ceraunus Blue	1	1					1												3
7	Eastern Tailed-Blue	38			2	3	957	1737	282	322	288	287	215	341	276	331	277	247	-14	5,603
7	Spring Azure	6	2			10	223	494	67	33	46	42	22	61	29	32	48	16	-59	1,131
7	Holly Azure	24					38	76	17	20	13	12	22	14	8	17	10	7	-53	278
6	Summer Azure	50	2		2	3	546	1011	141	149	186	183	104	166	182	266	248	200	3	3,439

Distribution of NC Butterfly Records by Year

		Date ?	<60	60s	70s	80s	90s	00-06	07	08	09	10	11	12	13	14	15	16	% Change	Totals
7	Appalachian Azure	3		2	1	2	16	41	10	6	5	1	3	3	2	7	1	2	-50	105
6	**Dusky Azure**	**5**		**1**	**3**		**9**	**15**							**2**		**1**	**2**	**100**	**38**
7	Silvery Blue	3					12	28				1	6	10	10	7	6	3	-63	86
7	Little Metalmark	9					36	29	5	3	4	2	1	4	5	6	11	2	-67	117
6	American Snout	36	2		1	1	300	567	51	59	81	112	56	94	80	67	80	96	26	1,683
6	Gulf Fritillary	9	4				115	338	35	103	27	32	26	114	35	54	84	80	27	1,056
7	Zebra Longwing	2				1	7	18		29		2			13			1	-67	73
6	Variegated Fritillary	19			1	1	576	1060	149	197	172	208	148	245	145	190	172	211	17	3,494
4	Diana Fritillary	13	4				87	90	23	35	12	9	17	11	4	13	14	12	aa	344
7	Great Spangled Fritillary	10				2	256	526	140	158	125	124	73	66	76	133	112	74	-20	1,875
7	Aphrodite Fritillary	5			2		89	137	46	66	23	11	10	7	7	12	15	10	-9	440
u	Regal Fritillary	2	1	1	1		1													6
7	Meadow Fritillary	4				1	70	170	77	81	40	22	23	29	19	27	37	23	-15	623
u	Gorgone Checkerspot							9												9
6	Silvery Checkerspot	9				1	144	215	39	36	45	61	54	55	58	55	30	56	10	858
u	Texan Crescent					2		1												3
7	Phaon Crescent	1					43	29	4	6	1	7	5	3	7	7	17	3	-63	133
7	Pearl Crescent	16			1	2	1227	1949	330	305	308	299	235	412	302	355	388	300	-12	6,429
7	Northern Crescent	3						24	10	2	4	1	2	8		2	1	1	-67	58
7	Tawny Crescent	2			2		24	25	2		5		3	1		1	2	1	-50	68
7	*Baltimore Checkerspot*	*9*					*10*	*5*		*4*	*3*	*2*	*4*	*7*					*ns*	*44*
7	Question Mark	20				3	554	949	125	89	165	199	96	193	109	71	111	114	-2	2,798
7	Eastern Comma	25				2	307	554	58	76	116	128	96	101	83	95	64	78	-11	1,783
7	Green Comma	9	4				5	4		5	5	7	3	4	13	5	2	3	-50	69
7	*Gray Comma*	*4*	*3*				*3*	*1*		*1*					*1*	*1*			*ns*	*14*
u	Compton Tortoiseshell						3													3
7	Mourning Cloak	25				4	303	507	39	74	114	97	79	97	64	60	53	29	-59	1,545
u	Milbert's Tortoiseshell	1																		1
7	American Lady	26	2		1	1	888	1800	285	246	227	196	152	335	250	268	188	204	-15	5,069
7	Painted Lady	23	1		1		70	389	37	77	62	42	5	177	48	87	21	11	-84	1,051
7	Red Admiral	23	1			3	452	875	212	114	125	246	90	278	111	127	219	129	-22	3,005
7	*Mimic*				*1*			*1*							*2*				*ns*	*4*
6	Common Buckeye	27	4		2	1	1063	1745	277	349	236	358	262	346	215	290	293	317	12	5,785
7	*White Peacock*	*1*					*4*	*3*							*2*				*ns*	*10*
7	Red-spotted Purple	23			1	4	767	1263	145	141	237	236	114	219	215	187	219	151	-21	3,922
7	Viceroy	30				1	334	402	63	54	102	107	38	106	92	77	69	65	-16	1,540
u	Goatweed Leafwing	2						1												3
6	Hackberry Emperor	14				1	167	382	36	41	82	91	33	62	68	47	45	56	10	1,125
7	Tawny Emperor	9				1	74	153	10	14	27	57	12	22	34	23	19	20	-9	475
6	Southern Pearly-eye	19				3	101	207	35	25	55	32	11	67	18	15	28	30	7	646
7	Northern Pearly-eye	7					79	257	40	26	52	74	47	52	55	59	60	41	-25	849
6	Creole Pearly-eye	17			4	2	46	100	19	24	27	31	9	25	14	21	15	22	29	376
7	Appalachian Brown	21					84	182	23	31	35	40	26	39	35	49	39	24	-37	628
7	Gemmed Satyr	24				1	228	362	41	58	77	44	36	98	57	55	53	57	-5	1,191
7	Carolina Satyr	35				2	555	1147	149	119	228	194	112	261	187	203	154	180	-2	3,526
6	**Intricate Satyr**				**4**											**1**		**2**	**100**	**7**
4	Georgia Satyr	3	2			1	68	32	3	3	6	3	1	7	4	6	3	5	aa	147
u	Helicta Satyr	20	2	7	4	1	18	6	1		1									60
u	Mitchell's Satyr	10				2	10	3												25
7	Little Wood-Satyr	35			1	3	212	388	64	62	64	59	38	68	34	42	42	15	-67	1,127

		Date ?	<60	60s	70s	80s	90s	00-06	07	08	09	10	11	12	13	14	15	16	% Change	Totals
7	Common Wood-Nymph	30	1			4	377	389	83	76	83	47	30	41	62	75	49	40	-23	1,387
7	Monarch	22	5		1	1	724	1147	203	204	187	200	183	192	112	205	148	142	-15	3,676
7	*Queen*	*9*	*4*		*1*		*14*	*19*	*2*	*7*	*15*	*8*	*1*	*6*	*10*	*2*	*3*		*ns*	*101*
u	Soldier						1	1												2
7	Silver-spotted Skipper	65	2		1	5	887	1839	302	286	275	269	208	309	284	325	405	270	-12	5,732
7	Long-tailed Skipper	8					172	215	34	67	9	11	15	137	9	21	21	27	-34	746
6	**Dorantes Longtail**	**2**					**3**	**1**	**1**							**1**		**2**	**100**	**10**
4	Golden Banded-Skipper	15	1	1			5	11	7		2	2	2	4				2	aa	52
6	Hoary Edge	47				4	229	362	35	38	51	40	22	41	38	45	37	46	24	1,035
7	Southern Cloudywing	47			2	1	298	465	55	39	57	34	24	47	28	36	39	31	-11	1,203
7	Northern Cloudywing	25				1	136	270	36	30	50	30	24	45	22	30	43	32	-3	774
7	Confused Cloudywing	22					42	58	7	6	3	1	3	5	3	4	11	4	-33	169
7	Hayhurst's Scallopwing	14				1	51	75	6	23	20	9	26	26	15	13	20	5	-75	304
7	Dreamy Duskywing	4				2	80	147	35	17	17	12	16	31	25	29	38	12	-57	465
7	Sleepy Duskywing	21	2			2	73	189	26	21	22	18	11	22	13	10	30	16	-11	476
7	Juvenal's Duskywing	38				11	368	739	159	108	82	74	60	95	75	83	109	52	-39	2,053
7	Horace's Duskywing	40				3	397	769	93	130	119	93	74	125	79	132	134	105	-4	2,293
4	Mottled Duskywing	12	8	1	1		12	21				2	4	5	6	2	2	4	aa	80
6	Zarucco Duskywing	60					118	173	25	24	21	11	7	19	15	14	20	28	87	535
u	Funereal Duskywing							1				1								2
7	Wild Indigo Duskywing	32				4	90	169	26	28	20	24	17	38	29	32	33	15	-50	557
u	Grizzled Skipper	1						9	5	1										16
6	Common Checkered-Skipper	23					320	590	89	93	67	114	84	101	62	121	95	97	4	1,856
4	White Checkered-Skipper							1							1			1	aa	3
7	*Tropical Checkered-Skipper*	*1*									*1*				*1*				*ns*	*3*
7	Common Sootywing	29			1	1	148	202	21	32	28	43	30	35	37	28	44	21	-40	700
6	Swarthy Skipper	28				2	221	316	30	19	41	30	17	46	30	19	32	44	52	875
6	Clouded Skipper	43			1	1	573	894	160	163	148	121	88	263	140	126	97	186	30	3,004
7	Least Skipper	22				4	311	524	87	85	110	124	73	156	128	138	125	122	-2	2,009
7	Southern Skipperling	42	4				113	196	9	14	18	21	11	35	27	4		4	-75	498
7	*European Skipper*						*5*	*2*	*4*	*1*						*2*			*ns*	*14*
6	Fiery Skipper	57			1	1	583	1005	150	169	177	179	137	226	213	231	213	209	2	3,551
4	Leonard's Skipper	7					24	29	1	5		2		2	3	3	1	2	aa	79
6	**Cobweb Skipper**	**20**	**2**			**1**	**18**	**28**	**2**	**1**	**1**	**2**		**2**	**1**	**2**		**3**	**200**	**83**
6	**Dotted Skipper**	**29**					**22**	**28**			**2**	**2**				**2**	**1**	**2**	**100**	**88**
7	Meske's Skipper	20			5	2	19	36		5	1	4	5	5	2	1	2	2	-33	109
7	Indian Skipper	2					10	29	9	3	2			3	1	6	1	2	-33	68
7	Peck's Skipper	5	1		1		57	98	32	31	10	10	15	19	21	37	18	21	-5	376
7	Tawny-edged Skipper	28				3	163	164	12	19	21	18	12	26	13	28	20	13	-35	540
7	Crossline Skipper	62				2	341	503	75	50	62	61	33	65	30	45	29	35	-15	1,393
7	*Long Dash*							*2*	*4*			*1*		*3*		*2*			*ns*	*12*
7	Whirlabout	65	3		16	3	216	357	21	29	32	32	11	42	36	27	15	8	-70	913
7	Southern Broken-dash	49				2	169	285	34	34	44	41	17	28	34	39	32	29	-3	837
7	Northern Broken-dash	20	3				69	170	18	10	14	17	7	13	21	24	12	6	-63	404
7	Little Glassywing	17				3	238	369	50	37	62	72	51	67	59	83	72	65	-3	1,245
7	Sachem	42			3	2	658	1011	123	149	163	212	181	216	176	214	192	159	-19	3,501
u	Arogos Skipper	2	3				9	7		1										22
7	Delaware Skipper	12		1			127	186	30	13	29	19	12	26	28	25	29	22	-8	559
6	Byssus Skipper	5					13	28	17	10	8	5	5	13	13	9	11	12	9	149
u	Rare Skipper		5				16	5	1											27

Distribution of NC Butterfly Records by Year

		Date ?	<60	60s	70s	80s	90s	00-06	07	08	09	10	11	12	13	14	15	16	% Change	Totals
7	Hobomok Skipper	5					49	77	29	14	7	1	8	17	2	10	3	2	-75	224
6	Zabulon Skipper	23	1			4	382	589	64	88	116	105	53	146	100	96	125	119	14	2,011
7	*Aaron's Skipper*	*2*					*10*	*6*						*1*					*ns*	*19*
4	Yehl Skipper	33	1				69	90	10	13	16	16	11	19	15	5	6	12	aa	316
7	Broad-winged Skipper	5					67	51	5	5	5	8	9	20	13	8	7	5	-58	208
6	**Palatka Skipper**	**6**				**1**	**27**	**26**	**3**		**2**	**1**		**7**	**1**	**1**	**1**	**4**	**100**	**80**
7	Dion Skipper	25				1	85	103	24	11	28	25	15	30	11	21	27	19	-10	425
6	Dukes' Skipper	2		1			19	11		4	9	5	2	2	2	4	1	4	33	66
7	Berry's Skipper	2					9	9	1	3	2			2	2	2	4	1	-50	37
7	*Two-spotted Skipper*	*6*			*1*		*9*	*16*	*4*	*1*		*1*	*1*	*2*	*3*				*ns*	*44*
6	Dun Skipper	19				1	290	472	67	65	78	75	60	115	62	54	78	80	8	1,516
4	Dusted Skipper	26				2	45	89	17	10	6	4	3	17	3	6	12	9	aa	249
u	Loammi Skipper	2				2	2													6
7	Crystal Skipper	2					1	41	10	9	4	4	2	7	4	4	11	2	-67	101
7	*Pepper and Salt Skipper*	*8*				*2*	*25*	*66*	*8*	*4*	*5*	*5*	*6*	*6*	*2*	*9*	*2*		*ns*	*148*
7	Lace-winged Roadside-Skipper	20					78	159	15	9	39	29	14	35	29	26	27	26	-4	506
4	Carolina Roadside-Skipper	32			1	1	45	83	4	3	10	10	4	17	7	7	12	10	aa	246
7	Reversed Roadside-Skipper	13					31	32		3	3	2	1	4	1	3	8	3	-25	104
7	Common Roadside-Skipper	21	1			1	38	86	3	12	13	17	9	26	19	27	17	10	-50	300
u	Dusky Roadside-Skipper	13	3				21	8	1	1										47
6	**Eufala Skipper**	**16**					**133**	**135**	**18**	**23**	**16**	**11**	**2**	**14**	**12**	**3**	**5**	**19**	**138**	**407**
4	Twin-spot Skipper	7					44	40	13	8	5	2	1	12	9	5	1	6	aa	153
6	Brazilian Skipper	15					18	29	2	1	4	6		13		12	1	9	50	110
7	Salt Marsh Skipper	4				1	59	57	5	3	5	8	4	6	6	6	12	3	-57	179
6	Ocola Skipper	14					296	450	46	46	47	51	44	96	112	170	157	135	16	1,664
4	Yucca Giant-Skipper	13			15		35	47	3	6	8	9	1	4	2	4	4	3	aa	154
u	Cofaqui Giant-Skipper	2					1				1									4
	Number of Records:	3,092	124	18	117	248	30,521	53,228	8,051	8,358	8,318	8,658	5,828	10,555	7,661	8,548	8,537	7,586		169,448
		Date ?	<60	60s	70s	80s	90s	00-06	07	08	09	10	11	12	13	14	15	16		

Species not reported in the last 6 years:

Great Southern White, Orange-barred Sulphur, Barred Yellow, Cassius Blue, Ceraunus Blue, Regal Fritillary, Gorgone Checkerspot, Texan Crescent, Compton Tortoiseshell, Milbert's Tortoiseshell, Goatweed Leafwing, Helicta Satyr, Mitchell's Satyr, Soldier, Funereal Duskywing, Grizzled Skipper, Arogos Skipper, Rare Skipper, Loammi Skipper, Dusky Roadside-Skipper, Cofaqui Giant-Skipper

Nearly all records with unknown date were derived from Nekola-Opler dot maps.

BOLD - Records in 2016 were 2 or more times as many as previous 5 year average or seen for first time in 5 years.
ITALIC - Species had been seen in previous 5 years BUT not in 2016. (ns - not seen)
unk - Unable to calculate percent change.

* Comparison of Year 2016 records to AVERAGE for the previous 5 years - (2011-2015). No weights applied.

6 - Above average

7 - Below average

4 - At average (aa)

u - Not applicable