THE DRAGONFLIES AND DAMSELFLIES OF NORTH CAROLINA

Ninth Approximation

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This material — Ninth Approximation — is an account of the species of dragonflies and damselflies of North Carolina. It is not considered to be a "publication". It is intended to be a guide or "handbook" for odonate enthusiasts, as there is as yet no published book on this group of insects of North Carolina. The bulk of the information is based on data for each species that was compiled over a several decade period by the late Duncan Cuyler; most of these data are based on specimens. (Cuyler's entire specimen collection is housed at the Florida State Collection of Arthropods/International Odonata Research Institute in Gainesville, FL.) In 2009, Tom Howard created the Dragonflies and Damselflies of North Carolina website -- http://www.dpr.ncparks.gov/odes/a/accounts.php -- which has an input function that allows biologists to enter their own observational data.

The county distribution maps in this document (and on the website) represent a mix of specimens, photos, and unconfirmed sight records. Prior to the Fourth Approximation, Cuyler's county records were transformed into an Excel file by Steve Roble (Virginia Natural Heritage Program), and this file was sent to Howard, who converted these data into the county range maps. However, in fall 2012 the authors received an Excel file from Bill Mauffray, the curator of odonates at the Florida museum, that contains all of the roughly 17,900 records of odonate specimens there that have been collected in North Carolina! This file contains not only the species and county, but also the date, exact location, and number of specimens of the species collected on that date. Thus, starting with the Fourth Approximation, we finally have meaningful flight charts (one chart for each of the three physiographic provinces) on the PDF pages, with a respectable number of date records for most species, many new earliest dates and latest dates, and many new high counts. (Note – high counts of these specimen data, as shown on many of the species account PDF's, simply are the number of specimens collected on that date; the collector might well have seen many more individuals that day.) Most of these specimen records show as a blue-green color on the website county maps, as the bulk of the records were taken more than 20 years ago. Newer records are indicated on the maps on the website by different color shadings and symbols (on the PDF maps).

The common and scientific names follow those of "The Odonata of North America" (Dragonfly Society of the Americas Checklist Committee 2017), except that the damselflies are moved behind the dragonflies in our document. Thus, the families (ending in "idae") are arranged in taxonomic order from most primitive to most "recent"; within each family, the sequence is simply alphabetical, by both genera and by species (within a given genus). Information about the life history of the state's 134 confirmed species of dragonflies (plus six others reported in the literature) – based in part on the field experience of the senior author (LeGrand), and in part on three excellent and recent publications, by Dunkle (2000), Beaton (2007), and Paulson (2011) – is given under several headings on each species account.

The Behavior section of most of the damselflies is not yet written, and thus this field does not appear for most of the damselfly species accounts. However, it is hoped that LeGrand or others can fill out this section for all damselfly species in the next year or two, based on their field experience; otherwise, material written in reference books will be summarized.

One purpose of this document is to encourage the reporting of sightings or other records of rare species to the Natural Heritage Program. This Program keeps computerized records on these rare species, in hopes of arranging protection for them. Rare species are noted by the "NC Status" and "US Status" lines beneath each species' range; see Page vi of this document for rarity codes.

Much still remains to be learned about the distributions and life histories of the 187 species of odonates (134 dragonflies and 53 damselflies) in the state. Many species with 20 or more county records have only a handful dates available, and some species with a dozen county records or more have very few flight dates for them. Geographically, the dot maps have many holes, even for common species. Coverage of the state by Cuyler (mostly pre-1990), though somewhat thorough, was probably not uniform; certainly coverage in recent years has not been uniform, as most field workers tend to be clustered in the Piedmont, especially in the Triangle area. Especially needing work are mountain counties, in particular for clubtail (Family Gomphidae) species, and most Coastal Plain counties, particularly for damselflies. From the list in Appendix B, it is easy to pick out the counties that have had little field work.

• Suggested References •

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• 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

Dragonflies and Damselflies (Odonata) of Georgia, the southeastern U.S., and beyond. This site, created by Marion Dobbs, provides photos and county range maps for all species found in Georgia; most of these are also found in North Carolina.
http://www.mmdragon.net

Delmarva Dragonflies and Damselflies. Photos and minimal text of all species found on the Delmarva Peninsula.
https://sites.google.com/a/udel.edu/deodes/

International Odonata Research Institute. Provides a number of links and checklists.
http://www.iodonata.net

OdonataCentral. Provides a number of links to various odonate resources, contains an online data entry feature, and shows county distribution maps (and records) for all North American species. The site also has a link to "The Odonata of North America."
http://www.odonatacentral.org

Southeastern Odes Public Group on Facebook. Posts on identification, sightings, ecology, and other aspects of odonates in the southeastern US.
https://www.facebook.com/groups/119127804903860/

Giff Beaton's personal website. Dragonflies and Damselflies (Odonata) of Georgia and the Southeast. Photos and some text for most species found in North Carolina.
http://www.giffbeaton.com/dragonflies.htm

Allen Bryan's personal website. Damselflies and Dragonflies found and photographed in Virginia, North Carolina, or Montana. Photos and some text for most species found in North Carolina.
http://www.visitingnature.com/damselfliesanddragonflies.htm

Will Cook's personal website. Photos of North Carolina and Virginia odonates.
http://www.carolinanature.com/odonata/

Steve Krotzer's personal website. Features photos of adult and larval odonates from Alabama and Mississippi, most of which also occur in NC.
http://www.haysophill.com/odonates-folder/odonates-home.html

Greg Lasley's personal website. Photos of odonates of North America.
http://greglasley.com/dragonnoramerix.html

Troy Hibbitts's personal website. Photos of North American odonates.
http://thehibbitts.net/troy/photo/odonata.htm

Jeff Pippen's personal website. Photos of North Carolina odonates.
http://www.jeffpippen.com/dragonflies.htm

• ORGANIZATIONS •

Dragonfly Society of the Americas

http://odonatacentral.org/index.php/PageAction.get/name/DSAHomePage

• ACKNOWLEDGMENTS •

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TABLE OF CONTENTS

Species	Page	Status * State	Status * Global
PETALURIDAE [Petaltails] - 1 species in NC			
Gray Petaltail -- *Tachopteryx thoreyi*	1	S4	G4
AESHNIDAE [Darners] - 14 species in NC			
Black-tipped Darner -- *Aeshna tuberculifera*	2	SR - S1	G4
Shadow Darner -- *Aeshna umbrosa*	3	S5	G5
Green-striped Darner -- *Aeshna verticalis*	4	SR - S1	G5
Common Green Darner -- *Anax junius*	5	S5	G5
Comet Darner -- *Anax longipes*	6	S4	G5
Springtime Darner -- *Basiaeschna janata*	7	S5	G5
Ocellated Darner -- *Boyeria grafiana*	8	SR - S2?	G5
Fawn Darner -- *Boyeria vinosa*	9	S5	G5
Regal Darner -- *Coryphaeschna ingens*	10	SR - S2?	G5
Swamp Darner -- *Epiaeschna heros*	11	S5	G5
Taper-tailed Darner -- *Gomphaeschna antilope*	12	S4	G4
Harlequin Darner -- *Gomphaeschna furcillata*	13	S4S5	G5
Cyrano Darner -- *Nasiaeschna pentacantha*	14	S4S5	G5
Phantom Darner -- *Triacanthagyna trifida*	15	SR - S1?	G5
GOMPHIDAE [Clubtails] - 48 species in NC			
Two-striped Forceptail -- *Aphylla williamsoni*	16	S3	G5
Gray-green Clubtail -- *Arigomphus pallidus*	17	SR - S1	G5
Unicorn Clubtail -- *Arigomphus villosipes*	18	W - S3	G5
Southeastern Spinyleg -- *Dromogomphus armatus*	19	W - S3	G4
Black-shouldered Spinyleg -- *Dromogomphus spinosus*	20	S5	G5
Flag-tailed Spinyleg -- *Dromogomphus spoliatus*	21	SR - S1	G4G5
Eastern Ringtail -- *Erpetogomphus designatus*	22	S3S4	G5
Blackwater Clubtail -- *Gomphurus dilatatus*	23	W - S3?	G5
Midland Clubtail -- *Gomphurus fraternus*	24	SR - S1	G5
Cocoa Clubtail -- *Gomphurus hybridus*	25	W - S3	G4
Splendid Clubtail -- *Gomphurus lineatifrons*	26	SR - S2	G4
Septima's Clubtail -- *Gomphurus septima*	27	SR - S2	FSC - G2
Cobra Clubtail -- *Gomphurus vastus*	28	S3S4	G5
Skillet Clubtail -- *Gomphurus ventricosus*	29	SR - S1S2	G3
Dragonhunter -- *Hagenius brevistylus*	30	S5	G5
Spine-crowned Clubtail -- *Hylogomphus abbreviatus*	31	SR - S3	G4
Mustached Clubtail -- *Hylogomphus adelphus*	32	SR - S1S2	G4
Banner Clubtail -- *Hylogomphus apomyius*	33	W - S3?	G3G4
Piedmont Clubtail -- *Hylogomphus parvidens*	34	W - S3?	G4
Green-faced Clubtail -- *Hylogomphus viridifrons*	35	SR - S1	G3G4
Southern Pygmy Clubtail -- *Lanthus vernalis*	36	S4	G4
Brook Snaketail -- *Ophiogomphus aspersus*	37	SR - S1	G4
Edmund's Snaketail -- *Ophiogomphus edmundo*	38	SR - S1	FSC - G1G2
Pygmy Snaketail -- *Ophiogomphus howei*	39	SR - S1	FSC - G3
Appalachian Snaketail -- *Ophiogomphus incurvatus*	40	W - S3	G3
Maine Snaketail -- *Ophiogomphus mainensis*	41	SR - S2S3	G4
Rusty Snaketail -- *Ophiogomphus rupinsulensis*	42	SR - S1	G5
Clearlake Clubtail -- *Phanogomphus australis*	43	SR - S1	G4
Beaverpond Clubtail -- *Phanogomphus borealis*	44	SR - SH	G4
Sandhill Clubtail -- *Phanogomphus cavillaris*	45	SR - S1	G4

TABLE OF CONTENTS

Species	Page	Status * State	Global
GOMPHIDAE [Clubtails] - 48 species in NC			
Harpoon Clubtail -- *Phanogomphus descriptus*	46	SR - S1	G4
Diminutive Clubtail -- *Phanogomphus diminutus*	47	W - S3S4	G3G4
Lancet Clubtail -- *Phanogomphus exilis*	48	S5	G5
Ashy Clubtail -- *Phanogomphus lividus*	49	S5	G5
Rapids Clubtail -- *Phanogomphus quadricolor*	50	SR - S1?	G3G4
Belle's Sanddragon -- *Progomphus bellei*	51	SR - S1	FSC - G3
Common Sanddragon -- *Progomphus obscurus*	52	S5	G5
Cherokee Clubtail -- *Stenogomphurus consanguis*	53	SR - S1?	FSC - G3
Sable Clubtail -- *Stenogomphurus rogersi*	54	W - S2S3	G4
Eastern Least Clubtail -- *Stylogomphus albistylus*	55	S3S4	G5
Interior Least Clubtail -- *Stylogomphus sigmastylus*	56	SR - SH	G5
Riverine Clubtail -- *Stylurus amnicola*	57	W - S3	G4
Shining Clubtail -- *Stylurus ivae*	58	SR - S2S3	G4
Laura's Clubtail -- *Stylurus laurae*	59	S3	G4
Russet-tipped Clubtail -- *Stylurus plagiatus*	60	S4S5	G5
Zebra Clubtail -- *Stylurus scudderi*	61	SR - S2?	G4
Arrow Clubtail -- *Stylurus spiniceps*	62	S3S4	G5
Townes's Clubtail -- *Stylurus townesi*	63	SR - SH	FSC - G3
CORDULEGASTRIDAE [Spiketails] - 4 species in NC			
Brown Spiketail -- *Cordulegaster bilineata*	64	S4	G5
Tiger Spiketail -- *Cordulegaster erronea*	65	S3S4	G4
Twin-spotted Spiketail -- *Cordulegaster maculata*	66	S5	G5
Arrowhead Spiketail -- *Cordulegaster obliqua*	67	S3	G4
MACROMIIDAE [Cruisers] - 5 species in NC			
Stream Cruiser -- *Didymops transversa*	68	S5	G5
Allegheny River Cruiser -- *Macromia alleghaniensis*	69	S4	G4
Swift River Cruiser -- *Macromia illinoiensis*	70	S5	G5
Mountain River Cruiser -- *Macromia margarita*	71	SR - S2?	FSC - G3
Royal River Cruiser -- *Macromia taeniolata*	72	S4	G5
CORDULIIDAE [Emeralds] - 19 species in NC			
American Emerald -- *Cordulia shurtleffii*	73	SR - S1	G5
Slender Baskettail -- *Epitheca costalis*	74	S4	G5
Common Baskettail -- *Epitheca cynosura*	75	S5	G5
Prince Baskettail -- *Epitheca princeps*	76	S5	G5
Mantled Baskettail -- *Epitheca semiaquea*	77	S5	G5
Robust Baskettail -- *Epitheca spinosa*	78	W - S3?	G4
Selys's Sundragon -- *Helocordulia selysii*	79	S4	G4
Uhler's Sundragon -- *Helocordulia uhleri*	80	S3S4	G5
Alabama Shadowdragon -- *Neurocordulia alabamensis*	81	W - S3?	G5
Smoky Shadowdragon -- *Neurocordulia molesta*	82	W - S3?	G4
Umber Shadowdragon -- *Neurocordulia obsoleta*	83	S4	G5
Cinnamon Shadowdragon -- *Neurocordulia virginiensis*	84	W - S3?	G4
Stygian Shadowdragon -- *Neurocordulia yamaskanensis*	85	SR - S1?	G5
Ski-tipped Emerald -- *Somatochlora elongata*	86	SR - S2S3	G5
Fine-lined Emerald -- *Somatochlora filosa*	87	S4	G5
Coppery Emerald -- *Somatochlora georgiana*	88	SR - S2?	G3G4
Mocha Emerald -- *Somatochlora linearis*	89	S5	G5

TABLE OF CONTENTS

Species	Page	Status * State	Global
CORDULIIDAE [Emeralds] - 19 species in NC			
Treetop Emerald -- *Somatochlora provocans*	90	W - S3?	G4
Clamp-tipped Emerald -- *Somatochlora tenebrosa*	91	S4S5	G5
LIBELLULIDAE [Skimmers] - 43 species in NC			
Four-spotted Pennant -- *Brachymesia gravida*	92	S5	G5
Amanda's Pennant -- *Celithemis amanda*	93	S5	G5
Red-veined Pennant -- *Celithemis bertha*	94	S4	G5
Calico Pennant -- *Celithemis elisa*	95	S5	G5
Halloween Pennant -- *Celithemis eponina*	96	S5	G5
Banded Pennant -- *Celithemis fasciata*	97	S5	G5
Ornate Pennant -- *Celithemis ornata*	98	S5	G5
Double-ringed Pennant -- *Celithemis verna*	99	S4	G5
Swift Setwing -- *Dythemis velox*	100	S4S5	G5
Eastern Pondhawk -- *Erythemis simplicicollis*	101	S5	G5
Seaside Dragonlet -- *Erythrodiplax berenice*	102	S5	G5
Little Blue Dragonlet -- *Erythrodiplax minuscula*	103	S5	G5
Blue Corporal -- *Ladona deplanata*	104	S5	G5
Chalk-fronted Corporal -- *Ladona julia*	105	SR - S1	G5
Golden-winged Skimmer -- *Libellula auripennis*	106	S5	G5
Bar-winged Skimmer -- *Libellula axilena*	107	S5	G5
Spangled Skimmer -- *Libellula cyanea*	108	S5	G5
Yellow-sided Skimmer -- *Libellula flavida*	109	S4S5	G5
Slaty Skimmer -- *Libellula incesta*	110	S5	G5
Widow Skimmer -- *Libellula luctuosa*	111	S5	G5
Needham's Skimmer -- *Libellula needhami*	112	S5	G5
Twelve-spotted Skimmer -- *Libellula pulchella*	113	S4	G5
Painted Skimmer -- *Libellula semifasciata*	114	S5	G5
Great Blue Skimmer -- *Libellula vibrans*	115	S5	G5
Marl Pennant -- *Macrodiplax balteata*	116	W - S2S3	G5
Elfin Skimmer -- *Nannothemis bella*	117	W - S3S4	G4
Roseate Skimmer -- *Orthemis ferruginea*	118	S3S4	G5
Blue Dasher -- *Pachydiplax longipennis*	119	S5	G5
Wandering Glider -- *Pantala flavescens*	120	S5	G5
Spot-winged Glider -- *Pantala hymenaea*	121	S5	G5
Eastern Amberwing -- *Perithemis tenera*	122	S5	G5
Common Whitetail -- *Plathemis lydia*	123	S5	G5
Blue-faced Meadowhawk -- *Sympetrum ambiguum*	124	S5	G5
Variegated Meadowhawk -- *Sympetrum corruptum*	125	SA	G5
Cherry-faced Meadowhawk -- *Sympetrum internum*	126	W - SU	G5
White-faced Meadowhawk -- *Sympetrum obtrusum*	127	SR - S1	G5
Ruby Meadowhawk -- *Sympetrum rubicundulum*	128	S4	G5
Band-winged Meadowhawk -- *Sympetrum semicinctum*	129	S3S4	G5
Autumn Meadowhawk -- *Sympetrum vicinum*	130	S5	G5
Striped Saddlebags -- *Tramea calverti*	131	SA	G5
Carolina Saddlebags -- *Tramea carolina*	132	S5	G5
Black Saddlebags -- *Tramea lacerata*	133	S5	G5
Red Saddlebags -- *Tramea onusta*	134	SA	G5

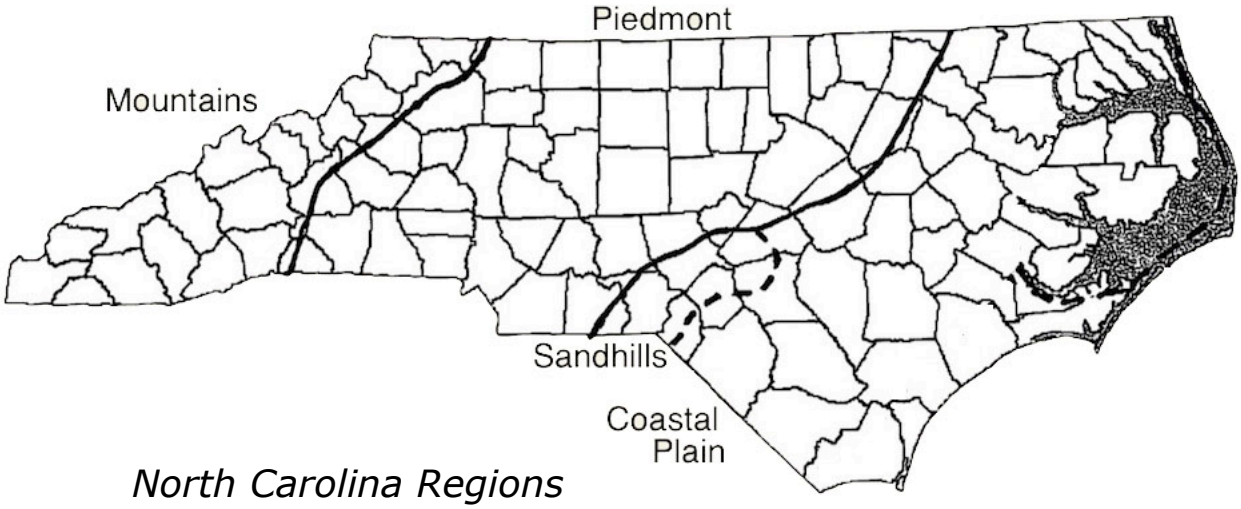
TABLE OF CONTENTS

Species	Page	Status * State	Global
CALOPTERYGIDAE [Broad-winged Damsels] - 6 species in NC			
Superb Jewelwing -- *Calopteryx amata*	135	SR - S1S2	G4
Appalachian Jewelwing -- *Calopteryx angustipennis*	136	S3S4	G4
Sparkling Jewelwing -- *Calopteryx dimidiata*	137	S5	G5
Ebony Jewelwing -- *Calopteryx maculata*	138	S5	G5
American Rubyspot -- *Hetaerina americana*	139	S5	G5
Smoky Rubyspot -- *Hetaerina titia*	140	S5	G5
LESTIDAE [Spreadwings] - 9 species in NC			
Great Spreadwing -- *Archilestes grandis*	141	S3S4	G5
Southern Spreadwing -- *Lestes australis*	142	S5	G5
Spotted Spreadwing -- *Lestes congener*	143	SR - S1	G5
Amber-winged Spreadwing -- *Lestes eurinus*	144	W - S3	G4
Sweetflag Spreadwing -- *Lestes forcipatus*	145	W - S2S3	G5
Elegant Spreadwing -- *Lestes inaequalis*	146	S5	G5
Slender Spreadwing -- *Lestes rectangularis*	147	S5	G5
Carolina Spreadwing -- *Lestes vidua*	148	SR - S2?	G5
Swamp Spreadwing -- *Lestes vigilax*	149	S5	G5
COENAGRIONIDAE [Pond Damsels] - 38 species in NC			
Eastern Red Damsel -- *Amphiagrion saucium*	150	S4?	G5
Blue-fronted Dancer -- *Argia apicalis*	151	S5	G5
Seepage Dancer -- *Argia bipunctulata*	152	S4	G4
Variable Dancer -- *Argia fumipennis*	153	S5	G5
Powdered Dancer -- *Argia moesta*	154	S5	G5
Blue-ringed Dancer -- *Argia sedula*	155	S5	G5
Blue-tipped Dancer -- *Argia tibialis*	156	S5	G5
Dusky Dancer -- *Argia translata*	157	S5	G5
Aurora Damsel -- *Chromagrion conditum*	158	S4?	G5
Azure Bluet -- *Enallagma aspersum*	159	S5	G5
Double-striped Bluet -- *Enallagma basidens*	160	S5	G5
Familiar Bluet -- *Enallagma civile*	161	S5	G5
Cherry Bluet -- *Enallagma concisum*	162	S3?	G4
Attenuated Bluet -- *Enallagma daeckii*	163	S4	G4
Sandhill Bluet -- *Enallagma davisi*	164	S3?	G5
Turquoise Bluet -- *Enallagma divagans*	165	S5	G5
Atlantic Bluet -- *Enallagma doubledayi*	166	S5	G5
Burgundy Bluet -- *Enallagma dubium*	167	S4S5	G5
Big Bluet -- *Enallagma durum*	168	S4S5	G5
Stream Bluet -- *Enallagma exsulans*	169	S5	G5
Skimming Bluet -- *Enallagma geminatum*	170	S5	G5
Hagen's Bluet -- *Enallagma hageni*	171	S3?	G5
Little Bluet -- *Enallagma minusculum*	172	W - SE?	G4
Pale Bluet -- *Enallagma pallidum*	173	S4?	G4
Orange Bluet -- *Enallagma signatum*	174	S5	G5
Golden Bluet -- *Enallagma sulcatum*	175	W - SU	G4
Slender Bluet -- *Enallagma traviatum*	176	S5	G5
Vesper Bluet -- *Enallagma vesperum*	177	S3S4	G5
Blackwater Bluet -- *Enallagma weewa*	178	S5	G5

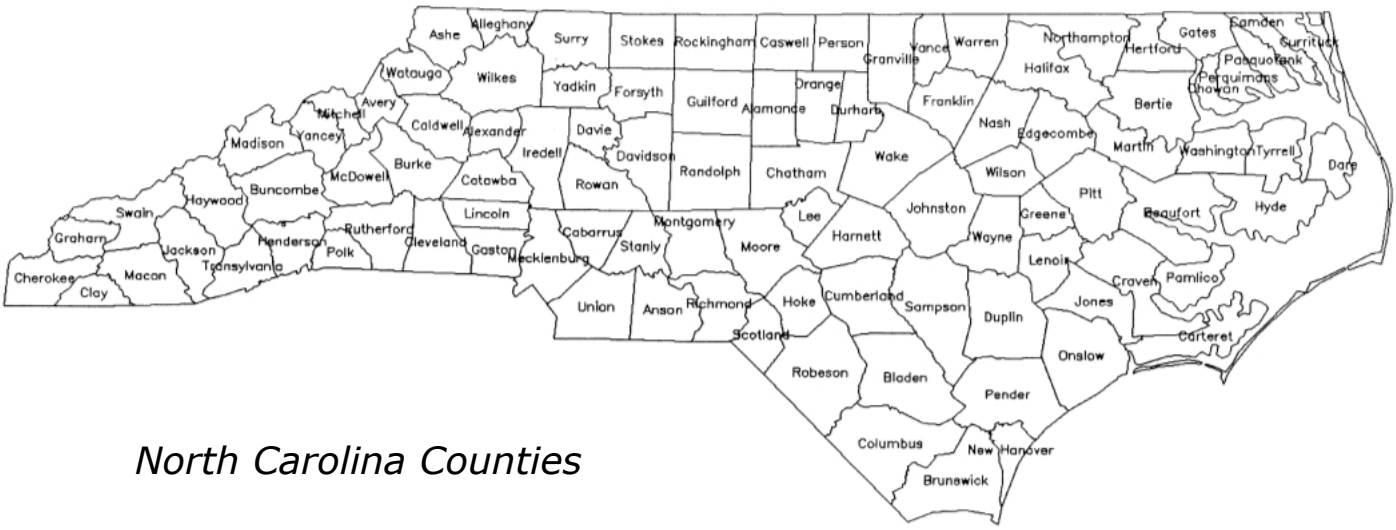
TABLE OF CONTENTS

Species	Page	Status *	
COENAGRIONIDAE [Pond Damsels] - 38 species in NC		**State**	**Global**
Citrine Forktail -- *Ischnura hastata*	179	S5	G5
Lilypad Forktail -- *Ischnura kellicotti*	180	S3S4	G5
Fragile Forktail -- *Ischnura posita*	181	S5	G5
Furtive Forktail -- *Ischnura prognata*	182	S3S4	G4
Rambur's Forktail -- *Ischnura ramburii*	183	S5	G5
Eastern Forktail -- *Ischnura verticalis*	184	S4S5	G5
Sphagnum Sprite -- *Nehalennia gracilis*	185	S3S4	G5
Southern Sprite -- *Nehalennia integricollis*	186	S3S4	G5
Duckweed Firetail -- *Telebasis byersi*	187	S3S4	G5

Appendix A (Species reported, but undocumented, for North Carolina) A1
Appendix B (NC Odonate Species per County) B1
Appendix C (NC Odonate Species by Number of Counties) C1
Appendix D (NC Odonate Species by Geographical Province) . . . . . D1 - D3
Appendix E (NC Odonate Species by NHP Rank) . . . . . E1 - E3



North Carolina Regions



North Carolina Counties

DEFINITIONS

* Status:

NC: (There is no State protection for odonates 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: FSC = Federal Species of Concern

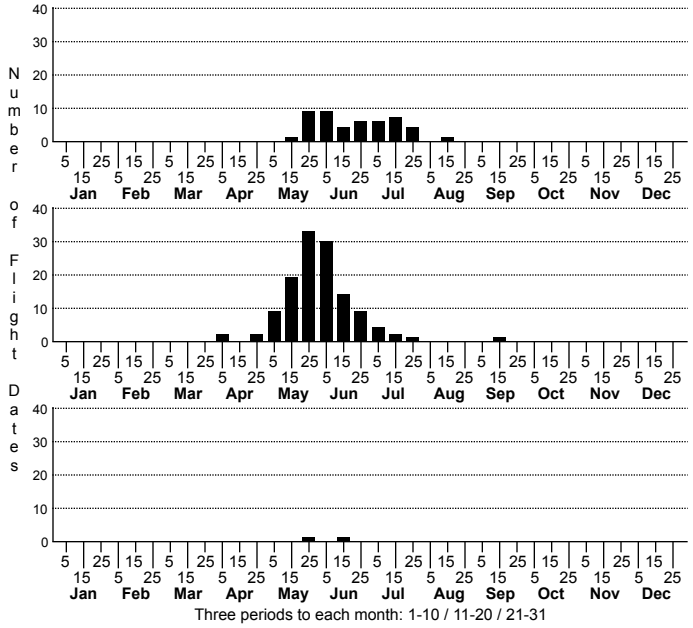
Rank: NatureServe gives each plant and animal species a global rank of rarity, and each state Natural Heritage Program gives each species occurring within its borders a state rank of rarity. Thus, each species has a global and state rank. For each species, the S# varies from state to state, depending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

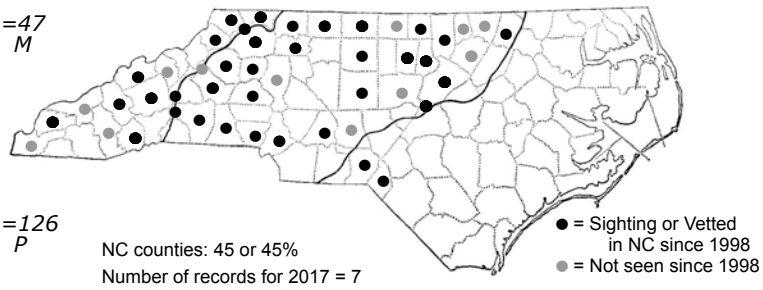
State:

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.
SU	1?	Unrankable - Currently unrankable in North Carolina due to lack of information or substantially conflicting information about status or trends. Need more information.
SE	1+	Exotic, not native (or presumed not native) to North Carolina.

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", and there is no Global Exotic (GE) rank.

Tachopteryx thoreyi Gray Petaltail





NC counties: 45 or 45%
Number of records for 2017 = 7

Sight (not vetted) in 2017: Surry

High counts of:
12 - Harnett; P - 2002-05-08
6 - Harnett; P - 2003-05-20
5 - Rockingham - 2008-05-31

Earliest date: Durham 2010-04-06
Latest date: Wake 2009-09-12

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

DISTRIBUTION: Present throughout the mountains and Piedmont; very rare in the Sandhills (only two records), but seemingly absent from nearly all of the remainder of the Coastal Plain.

ABUNDANCE: Generally uncommon, but may be fairly common, at least locally.

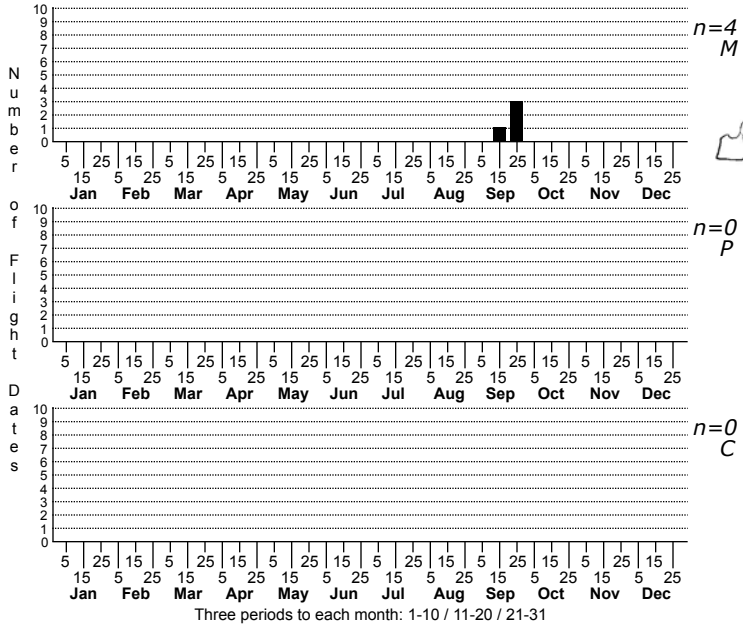
FLIGHT: In the Piedmont, late April to mid-July, and sparingly to late July; a later flight in the mountains by a month, from mid-May to mid-August. A recent report for 12 September in the Piedmont is extremely late and probably requires confirmation.

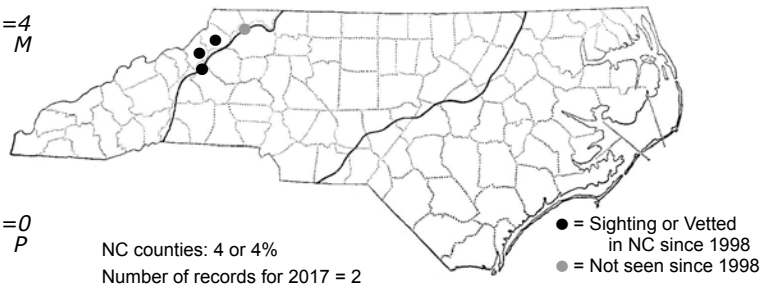
HABITAT: Breeds in wooded seepages, one of the few dragonflies to breed in seeps. Adults seen in upland forests and edges.

BEHAVIOR: Tame. Typically perches vertically on tree trunks, but also perches on humans!

COMMENTS: This is a "primitive" species. It is easily identified, as it is the only gray-colored species on the abdomen and as it often gives the observer an excellent view while it perches on tree trunks and other conspicuous places. It was formerly (20-30 years ago) thought be be rare (or very poorly known) in the state, but with many more observers afield, the species has been seen frequently, probably not representing a population increase. Though numbers are not overly great for a large dragonfly, its habit of flying to wooded openings in uplands, such as along jeep roads and sunny trails, and perching on tree trunks and humans, makes it readily conspicuous and an "odonate favorite".

Aeshna tuberculifera Black-tipped Darner





NC counties: 4 or 4%
Number of records for 2017 = 2

Vetted in 2017: Watauga

High counts of:
2 - Watauga - 2017-09-22
1 - Burke; M - 1969-09-29
1 - Avery - 2016-09-27

Earliest date: Burke; M 2017-09-19
Latest date: Burke; M 1969-09-29

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

DISTRIBUTION: Northern mountains/foothills only; records only from Watauga, Avery, Wilkes, and Burke counties.

ABUNDANCE: Undoubtedly rare, and possibly local. Poorly known in the state, though there are a few recent records (2016-17); the last previous record was from 1969.

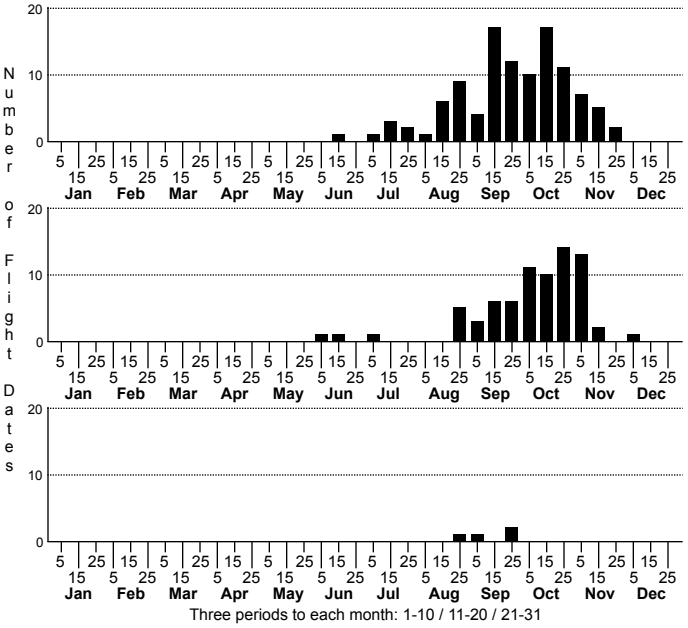
FLIGHT: Quite late for a dragonfly, especially in the mountains. The only NC dates available fall between 19 September and 29 September. Likely flies from mid- or late August into October, but most odonate field work in the mountains terminates in September and thus few people are likely to be active in the northern mountains when this species is flying.

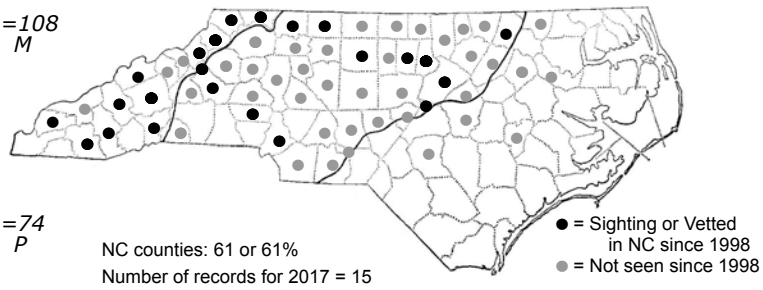
HABITAT: Mostly at ponds with marshy edges, such as cattails. The ponds are typically at high elevations (mostly over 3500 feet).

BEHAVIOR: Poorly known in NC. All recent records were of individuals seen over or along the edges of ponds, and thus it is not known how far individuals range away from such waters in the state.

COMMENTS: NC lies at the southern edge of the range, as it is not known from Georgia. Jim Petranka photographed an individual -- the first photograph of the species known in NC -- on 27 September 2016. This excellent record has moved the species off of the "historical" list of the N.C. Natural Heritage Program; thus, the State Rank has changed from SH [historical] to S1 [very rare]. Both John and Jim Petranka added additional county records (for Watauga and Burke), documented with photos, in 2017. Obviously, other ponds in the northern mountains need to be checked in the fall season, especially in the latter half of September.

Aeshna umbrosa Shadow Darner





NC counties: 61 or 61%
Number of records for 2017 = 15

High counts of:
12 - Haywood - 2017-09-22
8 - Burke; M - 1989-10-03
5 - Watauga - 2016-10-25

Earliest date: Durham 2017-06-04
Latest date: Mecklenburg 2017-12-01

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

DISTRIBUTION: Essentially in the mountains and Piedmont, and sparingly in the western third of the Coastal Plain; probably in the Sandhills region.

ABUNDANCE: Uncommon to at least locally fairly common in the mountains, uncommon over most of the Piedmont, and very rare in the western Coastal Plain. However, abundance is somewhat difficult to assess, as the species often flies in late afternoon and near dusk, in shaded parts of forests. Also, it flies late in the season, when much odonate field work has subsided. Found in most counties within the range in the state. It is certainly not nearly as numerous or conspicuous as most darners of the spring and early summer seasons; however, it is one of the few darners that is more numerous in the mountains than it is downstate.

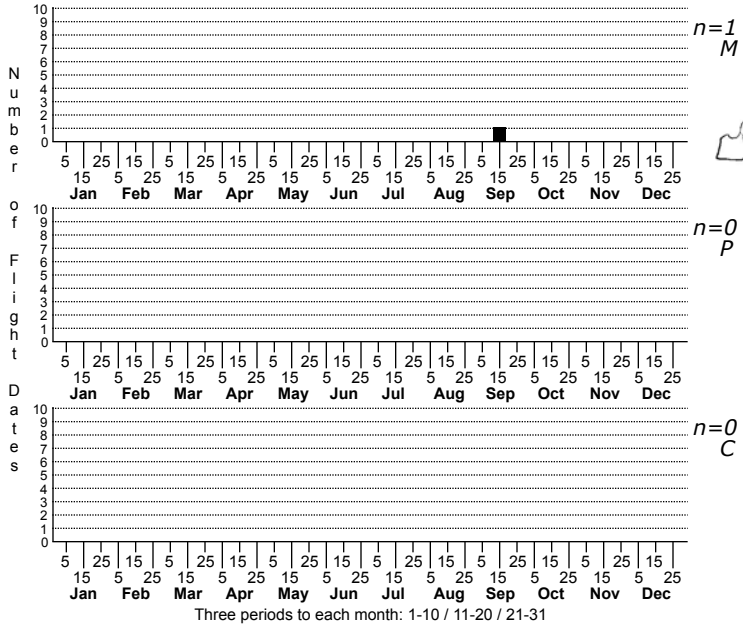
FLIGHT: Because this is a late summer/fall species, the mountain flight occurs somewhat earlier than the flights downstate. In the mountains it occurs mainly from early July to mid-November, peaking in September and October, with a few records even to late November. In the Piedmont the flight is later, mainly from late August to early November, and possibly into late November. However, there are early records in the mountains and Piedmont as early as mid-June. The few flight dates from the Coastal Plain are from late August to late September, though it certainly must fly into November there.

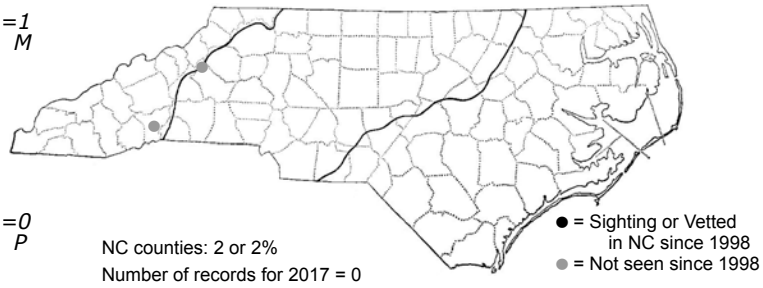
HABITAT: The vicinity of ponds, lake shores, marshes, and small streams, generally near wooded areas, but it can occur in open areas. Seldom seen near fields or areas far from water.

BEHAVIOR: Rather secretive, often staying in shady places. Can fly over small open areas, darting back and forth, but usually only in late afternoon.

COMMENTS: Of the "common" dragonflies in the state (collected/reported in over 60% of the counties), this is not a well known species to most observers, as it is rather scarce or hard to find in the Piedmont. Unlike other darners, it seldom flies around open areas, fields, or ponds during the morning or early afternoon hours; it keeps more to shaded areas and later times of the day for flying.

Aeshna verticalis Green-striped Darner





NC counties: 2 or 2%
Number of records for 2017 = 0

High counts of:
1 - Burke; M - 1990-09-11

Earliest date: Burke; M 1990-09-11
Latest date: Burke; M 1990-09-11

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

DISTRIBUTION: Mountains only; despite this being a northern species, with NC at the southern edge of the range, the records are from the central and southern escarpment region: Burke and Henderson counties.

ABUNDANCE: Presumably very rare or rare. As with the Black-tipped Darner, few persons are working the mountain region to determine range and abundance of odonates.

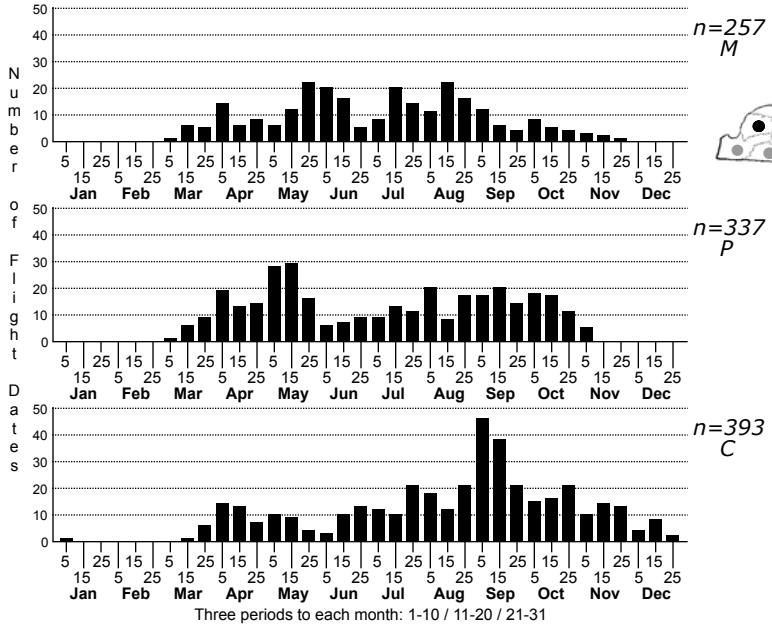
FLIGHT: Late summer -- July into September likely in NC, though the only date available is 11 September.

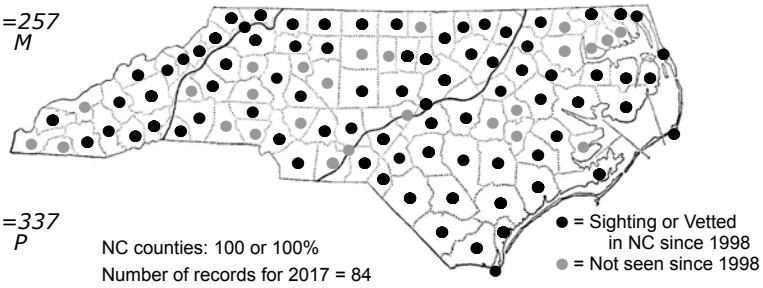
HABITAT: Small ponds, pools, and seeps, typically where spring-fed, and usually near a forest.

BEHAVIOR: Males spend much time feeding along pond and marshy margins. How much time is spent foraging over land is not known.

COMMENTS: Many odonates with ranges restricted to the mountains in NC are seldom reported in recent years, as little field work is done currently in this region. There are only two county records for this species. As the last recorded year available to us is from 1990, we consider the Green-striped Darner to still be present in the state.

Anax junius Common Green Darner





NC counties: 100 or 100%
Number of records for 2017 = 84

High counts of:
200 - New Hanover - 2015-09-13
50 - New Hanover - 2015-09-13
40 - Buncombe - 2011-09-25

Earliest date: Buncombe 2012-03-10
Latest date: Gates 2007-01-06

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

DISTRIBUTION: Statewide. Occurs in all 100 counties.

ABUNDANCE: Common statewide, with abundance levels somewhat equal across all three provinces. One of the more common dragonfly species in the mountains, with well over 200 records with flight data from that region of the state.

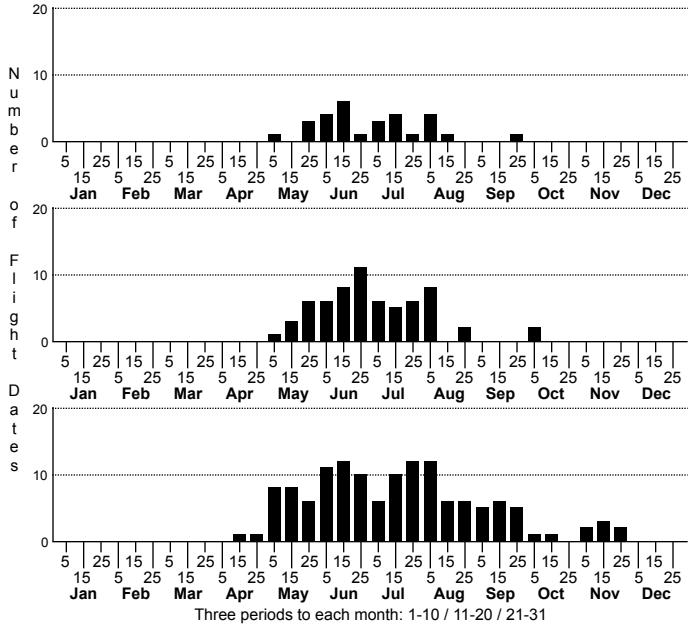
FLIGHT: Generally from mid-March to mid-November, and straggling at least in the Coastal Plain to the end of the year. It has the longest flight period of any dragonfly in the state, as it is the dragonfly species most likely to be seen in early winter -- being absent only for about two months in mid- and late winter.

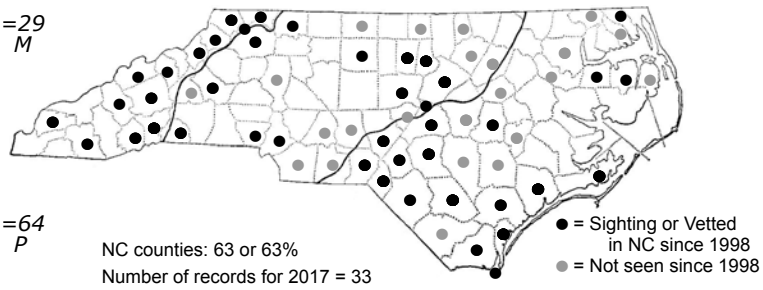
HABITAT: Wide-ranging; found around lakes, ponds, marshes, and other mostly still waters. Forages over fields, ponds, lakes, and other open habitats, as well as along roads through woods.

BEHAVIOR: Typically seen flying at eye-level or higher, over a wide range of open habitats.

COMMENTS: The species is seldom seen in truly large numbers or swarms. It can often be the first species of dragonfly one sees in spring, or the last in late fall. The species is usually easily identified in flight, even at a distance of 100 feet or more, through binoculars.

Anax longipes Comet Darner





NC counties: 63 or 63%
Number of records for 2017 = 33

Sight (not vetted) in 2017: Camden

High counts of:
6 - Orange - 2014-05-31
6 - Onslow - 2014-06-29
6 - New Hanover - 2017-09-30

Earliest date: Scotland 2008-04-19
Latest date: New Hanover 2015-11-28

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

DISTRIBUTION: Statewide, though more widespread in the southern half of the Coastal Plain and southeastern part of the Piedmont. Of spotty occurrence in most of the Piedmont and mountains, and the northern half of the Coastal Plain, though perhaps occurs in all counties.

ABUNDANCE: Generally widespread but uncommon in the southern half of the Coastal Plain, perhaps most numerous in the Sandhills. Rare to uncommon in the northern Coastal Plain and in the eastern Piedmont, and generally rare farther westward. Even though it is not a rare species, our highest one-day count is just 6 individuals.

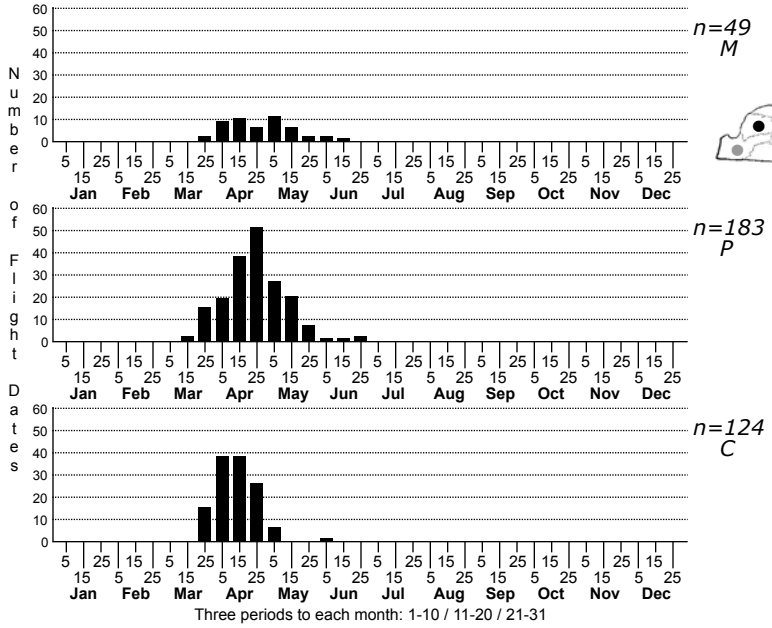
FLIGHT: In the Coastal Plain, generally from late April or early May to late November. Flies at least from mid-May to mid-August in the Piedmont and in the mountains, sparingly to late September and early October.

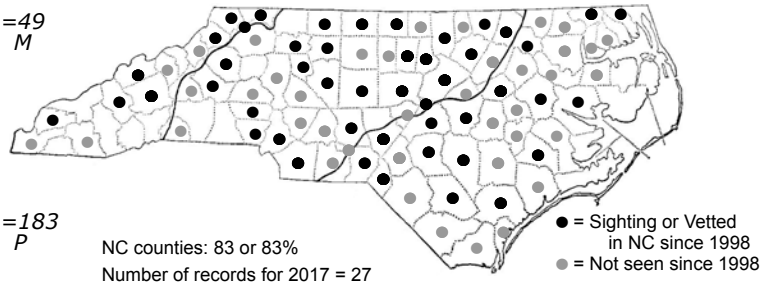
HABITAT: Mainly small to medium ponds, including natural ones such as limesink ponds and Carolina bays.

BEHAVIOR: Most often seen patrolling back and forth over a pond. At times seen over dry land, but best looked for over a pond/small lake.

COMMENTS: Males, with their bright red abdomen contrasting with the green head and thorax, are among our most beautiful and easily identified dragonflies. Its large size also adds to its striking appearance. Females and immatures can easily be confused with Common Green Darner, and probably cannot be safely identified while in flight.

Basiaeschna janata Springtime Darner





NC counties: 83 or 83%
Number of records for 2017 = 27

Vetted in 2017: Watauga

High counts of:
10 - Franklin - 2002-04-21
5 - Moore; C - 2007-03-31
5 - Scotland - 2004-04-17

Earliest date: Orange 2000-03-17
Latest date: Orange 2006-06-26

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

DISTRIBUTION: Nearly statewide. Might be absent in a few of the extreme eastern counties (not recorded from Currituck southward to Carteret counties). Of spotty occurrence in the mountains, though likely occurs in all counties there.

ABUNDANCE: Fairly common in most of the Piedmont and upper half of the Coastal Plain. Uncommon in the eastern Coastal Plain and mountains, and rare to locally absent near the northeastern and eastern coastal areas.

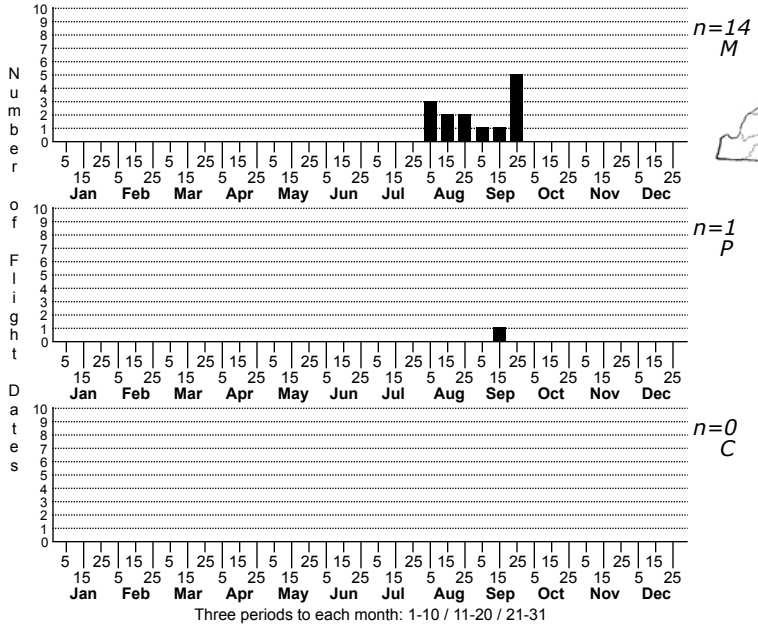
FLIGHT: Primarily mid-March to late May in the Piedmont and Coastal Plain; several "fluke" records in mid- to late June in the Piedmont. Mainly late March to early June in the mountains. Peak numbers are in mid-April.

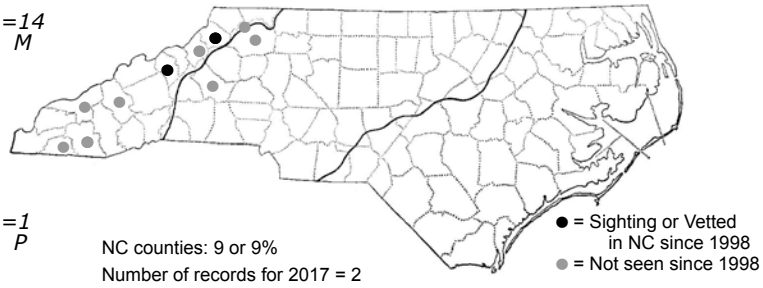
HABITAT: Breeds at streams, less often at ponds or lakes. More often seen along woodland borders or wide roads.

BEHAVIOR: Flies low along dirt roads and clearings in upland or mesic woods, perching frequently in an oblique manner on twigs. Relatively easy to identify, as it is not particularly wary when perched.

COMMENTS: The turquoise blue spots on the abdomen are quite stunning, especially in males. The species can often be identified in flight through binoculars, if the blue spots can be seen.

Boyeria grafiana Ocellated Darner





NC counties: 9 or 9%
Number of records for 2017 = 2

High counts of:
4 - Macon - 1956-09-23
4 - Watauga - 2017-09-21
3 - Yancey - 2017-09-19

Earliest date: Watauga 2013-08-02
Latest date: Avery 1969-09-30

Status NC	Status US	Rank NC	Rank Global
SR	-	S2?	G5

DISTRIBUTION: Mountains only, though perhaps into the Piedmont foothills; recorded from 9 counties. A northern species that ranges south only to the mountains of northern Georgia.

ABUNDANCE: Rare to uncommon (at best). As most of the records with data are older than 20 years ago, it might now be considered rare. Fortunately, there were three records documented by photographs in 2013, but all from a single county (Watauga).

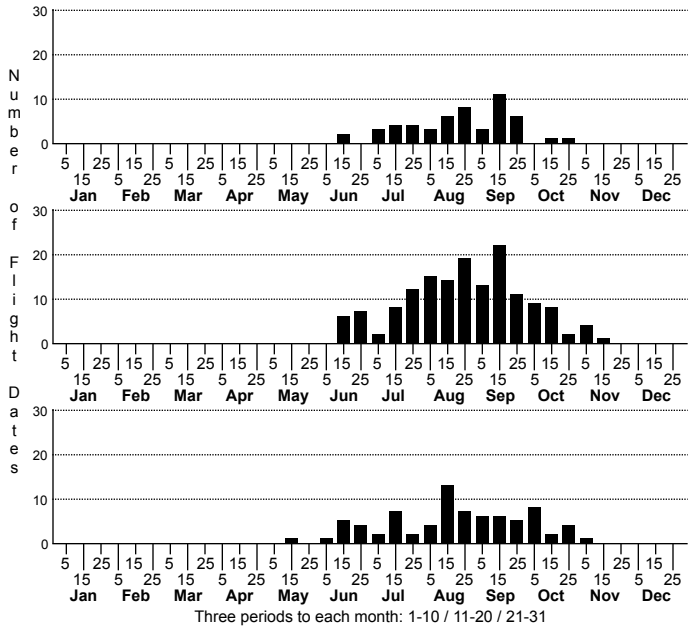
FLIGHT: The flight occurs in late summer and early fall -- from early August to the end of September. In Georgia, it also flies in August and September (Beaton 2007).

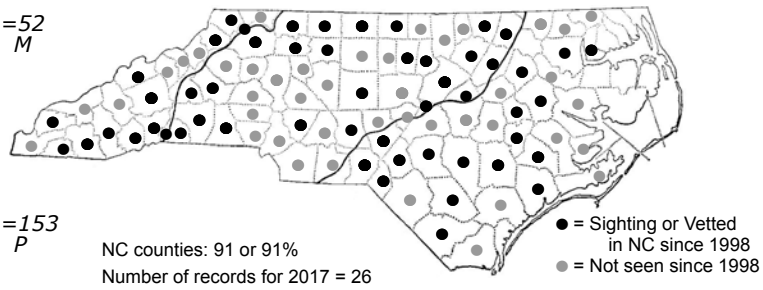
HABITAT: Mainly at fast, rocky streams in wooded habitats; however, recent records in Watauga County have also been at wet meadows and bogs.

BEHAVIOR: As with Fawn Darner, it forages by flying along creek banks, apparently fairly slowly. However, that species occurs mainly along slow moving waters, whereas the Ocellated occurs along rapidly moving waters.

COMMENTS: As there is relatively little odonate field work currently in the mountains, other than in the Asheville area, its range and status are not well known. Thus, the NC Natural Heritage Program wishes to keep records on it, and in November 2012 has up-listed it from Watch List to the Rare List, as Significantly Rare. Photos in 2013 documented the first records for Watauga County. More photos were made in Yancey County in 2017, though there is a vague, old report from this county. As there are records for five northern GA counties, it is disappointing that we have no recent records for any NC county in the southern half of the mountains.

Boyeria vinosa Fawn Darner





NC counties: 91 or 91%
Number of records for 2017 = 26

Vetted in 2017: Wilkes; M

High counts of:
17 - Cleveland - 1992-09-19
8 - Madison - 2017-09-21
7 - Moore; P - 1988-06-29

Earliest date: Onslow 2017-05-18
Latest date: Wake 2014-11-11

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Nearly statewide, but apparently absent from the immediate eastern Coastal Plain north and south of Albemarle Sound. No records east of Gates, Chowan, Beaufort, and Carteret counties.

ABUNDANCE: Uncommon to fairly common (but easily overlooked) in the mountains, Piedmont, and upper Coastal Plain; less numerous in much of the Coastal Plain, but not rare except near the coast.

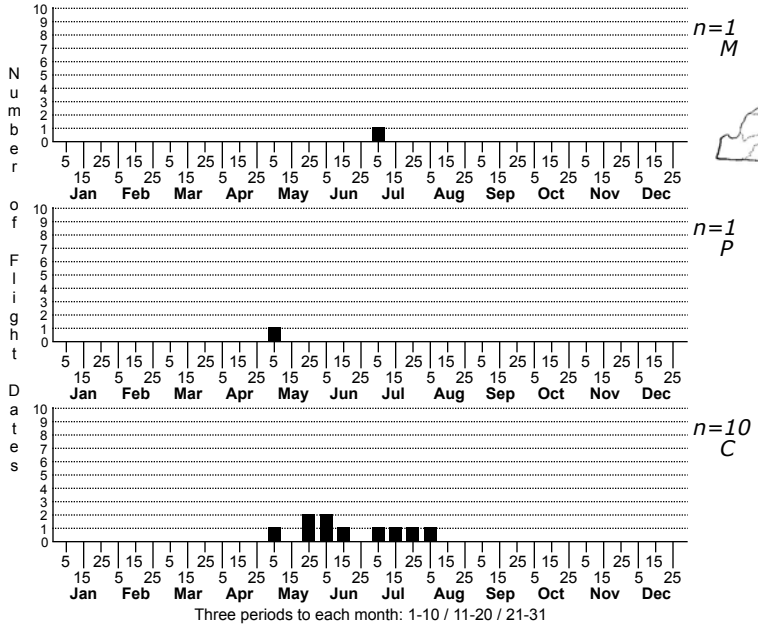
FLIGHT: Flight begins in mid-June in all provinces, and extends into early November in the Piedmont and Coastal Plain, and to late October in the mountains.

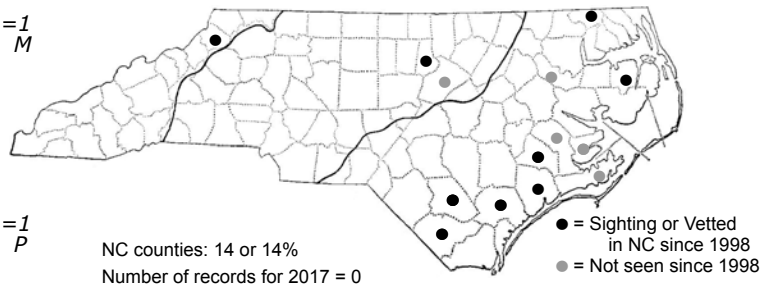
HABITAT: Flies low over creeks, typically following the creek banks, poking into nooks and crannies. Favors somewhat slow-moving creeks in hardwood forests.

BEHAVIOR: This species and the Ocellated Darner like dark places. It rests for most of the day inside a forest, hanging on twigs; sometimes disturbed when an observer is walking through a forest near a creek. It normally flies late in the afternoon and at dusk.

COMMENTS: This species must often be intentionally searched for, looking around creeks late in the day. A dragonfly flying slowly back and forth along creek banks, in shady situations, is often a Fawn Darner.

Coryphaeschna ingens Regal Darner





NC counties: 14 or 14%
Number of records for 2017 = 0

High counts of:
2 - Pender - 2007-06-13
2 - Bladen - 2013-06-04
1 - Gates - 2006-05-26

Earliest date: Jones 2014-05-03
Latest date: Pamlico 1965-08-10

Status NC	Status US	Rank NC	Rank Global
SR	-	S2?	G5

DISTRIBUTION: Sparingly over the Coastal Plain and extreme lower edge of the Piedmont. However, a most surprising record was documented from the northern mountains (Watauga County) in 2015. Not surprisingly, the northern limit of the species' range is extreme southeastern VA, and it is found mainly in the Southern Atlantic and Gulf coastal plains.

ABUNDANCE: Scarce; seemingly rare, but perhaps uncommon in some of the southern coastal counties north to Jones and Craven. Abundance difficult to assess because of its often high-flying behavior, and its similarity to the very common Swamp Darner, making the species difficult to confirm. Most numerous in Florida.

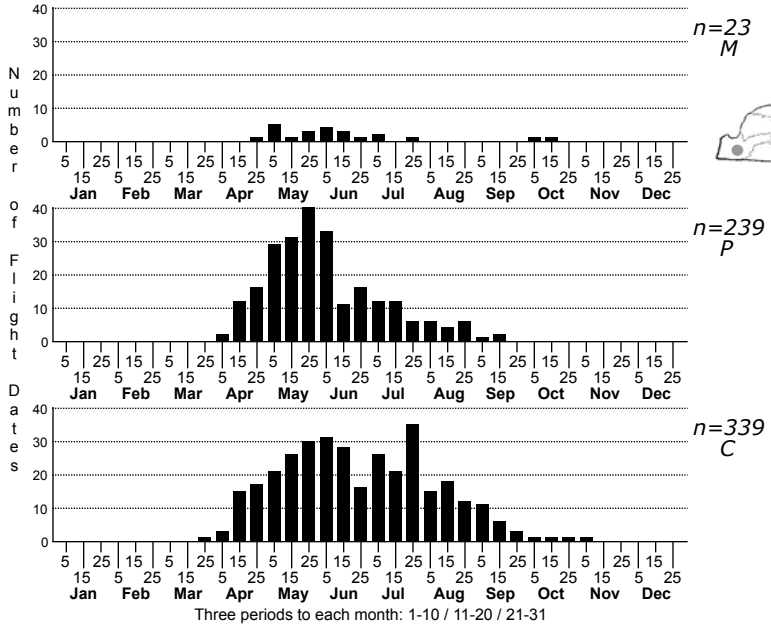
FLIGHT: In Georgia, it flies from early April to mid-September. The few (11) flight date records from NC are from 3 May to 10 August, suggesting a moderately extended flight.

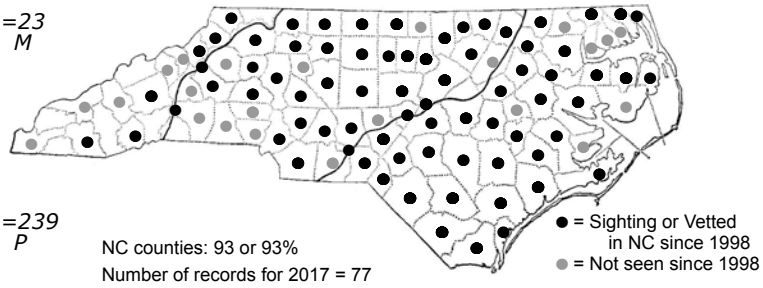
HABITAT: Ponds and lakes in forested areas, but may occur over fields and other open areas.

BEHAVIOR: Typically seen flying rather high, often at treetop level, over a pond nearby.

COMMENTS: The species is very poorly known in North Carolina, recorded only from 14 counties (if the Durham report is correct). Because relatively few reports have been made in recent years, the NC Natural Heritage Program moved the species from the Watch List to the Rare List, as Significantly Rare, in fall 2012. Though this is a very large/long species, it could easily be confused in flight (and even perched if not seen closely) with the much more common Swamp Darner. Fortunately, Conrad Wernett was able to net and photograph one (in hand) in 2013, adding a first record for Jones County. Dave Lenat collected a larva along the southern shore of Lake Waccamaw in 2014 to provide a first record for Columbus County. Kristi Baker provided excellent lateral view photos of one in 2015 from Tyrrell County, documenting a first record for that county and providing a first record for the Pamlimarle Peninsula. John Petranka made a remarkable discovery of one at a high elevation lake near the Blue Ridge Parkway in Watauga County (where a stray?), with photographs taken on 1 July 2015.

Epiaeschna heros Swamp Darner





NC counties: 93 or 93%
Number of records for 2017 = 77

High counts of:
100 - Camden - 2017-06-23
50 - Northampton - 2012-05-17
45 - Durham - 2015-05-29

Earliest date: Moore; C 2012-03-27
Latest date: Carteret 2004-11-08

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

DISTRIBUTION: Statewide, though distribution in the mountains is spotty (but likely occurs in all 100 counties of NC).

ABUNDANCE: Common to often very common in the Coastal Plain, and fairly common to common in the Piedmont; rare to uncommon in the mountains.

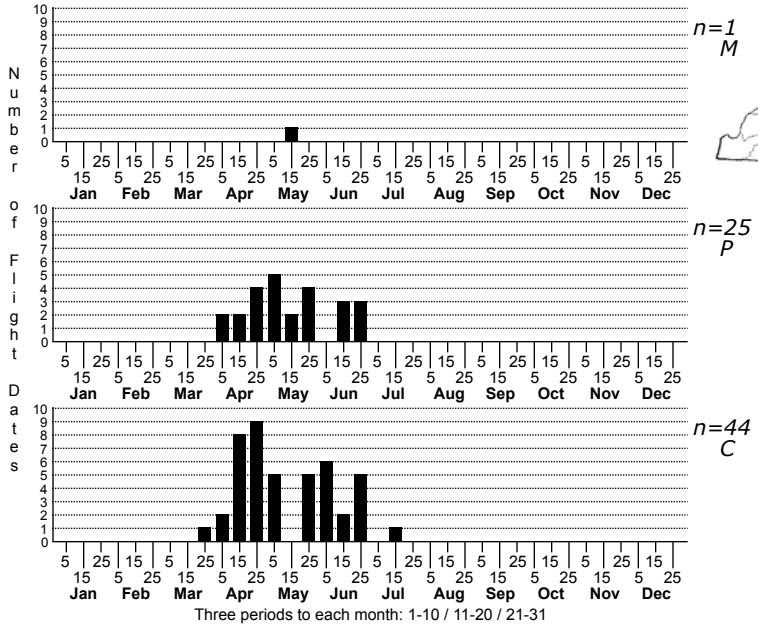
FLIGHT: The flight is from the end of March or early April into early November in the Coastal Plain. In the Piedmont the flight begins a bit later, by mid-April, and likely ends around mid-October, but oddly we have no records after September! The mountain flight occurs from late April to mid-October.

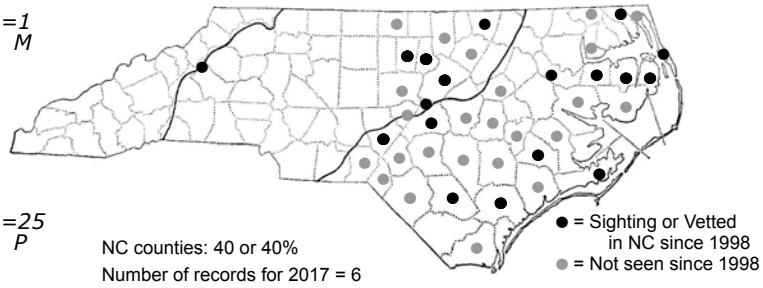
HABITAT: Swamps, bottomlands, rivers, and large streams; not numerous around forested lakes or ponds.

BEHAVIOR: Often seen cruising along forested roads and other clearings near woodlands and swamps, such as along roads through bottomlands and swamps. Flight is often head-height to treetop level. Frequently perches, usually at head-height or above, hanging downward from a twig.

COMMENTS: If a large dragonfly is seen flying over a road through a forested wetland, it is most likely this species. Several can often be seen in the same general area, though it normally doesn't form swarms. It can often be the most commonly seen species on a summer or early fall day, especially in the Coastal Plain.

Gomphaeschna antilope Taper-tailed Darner





NC counties: 40 or 40%
Number of records for 2017 = 6

Sight (not vetted) in 2017: Harnett; P

High counts of:
20 - Bladen - 2016-04-26
8 - Scotland - 1997-04-13
7 - Chatham - 1996-05-03

Earliest date: Washington 2008-03-28
Latest date: Dare; OBU 2007-07-20

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

DISTRIBUTION: Eastern half of the state only; throughout the Coastal Plain, and in the Piedmont west to Caswell, Orange, Chatham, Moore, and Richmond counties. A photo record from Burke County was most unusual and well to the west of the expected range. It should not be assumed to occur throughout the Piedmont based on this single "out-of-range" record.

ABUNDANCE: Uncommon in the southern and central Coastal Plain, but rare in the northern third of the province. Rare to locally uncommon in the eastern Piedmont west to Orange County. Essentially absent in the western two-thirds of the Piedmont (despite the single record).

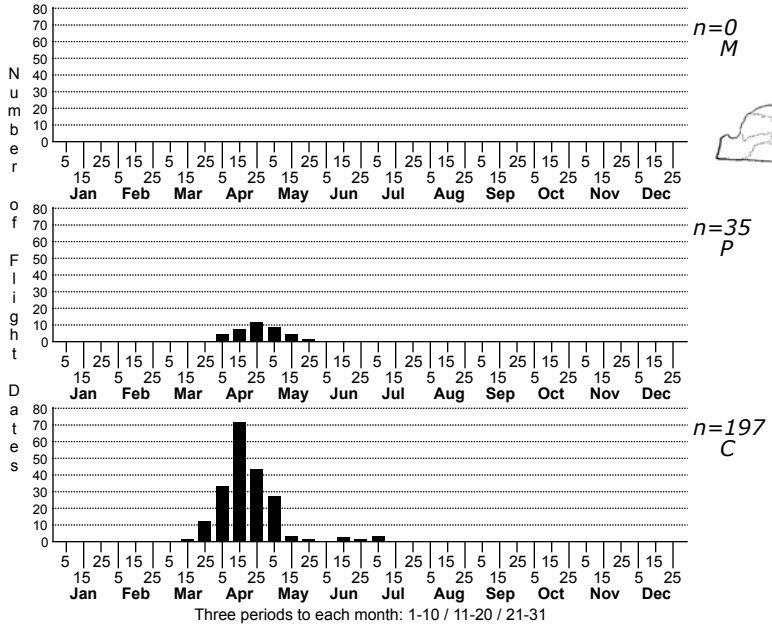
FLIGHT: Spring into early summer only. In the Coastal Plain, the flight is mainly from early April (very rarely in late March) to late June, sparingly into July. In the Piedmont, the flight occurs from early April to late June. The peak is from mid-April to early May.

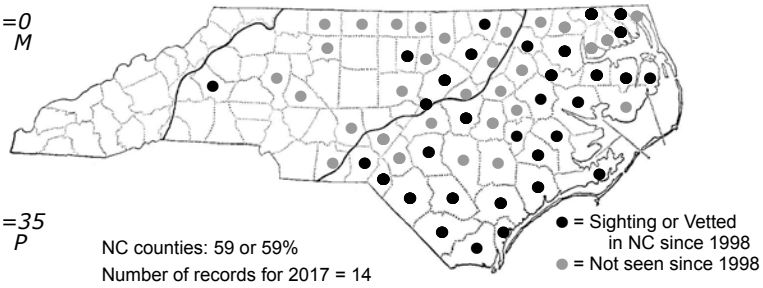
HABITAT: Typically in and near swamps, but also along nearby rivers and streams.

BEHAVIOR: Forages typically singly along wooded roads and openings near swamps and rivers, not over the water. As with the Harlequin Darner, it often perches vertically on tree trunks, where it can photographed near human eye-level.

COMMENTS: The species looks similar to Harlequin Darner, though has less green spots on the abdomen. Whereas the latter has a somewhat similar range and flight period to Taper-tailed, it is much more often encountered. There were few recent observations until about two years ago, probably owing to better coverage of the Coastal Plain.

Gomphaeschna furcillata Harlequin Darner





NC counties: 59 or 59%
Number of records for 2017 = 14

High counts of:
500 - Gates - 2007-04-13
45 - Washington - 2008-03-28
40 - Camden - 2017-04-13

Earliest date: Columbus 2007-03-18
Latest date: Moore; C 1972-07-07

Status		Rank	
NC	US	NC	Global
-	-	S4S5	G5

DISTRIBUTION: Throughout the Coastal Plain, and the eastern two-thirds of the Piedmont. Ranges as far west as Stokes, Forsyth, and Iredell counties, though there was an unconfirmed (sight) report from Burke County in spring 2014. The occurrence in most of the Piedmont is spotty.

ABUNDANCE: Locally common to very common (in swarms), but not particularly widespread, in the Coastal Plain; can be quite scarce in many areas of this province. Uncommon in the extreme lower Piedmont, but rare in the central Piedmont.

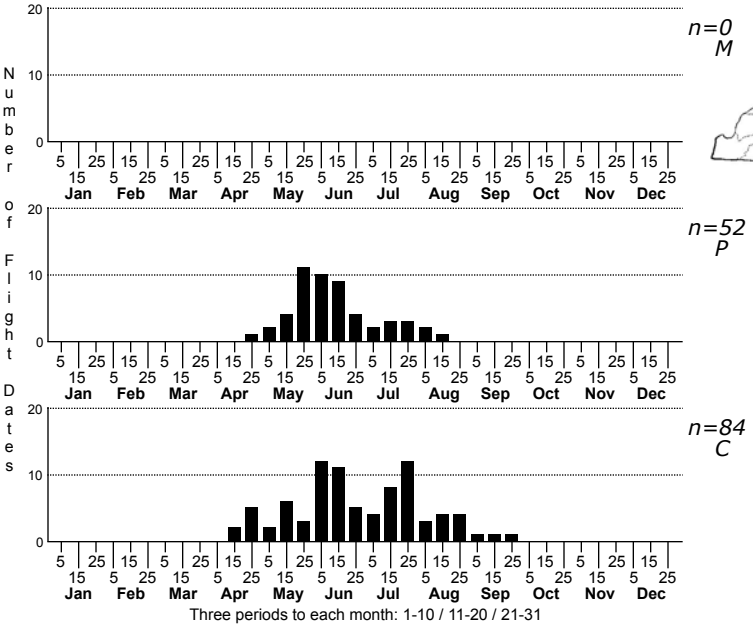
FLIGHT: Spring season, but sparingly into early summer. Its flight in the Coastal Plain is from late March to late May, with scattered records to early July; the Piedmont flight period is narrower -- early April to late May. The peak of the flight is in mid-April.

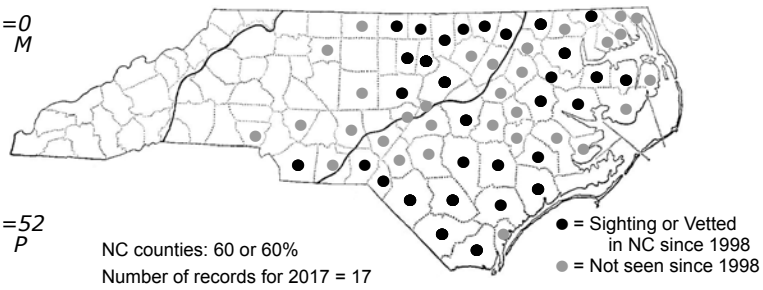
HABITAT: Typically near swamps or wetter bottomlands, but also near wooded creeks.

BEHAVIOR: This species has a fairly unusual behavior. Males patrol over swamps or marshes, but also along roads through wetlands and also in nearby uplands. They fly generally from 3-6 feet off the ground, often back and forth, and sometimes hover in the observer's face! They do not perch often, but when they do, it typically is vertically on tree trunks, but at times on humans.

COMMENTS: Dunkle (2000) calls the species "scarce" over its entire range; Beaton (2007) calls it "Rare to uncommon and local" throughout Georgia. Yet, observers have often seen dozens in some favorable spots in the NC Coastal Plain, and it can be the most commonly seen dragonfly at a few wetland areas, especially acidic wetlands such as pocosins. And, Cuyler has collection records from all but a few of the Coastal Plain counties in the state.

Nasiaeschna pentacantha Cyrano Darner





NC counties: 60 or 60%
Number of records for 2017 = 17

Sight (not vetted) in 2017: Richmond; C

High counts of:
10 - Bertie - 2008-06-14
8 - Washington - 2017-06-16
7 - Brunswick - 2017-04-12

Earliest date: Brunswick 2017-04-12
Latest date: Duplin 2017-09-24

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

DISTRIBUTION: The eastern two-thirds of the state only. Throughout the Coastal Plain, and the eastern 50-60% of the Piedmont, west to Rockingham, Forsyth, and Gaston counties.

ABUNDANCE: Uncommon to fairly common (but never in swarms) in the Coastal Plain, generally uncommon in the eastern Piedmont, but rare in the central Piedmont.

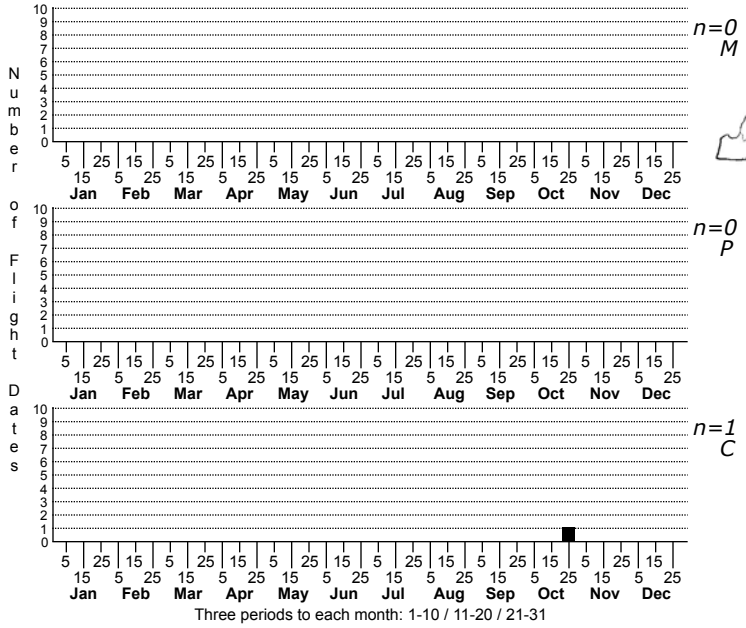
FLIGHT: Mainly in late spring and summer. In the Coastal Plain, the flight occurs from mid-April to late August, and sparingly to mid-September. The Piedmont flight occurs from late April to mid-August. The peak tends to occur in June and July.

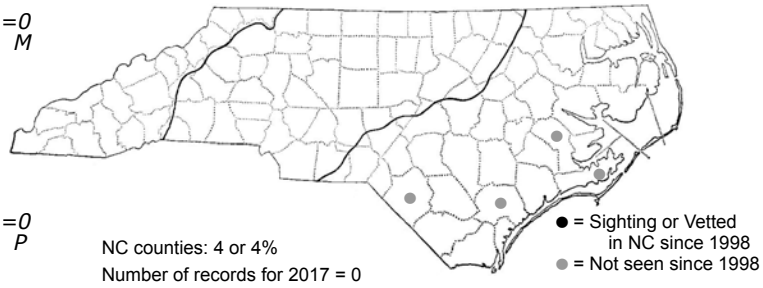
HABITAT: Mostly standing water in forested areas, such as swampy pools or openings in swamps; forested ponds; canals. They favor blackwater, as opposed to brownwater, bodies of water.

BEHAVIOR: Males have a distinctive flight behavior. They fly monotonous routes back and forth, often about 3-4 feet off the water, over canals and pools/ponds. Adults are only infrequently seen away from such pools and ponds; normally, one must look for the species over water.

COMMENTS: It can be frustrating to find one perched. However, the species can be identified in flight, through binoculars, and the "nose" can be seen under such circumstances. As the species is quite territorial, normally an observer will only see a single Cyrano Darner at a given body of water, and thus it is difficult to see more than a few of them in a given day.

Triacanthagyna trifida Phantom Darner





NC counties: 4 or 4%
Number of records for 2017 = 0

High counts of:
1 - Pender - 1971-10-26

Earliest date: Pender 1971-10-26
Latest date: Pender 1971-10-26

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

DISTRIBUTION: The southeastern corner of the state only; ranging north to Craven County and inland to Robeson County.

ABUNDANCE: Apparently rare; known from just four counties. However, as it is crepuscular, special effort must be made to see it. Thus, its true abundance would be difficult to determine.

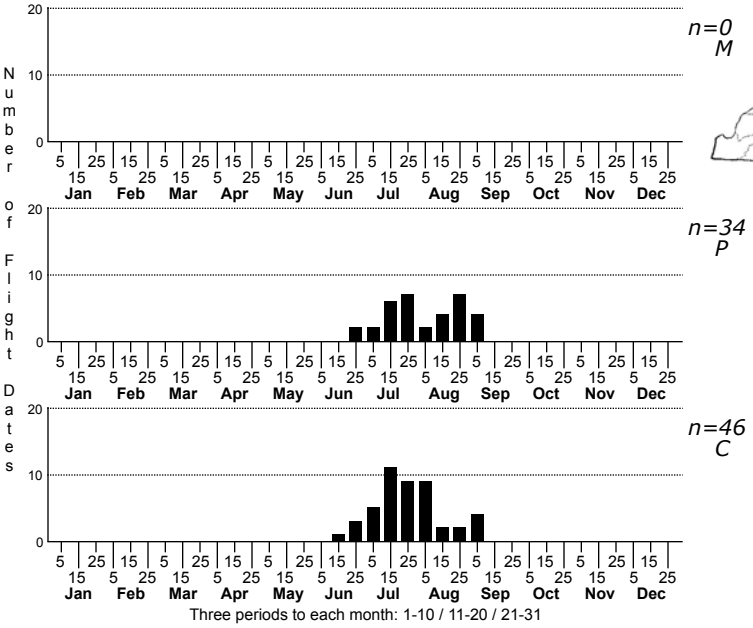
FLIGHT: Perhaps the latest flying odonate in NC -- in terms of flight period, with the flight likely only in October and November; the only NC date available is 26 October. The flight in GA is early October to mid-December.

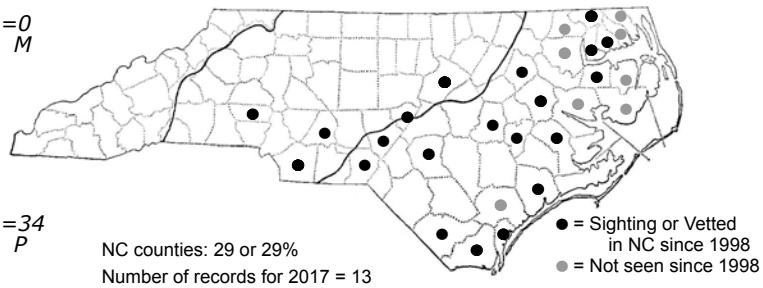
HABITAT: Small wooded pools, typically near rivers, in heavily forested areas.

BEHAVIOR: The species flies only in fairly dark conditions, typically the last two hours of daylight, or on very dark, cloudy days.

COMMENTS: The species has a very thin abdomen and should be readily distinguished by shape if seen well, a rare circumstance in NC. Its very late flight season, plus crepuscular habits, means that a biologist is unlikely to see the species during casual field work, without a special effort directed just for it. Because there are no recent records, and it has been recorded from just four counties, the NC Natural Heritage Program has deemed it worthy of tracking (as of fall 2010) as a Significantly Rare species. The NC Rank was moved from S2? to S1? in November 2012, to highlight the lack of recent records.

Aphylla williamsoni Two-striped Forceptail





NC counties: 29 or 29%
Number of records for 2017 = 13

Vetted in 2017: Lincoln, Onslow, Lenoir, Lee, Edgecombe
Sight (not vetted) in 2017: Moore; C, Richmond; C

High counts of:
12 - Onslow - 2017-07-14
6 - Union - 2014-07-16
6 - Union - 2014-08-26

Earliest date: Washington 2009-06-19
Latest date: Wake 2013-09-06

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

DISTRIBUTION: Formerly (prior to 2005), mainly just the lower half of the Coastal Plain. However, in the past handful of years the range is expanding westward rapidly, west currently to Lincoln County. Thus, now it is scattered over nearly all of the Coastal Plain and the southeastern Piedmont. Beaton (2007) states that in GA it is "rare above [the Fall Line] but expanding into the middle Piedmont". It is certainly expanding its range inland (westward) in NC, as well; Cuyler never collected the species farther west than Pitt and Pender counties.

ABUNDANCE: Clearly increasing in recent years. Formerly scarce (rare to uncommon) and limited almost solely to the Tidewater counties. Now it occurs essentially throughout the Coastal Plain and southeastern Piedmont, where rare to uncommon and a bit local, but formerly it was nearly absent in these areas. In fact, the species has been recorded now (2017) at a handful of lakes and ponds in Wake County alone, and our highest one-day counts have been in Union County.

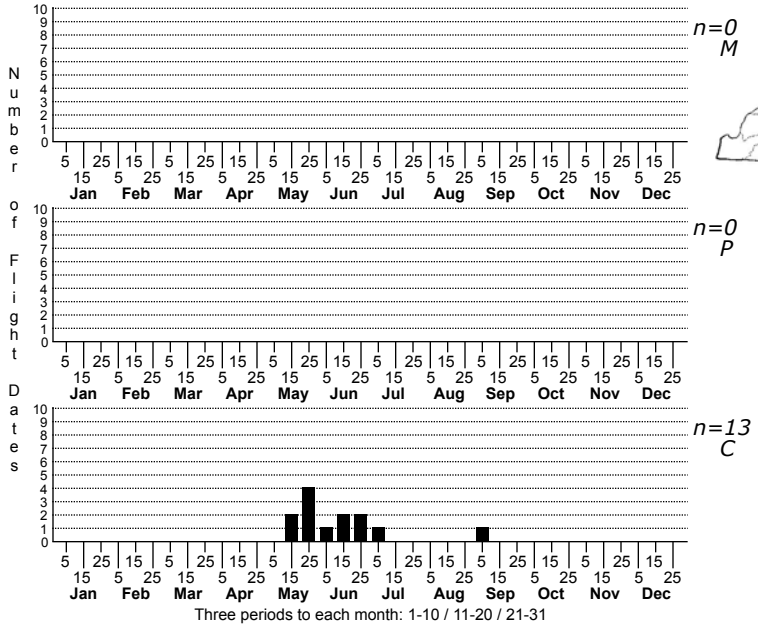
FLIGHT: In the Coastal Plain, present from mid-June to early September. The now many records from the Piedmont fall from late June to early September.

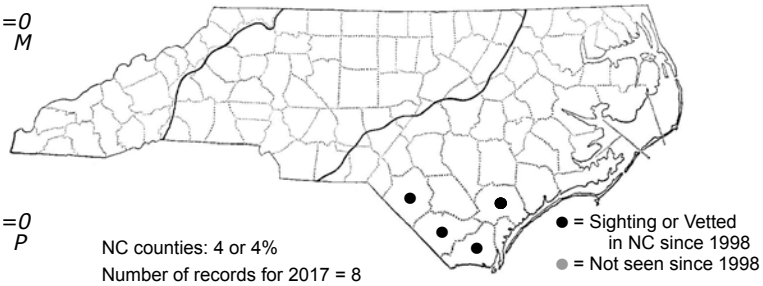
HABITAT: Vicinity of ponds and lakes, as well as canals, especially muck- or peat-bottom ones. These waters can be somewhat disturbed and not "high-quality".

BEHAVIOR: May perch on the ground near a pond, or on vegetation around a pond. Most often seen at ponds and small lakes.

COMMENTS: Because Cuyler never collected the species in NC farther inland than Hertford, Bertie, and Pitt counties, we assume that these farther western records represent a recent inland expansion of the range. The range is still spotty, in that there are a number of Wake County records but very few from the Sandhills or the adjacent counties to the east (e.g., Bladen, Robeson, Sampson, etc.).

Arigomphus pallidus Gray-green Clubtail





NC counties: 4 or 4%
Number of records for 2017 = 8

Vetted in 2017: Columbus
Sight (not vetted) in 2017: Robeson

High counts of:
5 - Columbus - 2017-05-28
4 - Pender - 2017-05-25
3 - Pender - 2017-05-26

Earliest date: Columbus 2017-05-17
Latest date: Pender 2017-09-02

Status		Rank	
NC	US	NC	Global
SR	-	S1	G5

DISTRIBUTION: Extreme southern portion of the state; recorded from Robeson County on the west to Pender County on the east. As one would surmise, NC lies at the northeastern corner of the species' range.

ABUNDANCE: Though common in much of Florida, it is rare in its small range in NC.

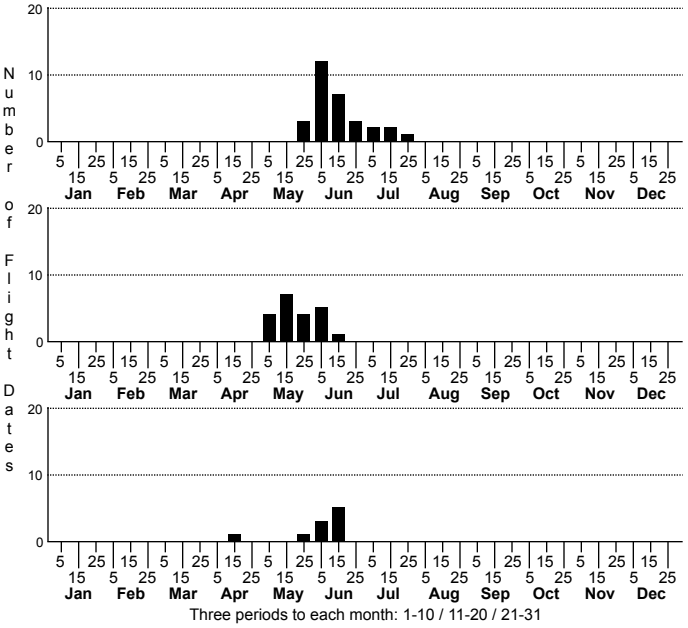
FLIGHT: The latter part of spring and early summer. The known records for NC are from 17 May to 8 July, plus a remarkable record (photo) from 2 September.

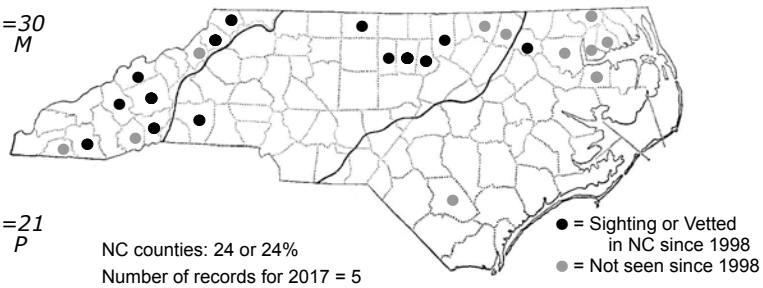
HABITAT: In NC, it has been seen only along blackwater rivers. Over the range as a whole, it favors swampy areas along slow-moving waters, such as habitat suitable for alligators (fide Chris Hill). Thus, it could occur in NC in swampy backwaters or other waters away from rivers.

BEHAVIOR: The species perches readily on the ground such as riverbanks or pond margins, and can be conspicuous where it occurs.

COMMENTS: For a clubtail, this is one of the easiest species to identify. The sides of the thorax are essentially unmarked and very dull, washed-out gray-green or pale green. Most other clubtails have conspicuous diagonal dark or light stripes on the thorax. Chris Hill observed 19 individuals on 13 July 2014 along the Little Pee Dee River in SC, perhaps only 10-20 miles down the Lumber River (same body of water) from the NC/SC state line. In 2016, Mark Shields re-located the species (two individuals) at or near Duncan Cuyler's original location along the Northeast Cape Fear River in Pender County; he also photographed one on the Brunswick County side of the Waccamaw River. James Reber also photographed one near the known Pender County site, in June 2016. As predicted from the results along the Waccamaw River, the species was discovered in May 2017 by Shields by kayaking the Lumber River, and thus adding Robeson and Columbus to the known counties of occurrence in the state.

Arigomphus villosipes Unicorn Clubtail





NC counties: 24 or 24%
Number of records for 2017 = 5

High counts of:
8 - Washington - 1989-06-19
5 - Orange - 2015-05-12
5 - Orange - 2016-05-04

Earliest date: Perquimans 1991-04-18
Latest date: Macon 2008-07-21

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

DISTRIBUTION: The mountain region, the northern Piedmont, and the adjacent northern Coastal Plain. A record from Bladen County seems odd, and it is not in Cuyler's specimen collection. Additional records in the past few years have extended the range slightly southward, to Alamance, Orange, and Durham counties. NC lies at the southeastern edge of the species' range.

ABUNDANCE: Uncommon (and possibly local) in the mountains, but probably very rare to rare in the southwestern counties. Seemingly very rare eastward in the Piedmont near the VA border, to Rockingham County; rare to locally uncommon (but increasing) in the northeastern Piedmont, but currently no Piedmont records for the southern 70% of the province. In the Coastal Plain, apparently rare south to Washington County; however, there are no records since 1998, and thus its current status in that province is not known.

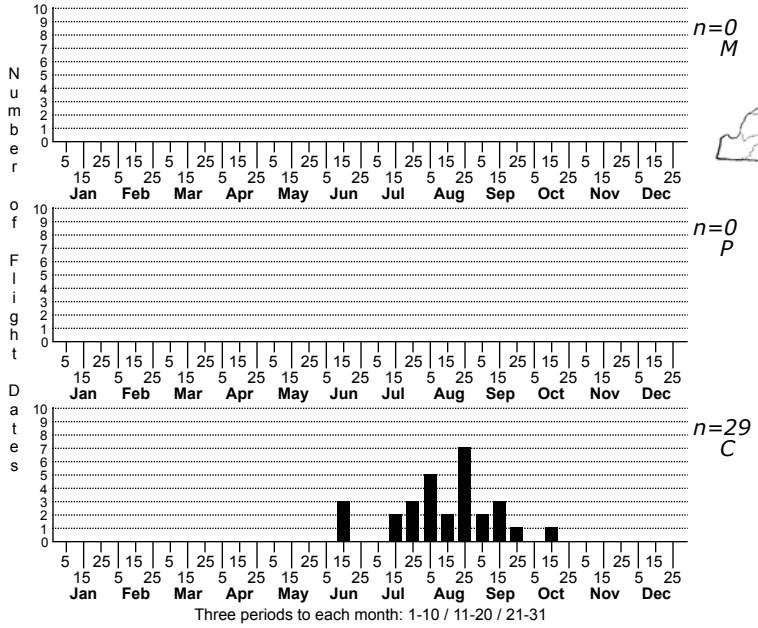
FLIGHT: The mountain flight occurs from late May to mid-July. The Piedmont flight is earlier -- early May to mid-June. Not surprisingly, the Coastal Plain flight is even earlier -- mid-April to mid-June.

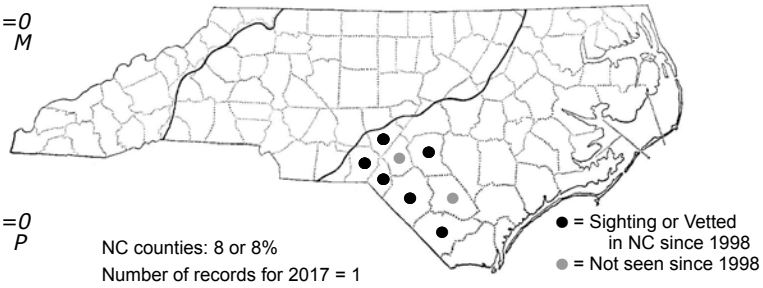
HABITAT: Generally a lake and pond species, or slow streams; muddy bottom waters preferred.

BEHAVIOR: Occurs around ponds and lakes, perching on the ground or on vegetation around the water's edge. It seems to favor small ponds in sunny locations, often in somewhat disturbed situations.

COMMENTS: Until 10-20 years ago, this species had an unusual range in the state, being found mainly in the mountains and the northern Coastal Plain, at least based on Duncan Cuyler's records. However, in the past few years there have been a modest number of records, mainly made by John Petranka, from the northeastern Piedmont, such that the former gap between the mountains and Coastal Plain has now been filled in. Unless data are uncovered soon for the Bladen County "record", we will likely remove it from the database; this county lies far to the south of any other known records.

Dromogomphus armatus Southeastern Spinyleg





NC counties: 8 or 8%
Number of records for 2017 = 1

High counts of:
2 - Cumberland - 2007-06-20
2 - Scotland - 2003-08-13
2 - Columbus - 1965-09-11

Earliest date: Moore; C 2017-06-11
Latest date: Robeson 1960-10-16

Status NC	Status US	Rank NC	Rank Global
W	-	S3	G4

DISTRIBUTION: Limited in NC to the Sandhills and adjacent southern Coastal Plain near the SC border. NC lies at the northern edge of the species' range.

ABUNDANCE: Uncommon in the Sandhills; less numerous -- presumably rare to uncommon -- in the adjacent Coastal Plain (Robeson, Bladen, and Columbus counties) to the southeast. Surprisingly, all daily counts are just of one to two individuals.

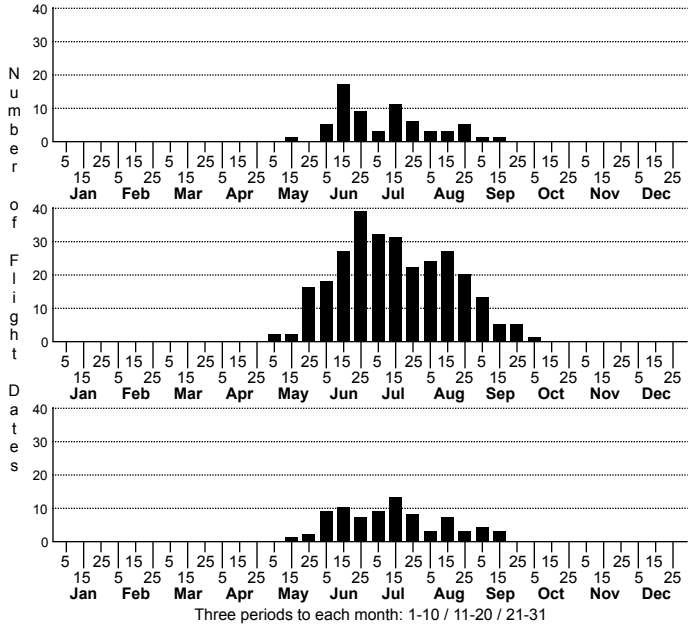
FLIGHT: Summer into early fall. Records occur between mid-June and mid-October; however, most are from late July to late September.

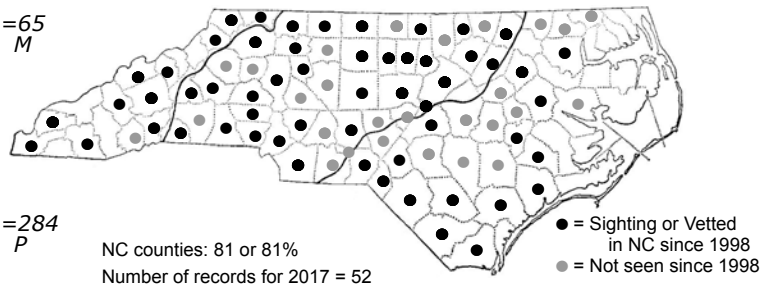
HABITAT: Breeds in rather acidic waters of seeps, springs, small streams, etc., mainly in or near forested habitats. Presumably uses pocosin streamheads in the Sandhills.

BEHAVIOR: Can be seen flying along roads, trails, or brushy areas near wetlands. Perches frequently, both on the ground and on vegetation.

COMMENTS: This is one of the Sandhills' most spectacular odonates. Adults are large, and the bright rusty-orange club easily draws attention. Though a handful of other clubtails flying at that season have rusty-orange clubs (such as Russet-tipped Clubtail and Two-striped Forceptail), they typically are restricted to water and seldom perch on sand roads and other places well away from water.

Dromogomphus spinosus Black-shouldered Spinyleg





NC counties: 81 or 81%
Number of records for 2017 = 52

Sight (not vetted) in 2017: Haywood, Hoke, Onslow

High counts of:
40 - Durham - 2013-06-20
30 - Halifax; P - 2009-07-14
30 - Rockingham - 2012-06-21

Earliest date: Anson 1990-05-07
Latest date: Wilkes; P 1993-10-03

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

DISTRIBUTION: Nearly statewide, though of spotty occurrence at both ends. Apparently absent from the extreme eastern counties (no records east of Gates, Bertie, Beaufort, and Jones counties). Also, there are records for only two-thirds of the mountain counties.

ABUNDANCE: Common over the Piedmont; fairly common in the upper Coastal Plain, and uncommon in the mountains. Much less numerous in the eastern Coastal Plain. This is one of the more numerous of the clubtails in the state, particularly in the Piedmont.

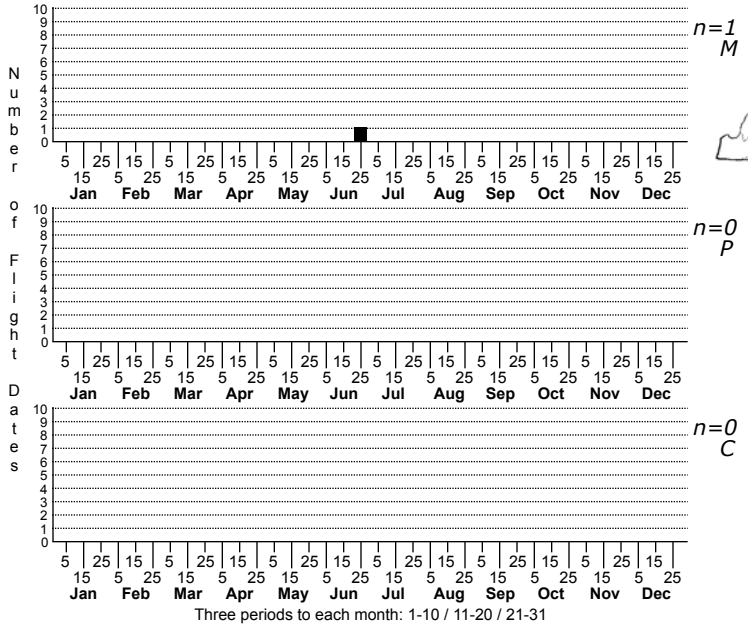
FLIGHT: Fairly wide spread of flight dates for a clubtail -- early May to early October in the Piedmont. Probably the same flight period in the Coastal Plain, though dates only span from mid-May to mid-September. The mountain flight occurs from mid-May to mid-September.

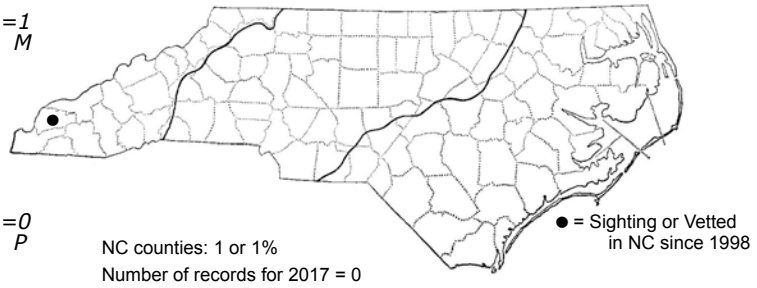
HABITAT: Widespread choice of breeding habitats, from rivers and streams, to lakes and ponds. More tolerant of disturbed habitats than most clubtails.

BEHAVIOR: One of the more conspicuous or easily seen clubtails in NC (along with Lancet and Ashy clubtails). Adults frequently perch flat on the ground on sunny trails, dirt roads, or vegetation, where they can be easily studied. One does not have to head for a pond, large creek, or river to see this species.

COMMENTS: This is a large and striking dragonfly. Immatures and adult females have conspicuous yellow sides to the thorax, whereas the adult males are more lime green on the sides of the thorax. The very thick black "shoulders" at the front of the thorax are clinching marks. Also, as the common name indicates, the spinylegs indeed have spiny projections on the very long pair of hind legs.

Dromogomphus spoliatus Flag-tailed Spinyleg





High counts of:
1 - Graham - 2014-06-23

Earliest date: Graham 2014-06-23
Latest date: Graham 2014-06-23

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

DISTRIBUTION: Ranges essentially west of NC, east to eastern TN and the extreme northwestern corner of GA. Finally, in 2014, it was found in NC, in western Graham County, less than 10 miles from the TN line. It is to be looked for in other low elevation sites in the mountains close to the TN border, especially in the southwestern corner of the state.

ABUNDANCE: Very rare in NC, with just a single documented record (photo). Not uncommon in much of its range, but Beaton (2007) calls it "Rare to uncommon and local" in its small range in northwestern GA.

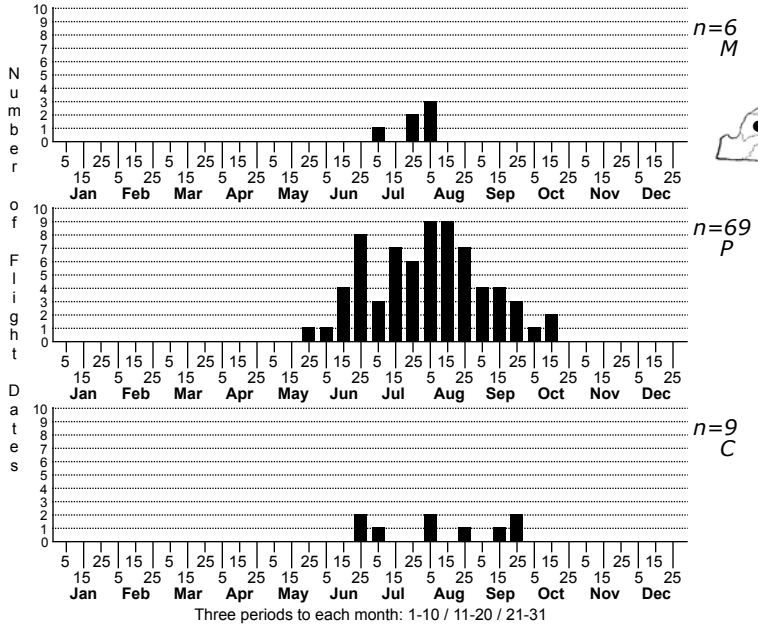
FLIGHT: Late May into September in GA. The only NC record is for 23 June. The NC flight is likely spread out over a 3-4-month period in mid-summer.

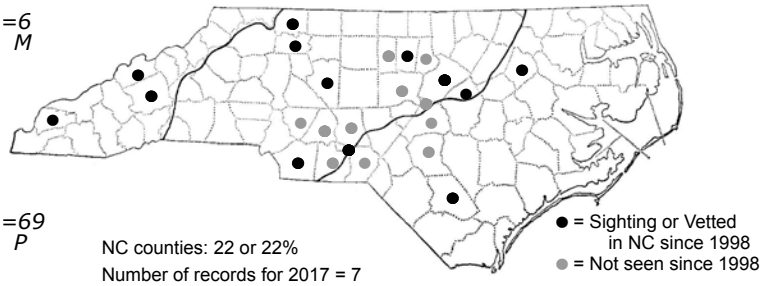
HABITAT: Mostly rivers and large streams, and at times around ponds and lakes; generally at areas where the flow of water is low.

BEHAVIOR: Males perch on the ground near water; they may also perch on vegetation or other objects.

COMMENTS: At least one older reference listed the species as occurring in NC, but Cuyler has no records; Bick and Mauffray (1997-2004) also does not list NC for this species, nor do later references, including the OdonataCentral range maps. However, Owen McConnell obtained an excellent photograph of an individual perched on the ground in north-central Graham County in 2014; this conclusively documents the species in NC. This is the first new odonate species recorded in NC since the Rusty Snaketail was found in 2006.

Erpetogomphus designatus Eastern Ringtail





NC counties: 22 or 22%
Number of records for 2017 = 7

Vetted in 2017: Edgecombe, Yadkin

High counts of:
12 - Wake - 2009-08-07
9 - Wake - 2009-08-18
5 - Yadkin - 2017-08-28

Earliest date: Harnett; P 1976-05-27
Latest date: Montgomery 1995-10-18

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

DISTRIBUTION: Mainly found in the Piedmont and the adjacent southwestern Coastal Plain, but finally found in the mountains -- in 2011 in Madison and Buncombe counties, and in Graham County in 2014. (Range maps in references tend to show the western 60-80% of the state within the range, and Paulson [2011] even shows the entire state within the range).

ABUNDANCE: Rare to locally uncommon in the eastern half of the Piedmont. Rare in the Coastal Plain portion of the range, and obviously rare and local in the lower elevations of the mountains and in the western Piedmont.

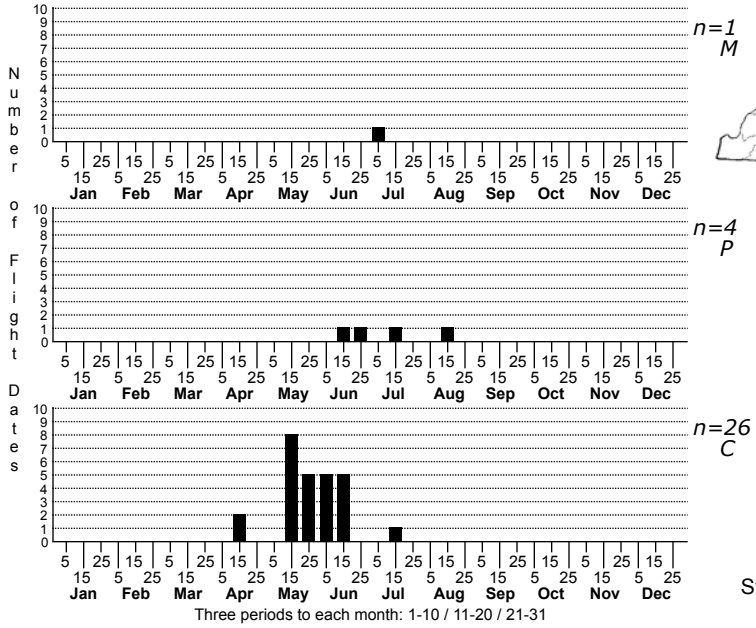
FLIGHT: The flight in the Piedmont occurs between late May and mid-October, with the Coastal Plain flight slightly narrower in time -- about late June to late September. The mountain records fall in a narrow window between early July and early August, though the flight period there is certainly wider, and likely extends into September.

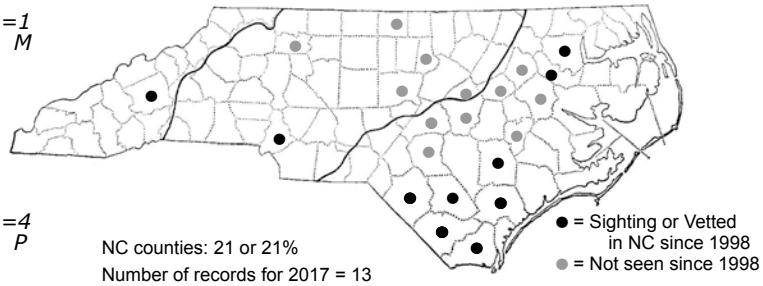
HABITAT: Generally rivers and wide streams, especially with riffles and somewhat fast flow.

BEHAVIOR: Normally stays very close to rivers and streams; occasionally strays to open fields, jeep roads, etc., well away from flowing waters. Perches on low vegetation, banks, or rocks along shores of rivers and streams.

COMMENTS: Until a few years ago, there were very few recent records for this "widespread" species. However, in the past several years there have been numerous records from the Neuse River just below the Falls Lake dam, and a handful of records from Buncombe and Madison counties, mainly not far from the French Broad River. Mike Turner expanded the range eastward to Edgecombe County in summer 2017. This is one of the more "colorful" of the clubtails, and for that reason, it may be the easiest clubtail in the state to identify.

Gomphurus dilatatus Blackwater Clubtail





NC counties: 21 or 21%
Number of records for 2017 = 13

Vetted in 2017: Duplin, Buncombe

High counts of:
30 - Bladen - 2016-05-27
30 - Pender - 2016-05-27
15 - Duplin - 2017-05-27

Earliest date: Columbus 2017-04-12
Latest date: Mecklenburg 2005-08-13

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

Synonym: *Gomphus dilatatus*

DISTRIBUTION: Scattered over much of the Coastal Plain, and of very spotty distribution over most of the Piedmont and low mountains (2017 record). Apparently absent over most of the mountains, at least over roughly 2,000 feet elevation. Perhaps occurs in most Piedmont counties, but only a handful of counties are known as of 2017. Also seemingly absent from the northeastern and far eastern portions of the Coastal Plain.

ABUNDANCE: Rare to locally uncommon in the southern portions of the Coastal Plain, and apparently rare northward in that province to the Roanoke River area. Very rare over most of the Piedmont, with the majority of records in the eastern portions. Casual in the mountains, where first recorded in 2017.

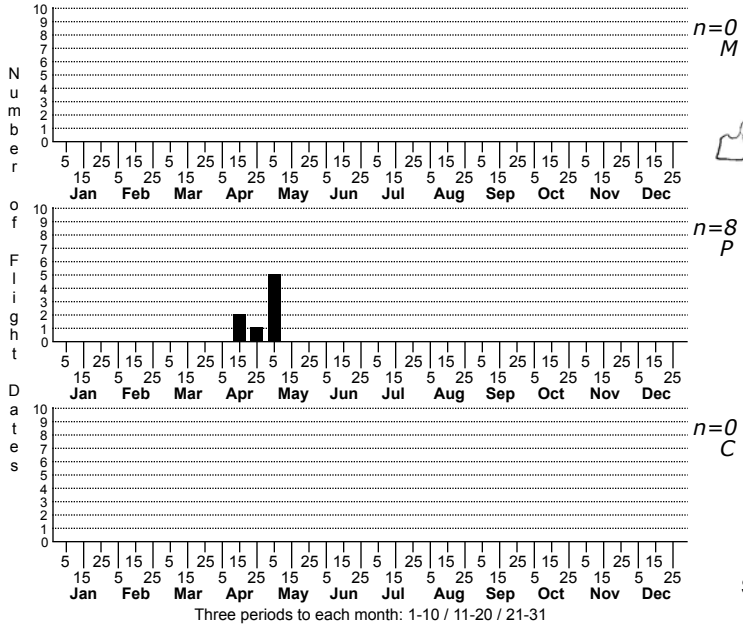
FLIGHT: Mid-April to at least mid-July in the Coastal Plain, and from mid-June into mid-July in the Piedmont and mountains. There is a sight report from the Piedmont for mid-August, though the latest specimen or photo record is only to mid-July.

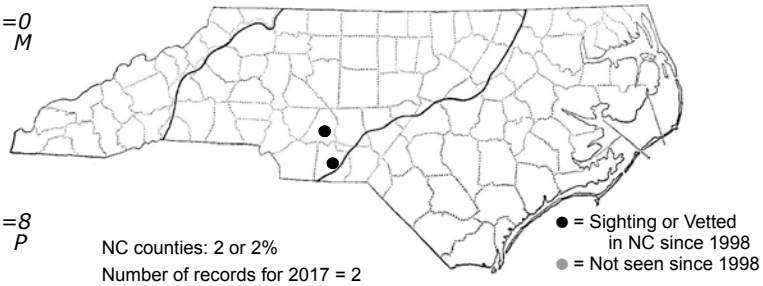
HABITAT: Slow-moving rivers or streams with sandy or silty bottoms. Favors blackwater rivers, as the common name suggests, as opposed to muddy or brownwater rivers.

BEHAVIOR: Males perch on leaves or branches close to the water, or over the water.

COMMENTS: This is one of the larger clubtails, and the wide club also adds to its striking appearance. However, it can be confused with the Cobra Clubtail. Even so, it is not often seen in NC, and thus the NC Natural Heritage Program considers it to be a Watch List species. Mark Shields provided the first notable count of the species, seeing and photographing about 30 individuals as he was canoeing down the Black River along the Bladen - Pender county line on 27 May 2016. Recent review by our website editors have determined that one or two photos previously identified as Blackwater Clubtails are actually Cobra Clubtails. And, that puts into jeopardy any sight reports of this species, due to the great confusion of these two species; the Mecklenburg County and the Martin/Bertie (i.e., Roanoke River) reports should be considered as tenuous, and certainly not definitive. However, Vin Stanton made a remarkable discovery in July 2017, by photographing a female Blackwater Clubtail in Buncombe County near the French Broad River. The OdonataCentral database has a single record for eastern TN in the Ridge and Valley province, but otherwise this record fills in a large gap in the range in the southern Appalachians (between eastern TN and west-central NC).

Gomphurus fraternus Midland Clubtail





NC counties: 2 or 2%
Number of records for 2017 = 2

High counts of:
6 - Anson - 2017-04-20
6 - Stanly - 2017-04-20
3 - Stanly - 1987-05-05

Earliest date: Stanly 2017-04-20
Latest date: Stanly 1989-05-08

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

Synonym: *Gomphus fraternus*

DISTRIBUTION: Known only from one site -- the Rocky River -- in the lower Piedmont. The distribution in the state would suggest that this is a Southern species, but in fact it is a Northeastern species, ranging south mainly to MD, WV, and western TN.

ABUNDANCE: Undoubtedly very rare in NC, as it is known from just a single body of water.

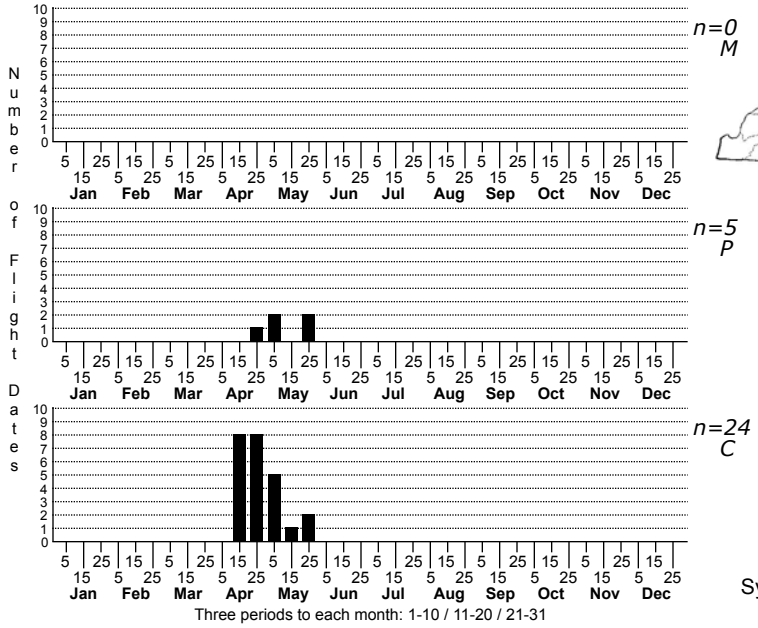
FLIGHT: All of the records fall between 20 April and 8 May. It is assumed that adults are present for only a few weeks (at this site) -- probably mid-April to mid-May.

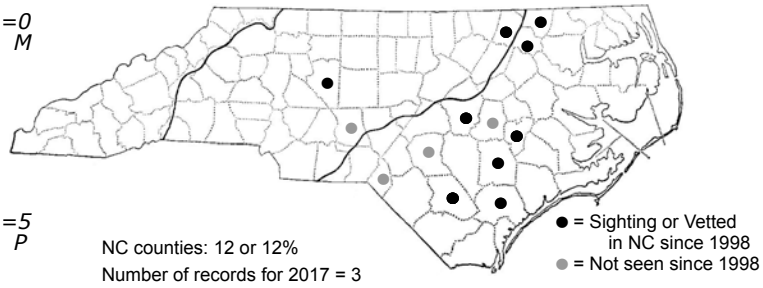
HABITAT: Breeds at fast flowing rivers and large streams.

BEHAVIOR: Perch on rocks or banks near rivers. References indicate that this is a very fast and strong flier, able to overtake and feed on other dragonflies.

COMMENTS: This is still another poorly known clubtail in NC. Its known state range -- two counties (Anson and Stanly) that border the Rocky River in the lower Piedmont -- is most unusual, as this is a Northeastern species. Does it not occur along the Flat, Eno, Haw, Cape Fear, and other rivers in the eastern Piedmont, where there has been more odonate field work? On the other hand, this is a difficult-to-identify species, unless a specimen is taken. In fact, photos of a clubtail from the Eno River in Orange County have been re-examined, and it was felt not to be a Midland Clubtail. (They were carried on this website as a "Midland" for several years.) Thankfully, John Petranka decided to travel to the Rocky River in spring 2017 to look for this species and, sure enough, re-found it along the river, but about 5.5 miles miles upriver from Duncan Cuyler's previous site. He saw and photographed several males on 20 April, which also extended the earliest state date by eight days.

Gomphurus hybridus Cocoa Clubtail





High counts of:
15 - Halifax; C - 2012-04-25
10 - Halifax; C - 2012-04-12
5 - Northampton - 2012-05-08

Earliest date: Halifax; C 2012-04-12
Latest date: Northampton 2013-05-26

Status NC	Status US	Rank NC	Rank Global
W	-	S3	G4

Synonym: *Gomphus hybridus*

DISTRIBUTION: Mainly the inner half of the Coastal Plain; scattered into the lower Coastal Plain in the southeastern region, and also at a few sites in the eastern and central Piedmont. The range in the Coastal Plain is expanding northward, as many new records came from the Roanoke River area in 2012; the species was previously known northward only to the Neuse River area. In fact, until 2013, Virginia had no records; however, there are now (2017) five records for the southeastern and central parts of the state.

ABUNDANCE: Common, at least locally, along the upper part of the Roanoke River (Halifax and Northampton counties). Seemingly rare to uncommon and local elsewhere, as it is recorded from only 10 other counties in NC in a fairly small range. Dunkle (2000) considers the species to be fairly common, whereas in GA Beaton (2007) say it is uncommon in the Coastal Plain but rare elsewhere.

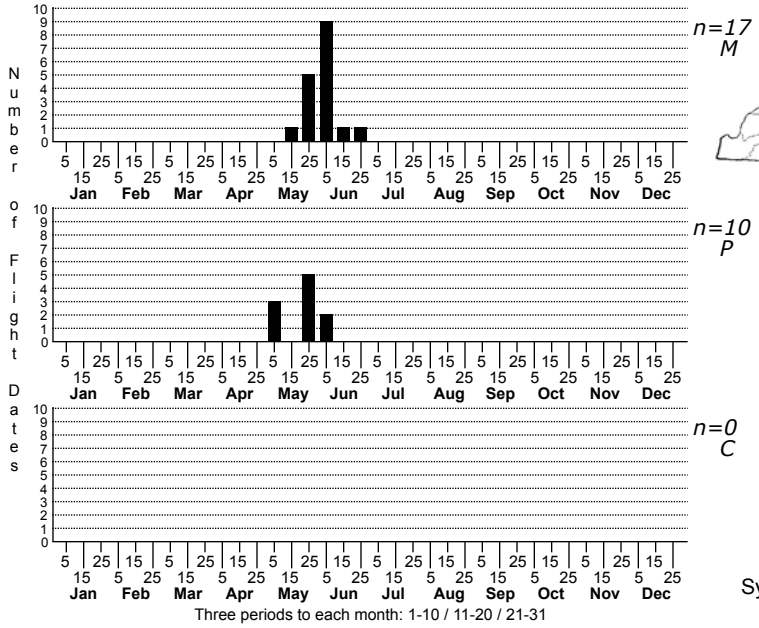
FLIGHT: Spring season only; the known dates in NC range from 12 April to 26 May.

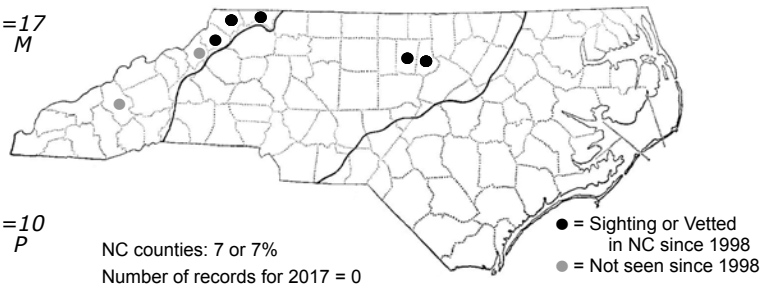
HABITAT: Large or medium rivers with silty or sandy bottoms.

BEHAVIOR: Males spend little time in flight patrols over the water. Teneral individuals, as well as adults, often forage hundreds of yards away from rivers, such as along clearings, dirt tracks, and forest openings. It is an unwary species and can be easily approached on the ground.

COMMENTS: This is one of the relatively few clubtails to be found along slow-moving rivers and large creeks in the Coastal Plain. (The majority of clubtails are found in the mountains and Piedmont, and near faster waters.) Randy Emmitt photographed one, on 3 May, at Kinston in Lenoir County; and Beth Brinson extended the known range to the north with a photograph taken in Davidson County in 2008. Steve Hall and Harry LeGrand found it commonly on several spring dates in 2012 at sites within 1/2-mile of the Roanoke River, for a notable northward range extension. As it has been found in VA in 2013, 2016, and 2017, it is obviously moving northward. The species is still on the NC Natural Heritage Program Watch List, but as it is clearly moving northward, it is uncertain if it will remain on that list.

Gomphurus lineatifrons Splendid Clubtail





NC counties: 7 or 7%
Number of records for 2017 = 0

High counts of:
10 - Orange - 1991-05-29
3 - Durham - 2002-05-23
3 - Alleghany - 2007-06-13

Earliest date: Orange 2002-05-07
Latest date: Alleghany 2006-06-22

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

Synonym: *Gomphus lineatifrons*

DISTRIBUTION: Primarily the northern mountains, but there are a few other mountain records (and occurs in the mountains of northern GA). Also a handful of records for the northeastern Piedmont (Orange and Durham counties). Thus, it might occur along the entire northern Piedmont.

ABUNDANCE: Not rare in the northern mountains (uncommon to fairly common?), as Ted Wilcox has a number of photographs from Ashe and Alleghany counties on his website. Presumed to be very rare in the remainder of the mountains, and in the northeastern Piedmont. Certainly very rare if not absent in the intervening northern Piedmont.

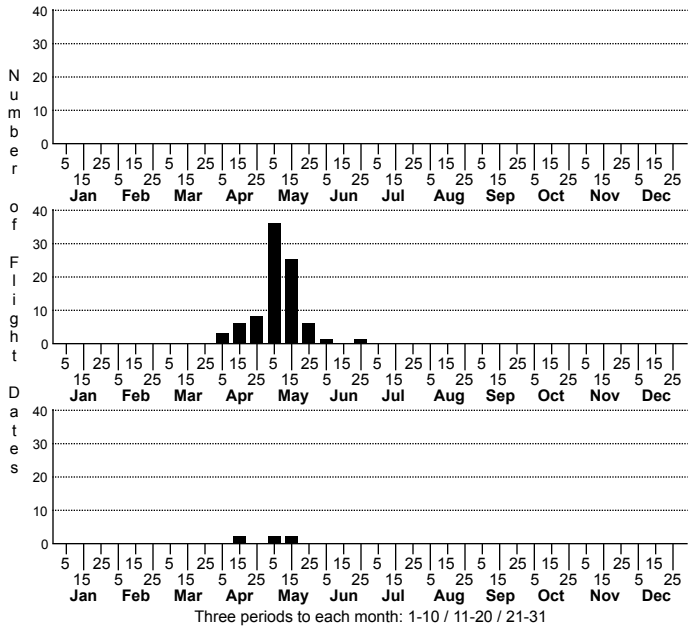
FLIGHT: Late spring and early summer. In the mountains from mid-May to late June; in the northeastern Piedmont, probably a week or two earlier, likely beginning in early May, and flying into June.

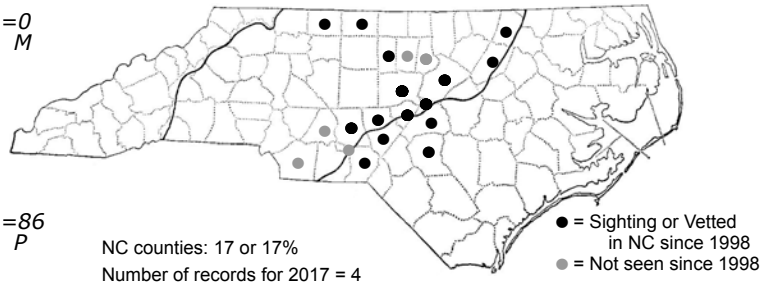
HABITAT: Breeds at clear rivers and creeks, with gravel bottoms.

BEHAVIOR: Males perch on rocks in the rivers or creeks, or on the ground or low vegetation nearby.

COMMENTS: This is a large and colorful clubtail; males have a large club. Beginners might mistake it for the common Black-shouldered Spinyleg, though that species has a much smaller club. In the northeastern Piedmont, nearly all records are from the Eno River. Though the NC Natural Heritage Program tracks the species, as there are records for only 7 counties, the fact that Wilcox has a number of records for the northwestern counties suggests that a Watch List status might be more appropriate.

Gomphurus septima Septima's Clubtail





NC counties: 17 or 17%
Number of records for 2017 = 4

Vetted in 2017: Rockingham, Stokes

High counts of:
8 - Chatham - 1993-05-11
7 - Chatham - 1982-05-11
7 - Harnett; P - 1987-05-06

Earliest date: Harnett; P 2016-04-02
Latest date: Wake 2010-06-21

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S2	G2

Synonym: *Gomphus septima*

DISTRIBUTION: A somewhat narrow northeast-southwest band in the eastern Piedmont and the Sandhills. Ranges west to Stokes, Stanly, and Union counties, and east to Halifax, Nash, Harnett, and Cumberland counties. The species has a peculiar, disjunct, or relict range, and so far has been found only in NY, PA, NJ, VA, NC, SC, and AL (according to the OdonataCentral map). Thus, DE, MD, and GA lack records; and it has been found in just two counties each in VA, SC, and AL (OdonataCentral map).

ABUNDANCE: Uncommon but widespread within its rather limited range; noticeably increasing in the past few years. Mainly in the Cape Fear River system -- Haw, Rocky, Deep, and the Cape Fear itself. Rare to uncommon in the lower Yadkin/Pee Dee River system. Rare in the Neuse, Tar, and Roanoke, where so far found only along these rivers (includes the Eno River as the upper end of the Neuse) and not their tributaries; only recently reported from the latter two rivers. Discovered in the Dan River system in spring 2017, but likely rare to very uncommon there.

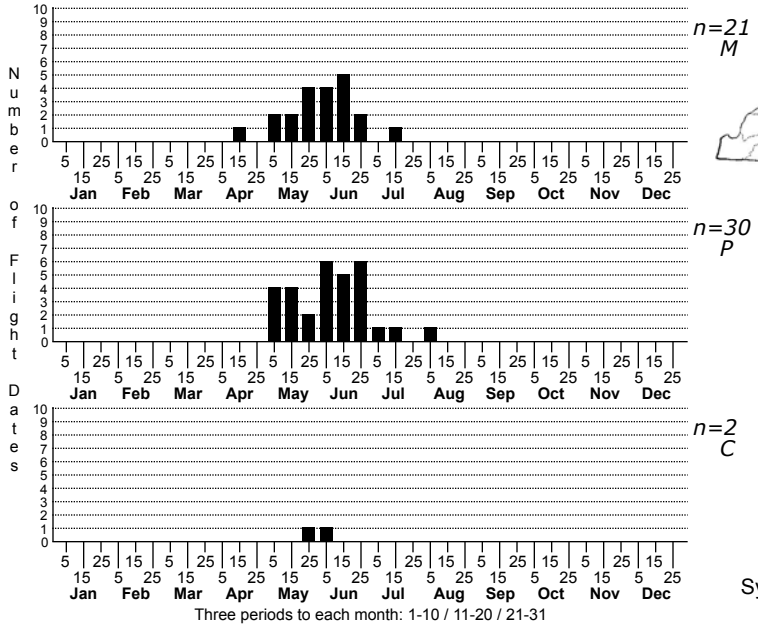
FLIGHT: Early April to the end of May, and sparingly to mid-June. The peak is during the first half of May. The flight period has moved forward (earlier) by a week to 10 days over the past decade. Formerly quite rare before very late April, but now with a number of records prior to 20 April.

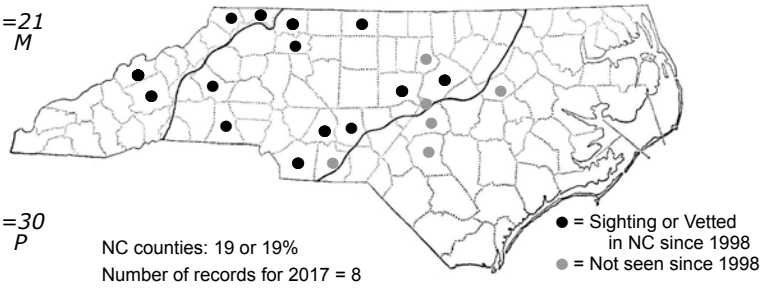
HABITAT: Breeds in clean, fast rivers and very large streams.

BEHAVIOR: Males perch on the ground near rivers, but they also perch on rocks in the rivers. For a clubtail, this species is rather easily observed and photographed, as individuals often perch on dirt roads, trails, and other spots away from the rivers.

COMMENTS: Until about 10 years ago, the species was known (apparently) only from NC and AL, and presumed to exist only in NC at that time. It has since been found far to the north in NY and NJ. This is, or at least was until about 10 years ago, one of the rarest dragonflies in the eastern United States. It has been found in 17 counties in NC, with photographic documentation for many of them. As mentioned above, the species is clearly on the increase in the state, and is now one of the more readily found clubtails along the larger rivers in the eastern third of the Piedmont. It should be re-ranked by NatureServe as G2G3 or G3, and its State Rank in NC is really S2S3, as well. (It is hardly in danger of extirpation from NC or extinction over its range now.)

Gomphurus vastus Cobra Clubtail





NC counties: 19 or 19%
Number of records for 2017 = 8

Sight (not vetted) in 2017: Burke; P

High counts of:
20 - Madison - 2011-05-06
15 - Chatham - 1976-06-12
10 - Yadkin - 2008-06-10

Earliest date: Buncombe 2012-04-20
Latest date: Surry 2008-08-08

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

Synonym: *Gomphus vastus*

DISTRIBUTION: Widely scattered over the western two-thirds of the state, east barely into the western Coastal Plain. Interestingly, nearly all of the mountain and western Piedmont records have come in the past few years, suggesting a possible westward range expansion in the state, though most range maps show the species ranging over the majority of the eastern United States. Likely absent at middle and higher elevations in the mountains. A puzzling scarcity of records from the middle of this range in the state -- such as the central and western Piedmont.

ABUNDANCE: Uncommon in the eastern Piedmont. Rare to very locally uncommon elsewhere in the mountains and Piedmont. Very rare in the western part of the Coastal Plain.

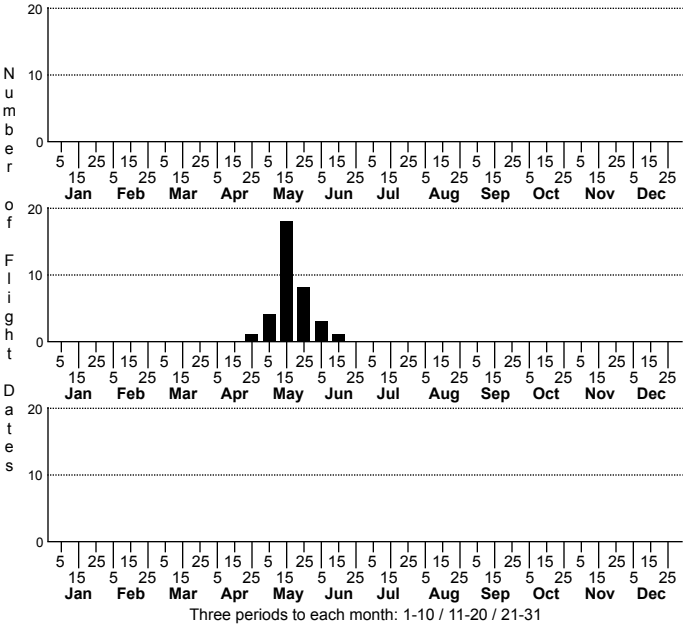
FLIGHT: Mostly early May to late June or early July, with an early date of 20 April. A seemingly quite late record on 8 August is open to question, though there are a few records for mid-July.

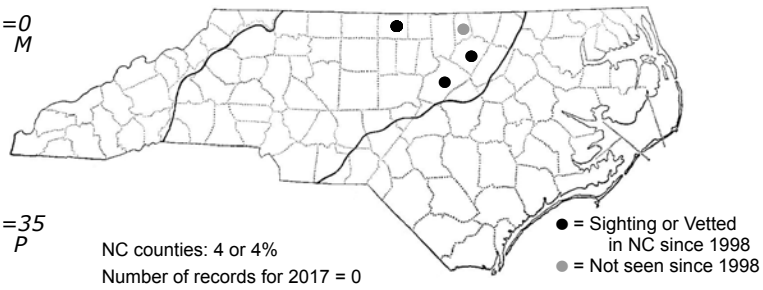
HABITAT: Breeds at rivers and large streams, where rocky or with riffles.

BEHAVIOR: Males perch along the shore on the ground, or on rocks in the rivers. They may fly well out over the rivers.

COMMENTS: This is a very striking species, quite black on the abdomen with very contrasting yellow markings. And, the male's club is very wide -- cobra-like, giving rise to the common name. Even so, there are a few other clubtails (such as Skillet, Splendid, and Blackwater) with wide clubs, and thus sight records must be made with care. Indeed, a few photos on this website have been re-evaluated by experts (in late 2016), and several photos reported as other species have been determined to be Cobra Clubtails by website editors/reviewers.

Gomphurus ventricosus Skillet Clubtail





NC counties: 4 or 4%
Number of records for 2017 = 0

High counts of:
8 - Caswell - 1992-05-13
5 - Caswell - 1996-05-30
4 - Caswell - 1982-05-14

Earliest date: Wake 2010-04-28
Latest date: Caswell 1988-06-20

Status NC	Status US	Rank NC	Rank Global
SR	-	S1S2	G3

Synonym: *Gomphus ventricosus*

DISTRIBUTION: A Northern species, ranging south only to the northeastern Piedmont of NC, where it ranges south only to Wake County. Known from just four NC counties.

ABUNDANCE: Very rare to rare in NC. Even throughout its overall range, Dunkle (2000) calls it rare, and NatureServe gives it a global rank of G3 (rare). Though there are a minimum of 35 records with dates, many seem to be from the same general area and it should not be inferred that the species is not rare.

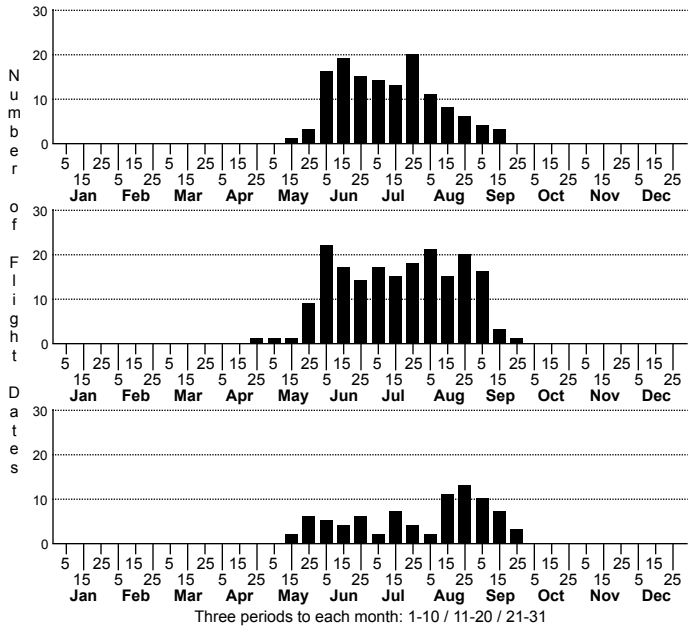
FLIGHT: Late April to mid-June; records fall between 28 April and 20 June.

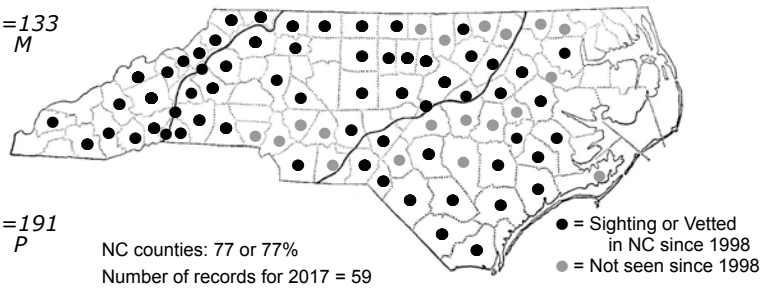
HABITAT: Larger rivers and streams that are fast-flowing, though occasionally at lakes with good water quality.

BEHAVIOR: Males are most easily seen in short flights out over the water, and they then return to shore to perch, often in grass, in the shade, or other inconspicuous places.

COMMENTS: The club is comparatively the widest of any clubtail, it being wider than the thorax width! It is also the smallest Gomphurus species of clubtail. Though rare and very poorly known in NC, it probably can be identified in flight within its small state range; the Cobra Clubtail is somewhat similar but that species has a mostly black abdomen (not as yellow on the dorsal portions of the thorax and abdomen as is the Skillet). It is one of the less common of the dragonflies, as NatureServe has its Global Rank at G3.

Hagenius brevistylus Dragonhunter





NC counties: 77 or 77%
Number of records for 2017 = 59

Vetted in 2017: Graham
Sight (not vetted) in 2017: Burke; M

High counts of:
25 - Rockingham - 2012-06-21
10 - Buncombe - 2015-09-15
9 - Madison - 2012-05-17

Earliest date: Wake 2014-04-27
Latest date: Richmond; C 1995-09-28

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

DISTRIBUTION: Nearly statewide, though apparently absent from the northeastern and far eastern parts of the state. No records east of Hertford, Martin, and Craven counties. Of spotty distribution in the southwestern mountains, for no obvious reason, as the species occurs over most of the eastern US.

ABUNDANCE: Generally fairly common in the mountains and foothills, uncommon to fairly common over most of the Piedmont, but uncommon in the Coastal Plain. Despite its very wide range, found in most NC counties, it is seldom really common and not nearly as often seen as the Lancet and Ashy clubtails (though the Dragonhunter flies later in the season than those two).

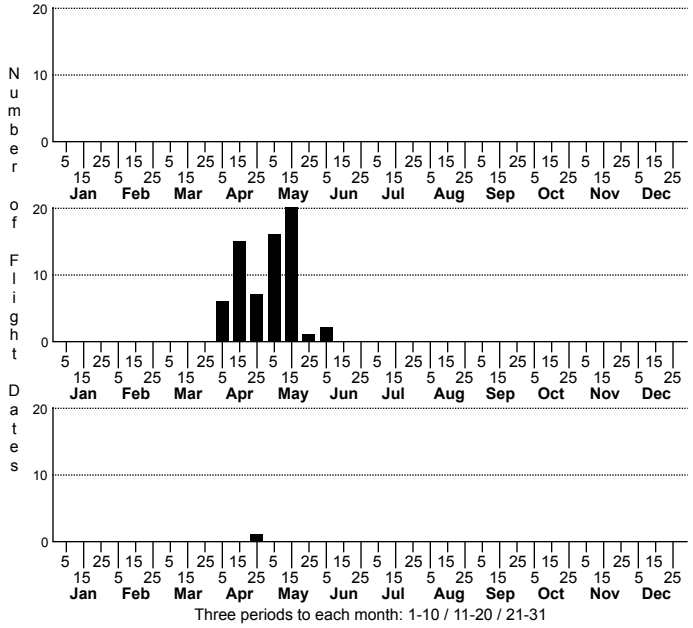
FLIGHT: Mainly from mid-May (rarely as early as late April) to late September; most often seen from early June to early September.

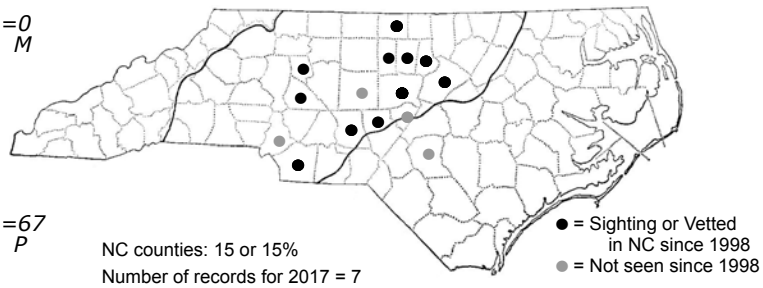
HABITAT: Generally breeds at swift-flowing streams and rivers, rarely at lakes. Prefers forested waters as opposed to very wide, sunny streams.

BEHAVIOR: Males often patrol conspicuously up and down the middle of a river or large stream, easily recognized by its very large size and unusual habit of curling the tip of the abdomen downward into a "J" shape. They also perch on bare ground and vegetation, at times allowing for easy observation.

COMMENTS: This is one of the largest of all dragonflies, and the male's habit of flying with the abdomen tip curled in a "J" shape makes it undoubtedly the easiest of the clubtails to identify on the wing. As the common name implies, it is quite predatory on other species of dragonflies, their main quarry. The species is monotypic -- the only species in its genus.

Hylogomphus abbreviatus Spine-crowned Clubtail





NC counties: 15 or 15%
Number of records for 2017 = 7

Vetted in 2017: Alamance, Davie
Sight (not vetted) in 2017: Rowan

High counts of:
20 - Orange - 2017-04-02
10 - Montgomery - 2016-04-05
8 - Chatham - 1993-05-11

Earliest date: Orange 2017-04-02
Latest date: Rowan 2017-06-02

Status NC	Status US	Rank NC	Rank Global
SR	-	S3	G4

Synonym: *Gomphus abbreviatus*

DISTRIBUTION: Found only in the central and eastern Piedmont and the extreme southwestern corner of the Coastal Plain (at least in the Sandhills).

ABUNDANCE: Poorly known at the present time; however, Allen Bryan has recently found it to be quite common in the Richmond, VA, area. Duncan Cuyler made several dozen collections in the lower Piedmont of NC a few decades ago, with as many as 8 individuals in a day. In 2016, John Petranka found it in some numbers at a few sites in Montgomery County, and small numbers in Durham and Orange counties. Thus, it might not be truly rare in NC; best called rare to locally uncommon in the lower Piedmont, and very rare in the southwestern Coastal Plain. However, it is easily overlooked due to similarity to other species.

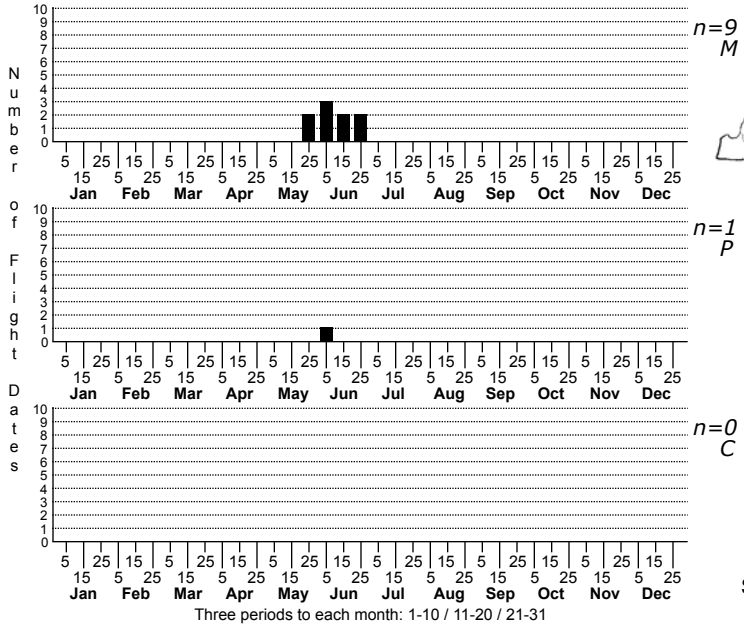
FLIGHT: Spring season only. The flight occurs from early April to early June. The peak was formerly during the first 20 days of May, but there are many recent April records, and the state high count was made on 2 April, our earliest state record!

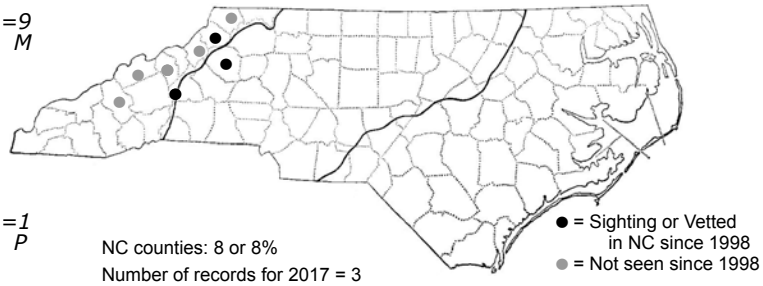
HABITAT: This is another riverine species, favoring fast-flowing rivers and large streams.

BEHAVIOR: Seen mainly at or near streams, on rocks or vegetation. Dunkle (2000) states that males are most active in the late afternoon.

COMMENTS: As with most clubtails, even ones with a range in the eastern Piedmont (where the greatest number of odonate biologists live and conduct field work), this is a poorly known species, at least by observers and photographers. Most clubtails are difficult to identify unless netted or collected and then studied in the hand. This species looks quite similar to the Piedmont Clubtail, and it can also be confused with Banner Clubtail. Though its range extends from SC northward into Canada, it has a somewhat narrow east-west range, barely ranging west to OH. We have had a number of recent records, thankfully, and thus its range and abundance are becoming better known.

Hylogomphus adelphus Mustached Clubtail





NC counties: 8 or 8%
Number of records for 2017 = 3

Vetted in 2017: Caldwell, McDowell; M

High counts of:
3 - McDowell; M - 2017-06-07
2 - Haywood - 1990-06-28
2 - Ashe - 1994-06-05

Earliest date: Watauga 2015-05-28
Latest date: Haywood 1990-06-28

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

Synonym: *Gomphus adelphus*

DISTRIBUTION: Mountains and adjacent foothills only; known from just eight counties, in the northern and central portions of the province. As expected from the state range map, this is a Northern species, ranging from Canada to northern GA (one record).

ABUNDANCE: Seemingly rare in the northern half of the mountains (and adjacent foothills), with seldom more than one or two individuals seen in a day. Obviously very rare, at best, in the southern half of the mountains. As there is a record for northern GA, it should occur sparingly in GA and SC border counties in NC.

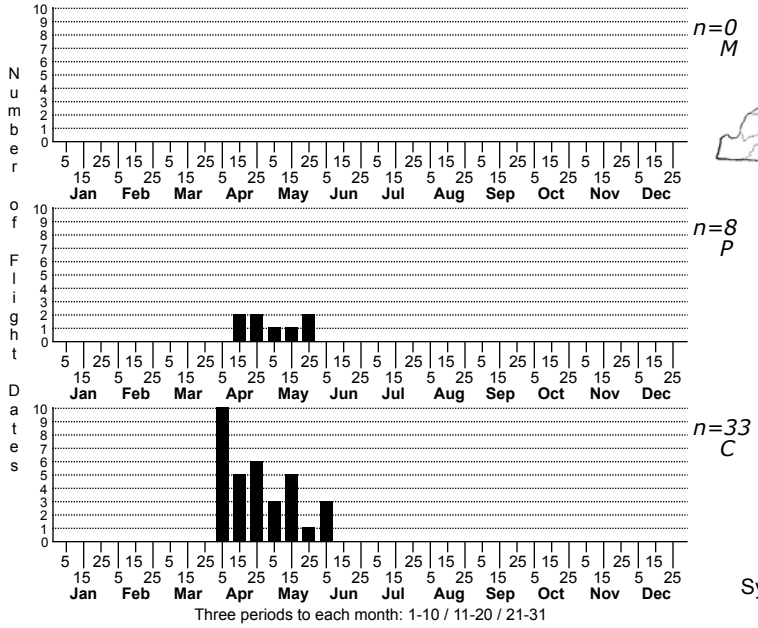
FLIGHT: A late spring to early summer flight. Late May to late June. Records previously reported earlier in May have been determined by website reviewers to be of Green-faced or Cobra clubtails.

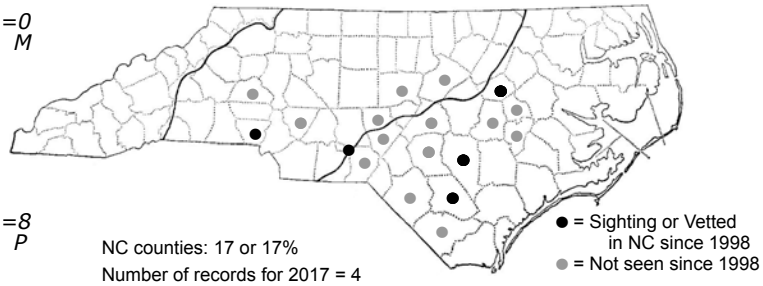
HABITAT: Rivers to small streams, where there are riffles or rapids. Occasionally at lakes.

BEHAVIOR: The species is most active in late afternoon. Adults may perch on rocks, shorelines, and leaves near rivers and creeks.

COMMENTS: This is one of many montane species of dragonflies that is poorly known to most state biologists; the species is likely found mainly with a purposeful search, late in the day. A photographic record made by Curtis Smalling in 2015 added Watauga County to the list of known counties. More importantly, photos from foothill sites in Caldwell (by Mark Shields) and McDowell (by Smalling) counties added two additional counties to the state range, especially indicating that it ranges downward into the transition zone with the Piedmont province. There are a number of photos of individuals reported initially as Mustached Clubtails from Madison and Buncombe counties. Recent (2016 and 2017) review by our website editors indicates that essentially all of these photos are of Green-faced or Cobra clubtails, and thus photos that formerly resided on this species account have now been moved to other accounts

Hylogomphus apomyius Banner Clubtail





NC counties: 17 or 17%
Number of records for 2017 = 4

High counts of:
10 - Cumberland - 1988-04-09
7 - Wilson - 1997-04-02
6 - Lenoir - 1983-05-11

Earliest date: Wilson 1991-04-01
Latest date: Harnett; C 1987-06-10

Status NC	Status US	Rank NC	Rank Global
W	-	S3?	G3G4

Synonym: *Gomphus apomyius*

DISTRIBUTION: Lower and south-central Piedmont, and the southern and central Coastal Plain, but absent from coastal counties. Ranges north to Catawba, Chatham, Wake, and Wilson counties. NC lies at the northeastern end of the range.

ABUNDANCE: Uncommon, at least in former years; might now be better stated "rare to uncommon and somewhat poorly known". Perhaps the species has declined in recent decades. Dunkle (2000) calls the species "scarce", and Beaton (2007) calls it "rare and local" in its range in Georgia.

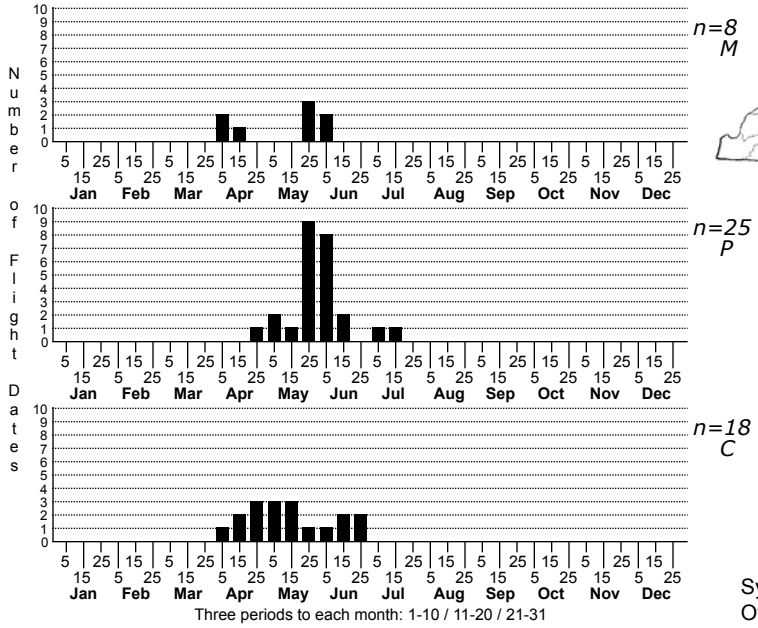
FLIGHT: Ranges from very early April to early June in the Coastal Plain. In the Piedmont, the flight appears to be slightly narrower -- mid-April to late May.

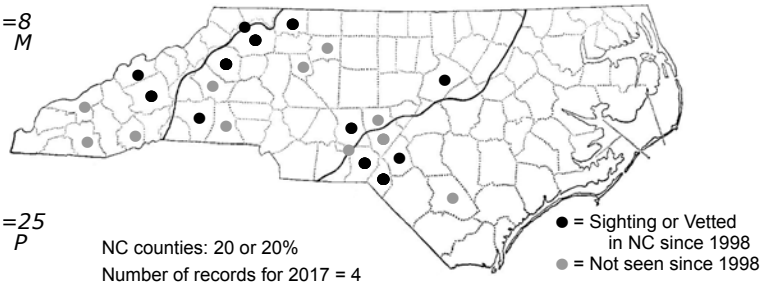
HABITAT: Generally in clean streams and rivers with sandy or gravelly bottoms.

BEHAVIOR: Males perch on rocks or other perches close to rivers and streams. They are most active early in the morning and toward dusk.

COMMENTS: This is one of the smaller clubtails (only up to 1.5 inches in length). Males have a very wide club. Despite its range occurring close to the locations of many biologists, it is poorly known to most persons, and thus the NC Natural Heritage Program has the species on its Watch List. The species can be easily confused with the Spine-crowned Clubtail; in fact, several former reports and photos listed as Banner Clubtail have been re-evaluated and determined to be Spine-crowned Clubtail. It is likely that this species has declined in the state since the time of Cuyler's collecting efforts; there are very few reports since the 1980s. Thankfully, Mark Shields and John Petranka have photographically documented new records of the species in spring 2017, along the South River in Sampson and Bladen counties.

Hylogomphus parvidens Piedmont Clubtail





NC counties: 20 or 20%
Number of records for 2017 = 4

Vetted in 2017: Wilkes; M

High counts of:
7 - Richmond; C - 1966-04-30
5 - Wilkes; P - 2007-06-05
4 - Scotland - 2003-05-03

Earliest date: Buncombe 2012-04-05
Latest date: Surry 2016-07-12

Status NC	Status US	Rank NC	Rank Global
W	-	S3?	G4

Synonym: *Gomphus parvidens*
Other Name: Sandhills Clubtail - Hylogomphus parvidens carolinus

DISTRIBUTION: Odd range in NC, probably owing to two separate subspecies being present. The nominate subspecies (Hylogomphus parvidens parvidens) occurs in the western half of the Piedmont and the southern mountains. The Sandhills subspecies (H. parvidens carolinus) occurs in the Sandhills region, with an outlying record from Bladen County; there is also a recent sight report for Wake County. It is not known if the species occurs in the intervening south-central Piedmont, though one would expect that it does.

ABUNDANCE: Rare to uncommon over the range, though there are records for most counties in the Sandhills. Occurs in rather low densities, with a peak daily count of just 7 individuals.

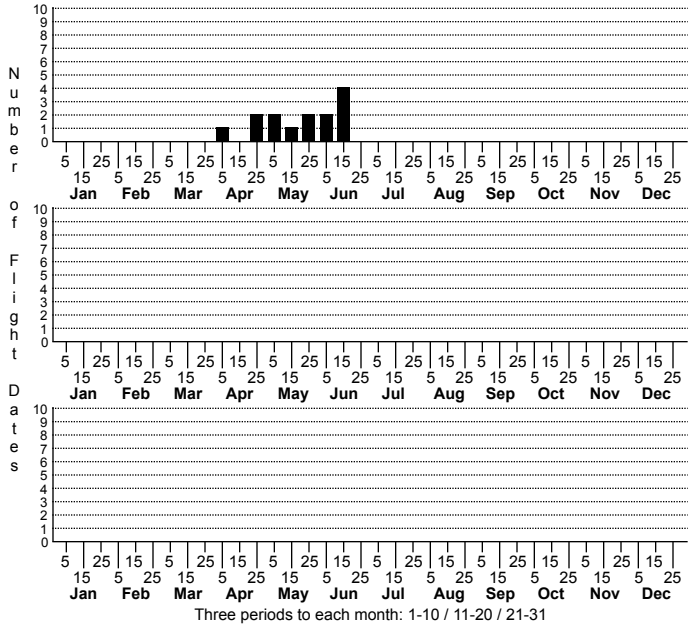
FLIGHT: Early April to late June, rarely to mid-July. Oddly -- perhaps because of the subspecies differences -- the mountain flight period starts about the same time as those downstate, and seemingly ends earlier; in most species, the flight in the mountains should be staggered later in starting and ending dates than those downstate.

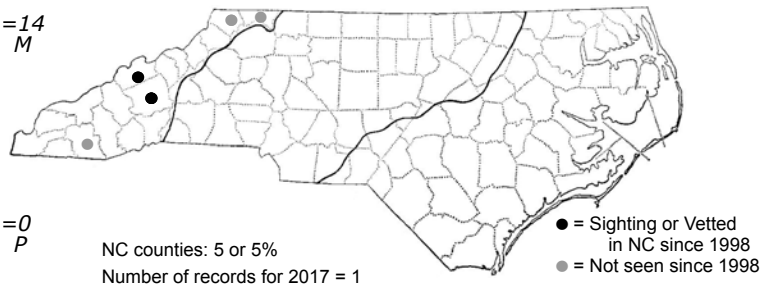
HABITAT: Small or medium creeks, with sandy bottoms and well-vegetated banks.

BEHAVIOR: References indicate that adults seldom perch on the ground or dirt, but instead typically perch on low vegetation close to the water.

COMMENTS: The species is not well known in NC, in part because it is essentially absent from the northeastern Piedmont where more biologists live and study odonates. Nonetheless, based on its range in the state, it does not appear to be rare in at least parts of the range. More field work is needed in the southern Piedmont to determine the boundaries of the ranges of the two subspecies and to determine whether there actually is a small hiatus between their ranges. The NC Natural Heritage Program added the species to its Watch List in 2012.

Hylogomphus viridifrons Green-faced Clubtail





NC counties: 5 or 5%
Number of records for 2017 = 1

High counts of:
6 - Macon - 1983-06-15
5 - Buncombe - 2012-05-01
4 - Ashe - 1994-06-05

Earliest date: Madison 2012-04-09
Latest date: Madison 2016-06-19

Status NC	Status US	Rank NC	Rank Global
SR	-	S1	G3G4

Synonym: *Gomphus viridifrons*

DISTRIBUTION: A Northern species, with the southeastern edge of the range reaching the mountains of the Carolinas and extreme northeastern GA (Rabun County). So far, NC records are only for Ashe, Alleghany, Buncombe, Madison, and Macon counties; however, it is likely being overlooked because of identification difficulties.

ABUNDANCE: Dunkle (2000) says it is "scarce" within its overall range, and NatureServe gives it a G3G4 (rare to uncommon) global rank. Thus, it is assumed to also be rare in NC, especially considering that we have only 14 state records with dates (as of 2017). However, it does not seem to be rare immediately along the French Broad River in Madison and Buncombe counties, at least in recent years.

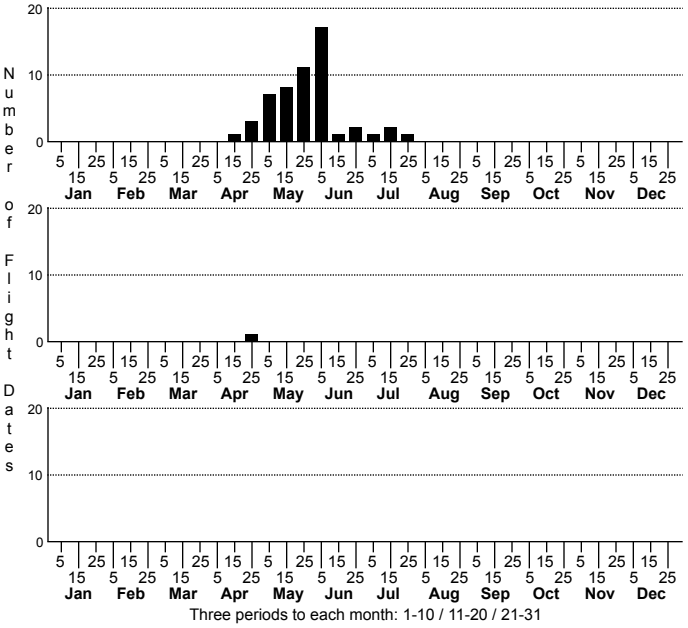
FLIGHT: Mainly late April into mid- or late June. There is one very early photo record, for 9 April. However, 2012 was an exceptionally warm and early spring, and thus the 9 April record might be an anomaly. There were several other reports from Madison County in 2012 in the April and May period, but data have not yet been entered.

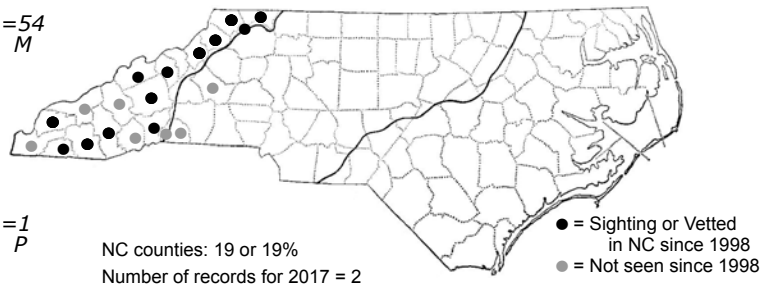
HABITAT: Rocky and fast-moving rivers and large streams. Likes a mixed substrate of silt and gravel.

BEHAVIOR: The species is most active late in the afternoon or in cloudy conditions. Males may perch on rocks in the rivers, or on vegetation or the ground near the shore.

COMMENTS: This is one of many clubtails that are poorly known in NC, as well as rather rare/scarce throughout the overall range. Thankfully, the large gap in the NC range between Ashe and Macon counties was "filled" by records from Madison and Buncombe counties in spring 2012. Jeff Pippen photographed one (shown on his website) from many angles, on 9 April, and this set of photos was reviewed by experts and determined to be this seemingly rare species. This is a difficult-to-identify species; in fact, several of this website's reviewers/editors have determined in 2016 and 2017 that quite a few photo records previously identified as Mustached Clubtail appear to be Green-faced Clubtail, and have been moved to this species account. Also, Green-faced Clubtail can easily be confused with Cobra Clubtail. All three species occur, or are believed to occur, along the French Broad River in Madison and Buncombe counties. What is most puzzling is that, despite this flurry of recent photographic records from Buncombe and Madison Counties, Duncan Cuyler never collected any individuals of Green-faced Clubtail from either of these counties!

Lanthus vernalis Southern Pygmy Clubtail





NC counties: 19 or 19%
Number of records for 2017 = 2

High counts of:
8 - Ashe - 2007-06-09
6 - Avery - 2015-05-12
5 - Ashe - 2007-06-01

Earliest date: Madison 2012-04-12
Latest date: Ashe 2006-07-22

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

DISTRIBUTION: Throughout the mountains. Known from nearly all counties in the mountain province, but no records downstate. Despite the common name -- Southern (as opposed to the Northern, for Lanthus parvulus) -- this is an Appalachian and somewhat Northern species, ranging south only to the extreme northern mountains of GA.

ABUNDANCE: Fairly common and widespread. It is one of the more numerous of the clubtails in the NC mountains, even in the southernmost mountain counties.

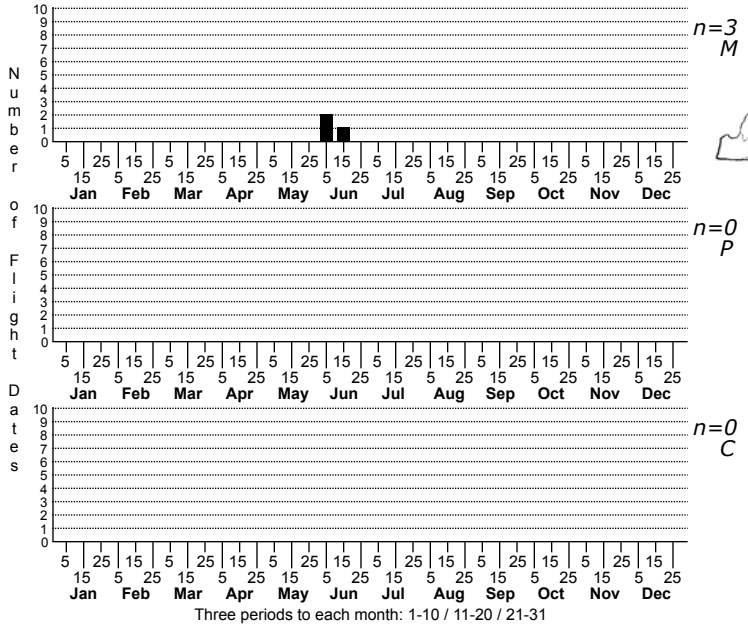
FLIGHT: Though both Dunkle (2000) and Beaton (2007) mention or graphically portray the early date as mid-May, many have been seen in NC earlier in the season. Perhaps global warming is moving the flight in NC earlier, but its flight in the state is now from mid-April to mid- or late July. The peak occurs from mid-May to early June.

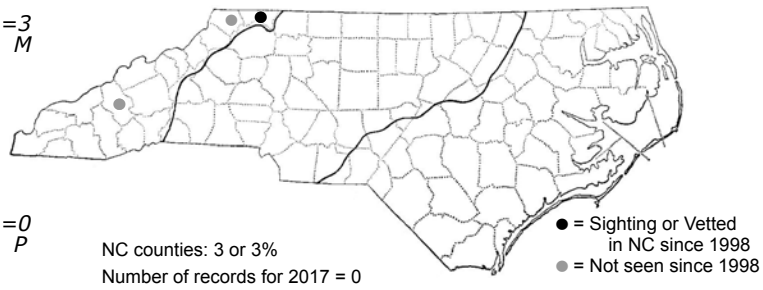
HABITAT: Typically breeds at small, rocky streams, often where shaded.

BEHAVIOR: Usually seen perched on vegetation, often well away from streams, but in wooded areas, such as along wide trails and dirt roads. Rather unwary and easily studied.

COMMENTS: By mid-May, this can be a somewhat easily found dragonfly near streams and along dirt roads through bottomlands or along streams. It is one of the smaller clubtails, and it is somewhat slender as well. Interestingly, Dunkle (2000) calls the species "uncommon" across its range, and Beaton (2007) calls it "rare to locally uncommon" in its small northern Georgia range. Perhaps it is more common in NC than elsewhere within its range.

Ophiogomphus aspersus Brook Snaketail





NC counties: 3 or 3%
Number of records for 2017 = 0

High counts of:
1 - Alleghany - 2007-06-13
1 - Haywood - 1958-06-09
1 - Ashe - 1994-06-05

Earliest date: Ashe 1994-06-05
Latest date: Alleghany 2007-06-13

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

DISTRIBUTION: This is a Northern species, apparently with a disjunct population in the southern Appalachians. In NC, it is found primarily in the northern mountains (next to the VA state line), with an outlier record from Haywood County.

ABUNDANCE: Rare in the vicinity of the New River in Ashe and Alleghany counties, and certainly very rare to absent farther southward in the mountains. This is especially true in that all known daily counts are of just a single individual.

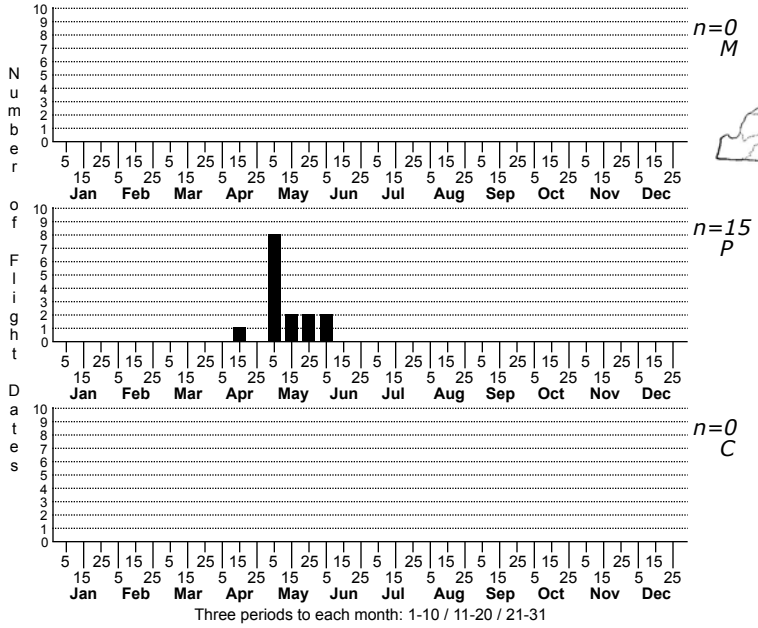
FLIGHT: Probably the latter part of May into most of June. The only NC dates available are for a very narrow period of 5-13 June, though of course the flight period must surely be a month or more.

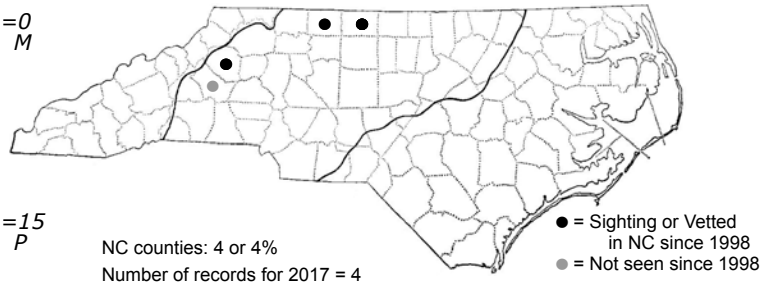
HABITAT: Not surprisingly, it breeds in clear, rocky rivers or streams, but Dunkle (2000) says these waters are "in the open", with brushy margins.

BEHAVIOR: Adults forage both near water and in fields and woodland roads/trail. Males perch on rocks in the rivers/creeks and elsewhere.

COMMENTS: This is another of the many clubtails that is very poorly known in the state, in part because the southern edge of the range apparently includes only a relatively few counties (in the mountains). Ted Wilcox's record came from the New River, as did a collection record from Duncan Cuyler. (Thus, the habitat as written in most guides is not strictly "brooks" or "streams", but it can be larger rivers such as the New.) Biologists looking for clubtails in the mountains always should check first alongside the largest and rockiest rivers available -- in the case of Ashe and Alleghany counties, it is the New River.

Ophiogomphus edmundo Edmund's Snaketail





NC counties: 4 or 4%
Number of records for 2017 = 4

Vetted in 2017: Stokes

High counts of:
16 - Rockingham - 2012-05-02
12 - Rockingham - 2015-05-07
6 - Caldwell - 2016-05-09

Earliest date: Rockingham 2016-04-13
Latest date: Burke; P 1994-06-04

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S1	G1G2

DISTRIBUTION: According to the OdonataCentral map, this species has now been found in just 10 counties in its range, in western NC, southeastern TN, extreme western SC, and northern GA. The NC range is the escarpment/foothills, in Caldwell and Burke counties, plus a few sites in Stokes and Rockingham counties in the northwestern Piedmont. This clubtail species ought to be present in other NC foothill counties, especially south of Burke County, as well as in the gap between Stokes and Caldwell counties.

ABUNDANCE: Very rare throughout its range, as well as in NC. However, at the very few locations where found, there have been moderate numbers seen in a given day, as opposed to just a single individual.

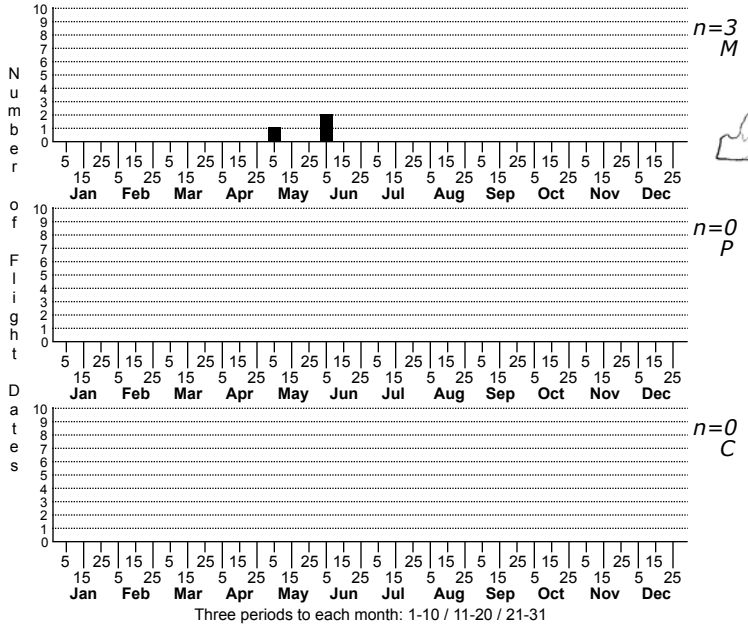
FLIGHT: The flight in NC, based on 15 records, is from mid-April to early June, if not slightly longer. The Georgia records fall between 24 April and 25 May (Giff Beaton's website).

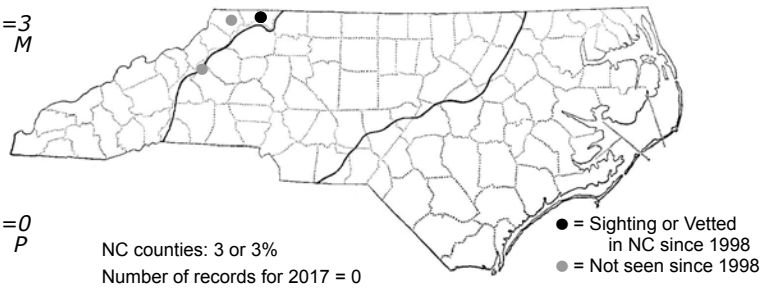
HABITAT: Rivers and larger creeks with fast-flowing, clear water. The three bodies of water (Mayo and Dan rivers and Wilson Creek) where recently seen in NC are fast-flowing large creeks/small rivers.

BEHAVIOR: Males are seldom seen except when perching on rocks in the rivers and streams. Dunkle (2000) says that the adults, at least males, spend most of their time high in trees.

COMMENTS: This species was considered to be of historical global occurrence (GH) until re-discovered in 1994 in the NC foothills. It has been searched for in the state in the Burke/Caldwell vicinity a few times since the discovery, but observers had met with failure until John Petranka found some numbers at two sites along Wilson Creek in Caldwell County, in May 2016. Of greater significance was Ed Corey's remarkable discovery of the species in Rockingham County in 2012, observing 16 individuals, photographing and collecting one to document this major range extension into the middle Piedmont. Other biologists have re-found this species there in recent years. In spring 2017, Brian Bockhahn and Kyle Kittelberger discovered a new location at the Dan River in Stokes County. With a global rank of G1G2, this may be globally the rarest dragonfly that occurs in NC. In fact, it ought to have been Federally listed as Endangered or Threatened already.

Ophiogomphus howei Pygmy Snaketail





NC counties: 3 or 3%
Number of records for 2017 = 0

High counts of:
2 - Alleghany - 2008-05-10
1 - Alleghany - 2007-06-06
1 - Ashe - 1994-06-05

Earliest date: Alleghany 2008-05-10
Latest date: Alleghany 2007-06-06

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S1	G3

DISTRIBUTION: This is a Northern/Appalachian species that ranges south to the mountains of NC. Within the state, it is known from only three mountain counties -- Alleghany, Ashe, and Burke.

ABUNDANCE: Undoubtedly very rare. Dunkle (2000) also considers the species to be "scarce" throughout its range.

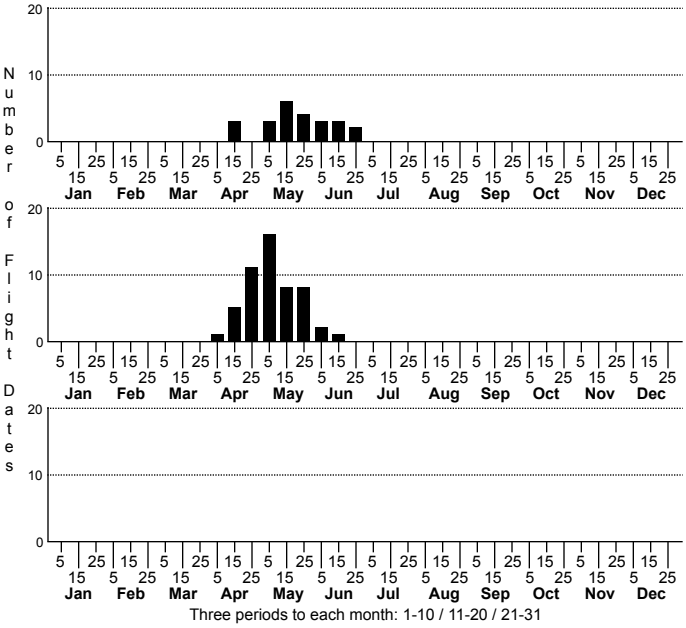
FLIGHT: The only NC dates available to us are 10 May, 5 June, and 6 June, from Alleghany and Ashe counties. The date(s) for the Burke County record is not known. Thus, the flight is presumed to occur from early May to early to mid-June.

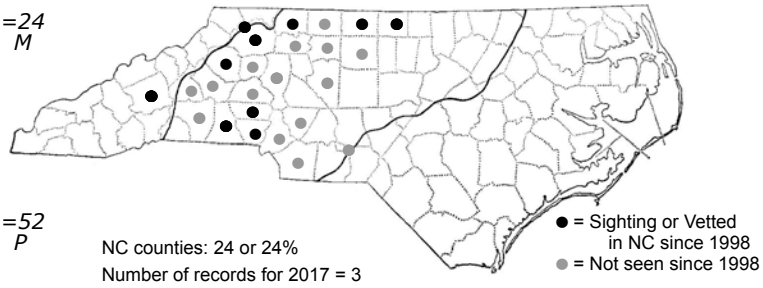
HABITAT: Breeds at large, clear rivers, with sand or gravel bottoms.

BEHAVIOR: Males fly in a bouncy manner low over ripples in the rivers, where they are difficult to observe.

COMMENTS: This is the smallest snaketail and one of the smallest of the clubtails, typically well under 1.5" in length. As with so many other clubtails, especially those restricted in NC to the mountains, it is practically unknown to most biologists. The New River in Ashe and Alleghany counties is the best spot to look for this and many other rare or poorly known dragonflies in our mountains.

Ophiogomphus incurvatus Appalachian Snaketail





NC counties: 24 or 24%
Number of records for 2017 = 3

High counts of:
6 - Caswell - 1982-04-23
4 - Wilkes; P - 2008-05-13
4 - Buncombe - 2012-05-06

Earliest date: Richmond; P 1994-04-10
Latest date: Buncombe 2013-06-30

Status NC	Status US	Rank NC	Rank Global
W	-	S3	G3

DISTRIBUTION: Throughout the western and central Piedmont; and sparingly in the lower elevations of the mountains, though so far known only from Buncombe County in that province. Apparently absent from the northeastern Piedmont. Recorded east to Caswell, Guilford, Davidson, and Richmond counties (presumably in the Piedmont portion of the county). The species has a rather limited range from MD to AL, and even though the common name is "Appalachian", and the general range is the southern Appalachians and Piedmont, for some interesting reason (elevation?) there are few "true"mountain records for NC.

ABUNDANCE: Uncommon to locally fairly common. It is quite widespread for a clubtail in the state, as there are records for most counties in the western 2/3rds of the NC Piedmont. However, this is globally a scarce species, as NatureServe has a G3 (rare) global rank. Thus, NC might have the highest density of the species.

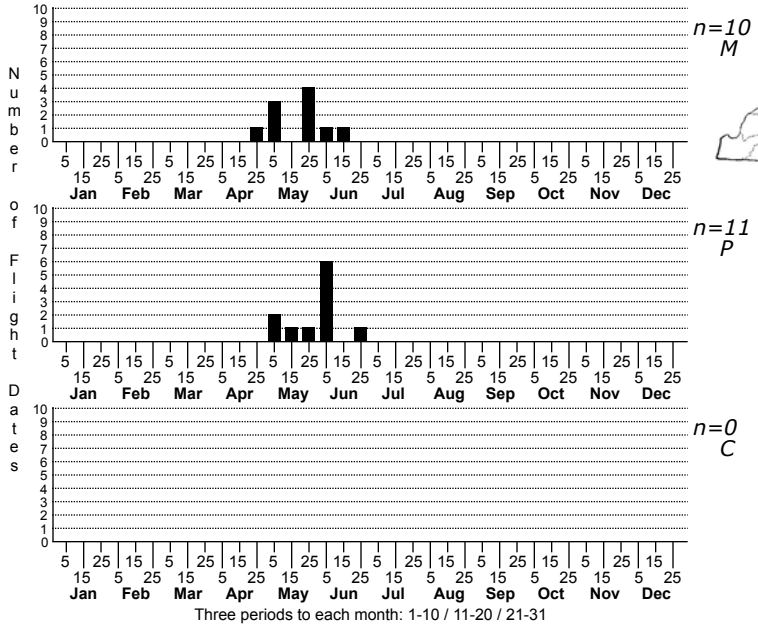
FLIGHT: Mid-April to late June, both in the mountains/foothills and in the remainder of the Piedmont. The single record for Richmond County is for early April, and thus in the southern Piedmont counties, the flight may start by early April.

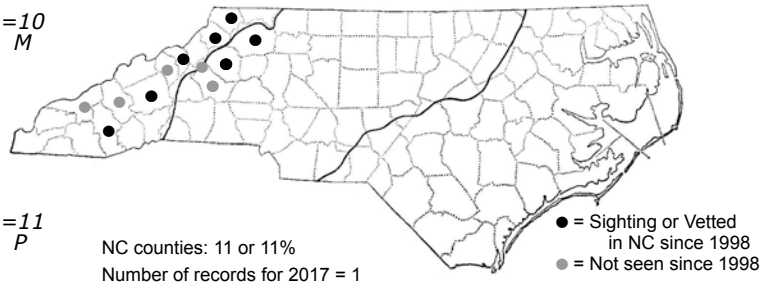
HABITAT: Small to medium streams, often in the open, for breeding; usually the streams are clear with some riffles and some gravel.

BEHAVIOR: Males typically perch on twigs or low vegetation near a creek; they make short patrols over the water.

COMMENTS: Though this is a globally scarce species, with Paulson (2011) calling it "rare" and Dunkle (2000) calling it "uncommon", it apparently is most numerous in its range in the western and central NC Piedmont. Snaketails (clubtails in the genus Ophiogomphus) are typically a bit more colorful than clubtails in other genera, especially with the bright lime-green or grass-green sides of the thorax. Because of its G3 global rank, though it is not a rare species in NC, the NC Natural Heritage Program has added the species to its Watch List in 2012; this is especially needed because there are relatively few recent reports.

Ophiogomphus mainensis Maine Snaketail





NC counties: 11 or 11%
Number of records for 2017 = 1

High counts of:
22 - Caldwell - 1994-06-07
6 - Caldwell - 1994-06-02
4 - Wilkes; P - 2016-05-25

Earliest date: Buncombe 2015-04-21
Latest date: Wilkes; P 2016-06-22

Status NC	Status US	Rank NC	Rank Global
SR	-	S2S3	G4

DISTRIBUTION: Essentially the mountains only, including Atlantic drainage streams along the upper Piedmont/Blue Ridge Escarpment. Probably ranges throughout the mountain province, as this is a Northern species but yet ranging south to northern GA (two counties). Records are lacking for the four extreme southwestern counties.

ABUNDANCE: Rare to locally uncommon. Not as rare as several other mountain/foothills-only clubtails, as NC now has records for 11 counties. In fact, there are recent records, including photos, for seven of the 11 counties.

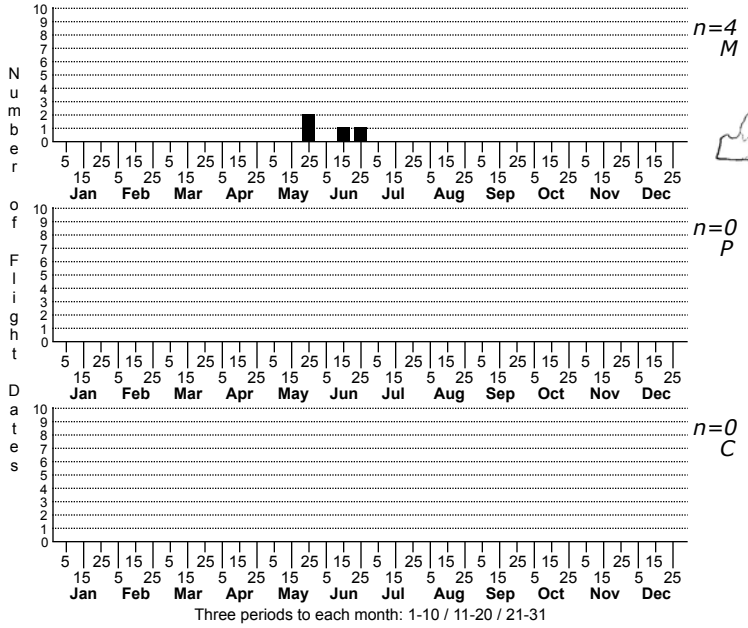
FLIGHT: Formerly early or mid-May to mid-June; however, in recent years the flight period seems to be moving earlier, as there is a 2016 record as early as 21 April. Thus, the flight is roughly from late April to mid-June.

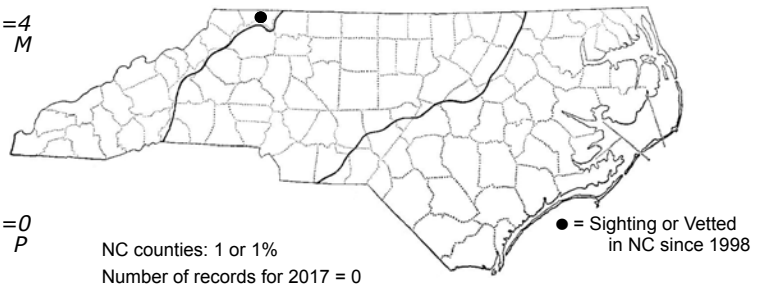
HABITAT: Clear and rapid mountains streams or small rivers, in forested areas, for breeding.

BEHAVIOR: Males perch on rocks in the streams, but adults tend to feed in fields, according to Dunkle (2000). Several NC records are well away from obvious streams or rivers.

COMMENTS: This species has a fairly extensive range in terms of latitude, from New Brunswick to northern Georgia, but it ranges west only through the Appalachians. As Dunkle (2000) calls it "fairly common", and Beaton (2007) cites three records from northern Georgia, we suspect that it is not rare in NC, but probably uncommon, likely being present in most counties in the mountains with further study. Though the NC Natural Heritage Program lists the species as Significantly Rare, the handful of new records, for a number of counties, suggests that it might be suitable to move the species to the Watch List.

Ophiogomphus rupinsulensis Rusty Snaketail





High counts of:
3 - Alleghany - 2007-06-13
3 - Alleghany - 2009-05-31
1 - Alleghany - 2006-06-22

Earliest date: Alleghany 2006-05-28
Latest date: Alleghany 2006-06-22

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

DISTRIBUTION: Northern, ranging south to extreme northwestern NC and TN. Known in NC only from Alleghany County, where first reported (photos) in 2006.

ABUNDANCE: Certainly must be very rare in NC. Within its fairly broad/wide range, however, Dunkle (2000) calls it "fairly common".

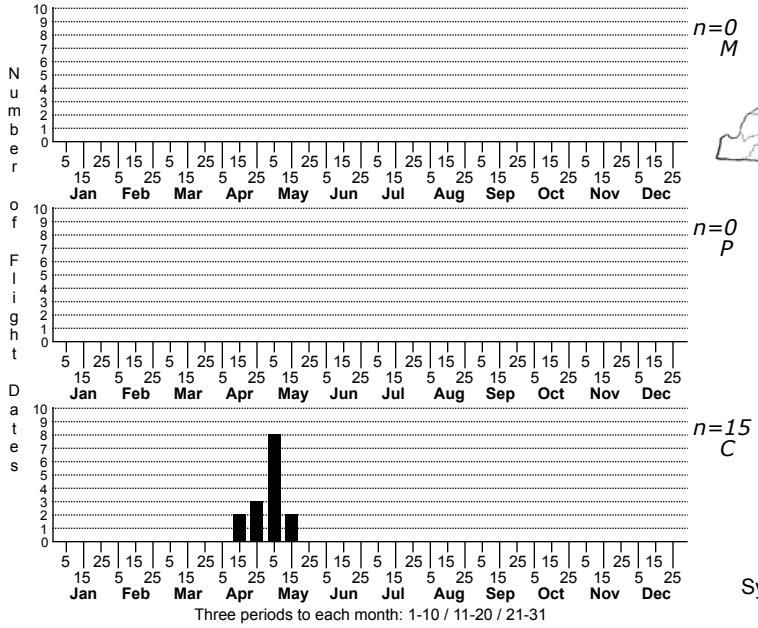
FLIGHT: The NC records fall between 28 May and 22 June. However, Mead (2003) gives a wide range from mid-May to mid-August for the MN area, and Dunkle (2000) gives "Early May to late Sep."; this is a remarkably wide spread of flight dates for any clubtail!

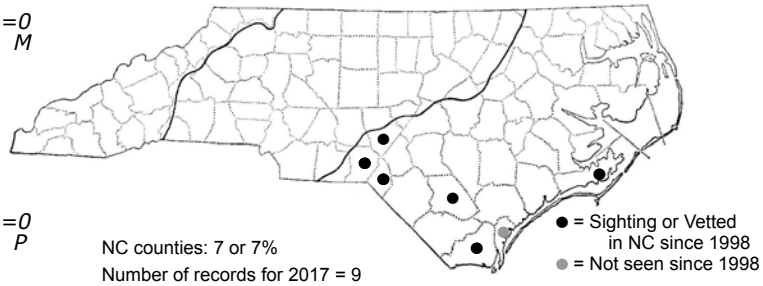
HABITAT: Large streams and rivers, where water is clear, with rapids and riffles.

BEHAVIOR: Adults, where present, are rather easily seen, as they often perch on dirt or other ground or low vegetation. As with most clubtails, males often perch on rocks in the rivers while guarding territories.

COMMENTS: This species had been reported to occur in NC in one or more references prior to 2006, though we were aware of no documentation, and Duncan Cuyler had no specimen data for the species in NC. Fortunately, while photographing dragonflies at the Alleghany County section of New River State Park on 28 May and again on 22 June, 2006, Ted Wilcox documented this species along the margins of the New River with excellent photographs.

Phanogomphus australis Clearlake Clubtail





NC counties: 7 or 7%
Number of records for 2017 = 9

Vetted in 2017: Carteret, Moore; C

High counts of:
10 - Richmond; C - 2011-05-05
8 - Scotland - 2017-05-08
4 - Richmond; C - 2015-05-08

Earliest date: Brunswick 2017-04-12
Latest date: Bladen 2013-05-20

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

Synonym: *Gomphus australis*

DISTRIBUTION: The southern Coastal Plain, from Carteret County west to Moore and Richmond counties. As would be surmised from the range, NC lies at the northern edge of the species' range. The Richmond County records (photographs first taken in 2011) extend the range slightly northward, and a record from adjacent Moore County in 2017 extends the range even more to the north. A photographic record in 2013 confirms the species from Bladen County, filling a gap in the former range. A photographic record from Carteret County in 2017 greatly extends the range eastward.

ABUNDANCE: Extremely local, known from only a handful of lakes and ponds in the state; however, not scarce at one or two sites in Richmond County. Range and abundance between the lower Coastal Plain and the Sandhills (Richmond County) is unknown, but SC has no records away from the Sandhills/Fall Line counties. Interestingly, as many as 10 individuals have been seen at the Richmond County site.

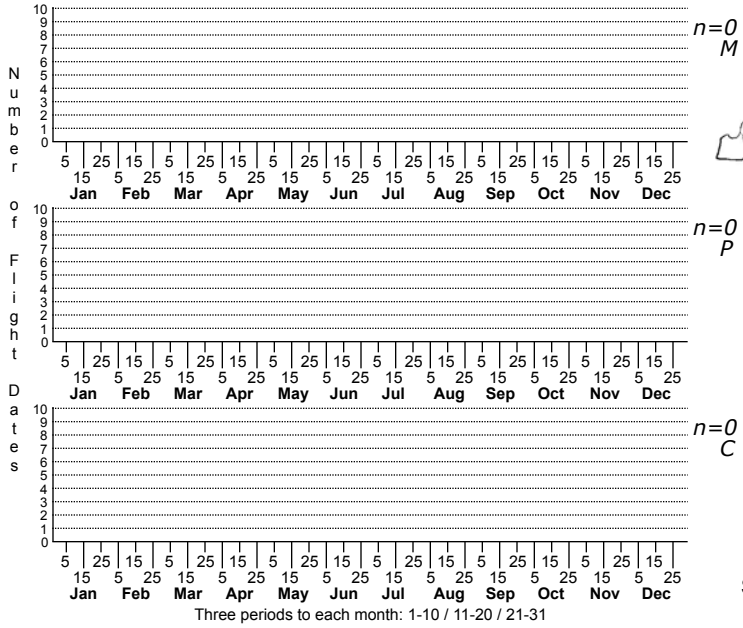
FLIGHT: Fairly early in the season: mid-April to mid-May.

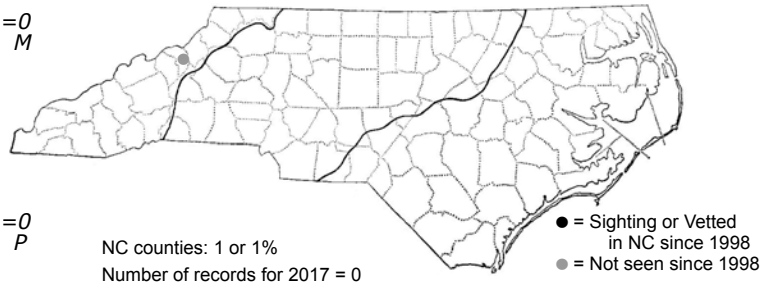
HABITAT: Lakes and ponds with sand bottoms and heavy vegetation, often with lily pads. The primary Richmond County site is a lake adjacent to a fish hatchery, with some dense concentrations of lily pads and other aquatic vegetation, particularly near the dam. The Bladen County record is from a large natural Carolina bay lake. The Carteret County site is a fairly large limesink pond, in otherwise sandy pinelands.

BEHAVIOR: Males perch on lily pads and other vegetation close to the lakes and ponds.

COMMENTS: Both Dunkle (2000) and Beaton (2007) mention the association of the species with lily pads. Thus, it suggests that biologists should try to find the species by searching out ponds or lakes with many lily pads. Gratifyingly, in the past few years, biologists have expanded the range and known sites and counties for the species in NC; it is not nearly as rare as thought just a few years ago.

Phanogomphus borealis Beaverpond Clubtail





NC counties: 1 or 1%
Number of records for 2017 = 0

High counts of:

Earliest date: ?
Latest date: ?

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

Synonym: *Gomphus borealis*

DISTRIBUTION: Known from just one mountain county -- Mitchell. This is the southern end of the range of this Northern species.

ABUNDANCE: Considered to be of historical occurrence in the state, the only odonate considered by the NC Natural Heritage Program to be perhaps extirpated from the state.

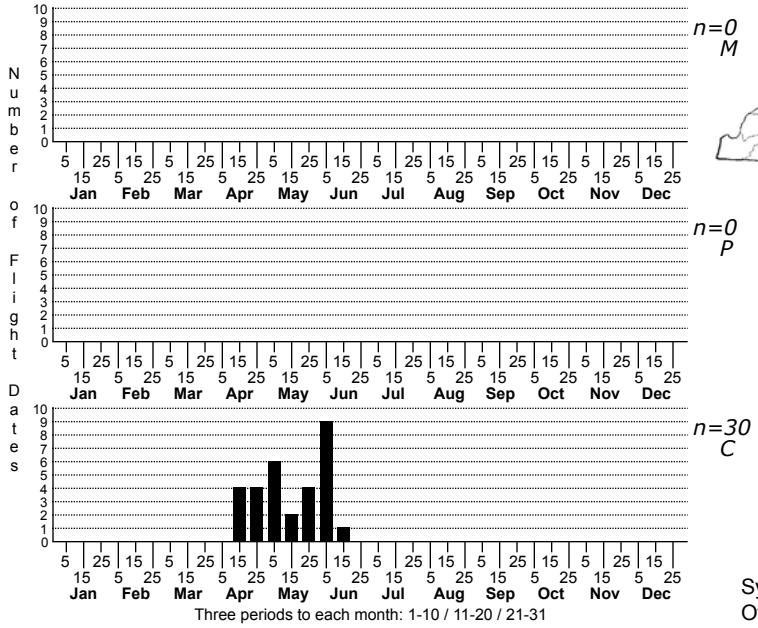
FLIGHT: Probably May into July, inferred from Dunkle (2000).

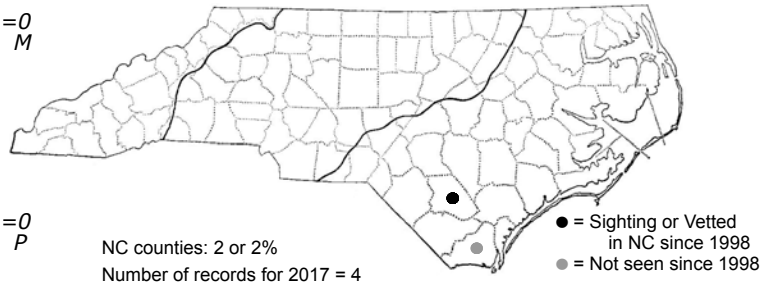
HABITAT: Lakes, ponds, and large, slow-moving streams. Mainly with mud bottoms. Beaver ponds are only one of many habitats used in its range.

BEHAVIOR: Males perch on the ground or vegetation near ponds.

COMMENTS: Duncan Cuyler (pers. comm. to the NC Natural Heritage Program) suggested an historical status for the species, as he had searched for it a few decades ago, and could not find the species. There are a handful of other dragonflies and damselflies with no recent records; however, biologists consider those to still be present, as likely there has been little or no search of known sites for them. Sadly, we do not have any data for the only record(s) known from the state for the Beaverpond Clubtail.

Phanogomphus cavillaris Sandhill Clubtail





High counts of:
18 - Bladen - 1966-05-08
15 - Bladen - 1966-05-08
14 - Bladen - 2009-05-31

Earliest date: Bladen 2010-04-15
Latest date: Brunswick 1987-06-11

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

Synonym: *Gomphus cavillaris*
Other Name: Brimley's Clubtail - Phanogomphus cavillaris brimleyi

DISTRIBUTION: Extreme southeastern corner of the state (Bladen and Brunswick counties only); disjunct from the main part of the range in FL and extreme southern GA. Surprisingly, not yet known from SC.

ABUNDANCE: Presumed to be very rare and local in NC, but numerous at one or more sites in Bladen County. Dunkle (2000) calls it "common" in FL, but the fact that the species hasn't been found in SC or most of GA suggests that it must be quite scarce in NC.

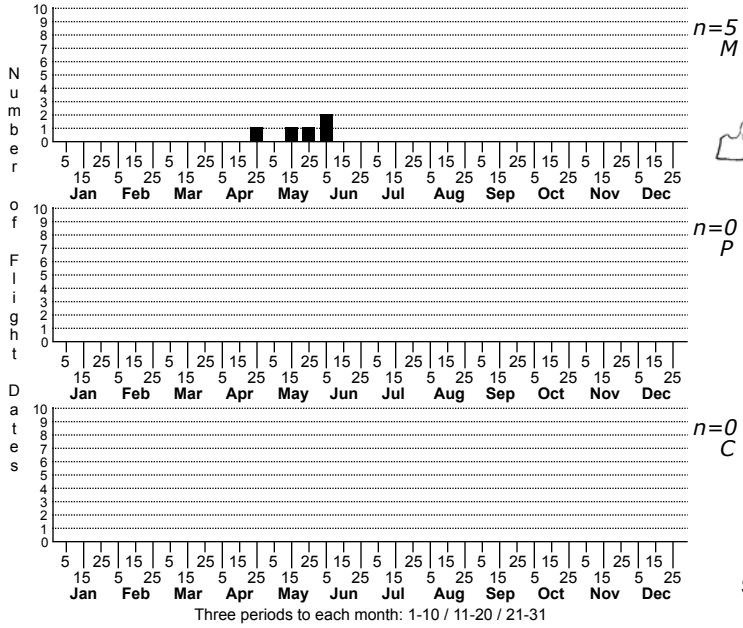
FLIGHT: Spring to very early summer. NC dates fall between mid-April and mid-June.

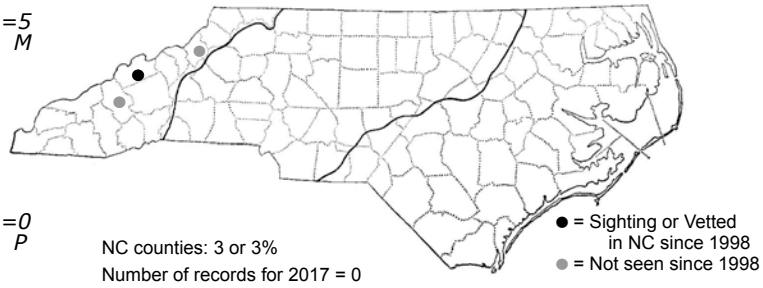
HABITAT: Sand-bottomed lakes. Individuals are often seen along the shoreline of a natural lake, perching on the sand. One seen in May 2015, however, was over a mile from the nearest lake and perched on the ground along a roadside.

BEHAVIOR: Males perch on the ground or in vegetation near lakes.

COMMENTS: The subspecies in NC is Phanogomphus cavillaris brimleyi. This subspecies is also found in the panhandle of Florida; the nominate subspecies (P. c. cavillaris) is found throughout the FL peninsula. Ed Corey saw and photographed several individuals on 3-4 June 2008 at bay lakes in Bladen County, to confirm that the species still has a presence in NC. Sixteen additional records were made between 2009 and 2017, all in the same areas in Bladen County as previously known.

Phanogomphus descriptus Harpoon Clubtail





NC counties: 3 or 3%
Number of records for 2017 = 0

High counts of:
1 - Haywood - 1958-06-09
1 - Avery - 1965-05-16
1 - Avery - 1965-06-06

Earliest date: Madison 2013-04-30
Latest date: Haywood 1958-06-09

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

Synonym: *Gomphus descriptus*

DISTRIBUTION: Mountains only, where recorded only from three counties (Avery, Madison, and Haywood). NC is at the southern end of the range, as the species does not range into the GA mountains. The species ranges north into southeastern Canada.

ABUNDANCE: Very rare (presumably), as records only for three mountain counties.

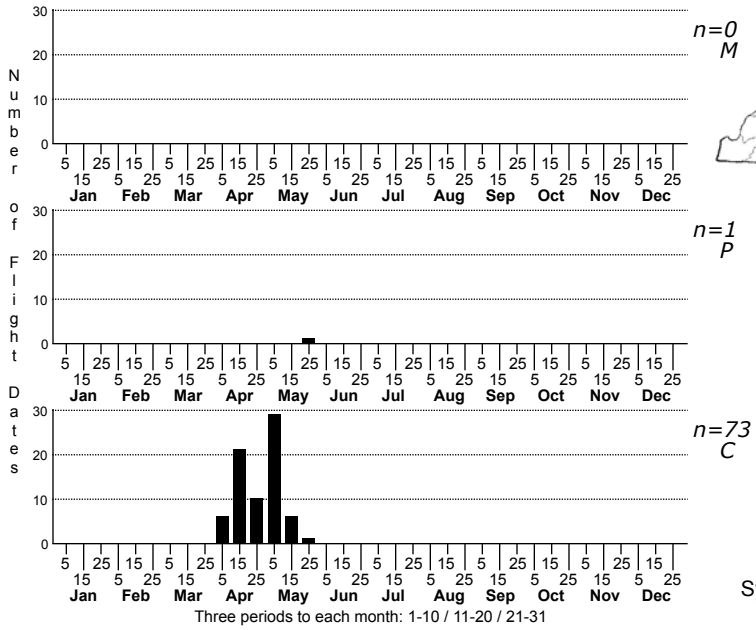
FLIGHT: Late April into June. The five dates available for NC fall from 30 April to 9 June.

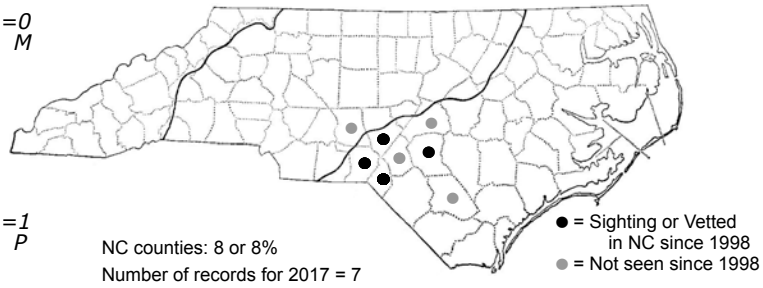
HABITAT: Breeds at rocky streams and rivers. All NC records are from the vicinity of small to moderate-sized rivers (i.e., French Broad, Linville, and East Fork Pigeon).

BEHAVIOR: Males perch on rocks in rivers and streams, on the ground near the water, or on vegetation close to the water.

COMMENTS: This is another poorly known dragonfly in NC. Until recently, the last known record for NC was from 1965, and it had been considered of historical occurrence. However, a male photographed by Vin Stanton in 2013 from the French Broad River in Madison County reconfirms this species in the state. One was well observed close to the same area in May 2016. Continued field work for clubtails in the mountains is greatly needed, especially by persons seeking out rare species by netting them along creeks and rivers, and could lead to additional records for this species.

Phanogomphus diminutus Diminutive Clubtail





NC counties: 8 or 8%
Number of records for 2017 = 7

High counts of:
33 - Moore; C - 1965-05-01
20 - Scotland - 2015-05-03
15 - Scotland - 2016-04-23

Earliest date: Scotland 1991-04-03
Latest date: Montgomery 1970-05-27

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

Synonym: *Gomphus diminutus*

DISTRIBUTION: Essentially only the Sandhills region, plus the adjacent southern Coastal Plain, east to Harnett, Cumberland, and Bladen counties. NC lies at the northeastern edge of the species' range. The species has one of the more limited ranges for a dragonfly -- primarily along the Fall Line sandhills from NC, through central SC, to extreme eastern GA.

ABUNDANCE: Uncommon to locally fairly common in the Sandhills, but very rare to the east. Can occur in some numbers, as there are three daily counts of 15 or more individuals.

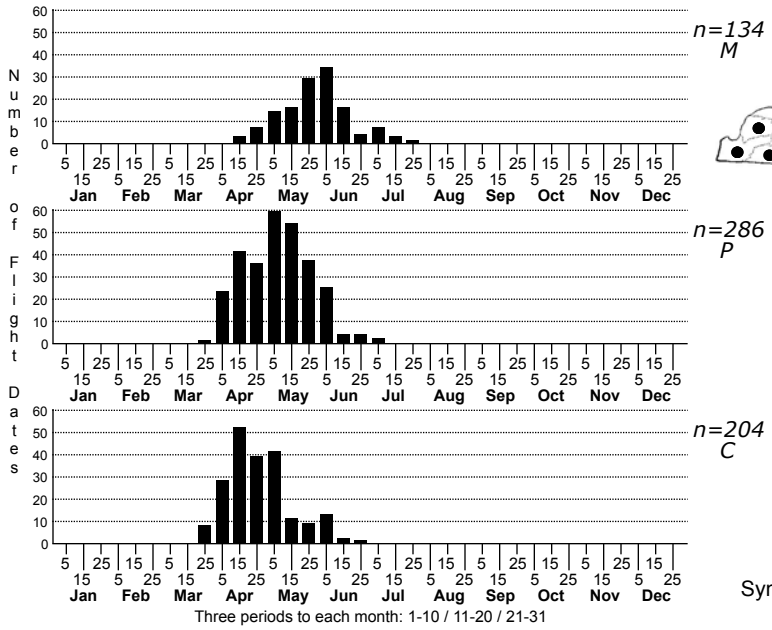
FLIGHT: Spring season only; early April to late May.

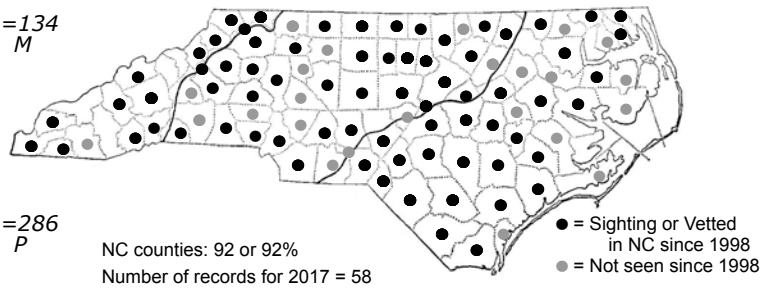
HABITAT: Sunny margins of lakes, ponds, pools, and other slow-moving water, often around sphagnum moss or other "boggy" ground.

BEHAVIOR: Adults perch on the ground in the boggy places or dirt/ground nearby. They probably do not stray too far from such wet areas.

COMMENTS: In the Sandhills, this species is not too difficult to find, if one walks along the boggy, open margins of beaver ponds or man-made ponds, especially looking near sphagnum moss. Wet spots in powerline clearings can also have the species. It is one of the smaller clubtails, appearing similar at a glance to the much more common Lancet Clubtail, but the Diminutive (as the common name implies) is even slimmer and slightly shorter than the Lancet. A previous photo from Brunswick County that was identified as this species has been confirmed by the website editors (in late 2016) as a different species and thus this county has been removed from the range map.

Phanogomphus exilis Lancet Clubtail





NC counties: 92 or 92%
Number of records for 2017 = 58

High counts of:
20 - Harnett; P - 2010-04-19
20 - Wake - 2010-05-30
20 - Durham - 2016-04-14

Earliest date: Onslow 2017-03-21
Latest date: Ashe 2007-07-29

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

Synonym: *Gomphus exilis*

DISTRIBUTION: Unlike most of the other clubtails in NC, this species ranges throughout the state, occurring in essentially all counties, though there are no records for a handful of mountain and eastern Coastal Plain counties.

ABUNDANCE: Common and widespread. Generally the most common and often seen clubtail over most of the state, especially in the Coastal Plain. Presumably not common in the higher mountains.

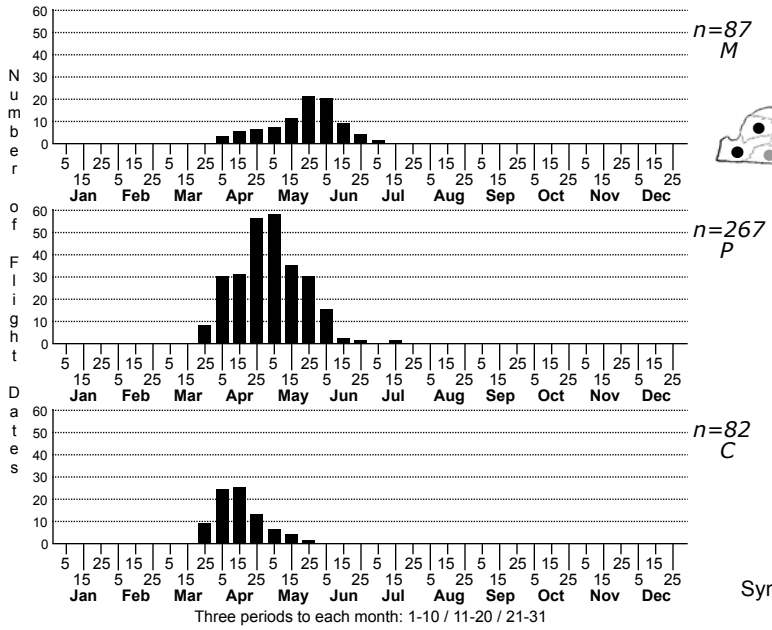
FLIGHT: Mainly in the spring. Downstate, from the end of March to late June, peaking in April and early May. In the mountains, the dates are from mid-April to late July, with a peak in early June.

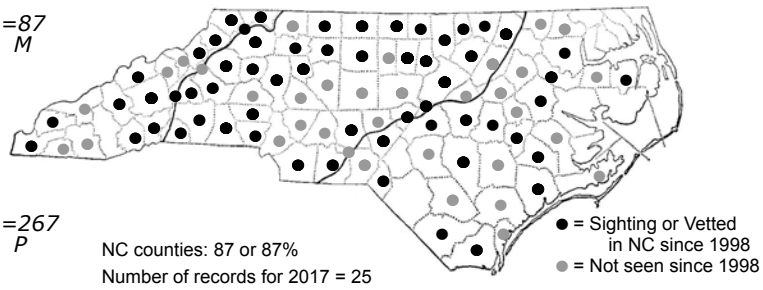
HABITAT: Breeds mainly at ponds and small lakes, but also at streams.

BEHAVIOR: Adults frequently perch on dirt roads, sunny trails, and other bare areas, often a long way from water. They also perch on low vegetation near water.

COMMENTS: Over most of the state, this and the similar Ashy Clubtail are the most frequently observed clubtails by the average person, as both frequently perch on dirt roads and are rather unwary. Differentiating between the two can be somewhat tricky, though the Lancet is slightly smaller, slimmer, and brighter-colored, among several other field marks.

Phanogomphus lividus Ashy Clubtail





NC counties: 87 or 87%
Number of records for 2017 = 25

Sight (not vetted) in 2017: Wilkes; M

High counts of:
20 - Orange - 2016-03-29
15 - Franklin - 2002-04-21
15 - Halifax; P - 2012-04-11

Earliest date: Durham 1990-03-22
Latest date: Orange 2013-07-11

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

Synonym: *Gomphus lividus*

DISTRIBUTION: Essentially statewide; throughout the mountains, Piedmont, and nearly all of the Coastal Plain, but possibly absent in the extreme eastern counties (no records east of Hertford, Tyrrell, and Craven counties).

ABUNDANCE: Common, except infrequent in the central and eastern Coastal Plain. Abundance equals that of the Lancet Clubtail in the Piedmont, exceeds the Lancet in the mountains, but is less numerous than that species in the Coastal Plain.

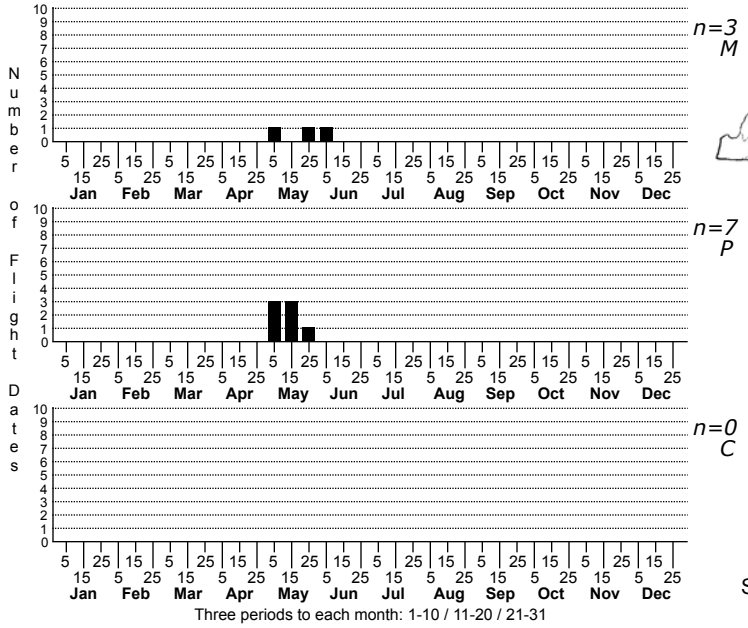
FLIGHT: Spring to very early summer season only, but a fairly wide spread of dates (for a clubtail). Generally from late March to late June, but mostly done downstate by late May (Coastal Plain) or mid-June (Piedmont).

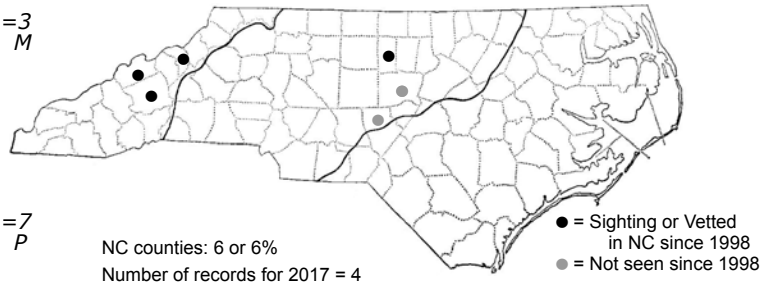
HABITAT: Typically breeds at small creeks or rivers, less so at lakes and ponds.

BEHAVIOR: Behavior seems identical to the nearly equally numerous Lancet Clubtail. Adults commonly perch on dirt roads, trails, and other bare ground or fallen leaves, often far from water. Adults are unwary and easily studied through binoculars.

COMMENTS: Along with the Lancet, these are the most often seen clubtails in NC, typically found on most spring-season field trips to woodlands and fields with appropriate dirt roads or bare ground for perching. Ashy averages slightly longer and huskier in the abdomen than Lancet, and the thorax is slightly duller in Ashy.

Phanogomphus quadricolor Rapids Clubtail





NC counties: 6 or 6%
Number of records for 2017 = 4

Vetted in 2017: Alamance, Mitchell

High counts of:
2 - Chatham - 1989-05-03
2 - Alamance - 2017-05-19
2 - Alamance - 2017-05-28

Earliest date: Chatham 1989-05-03
Latest date: Mitchell 2017-06-03

Status NC	Status US	Rank NC	Rank Global
SR	-	S1?	G3G4

Synonym: *Gomphus quadricolor*

DISTRIBUTION: Primarily north and west of NC, ranging south to northern VA, eastern TN, and northern GA and AL. A photo record from near the French Broad River in Madison County in 2011 slightly expanded this main range eastward, as did another from alongside this river in adjacent Buncombe County in 2013, and another from Mitchell County in 2017. However, there are several eastern disjunct records from Chatham and Moore counties (essentially the Rocky and Deep rivers), from 1985-1989, and from Alamance County (Haw River) in 2017.

ABUNDANCE: Presumed very rare in the mountains, and also very rare (and local) in the eastern Piedmont. Status in the central and western Piedmont is obviously uncertain, though it may well occur in a few places in this large region.

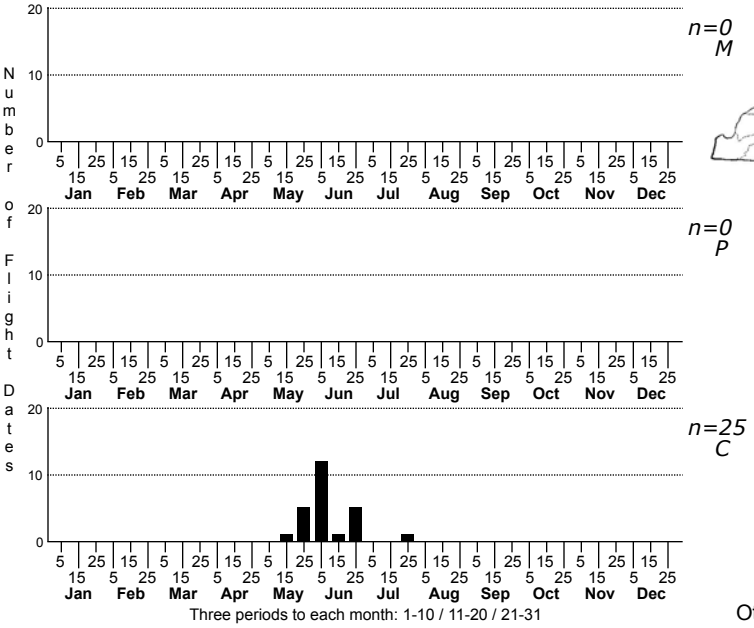
FLIGHT: A relatively short spring season flight. The flight dates from the eastern NC Piedmont are from 3-28 May, and the three NC mountain records are from 6 May to 3 June. The single GA record (in the mountains) is for 16 May. Thus, the flight in NC occurs from at least early May to early June. Dunkle (2000) says "early May to mid-July" throughout the range; and Paulson (2011) lists "May-Jun" for KY.

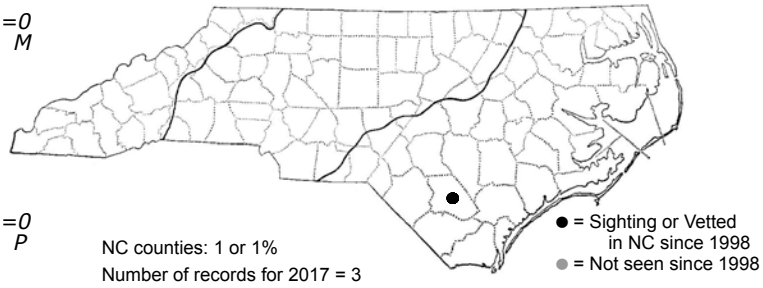
HABITAT: Mainly at larger rivers with rocks and rapids.

BEHAVIOR: Males perch on rocks or vegetation near the rivers, but also on vegetation away from rivers.

COMMENTS: This is another very rare clubtail in the state. Its distribution is oddly disjunct, as the main part of the range is north and west of the state, south to VA and TN; only one record is known from GA. This is one of many clubtails that can be difficult to identify; multiple photos or specimens are almost certainly necessary for proper documentation. Thankfully, Richard Stickney found a new location of the species, in the Haw River near Swepsonville, in May 2017, and documented this finding with several photographs. John Petranka added several additional photos from that site four days later.

Progomphus bellei Belle's Sanddragon





High counts of:
30 - Bladen - 2008-06-04
15 - Bladen - 2008-06-03
14 - Bladen - 2009-06-25

Earliest date: Bladen 2017-05-20
Latest date: Bladen 2009-07-26

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S1	G3

Other Name: Variegated Clubtail

DISTRIBUTION: Only known in NC from large, natural Carolina bay lakes in Bladen County. Known from Baytree, Jones, Salters, Singletary, Little Singletary, and White lakes. This area is highly disjunct from the main part of the range in the FL panhandle.

ABUNDANCE: Not uncommon at several lakes during at least a portion of the flight period; however, absent to extremely rare away from such lakes.

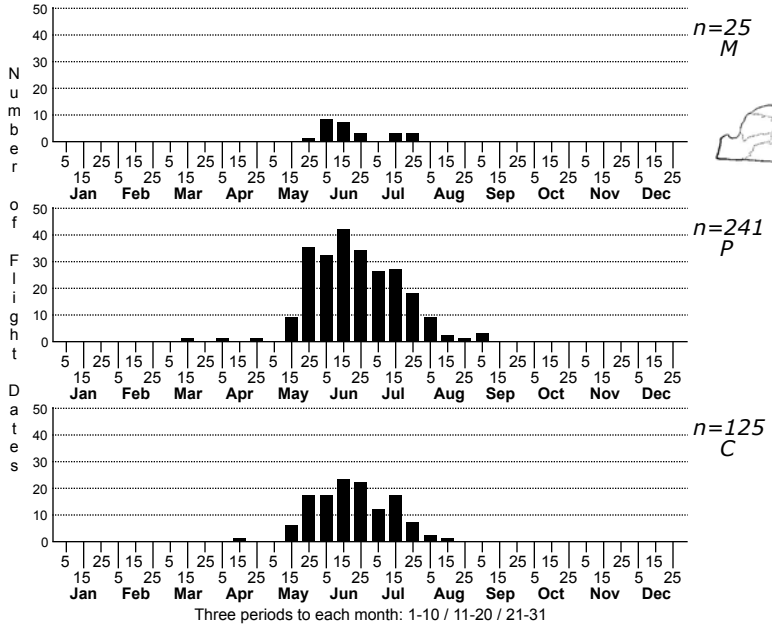
FLIGHT: The flight occurs from late May to late July, with the peak in early to mid-June. Dunkle (2000) gives a flight range from "Early May to mid-Aug.", though that likely applies to the FL population.

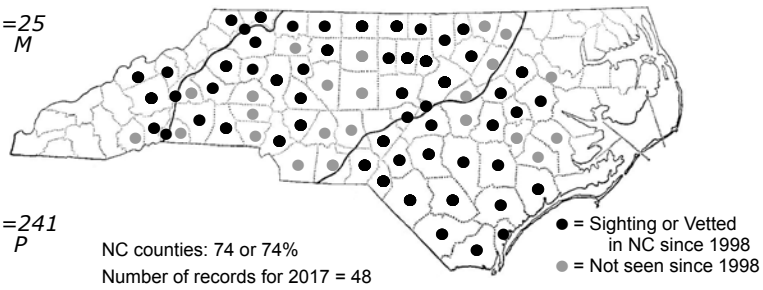
HABITAT: In NC, only at large Carolina bay lakes, with a sandy bottom and shoreline.

BEHAVIOR: Males perch on sand along the lake shorelines, but they also perch on adjacent twigs and cypress knees along the shoreline and on piers. (Sanddragons [genus Progomphus] are named by the habit of males for perching on damp sand.) Males make patrolling flights about a foot above the surface of the lakes, coming back to the shore to perch from time to time. They are quite wary, difficult for a person to approach within 10 feet.

COMMENTS: This is clearly one of the rarer dragonflies in the southeastern part of the country, with a global rank of G3. Of note is that the species is not known at all from intervening SC or GA. One must wonder if Belle's Sanddragon might occur at other similar large, sand-bottomed Carolina bay lakes in NC, such as Lake Waccamaw. Photos and specimens from NC have much smaller (or lack) yellow spots on the side of the abdominal club and probably warrant description as a new subspecies (though presumably not as a new species). Ed Corey found the species to be quite numerous on several dates in June 2008 at four of the State Lakes in Bladen County (photos and specimens for documentation). However, he and other State Park personnel were unable to find the species at Lake Waccamaw in Columbus County in 2008.

Progomphus obscurus Common Sanddragon





NC counties: 74 or 74%
Number of records for 2017 = 48

Vetted in 2017: McDowell; M

High counts of:
65 - Duplin - 2017-05-27
27 - Columbus - 2017-05-17
27 - Robeson - 2017-05-17

Earliest date: Surry 2012-03-16
Latest date: Wake 2007-09-09

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

DISTRIBUTION: Nearly statewide, but apparently absent from the extreme northeastern and eastern counties, and of spotty occurrence in the mountains (and perhaps absent in the middle and upper elevations). No records east of Halifax, Martin, and Craven counties in the Coastal Plain; and known from just seven counties in the mountains (and none from the southwestern corner of the mountains).

ABUNDANCE: Fairly common to occasionally common in the Piedmont and much of the Coastal Plain, but seemingly absent in the northeastern and eastern portions of the latter province. Rare in much of the mountains, and presumably scarce to absent over 3000-feet elevation. This species and the Black-shouldered Spinyleg are the most frequently seen clubtails across the state during the late spring and early summer months (whereas Ashy and Lancet clubtails are the most common clubtails in the spring season).

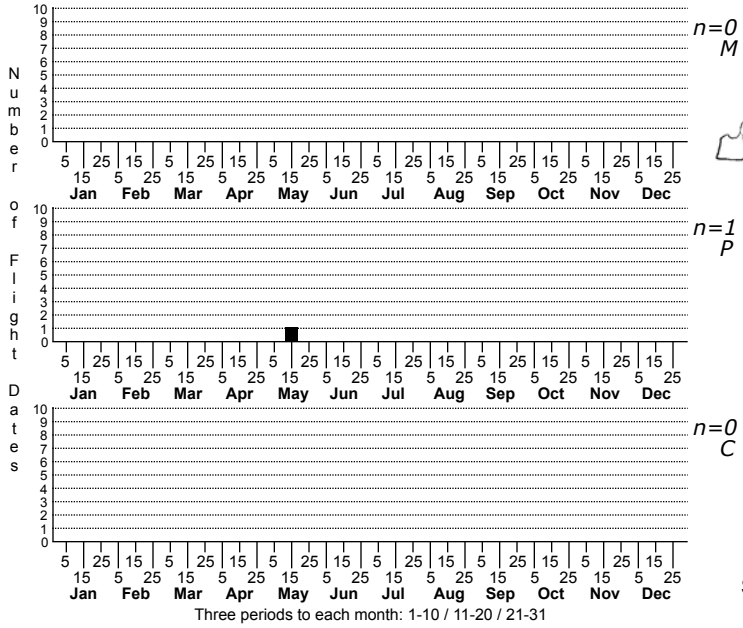
FLIGHT: Generally from mid-May to mid-August. However, there are scattered records as early as 16 March and as late as 9 September. The flight starts slightly later in the mountains than downstate.

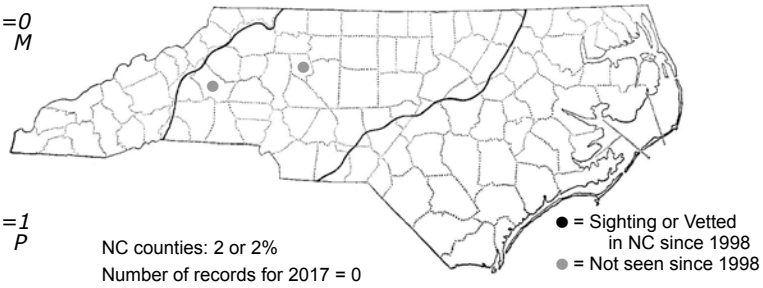
HABITAT: Creeks or small rivers with sandy shores, sand bars, and other sandy areas nearby. These are often in rather open habitats, but may be in wooded areas.

BEHAVIOR: As the common name implies, this species is most often seen perching on damp sand or sandbars close to water. In hot weather, the males obelisk with the abdomen held angled up from the surface of the sand. They also perch on twigs near water and fly short distance over water.

COMMENTS: A dragonfly perching -- with the abdomen raised -- on sand next to a small stream will more than likely be a Common Sanddragon. Though seldom seen in large numbers in NC on a given day, it is quite widespread, with records from practically all Piedmont and Coastal Plain counties (except in the far east). The shape of the yellow markings on the dorsal side of the abdominal segments is quite unusual, almost like an inverted bell, with the wide, open end of the bell at the anterior portion of each segment.

Stenogomphurus consanguis Cherokee Clubtail





NC counties: 2 or 2%
Number of records for 2017 = 0

High counts of:
1 - Davie - 1993-05-20

Earliest date: Davie 1993-05-20
Latest date: Davie 1993-05-20

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S1?	G3

Synonym: *Gomphus consanguis*

DISTRIBUTION: Only known from two counties in the western Piedmont/foothills. This species has a small range in the southern Appalachians, from southwestern VA into northern AL. It is odd that there are no records yet from the NC mountain counties, and because it is a southern Appalachian species, it obviously must occur in the mountains only at very low to low elevations (perhaps below 2,000 feet).

ABUNDANCE: Seemingly very rare, but part of the scarcity of records might be due to difficulty of identification (other than through collecting). Beaton (2007) calls it "Rare to locally uncommon" in its small GA range.

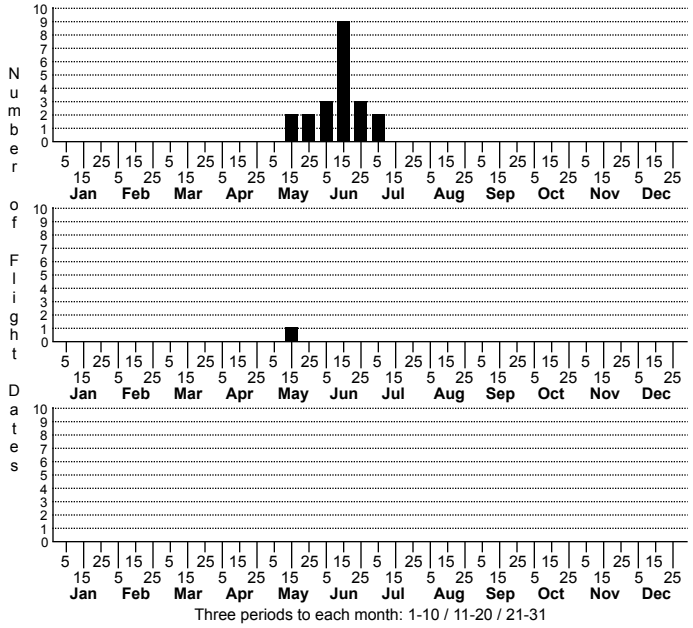
FLIGHT: Late May to mid- or late June in GA (Beaton 2007). The only record available in NC with a date is for 20 May, which seems surprisingly early (compared with GA flight dates). The NC flight in the central/western Piedmont of NC thus might start in mid-May, but is expected to extend well into June.

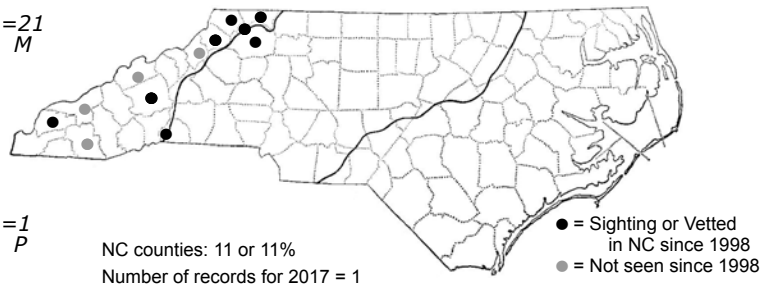
HABITAT: Only near small streams in forests, often near springs, or where spring-fed.

BEHAVIOR: Males perch close to such streams and springs, and have a slow flight close to the water. Both Beaton (2007) and Dunkle (2000) call the species "unwary" near these creeks.

COMMENTS: This is one of many poorly known clubtails in NC. Few biologists are actively searching for odonates in the mountains and upper Piedmont, so its status will probably be poorly known for years. Add to this the similarity in appearance to the Sable Clubtail, and it is understandable that there are no certain recent records. However, there have been observations and photos in the past several years in Madison County of individuals that were one of these two species but that couldn't be confirmed. Note that NatureServe's global rank is G3; thus, any and all records are of great interest.

Stenogomphurus rogersi Sable Clubtail





NC counties: 11 or 11%
Number of records for 2017 = 1

High counts of:
5 - Watauga - 2007-06-11
5 - Macon - 1982-07-07
4 - Polk; M - 2008-06-12

Earliest date: Wilkes; P 2008-05-13
Latest date: Macon 1982-07-07

Status NC	Status US	Rank NC	Rank Global
W	-	S2S3	G4

Synonym: *Gomphus rogersi*

DISTRIBUTION: Mountains only (and apparently into the immediate foothills), throughout the province, as it is a Northern species yet does range into northern GA and AL.

ABUNDANCE: Uncommon; only known from 11 counties as of summer 2015. As Beaton (2007) calls it "uncommon" in northern GA, and Dunkle (2000) calls it "common but secretive", we must assume that its abundance in NC is no more scarce than "uncommon".

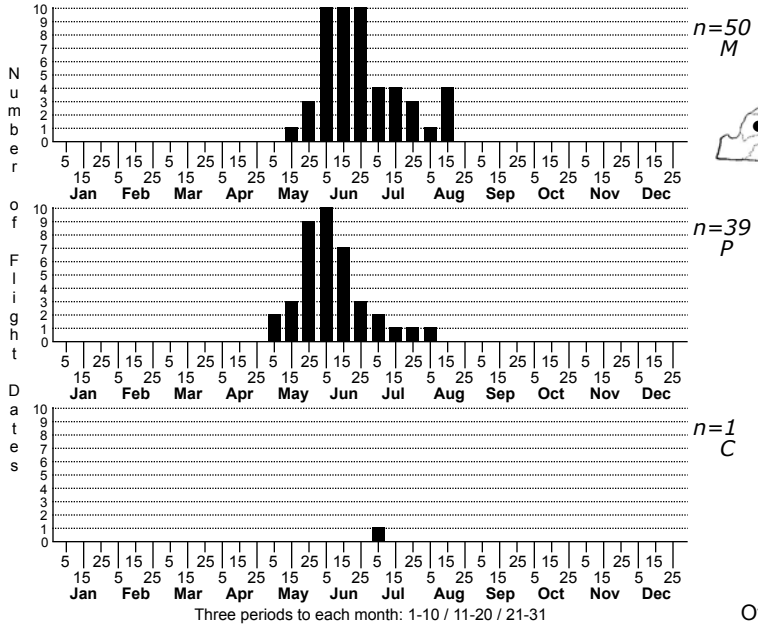
FLIGHT: A mid-spring to early summer flier; recent occurrences from mid-May to the end of June. Interestingly, older collection dates fall from 17 June to 7 July. Thus, perhaps owing to global warming, the species is flying earlier in recent decades. The overall flight in the state is mid-May to early July.

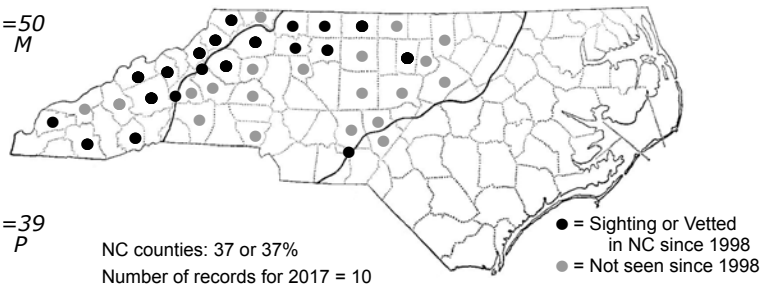
HABITAT: Breeds at small and clear, woodland streams, with sand or gravel bottoms.

BEHAVIOR: Males perch on vegetation or rocks, seldom on the ground, near streams. They often perch in shady places and can be hard to see.

COMMENTS: This species is called "secretive" by Dunkle (2000). This behavior might be the reason NC has records for only 11 counties, despite it presumably being not a scarce species. However, the NC Natural Heritage Program has placed the species on the Watch List, at least until more surveys of montane areas have been done for all odonates.

Stylogomphus albistylus Eastern Least Clubtail





NC counties: 37 or 37%
Number of records for 2017 = 10

Vetted in 2017: Surry, McDowell; M
Sight (not vetted) in 2017: Yadkin

High counts of:
5 - Wilkes; P - 2007-07-19
5 - Orange - 1966-05-29
5 - Orange - 2011-05-30

Earliest date: Richmond; P 2002-05-09
Latest date: Yancey 1997-08-17

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

Other Name: Least Clubtail

DISTRIBUTION: Mountains and Piedmont only. Scattered across both provinces, eastward to Granville, Wake, and Moore counties.

ABUNDANCE: Uncommon in the mountains, and rare to uncommon in the Piedmont, being least numerous in the central and eastern portions of the latter province. Despite the moderate number of records, the peak one-day count is just of 5 individuals. However, this quite small species is easily overlooked in its shady habitat.

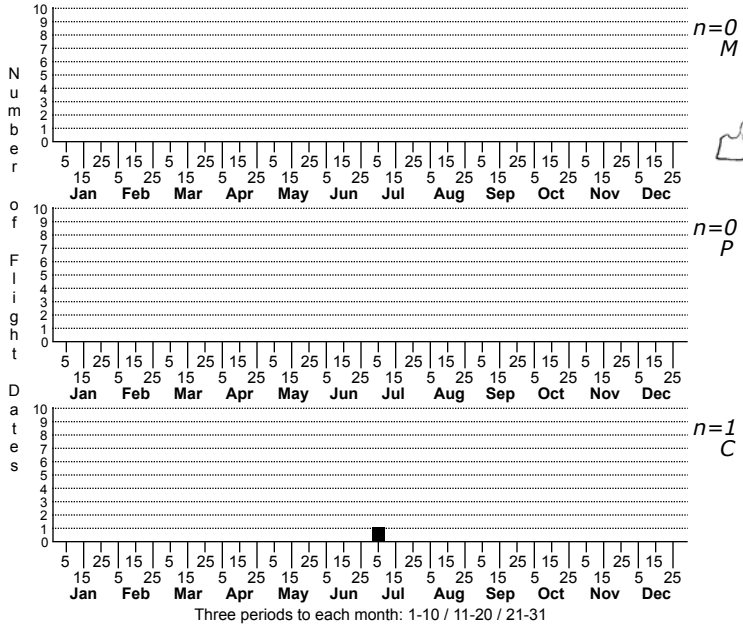
FLIGHT: Early May to early August in the Piedmont, and from mid-May to mid-August in the mountains.

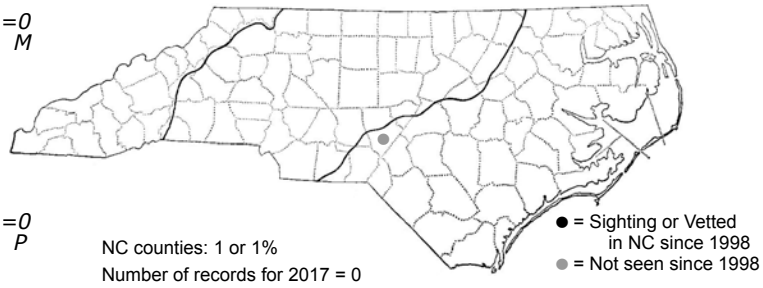
HABITAT: Small, clear, woodland creeks are preferred; sandy or gravel bottoms.

BEHAVIOR: Males often perch on rocks in the streams, where they are difficult to spot because of their small size and dark coloration. They also perch on vegetation near the water and make small, quick flights over water.

COMMENTS: This species might be more overlooked and hard to spot rather than being truly "scarce". Despite its range, including the Triangle and eastern Piedmont where most biologists study odonates, there are essentially no reports from State Park personnel. This is not a species one would casually stumble into while in the field; rather, one should look carefully along small shaded or semi-shaded creeks in June or the first half of July.

Stylogomphus sigmastylus Interior Least Clubtail





NC counties: 1 or 1%
Number of records for 2017 = 0

High counts of:
1 - Moore; C - 1969-07-02

Earliest date: Moore; C 1969-07-02
Latest date: Moore; C 1969-07-02

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

DISTRIBUTION: This is a species of the Ozark Mountains eastward to central TN. There are records reported in Paulson (2011) from southwestern VA and central NC. The single record for the state came from 1969, collected by Duncan Cuyler near Vass, Moore County; Steve Roble provided us with the data for this record (in 2013).

ABUNDANCE: Presumably extremely rare in NC, assuming a correct identification. As the record was over 40 years ago, we must consider it to be of historical occurrence, though it still could certainly be present in the state, either there or elsewhere.

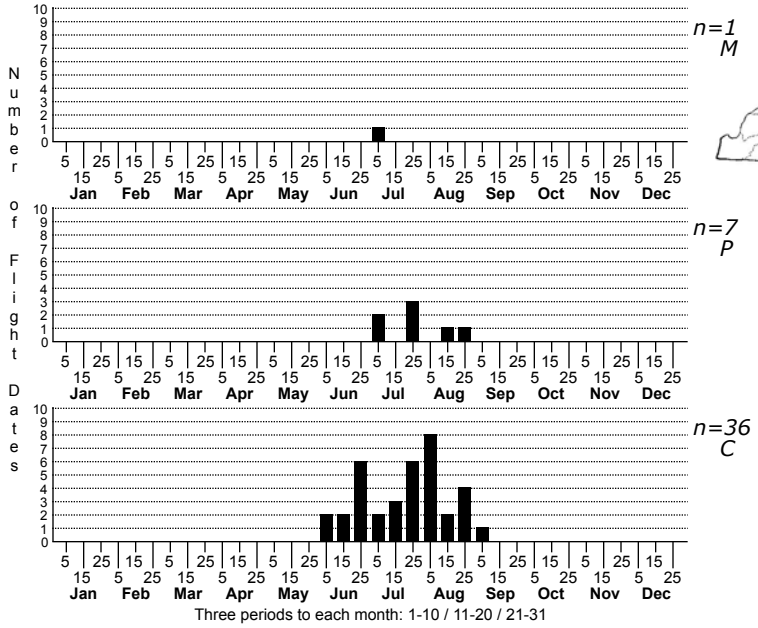
FLIGHT: The only record for the state was on 2 July. As the Eastern Least Clubtail flies in the Piedmont from early May to early August, the flight of the Interior Least Clubtail is likely for several months in spring and summer.

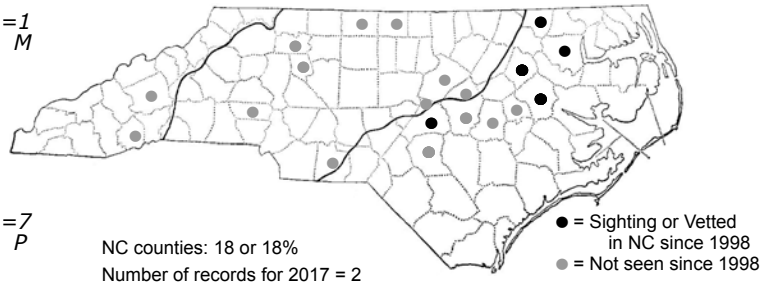
HABITAT: Rivers that are clear and somewhat small, with moderate current. Apparently the same as for Eastern Least Clubtail.

BEHAVIOR: Presumably like that of Eastern Least Clubtail.

COMMENTS: This species looks very similar to the Eastern Least Clubtail, which is uncommon in itself in the state. Thus, it seems that a specimen would be necessary to confirm the Interior Least Clubtail in NC.

Stylurus amnicola Riverine Clubtail





NC counties: 18 or 18%
Number of records for 2017 = 2

High counts of:
14 - Cumberland - 1969-06-22
5 - Edgecombe - 1994-08-01
3 - Bertie - 2012-06-06

Earliest date: Bertie 2012-06-06
Latest date: Pitt 1990-09-04

Status NC	Status US	Rank NC	Rank Global
W	-	S3	G4

DISTRIBUTION: Mainly in the upper half of the Coastal Plain, and very widely scattered across the entire Piedmont and southern mountains. Absent from the eastern part of the Coastal Plain, and seemingly absent from the northern half of the mountains.

ABUNDANCE: Rare to locally uncommon in the Coastal Plain portion of the range, very rare (now) to rare in the Piedmont, and very rare in the mountains.

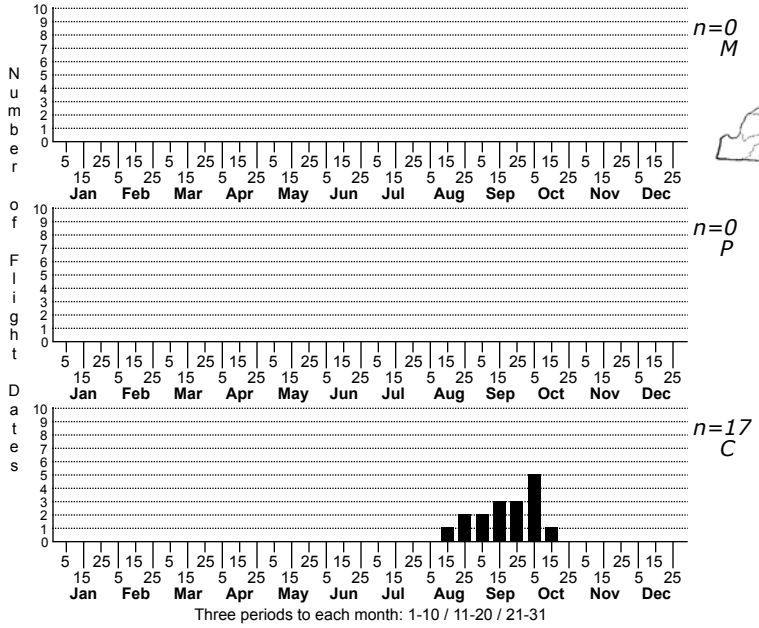
FLIGHT: In the Coastal Plain, early June to early September. Upstate, records fall between early July and late August, though it might be expected in June in the Piedmont.

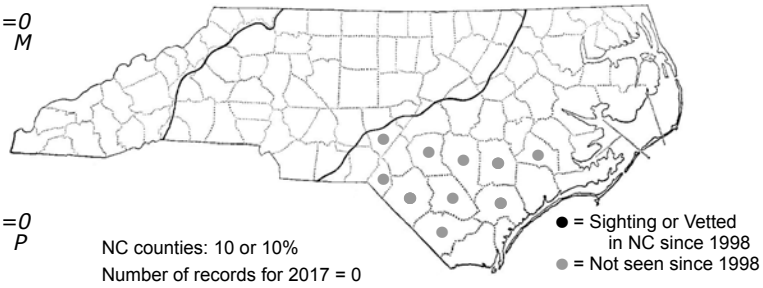
HABITAT: Rivers with a moderate to rapid current and various substrates, for breeding. Recent records have been along fairly slow-moving brownwater rivers (i.e., Roanoke, Tar, and Cape Fear).

BEHAVIOR: Perches on leaves or other vegetation close to the streams and rivers. Males can be seen patrolling up and down rivers. Males, at least, are rather unwary (compared to other Stylurus species).

COMMENTS: Though there are records from about 65-70% of the geographic area of NC, there are only 18 county records, implying a scarce species that is poorly known. Steve Hall and Harry LeGrand found the species on several occasions in summer 2012 along the Roanoke River, where photos from Bertie and Northampton counties established new county records and thus first records for the Roanoke River floodplain. Mark Shields saw two males patrolling up and down the Cape Fear River in Harnett County in 2017; and Mike Turner found one along the Tar River in Edgecombe County, also in 2017. The species may be in decline, as these are the only records in recent years. It certainly seems to be in decline in the Piedmont and mountains, where we lack recent records. However, the species could be overlooked as a Black-shouldered Spinyleg unless carefully photographed or observed.

Stylurus ivae Shining Clubtail





NC counties: 10 or 10%
Number of records for 2017 = 0

High counts of:
10 - Duplin - 1991-10-10
6 - Duplin - 1993-09-02
2 - Moore; C - 1965-10-02

Earliest date: Robeson 1962-08-19
Latest date: Pender 1956-10-16

Status NC	Status US	Rank NC	Rank Global
SR	-	S2S3	G4

DISTRIBUTION: Strictly the southeastern portion of the state -- the southern 35-40% of the Coastal Plain in particular. It ranges north to Moore, Sampson, and Jones counties. These counties represent the northeastern end of the range of this Southeastern species.

ABUNDANCE: Uncommon, prior to about 1995; however, there are no more recent records, and thus the species may have declined considerably, as it should not be difficult to identify. Possibly rare at the present time, but as this species flies mainly in the fall and in areas where few biologists live, the species might simply be under-surveyed.

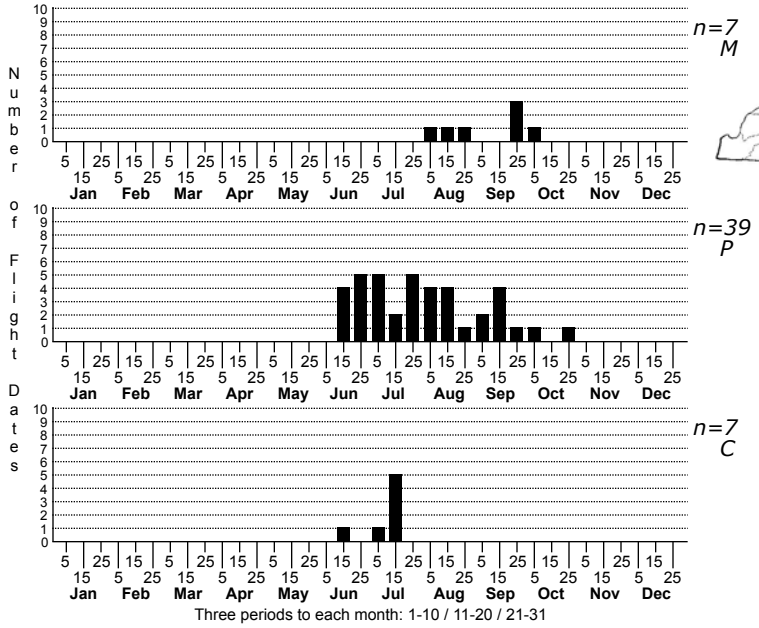
FLIGHT: One of the very few "autumn-only" dragonflies in NC, though technically it begins it flight in August. The flight in the state occurs between mid-August and mid-October, peaking in late September and early October.

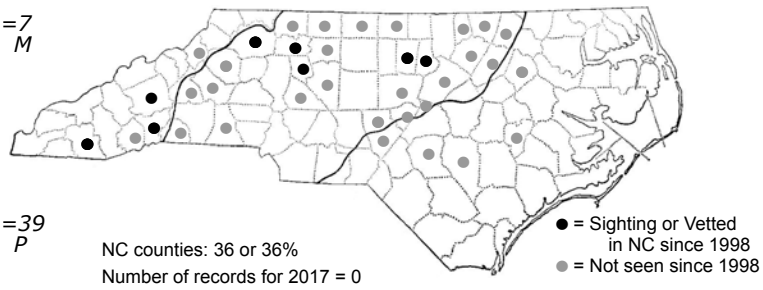
HABITAT: Sandy creeks or small rivers, where waters are clean.

BEHAVIOR: Males typically forage in fields or clearings, perching conspicuously. They patrol over streams in a slow manner, often with some hovering.

COMMENTS: This is a dragonfly that likely can be identified in flight over water, owing to the glowing bright yellow or golden-yellow club, and the fairly late flight period. The more numerous Russet-tipped Clubtail has a more orange/red club. Several observers, especially Mark Shields, have specifically searched for the species in 2016 and 2017, with no luck. Thus, the absence of any records since the early 1990s, for a readily identified species, is alarming and almost certainly indicates a clear decline in the state. At least, there are several recent records from the SC Coastal Plain, where the species is obviously less rare than in NC.

Stylurus laurae Laura's Clubtail





NC counties: 36 or 36%
Number of records for 2017 = 0

High counts of:
2 - Orange - 2002-06-13
2 - Orange - 2002-07-05
2 - Orange - 2002-07-30

Earliest date: Yadkin 2000-06-11
Latest date: Davidson 1984-10-24

Status		Rank	
NC	US	NC	Global
-	-	S3	G4

DISTRIBUTION: Essentially throughout the lower elevations of the mountains, the Piedmont, and the upper Coastal Plain. Ranges east only to Halifax, Edgecombe, and Lenoir counties. Only five county records for the mountain province.

ABUNDANCE: Generally rare across most of the state, and likely absent from the eastern half of the Coastal Plain; almost certainly declining in recent years. Most recent records are for the lower mountains and foothills. Though one of the more widespread of the stream clubtails (Stylurus species) in the state, it is quite scarce nowadays and we have a daily peak count of just 2 individuals.

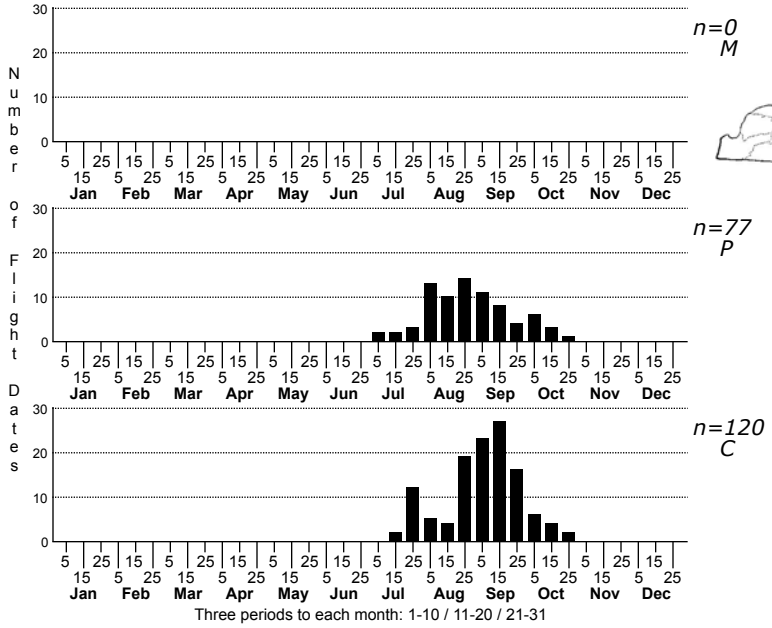
FLIGHT: Mid-June into early October in the Piedmont. In the mountains, the flight is narrower, with records only from early August to early October. In the Coastal Plain, the few records fall between mid-June and mid-July, though it certainly occurs into the fall season there. In GA it flies from early or mid-June into September (Beaton 2007).

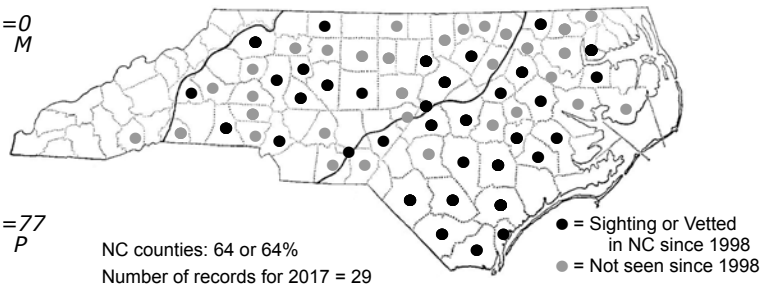
HABITAT: Mainly breeds at small to medium-sized creeks, where clean and with a sandy bottom.

BEHAVIOR: Males are most often seen perched on leaves close to the water. Though they forage during the middle of the day, the species is most active late in the day. Thus, this species can often be difficult to observe because of time of day and infrequency of perching on the ground or in the open.

COMMENTS: Considering that Dunkle (2000) calls the species "uncommon" throughout its range, and Beaton (2007) calls it "rare and local" in its GA range, and both indicate its difficulty of observation, it is a pleasant surprise that we have slightly over 50 records with dates in the state, covering 36 counties. Even so, it is not often encountered, and always just one or two individuals at any one site. Especially disturbing is the very few recent records from the Piedmont and Coastal Plain, suggesting a decline in numbers in these provinces. Its State Rank is therefore moved from S4 to now S3.

Stylurus plagiatus Russet-tipped Clubtail





NC counties: 64 or 64%
Number of records for 2017 = 29

High counts of:
48 - Pender - 2015-08-09
48 - Bladen - 2015-08-09
18 - Duplin - 2015-08-15

Earliest date: Wake 2013-07-06
Latest date: Lincoln 1993-10-28

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

DISTRIBUTION: Throughout the Piedmont and nearly all of the Coastal Plain, though probably absent in the far eastern counties; only one county record for the mountains, where essentially absent. No records east of Gates, Chowan, and Hyde counties.

ABUNDANCE: Though there are records for close to two-thirds of the counties in the state, it is uncommon in most of the Piedmont and Coastal Plain, but can be fairly common in parts of the Coastal Plain, especially in the southern part of that province. Rare in the foothills, and likely absent in most of the mountains, at least above perhaps 2500 feet in elevation.

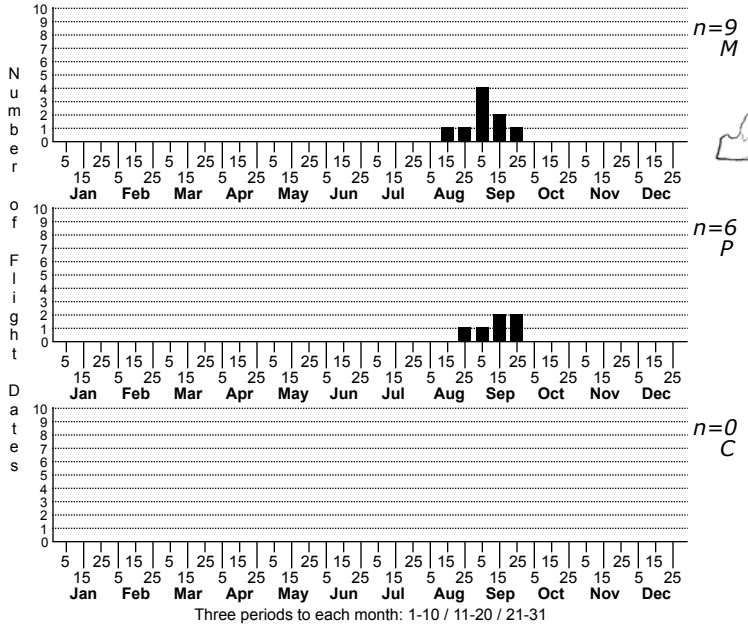
FLIGHT: Mid-summer into mid-fall. The flight occurs from early July to late October, though the earliest record for the Coastal Plain isn't until mid-July. Certainly the flight in the Coastal Plain should start at the same time, if not slightly earlier, than the flight in the Piedmont (i.e., by early July).

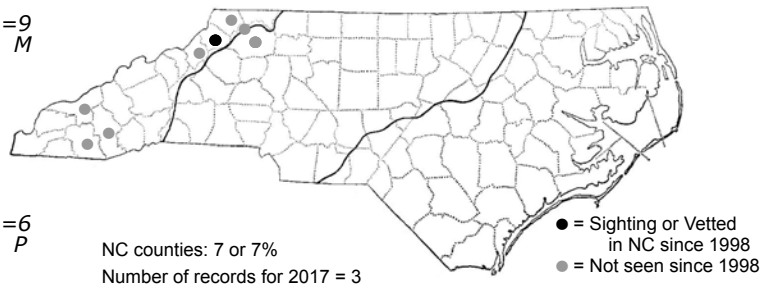
HABITAT: Mainly at rivers and larger streams, but also at some lakes; silty or sandy bottoms. Occurs along both brownwater and blackwater rivers.

BEHAVIOR: Often perch on leaves near the water's edge, such that the weight of the body bends the leaf downward until the animals are almost in a vertical position. Adults forage in long flights over the rivers and creeks. In fact, the species is most often seen from a canoe or other type of boat along a wide creek or river, typically flying by at eye level.

COMMENTS: This species, along with the Southeastern Spinyleg, has a large and bright orange/red club that is easily seen at a distance. This species can thus be fairly easily identified without a net as it cruises along a river or stream. There has been a most gratifying surge in records in recent years, especially from Mark Shields, who has several double-digit counts by paddling along rivers in the southeastern part of the state.

Stylurus scudderi Zebra Clubtail





NC counties: 7 or 7%
Number of records for 2017 = 3

High counts of:
3 - Wilkes; P - 1969-08-23
2 - Wilkes; P - 1967-09-16
2 - Wilkes; P - 1970-09-14

Earliest date: Macon 1957-08-20
Latest date: Wilkes; P 1969-09-30

Status		Rank	
NC	US	NC	Global
SR	-	S2?	G4

DISTRIBUTION: Mountain province only; probably occurring throughout the mountains, as there are several county records for northern GA. Though there is a large gap between the two clusters of mountain records, and Buncombe and Madison counties have been fairly well worked for odonates, it is highly unlikely that this species is absent there or any rarer there than near the VA and GA borders. This is a Northern species, and NC lies near the southern edge of the range.

ABUNDANCE: Very rare or rare; known from just seven of the mountain counties. Dunkle (2000) calls the species as "fairly common" over its range, though clearly in NC it is nowhere this numerous, as there are just 2-3 recent records, all from the same general area in a single county.

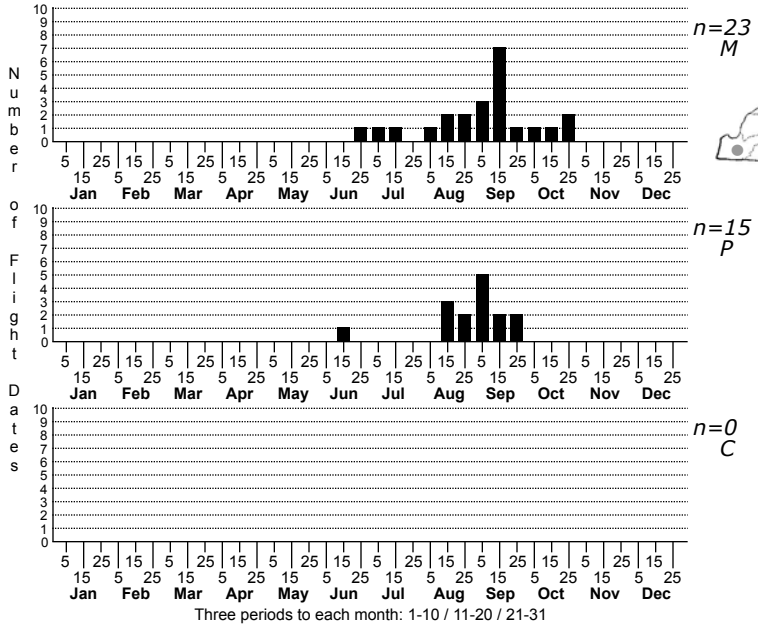
FLIGHT: "Mid-June to early Oct." (Dunkle 2000). However, in NC this is a late-flying clubtail; all records with dates are from mid-August to late September. It seems likely that the flight period is more than just 40 days long, and it is suspected that the flight begins earlier than 20 August.

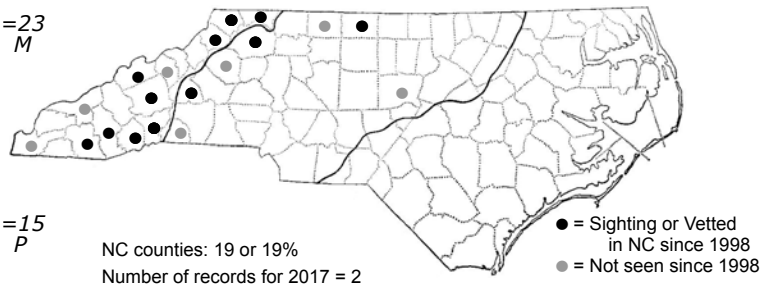
HABITAT: Cool, swiftly flowing creeks and smaller rivers, in forested areas.

BEHAVIOR: Males perch on low sites, such as twigs, leaves, and at times on the ground. They make short patrols over riffles of the creeks.

COMMENTS: This is one of many clubtails that is essentially restricted to the mountains in NC, and therefore is known to very few people. Fortunately, the species (especially males) is easy to identify by the bold pale rings around abdominal segments and the fairly wide club. Adults are considered to be a bit wary, and thus the species is probably not as scarce in NC as the few records imply. Teddy Wilcox provided our first recent record(s), observing and photographing one individual on five dates in late summer and fall 2016 along the Boone Greenway. He rightly wondered if a single Zebra Clubtail was responsible for each of these sightings, spread out over a span of dates ranging from 31 August to 20 September. No matter the answer, he has provided the first known photos of this species in the state. A year later, John Petranka and Sally Gewalt found a few individuals in the same general area of Watauga County.

Stylurus spiniceps Arrow Clubtail





NC counties: 19 or 19%
Number of records for 2017 = 2

Sight (not vetted) in 2017: Macon

High counts of:
6 - Wilkes; P - 1962-08-26
5 - Ashe - 1970-09-13
5 - McDowell; P - 1998-09-10

Earliest date: Chatham 1957-06-14
Latest date: Watauga 2016-10-25

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

DISTRIBUTION: Essentially throughout the mountains and Piedmont foothills, and sparingly east in the Piedmont to Rockingham County. A record for Chatham County, far to the east and southeast of other records, might be of a stray.

ABUNDANCE: Rare to locally uncommon in the mountains and foothills. Rare into the northern Piedmont, at least away from the foothills.

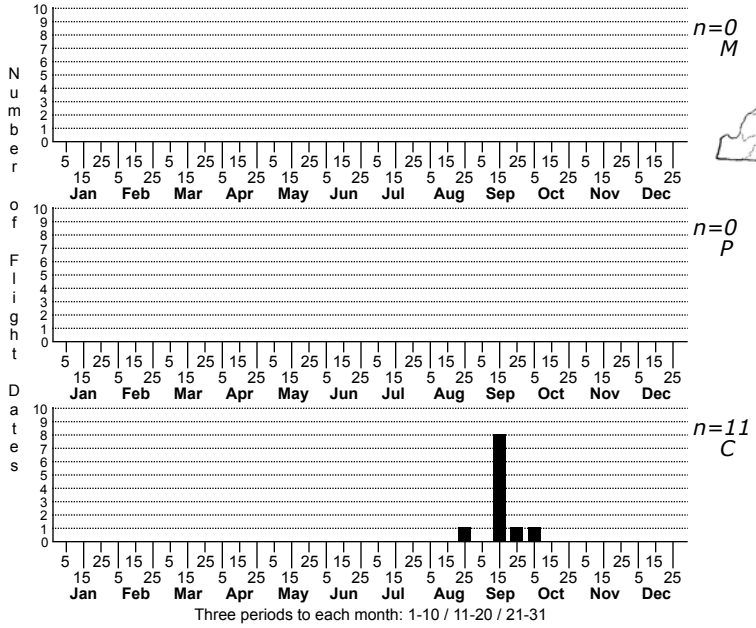
FLIGHT: Mainly in late summer and fall, but many dates starting in early summer. Flight is from mid- or late June to late October; generally from mid-August into early October. Oddly, we have no records as yet in the month of October from the Piedmont, where individuals should be on the wing slightly later than in the mountains.

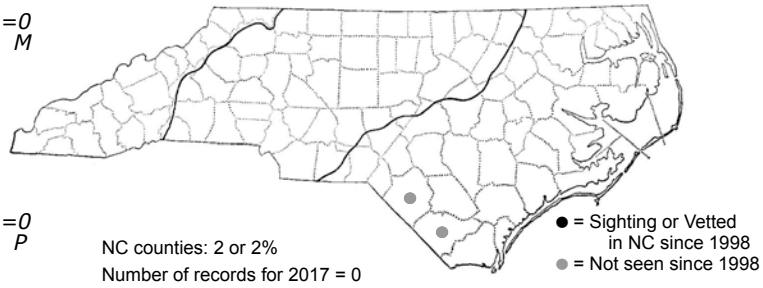
HABITAT: Large rivers, less so at large streams or at lakes. Favors sandy bottoms.

BEHAVIOR: Males are very strong fliers and may forage a long distance from water, in fields and other places. As with other Stylurus species, males in particular may perch on a leaf and hang vertically on it as the leaf bends under the weight of the insect. They also forage in large flights over water.

COMMENTS: This large species has an unusually long (and slender) abdomen, giving rise to the common name, as it does resemble an arrow in some respects. It is not one of the rarer clubtails in the mountains and foothills; however, because it flies mostly in very late summer and autumn, after much of the odonate field work is done, records have been somewhat slow to accumulate. There are still less than 25 records for the mountain province, though we do have a number of recent photographs.

Stylurus townesi Townes's Clubtail





NC counties: 2 or 2%
Number of records for 2017 = 0

High counts of:
7 - Columbus - 1964-09-20
5 - Columbus - 1964-09-19
5 - Robeson - 1964-09-12

Earliest date: Columbus 1963-08-24
Latest date: Robeson 1970-10-03

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

DISTRIBUTION: Known in NC only from the extreme southeastern corner of the state -- Robeson and Columbus counties (i.e., the Lumber River). This is a poorly known Southeastern species ranging southwest to MS and n.w. FL, but with large gaps in the range. The only SC records are an old one from Greenville County (upper Piedmont) and a 2016 one (photos and specimen) from Calhoun County (in the upper Coastal Plain).

ABUNDANCE: Formerly, not rare along a short section of the Lumber River just north of the SC state line; however, there have been no reports in the state in nearly 50 years. There have been a few recent surveys of this section of the river, but no individuals have been found. Thus, presumably very rare, if it still occurs, in the state. Dunkle (2000) calls it "scarce" throughout its range.

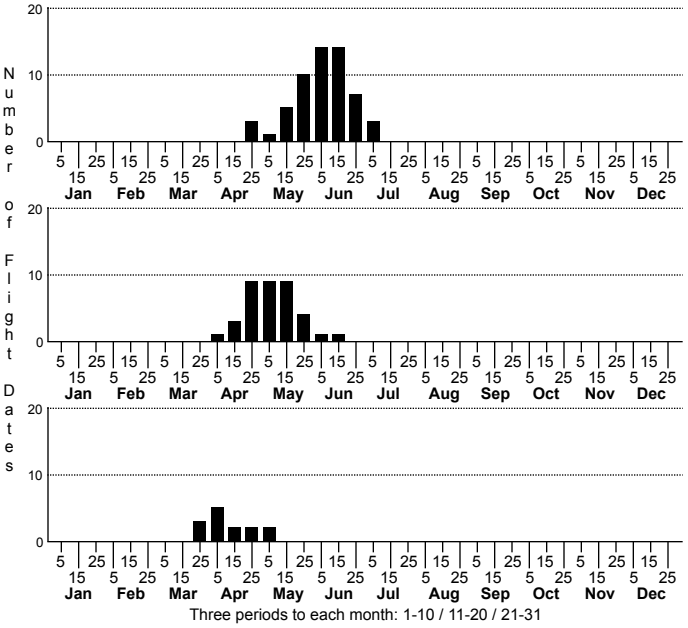
FLIGHT: "Early June to late Sept." (Dunkle 2000). The 11 state records with dates fall between late August and early October. However, the recent SC record is from 4 August, and thus perhaps surveys in NC should be earlier than late August.

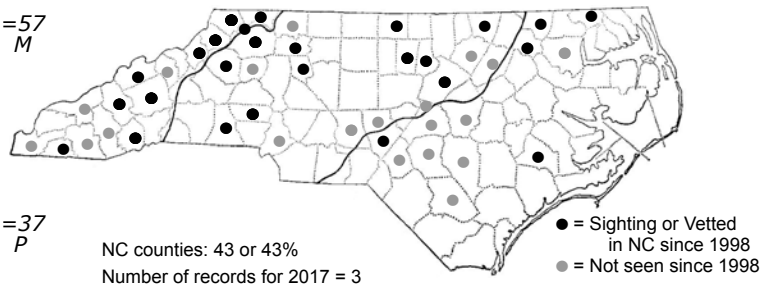
HABITAT: Forested creeks and rivers with sandy bottoms and clean water.

BEHAVIOR: Males apparently forage mainly in low light conditions in early morning, cloudy weather, or near dusk. Males seldom make patrols over water, but forage from twigs along the water's edge.

COMMENTS: This species is so poorly known that it has not even been recorded from one state -- GA -- that lies near the center of the range. Even though Belle's Sanddragon may have the most restricted range in the NC Coastal Plain of any dragonfly, the Townes's Clubtail may well be the poorest known in that province, as only Dunkle (2000) and Paulson (2011) contain information about the species. There was a flurry of collections of this species in the Fair Bluff area of Columbus County along the Lumber River in the 1960s; whether it still occurs in NC at present is not known. In 2012, the NC Natural Heritage Program moved its NC Rank from S1 (very rare) to SH (Historical); this does not mean that it is thought to be extirpated, but that there is no information to indicate that it currently still exists in the state. However, as the Lumber River is still heavily forested in many areas and is a State Natural and Scenic River, there is a good chance that Townes's Clubtail still occurs there, if not elsewhere in the state. Ed Corey conducted a brief survey of this part of the Lumber River in fall 2013 and did not find the species. Also, Mark Shields has searched this section of the river many times in fall 2015-2017 with no luck. With Chris Hill's recent SC record being in early August, it seems that more surveys of the Lumber River (if not other rivers close to SC) should take place starting in early August.

Cordulegaster bilineata Brown Spiketail





NC counties: 43 or 43%
Number of records for 2017 = 3

Vetted in 2017: Jones, Gates

High counts of:
8 - Moore; C - 2007-04-08
4 - Halifax; C - 2012-03-30
4 - Caswell - 1997-05-05

Earliest date: Hoke 1990-03-28
Latest date: Watauga 2010-07-06

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

DISTRIBUTION: Throughout the mountains, and scattered across the Piedmont and the western portion of the Coastal Plain, including the Sandhills; a few recent photo records for the lower half of the Coastal Plain (Gates and Jones counties) Apparently absent in all coastal counties and most other eastern Coastal Plain counties.

ABUNDANCE: Fairly common in the mountains (at least in the northern counties), but uncommon in the western Piedmont, and rare to uncommon in the eastern Piedmont and Coastal Plain portion of the range. Much more common in the mountains than downstate. Possibly less numerous in the central Piedmont than on either side, as there are many records eastward and westward but with many counties lacking records in this part of the Piedmont.

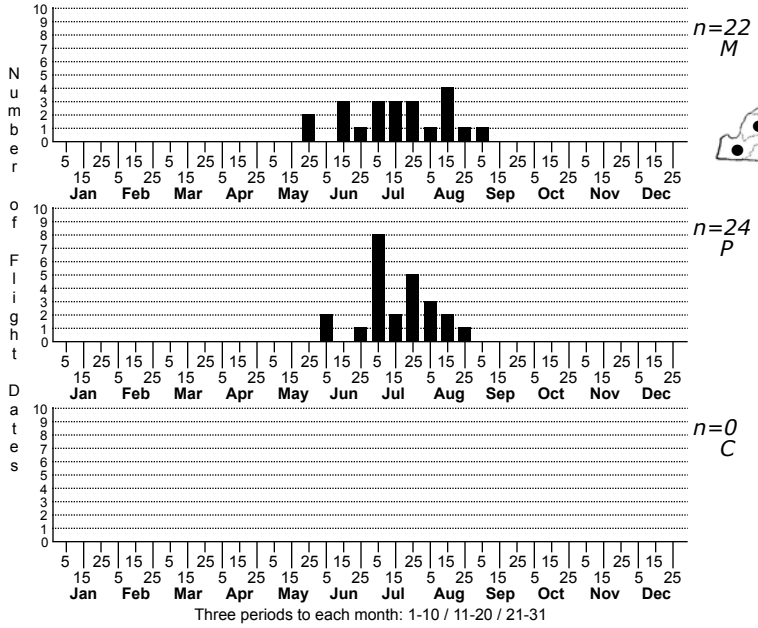
FLIGHT: Late April to early July in the mountains, but slightly advanced (as expected) in the Piedmont, where it flies from early April and extends at least to mid-June (if not later). The relatively few dates for the Coastal Plain fall from late March only to early May, but the flight surely must extend into June there.

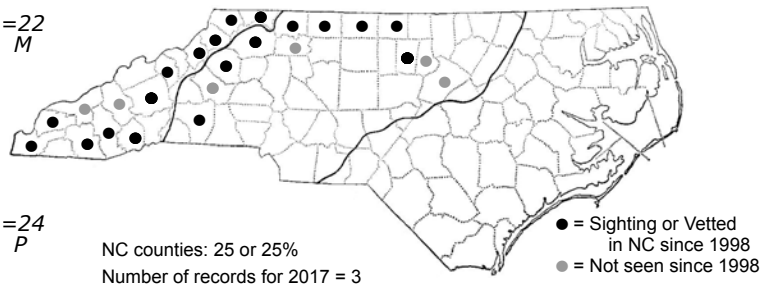
HABITAT: Small streams or seeps, often with little flow; typically in wooded areas.

BEHAVIOR: Typically flies slowly over streams or seeps or in nearby clearings. Perches on low twigs, in an oblique manner typical of spiketails.

COMMENTS: This species can be confused with the somewhat similar, but slightly more widespread and definitely more numerous, Twin-spotted Spiketail. Both can occur together along mountain and Piedmont wooded roadsides and clearings along woods and small creeks. This species might have a slight bimodal distribution, as it seems surprisingly scarce in the central Piedmont. Steve Hall and Harry LeGrand saw and photographed the species on several occasions in 2012 near the Roanoke River, adding first records for Halifax and Northampton counties. Surprising were photo records in 2017 by Hunter Phillips for Jones County and by Signa and Floyd Williams for Gates County.

Cordulegaster erronea Tiger Spiketail





NC counties: 25 or 25%
Number of records for 2017 = 3

Vetted in 2017: Yancey

High counts of:
4 - Ashe - 2007-07-10
3 - Orange - 1993-07-02
3 - Yancey - 2017-07-14

Earliest date: Buncombe 2016-05-24
Latest date: Graham 2014-09-02

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

DISTRIBUTION: Widely scattered across the mountains, foothills, and the northern third of the Piedmont. Presence in the southeastern half of the Piedmont is uncertain, though there are no records between Rutherford and Wake counties.

ABUNDANCE: Uncommon in the Piedmont foothills, but rare in the true mountains and eastward in the Piedmont toward the Fall Line. Dunkle (2000) calls it "local" throughout its range, Paulson (2011) calls it "rather rare" over its range, and Beaton (2007) says "Uncommon to rare and local" in GA.

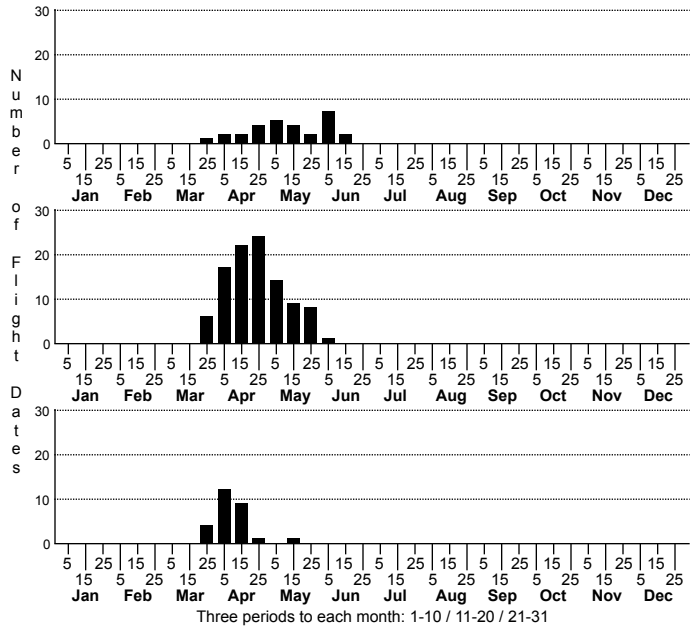
FLIGHT: The flights in the mountains and Piedmont are roughly similar -- late May into early September. However, it is most frequent in July and in the first half of August.

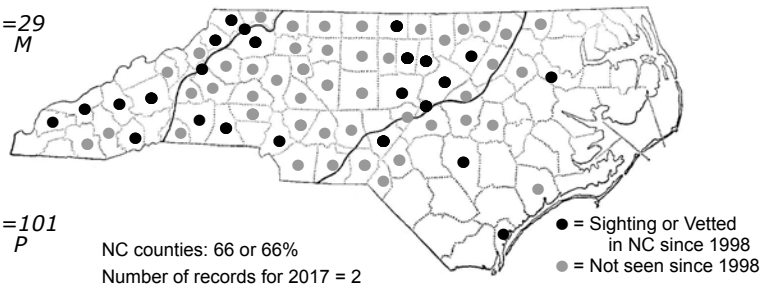
HABITAT: Small streams or seeps, without fish; in partial shade. Streams may be rocky, but may have a sandy substrate.

BEHAVIOR: Males cruise in the vicinity of the seeps, though they can be difficult to find when perched. The males are more active late in the day, and may fly and perch well away from seeps, often on a twig or stem just one to several feet off the ground, for easy viewing.

COMMENTS: For whatever reason, Duncan Cuyler had relatively few numbers of collected specimens and county records, as compared with the gratifyingly large number of recent records, especially those documented with photos. Photos have now been taken in ten counties, both in the mountains and in the far northern Piedmont. These data seem to indicate that the Tiger Spiketail may be increasing in numbers in recent decades, though it might simply be that the species is not a difficult one to photograph. Because of this increase in recent records, the NC Natural Heritage Program removed it from the Watch List in fall 2014.

Cordulegaster maculata Twin-spotted Spiketail





NC counties: 66 or 66%
Number of records for 2017 = 2

High counts of:
6 - Caswell - 2007-03-31
4 - Orange - 1966-04-23
4 - Orange - 1976-04-18

Earliest date: Mecklenburg 2017-03-21
Latest date: Watauga 2006-06-19

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

DISTRIBUTION: Throughout the Piedmont, and essentially throughout the mountains and the western third/half of the Coastal Plain, being nearly absent from most counties east of Martin, Wayne, and Sampson (except for Onslow and New Hanover county records). Of somewhat spotty distribution in the southern half of the mountains. The range is thus somewhat similar to that of the Brown Spiketail in NC, but that species has been found in many fewer counties and its abundance is centered in the mountains and foothills; the Brown also has not yet been found in coastal counties.

ABUNDANCE: Seemingly declining in recent years. Uncommon but widespread in the Piedmont and extreme western Coastal Plain; rare to uncommon in the mountains, but quite rare in the central Coastal Plain and near the southern coast. Though not as numerous as many other spring-flying dragonflies, it is the most often seen spiketail in NC (but often outnumbered in the mountains by the Brown Spiketail). Shockingly, if not disturbingly, there were only two reports for the entire state in 2017.

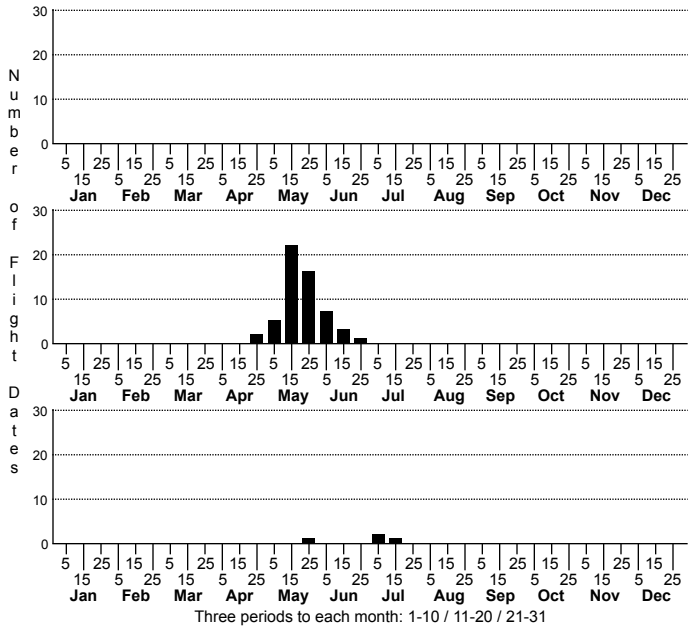
FLIGHT: Downstate, primarily from very late March to late May, with the peak in April. The mountain flight occurs from late March to mid-June, though it is scarce before May.

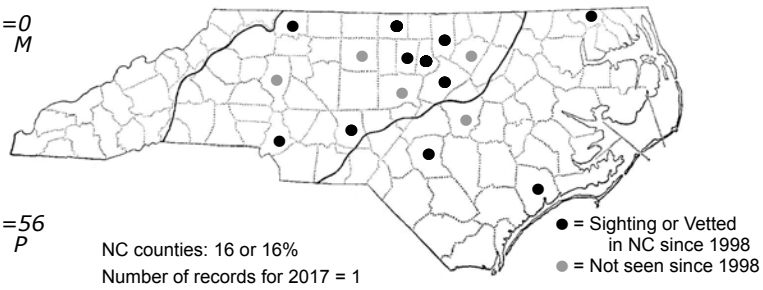
HABITAT: Creeks or small rivers, of many sizes and substrates, for breeding. These are typically in forested or semi-shaded areas and fairly pristine or clear waters.

BEHAVIOR: Males cruise along streams, but adults are more more often seen well away from water along wooded roads or wide trails or wood margins. They perch conspicuously on twigs and other vegetation, in an oblique manner, typically only a foot or two above the ground, where easily studied.

COMMENTS: This is one of the larger and more spectacular of the spring-season (only) dragonflies. It can be confused with the Brown Spiketail, which is less numerous (except in the mountains), is browner on the abdomen, has somewhat more equal-sized yellow spots on the abdomen, and is slightly smaller in length. In 2014, several observers found a colony close to the coast in New Hanover County and documented this noteworthy record with photos.

Cordulegaster obliqua Arrowhead Spiketail





NC counties: 16 or 16%
Number of records for 2017 = 1

Vetted in 2017: Onslow

High counts of:
8 - Caswell - 1996-05-30
5 - Durham - 2010-05-09
4 - Wake - 2011-05-15

Earliest date: Surry 2010-04-24
Latest date: Onslow 2017-07-20

Status NC	Status US	Rank NC	Rank Global
-	-	S3	G4

DISTRIBUTION: Though reference books show the range of the species to occur statewide (and across most of the Eastern US), NC records fall only in the Piedmont, and a few widely scattered areas in the Coastal Plain. Ranges west to Surry, Iredell, and Mecklenburg counties in the Piedmont; and it ranges east to Gates and Onslow counties in the northern Coastal Plain, but most records fall in the northeastern portion of the Piedmont (which could be a bias in observer coverage).

ABUNDANCE: Uncommon in the eastern third of the Piedmont, rare to very uncommon in the central Piedmont, and very rare in the narrow Coastal Plain portion of the range. Possibly just a stray to the eastern Coastal Plain; this is an easily identified and quite large species, so it is not being overlooked in the Coastal Plain.

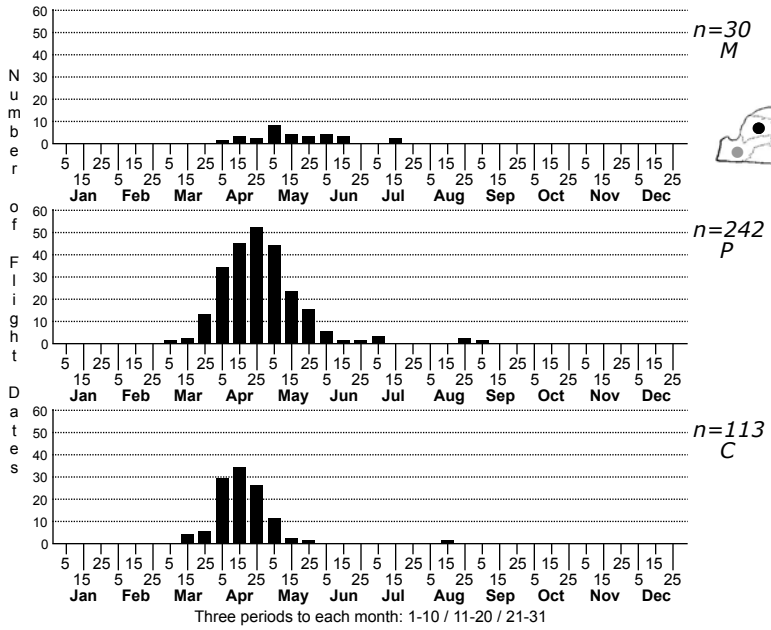
FLIGHT: The flight occurs during the two months from late April to late June (and sparingly to mid-July), with the peak in the latter half of May.

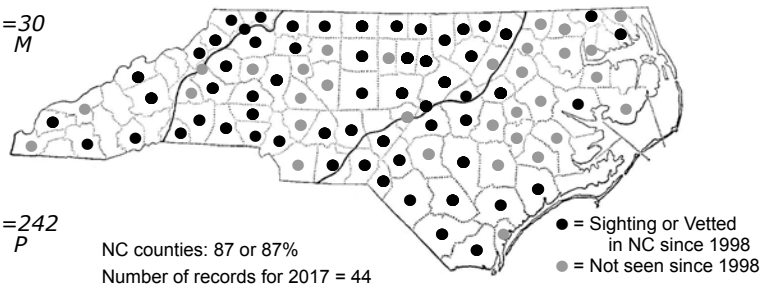
HABITAT: Very small streams and seeps, in wooded/shaded habitats.

BEHAVIOR: As with all spiketails, adults often forage long distances from their forested streams. The species is most often seen along wooded trails or roads, perching low to the ground on a twig. However, unlike other spiketails, it has a habit of flying off high, often over trees, once disturbed.

COMMENTS: This, the largest of our four spiketails in NC, is always a thrill to see. Its dorsal yellow abdominal markings (not paired as in other spiketails) indeed look like arrowheads, rendering it easy to identify. Fortunately, it is not overly scarce in the eastern Piedmont; an active observer there has a reasonable chance to encounter it each year. Conrad Wernett photographed one far to the east of the previously known range in Onslow County, in July 2017. Not only was this far east of the previously known range, but the mid-July date is the latest date known for the species! It is too soon to say if the regular range of this species extends this far to the east, as nearly all records are for the Piedmont and the far western Coastal Plain.

Didymops transversa Stream Cruiser





NC counties: 87 or 87%
Number of records for 2017 = 44

Sight (not vetted) in 2017: Transylvania, Wilkes; M

High counts of:
30 - Iredell - 2017-03-27
19 - Wake - 2014-04-23
14 - Iredell - 2017-03-28

Earliest date: Wake 2017-03-10
Latest date: Wake 2007-09-09

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

DISTRIBUTION: Essentially statewide, but of spotty occurrence in the mountains (with only ten county records). Also, scarce along the extreme northeastern coastal areas (where most dragonfly species are also scarce to absent).

ABUNDANCE: Fairly common to common, and very widespread, across the Piedmont and at least the western half of the Coastal Plain. Uncommon in the lower Coastal Plain, and rare to uncommon in the mountains.

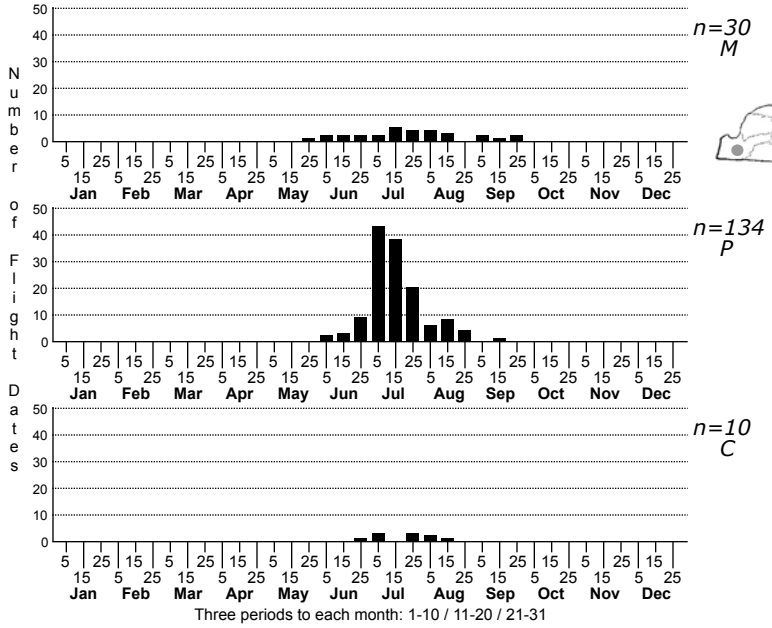
FLIGHT: Mid-March to mid-July, though primarily in the spring (i.e., mainly in April and May). There are a few records well into August and early September, but the flight is generally over in July. The flight in the mountains starts in early April.

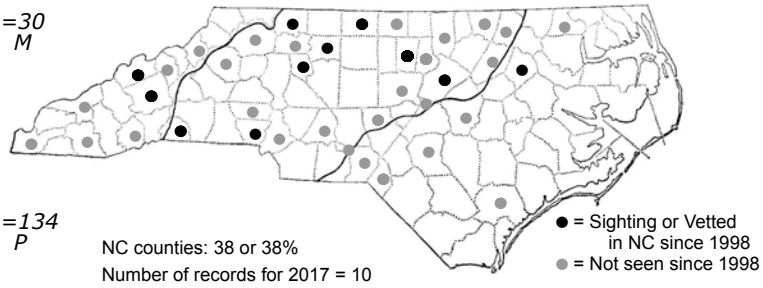
HABITAT: A wide variety of creeks and rivers (though typically smaller rivers); rarely at lakes.

BEHAVIOR: Males patrol back and forth across streams. Adults are more often seen flying and perched well away from water, along dirt roads, sunny trails, and edges. They perch obliquely on twigs and other vegetation low to the ground, as do spiketails and darners (with which they often fly).

COMMENTS: Other than another Didymops species in Florida, this is the only member of its genus in most of the United States. Though unique from that standpoint, at a casual glance it could be confused with some darners, spiketails, or river cruisers. However, it is easily separated from all but river cruisers by its single yellow band on the side of the thorax, its yellow facial bar, and single yellow spots (not paired) on the top of the abdominal segments. The river cruisers have green (or brighter green) eyes and are blacker on the abdomen (not so brown), they fly later in summer, and they seldom perch near the ground. The Stream Cruiser is reasonably unwary, often allowing close study while perched obliquely on a twig.

Macromia alleghaniensis Allegheny River Cruiser





NC counties: 38 or 38%
Number of records for 2017 = 10

Sight (not vetted) in 2017: Surry

High counts of:
14 - Orange - 1960-07-03
7 - Orange - 1994-07-02
7 - Orange - 1984-07-15

Earliest date: Madison 2017-05-26
Latest date: Madison 2017-09-24

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

DISTRIBUTION: Scattered across the mountains, Piedmont, and western Coastal Plain, with a disjunct (?) record from Pender County. Though probably occurring in all counties east to Hertford, Edgecombe, Cumberland, and Scotland, the range is spotty, probably owing mainly to the difficulty of identification (without a specimen).

ABUNDANCE: Uncommon to perhaps locally fairly common in the Piedmont, and rare to uncommon in the mountains and extreme western Coastal Plain. Very rare to absent over nearly all of the eastern two-thirds of the Coastal Plain. Poorly known by most recent observers because of difficulty in separation from both the Swift River Cruiser and the Mountain River Cruiser without a specimen.

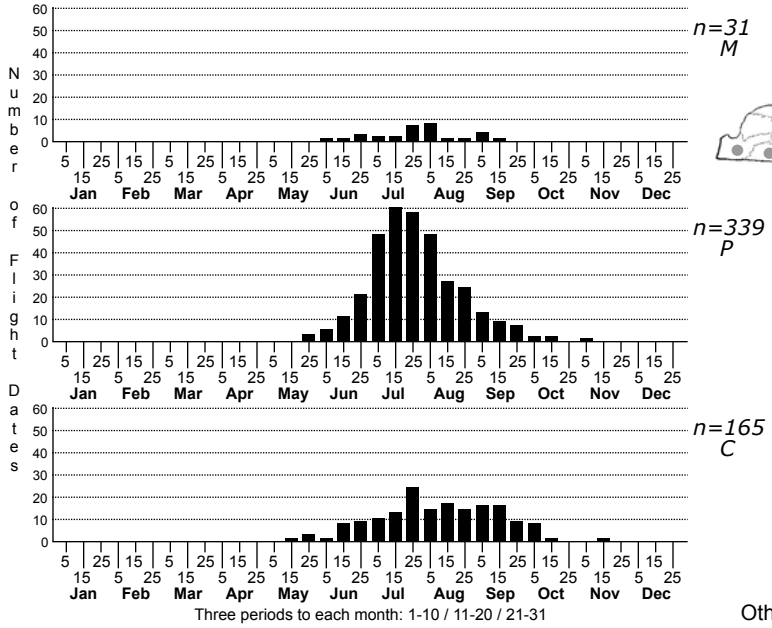
FLIGHT: The flight in the Piedmont and mountains occurs between early June and mid-September. This is likely also the flight period in the Coastal Plain, but known records there fall in a narrower range from late June to mid-August.

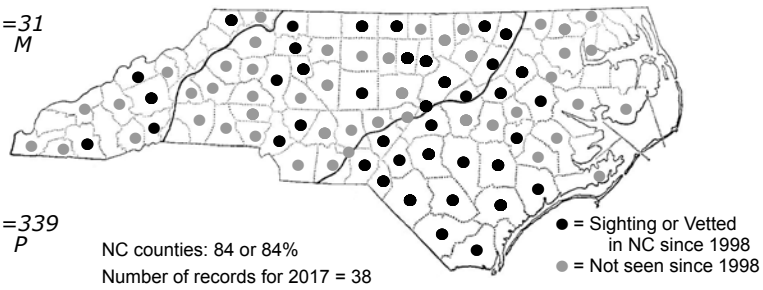
HABITAT: Creeks and rivers.

BEHAVIOR: Similar to other river cruisers, in that males cruise back and forth quickly along the length of the stream. Adults often forage in long patrols along wooded roads and wide trails, typically higher later in the day. They can be difficult to see perched.

COMMENTS: Though an observer without a net can frequently identify a "river cruiser" by its bright green eyes, yellow spots or bands on the black abdomen, and rapid back and forth cruising along a creek or a dirt road, identification of most species is tricky, even when seen perched. Often, they must be identified in the hand, or collected to study the genitalia. This species has a nearly complete yellow ring on abdominal segment 2 (a slight break dorsally). Refer to reference books and photos for identification. The scarcity of observational data in NC is understandable, as such data likely would be inconclusive or questionable (without photo or specimen). Thankfully, several people in the mountains have provided excellent recent documentation through photographs. Our website editors carefully scrutinized photo reports of all of the river cruisers (in late 2016), and several photos had been misidentified. Thus, the number of counties and records for most species of river cruisers changed due to moving records from one species to another.

Macromia illinoiensis Swift River Cruiser





NC counties: 84 or 84%
Number of records for 2017 = 38

Sight (not vetted) in 2017: Surry

High counts of:
20 - Surry - 2017-08-22
18 - Macon - 1981-08-07
11 - Duplin - 2015-08-15

Earliest date: Bladen 2017-05-20
Latest date: Pender 1994-11-14

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

Other Name: Illinois River Cruiser, Georgia River Cruiser

DISTRIBUTION: Essentially statewide, but as with nearly all such species, it is absent (or essentially so) from the extreme northeastern counties. No records east of Gates, Chowan, or Beaufort counties (except for Hyde County).

ABUNDANCE: Fairly common and widespread in most of the Piedmont and upper Coastal Plain, including the Sandhills. Uncommon to locally fairly common in the mountains and foothills, as well as the lower Coastal Plain. Certainly the most numerous river cruiser in the mountains, Piedmont, and upper Coastal Plain (though it can be outnumbered in the Coastal Plain by the Royal River Cruiser).

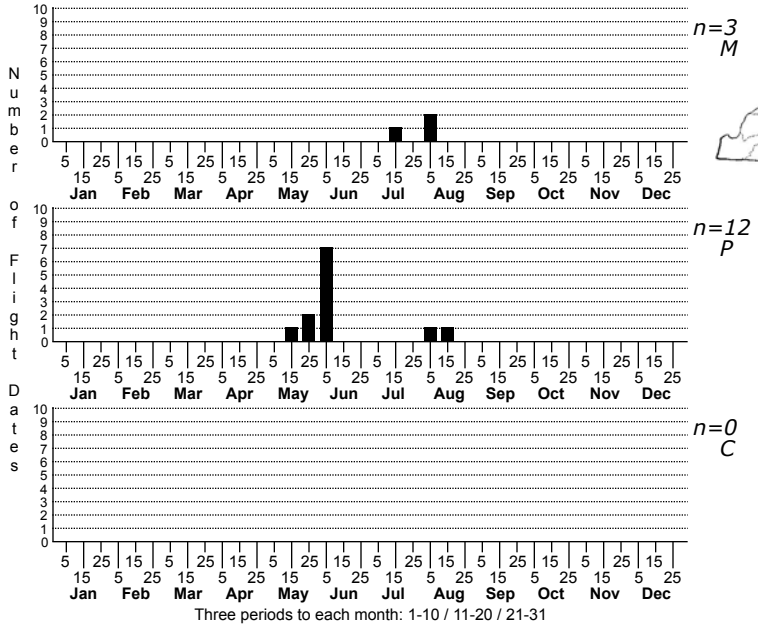
FLIGHT: A fairly wide flight period, from late May to mid-October downstate, and at least from early June to early September in the mountains. One very late record for 14 November.

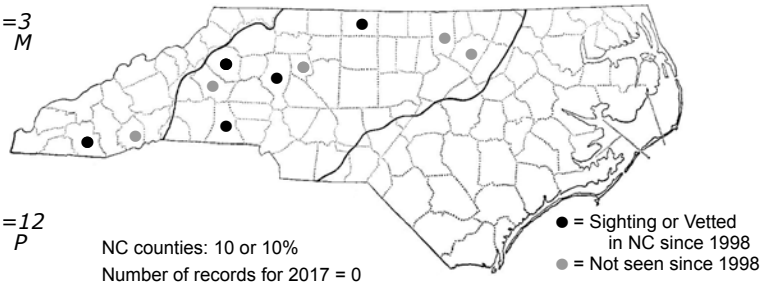
HABITAT: Rivers and creeks, preferably in smaller rivers as compared with large ones.

BEHAVIOR: Very similar to other river cruisers, it can usually be seen when adults are cruising back and forth on long patrols along dirt roads or wide trails through forests, often well away from water. Males patrol along the length of a creek or small river.

COMMENTS: There are two subspecies found in NC and other Southeastern states. The subspecies M. i. georgina ("Georgia River Cruiser") is found across most of the Piedmont and Coastal Plain, whereas the nominate subspecies (often called "Illinois River Cruiser") is more northern and is found in the mountains. Most sightings of river cruisers in NC refer to "Georgia", as this form is not uncommonly seen in mid- and late summer along wide trails and dirt roads through forests in the Piedmont. It has more obvious dorsal yellow spots on most abdominal segments than does the nominate subspecies and the Allegheny River Cruiser (which have a large dorsal spot on abdominal segment 7 but fewer spots otherwise on the abdomen).

Macromia margarita Mountain River Cruiser





NC counties: 10 or 10%
Number of records for 2017 = 0

High counts of:
2 - Macon - 2008-07-20
2 - Caldwell - 1987-08-18
2 - Cleveland - 1999-06-06

Earliest date: Davie 1993-05-20
Latest date: Caldwell 1987-08-18

Status NC	Status US	Rank NC	Rank Global
SR	FSC	S2?	G3

DISTRIBUTION: This is a very poorly known species that is globally limited to the southern Appalachians and adjacent Piedmont. In NC, there are records for 10 counties in the mountains and Piedmont. The easternmost record is from Franklin County. Much more data are needed to determine the range in NC and in the US, though it seems to be absent from mid- and high elevations in the mountains.

ABUNDANCE: Rare or at least very difficult to identify, in the lower mountains and Piedmont foothills. Presumed very rare eastward over the rest of the Piedmont, and seemingly absent from the southeastern portion of the Piedmont.

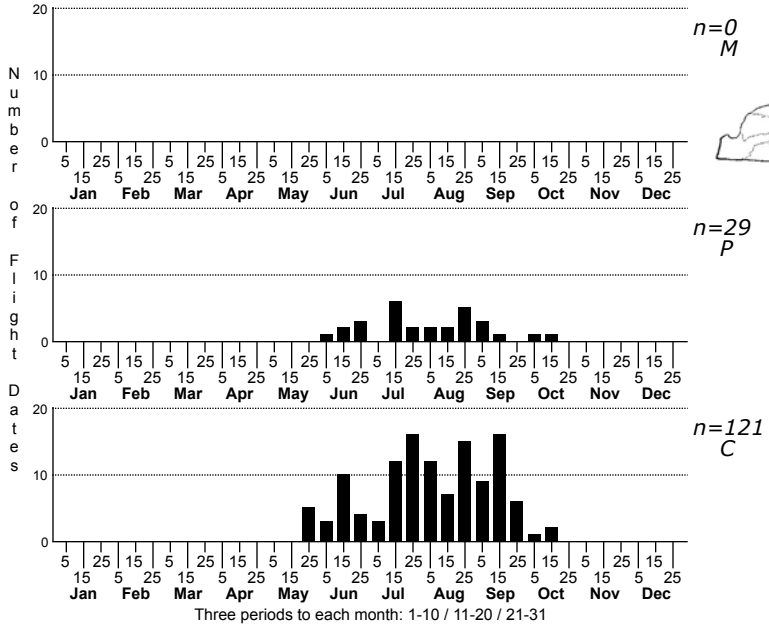
FLIGHT: "Early June to late Aug." in the overall range (Dunkle 2000). The 17 records (two are for 20 and 21 July 2008, but with no county given) in the state with dates available fall between mid-May and mid-August. However, of the 12 records with dates for the Piedmont, nary a one is from July, making the species look like it has two flight periods! The few mountain records fall between mid-July and early August, but the flight there is bound to be longer than just a few weeks.

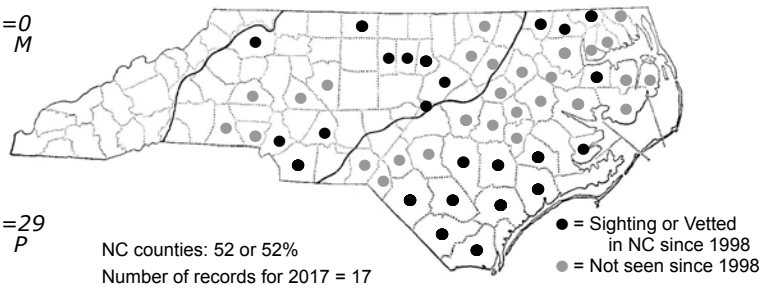
HABITAT: Creeks and rivers that are clean and fast-flowing.

BEHAVIOR: Very little reported. Males patrol lengthwise along creeks and rivers. How often it flies and perches away from the breeding sites has not been reported.

COMMENTS: This might be the most difficult dragonfly to identify in the state, even more so than some clubtails and baskettails. It very closely resembles both Allegheny and Swift river cruisers; thus, a specimen (or possibly a photograph or two) would be needed to confirm the species. There is a report of one found dead at Hanging Rock State Park in Stokes County; however, the animal was not photographed nor saved, and thus we have removed this "record" from the database. Fortunately, in neighboring Rockingham County, one was netted and photographed in 2013 to confirm its occurrence in the north-central part of the Piedmont and to "close-up" a gap in the state range map. Its global rank (by NatureServe) is just G3, implying that it is one of the less numerous dragonflies in the eastern US. Considering that little collecting of odonates takes place in the 21st Century, the range and abundance of this species will likely be unclear for years to come.

Macromia taeniolata Royal River Cruiser





NC counties: 52 or 52%
Number of records for 2017 = 17

High counts of:
38 - Sampson - 2015-08-23
24 - Pender - 2015-07-11
20 - Robeson - 2016-08-27

Earliest date: Columbus 2003-05-24
Latest date: Robeson 1960-10-16

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

DISTRIBUTION: Essentially throughout the Coastal Plain, and widely scattered over most of the Piedmont. A photo record in 2016 extended the state range into the northwestern Piedmont (to Wilkes County). Apparently absent from the mountains.

ABUNDANCE: Difficult to determine because of similarity of appearance to the Swift River Cruiser and the fact that river cruisers perch infrequently or too high in trees for easy observation/photography. Based on the number of records (mostly collections and recent photos), fairly common in the southern half of the Coastal Plain, and uncommon in the northern half, though this difference is possibly due to the comparative scarcity of field work in the northern counties. It is clearly rare in the Piedmont.

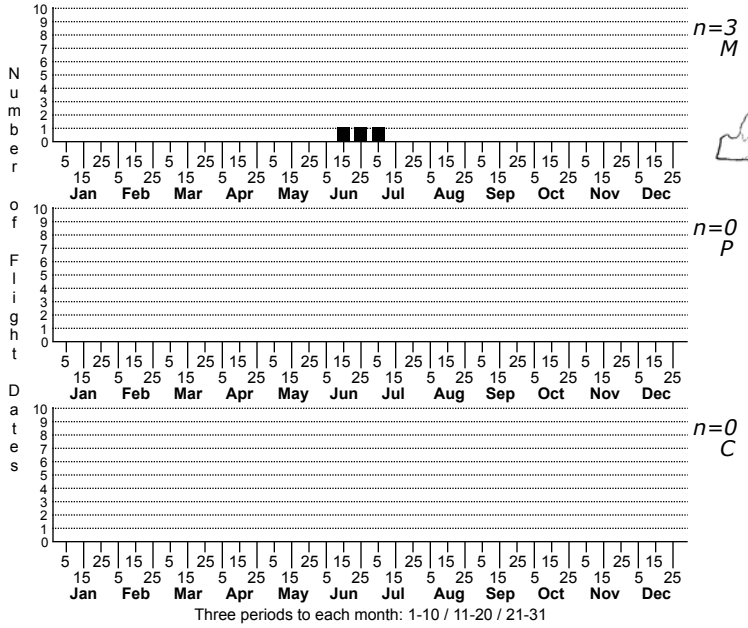
FLIGHT: Late May to mid-October in the Coastal Plain. Not surprisingly, as there are many fewer records, the known flight in the Piedmont is from early June to mid-September, and very sparingly to mid-October.

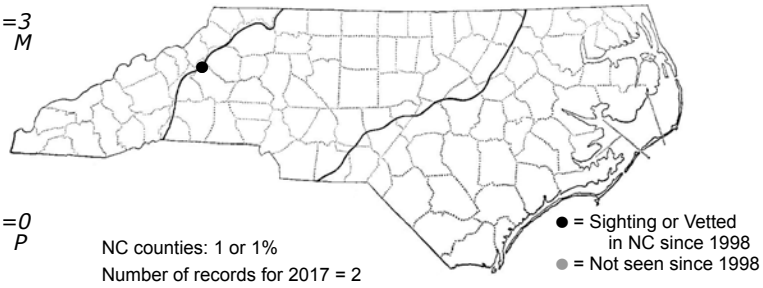
HABITAT: Mostly around larger creeks and rivers, rarely at lakes.

BEHAVIOR: Males cruise long distances over rivers and larger creeks, mostly about 3' above the water, and the flight is slower than in other river cruisers. Away from water, they behave like most other river cruisers, flying long beats over roads and sunny trails in forested areas. However, they tend to fly higher than the others in the genus, often 15 or more feet off the ground.

COMMENTS: This is one of the longest of the state's dragonflies. However, its abdomen is quite slender, and thus when seen overhead in flight over a road, one can separate it from the similar-sized Swamp Darner (which has a robust and tapered abdomen). Though reportedly it perches often, most will be seen in flight, where it often occurs with Swamp Darners. Because it can be easily confused with other river cruisers, and as the Swift River Cruiser is numerous within the range of this species, observers must be cautious when submitting sight records for the Royal River Cruiser. Mark Shields found the species to be fairly common to common along some of the rivers he cruised in 2015 and 2016, and we now have several daily counts of at least 20 individuals.

Cordulia shurtleffii American Emerald





NC counties: 1 or 1%
Number of records for 2017 = 2

High counts of:
4 - Burke; M - 1993-07-06
3 - Burke; M - 2017-06-20
3 - Burke; M - 2017-06-21

Earliest date: Burke; M 2017-06-20
Latest date: Burke; M 1993-07-06

Status		Rank	
NC	US	NC	Global
SR	-	S1	G5

DISTRIBUTION: This is a widespread Northern species, ranging from Alaska to Newfoundland, and south to California and Virginia. There are just a few NC records, all apparently from a single site in Burke County.

ABUNDANCE: Undoubtedly very rare in NC. However, it is a common species within the majority of its range.

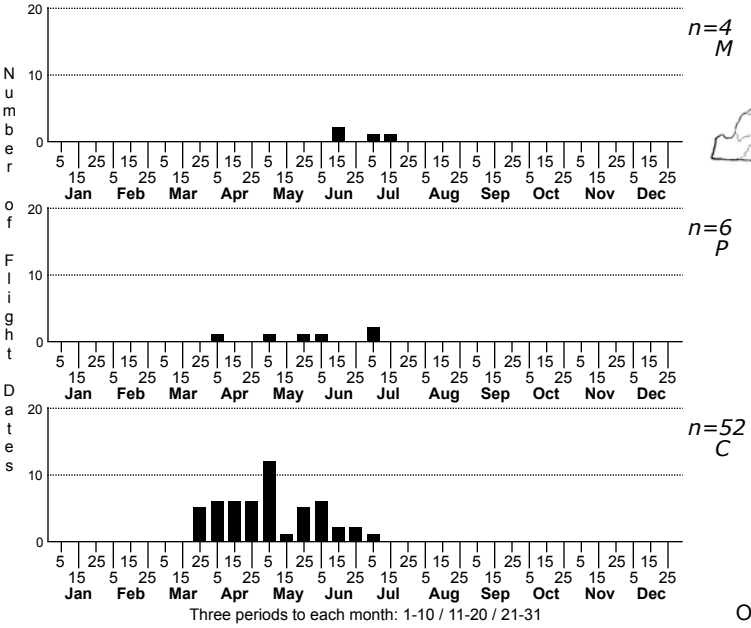
FLIGHT: The only NC records are for 20-21 June and 6 July. This seems quite late, as Paulson (2011) gives a flight season of May to July for New Jersey, and May to June for Ohio. Thus, one would expect the species to occur from May at least into early July in NC.

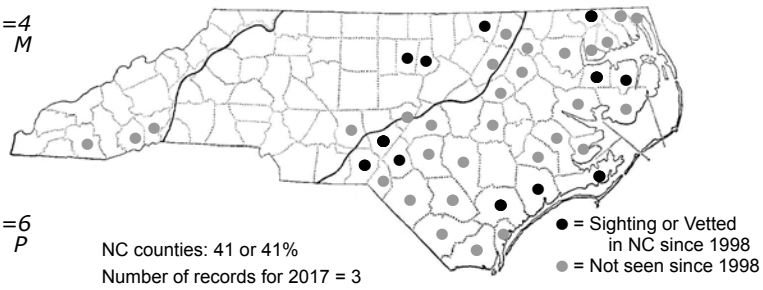
HABITAT: Still waters of lakes, ponds, or boggy areas, with marshy or damp areas surrounding the water. Favored ponds are shaded or partly shaded with much vegetation along the shoreline.

BEHAVIOR: Males "dart and hover" along shores of its ponds and boggy areas. Adults forage away from ponds along wooded margins.

COMMENTS: Four individuals were collected by Duncan Cuyler in the Jonas Ridge (mountain) portion of Burke County, in 1993. Perhaps others were seen at the same time; thus, the "4" for the high count is a minimum total present that day. Perhaps surprisingly, Jim Petranka re-discovered the species in 2017, apparently at the same pond near Jonas Ridge. John Petranka visited the pond on the following day and was able to get additional photos, including a few in the hand, finding at least three individuals. Considering that the species is common and wide-ranging to our north, it ought to occur in some counties between Burke and the VA state line.

Epitheca costalis Slender Baskettail





NC counties: 41 or 41%
Number of records for 2017 = 3

Sight (not vetted) in 2017: Orange

High counts of:
8 - Gates - 1970-06-01
5 - Bladen - 1969-05-17
5 - Camden - 1993-06-07

Earliest date: Hoke 2008-03-26
Latest date: Transylvania 1940-07-12

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

Other Name: Stripe-winged Baskettail

DISTRIBUTION: Essentially just the Coastal Plain, though it does occur in the extreme eastern and southeastern Piedmont and in the southern mountains. Likely present over other portions of the southern Piedmont between Montgomery and Henderson counties. In fact, range maps in Dunkle (2000) and Beaton (2007) show that the species ought to occur over the entire state, except perhaps for the northern mountains! Thankfully, the range map in Paulson (2011) matches that of the range map for NC on this website.

ABUNDANCE: Generally uncommon in the Coastal Plain; much less numerous than the Common and Mantled baskettails within its Coastal Plain range. Very rare in the eastern Piedmont and southern mountains (and apparently absent elsewhere in these provinces). However, as the species is difficult to positively identify without hand examination, its true abundance is only speculation.

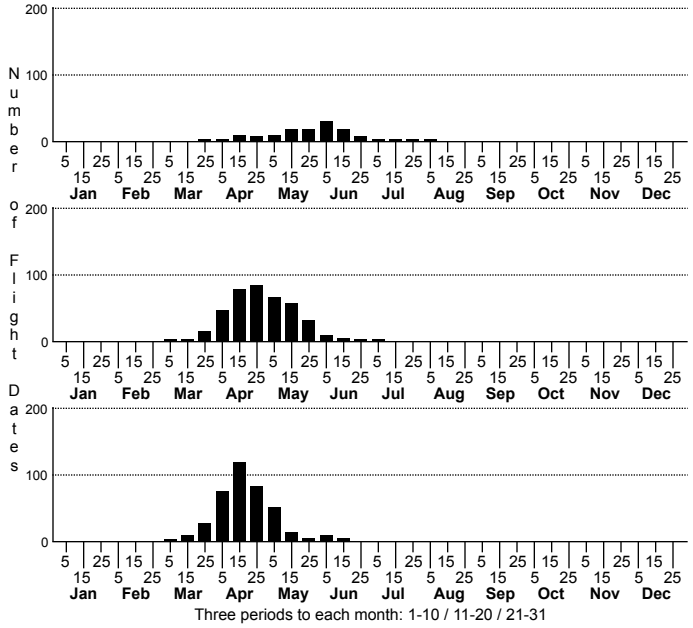
FLIGHT: Spring season for the most part, but sparingly into early summer. In the Coastal Plain, the flight is from late March to early July, but it is most numerous in April and May. Interestingly, Duncan Cuyler's records for the Great Dismal Swamp area are only in June, from Camden County; but his records elsewhere in NC fall between April and July (Roble and Cuyler 1998). The meager data for the Piedmont fall between early May and early July, whereas those in the mountains fall between mid-June and mid-July.

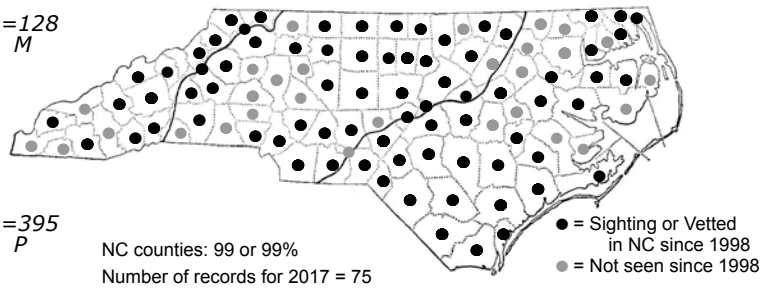
HABITAT: Mainly at ponds or small lakes, rarely at slow-moving rivers.

BEHAVIOR: Males patrol small territories around the pond margins. As with all baskettails, adults are more easily seen and studied when they are foraging or perching in an oblique manner on twigs a foot or two above ground along dirt roads and wide trails.

COMMENTS: This species was formerly called the Stripe-winged Baskettail, but only a few females show the characteristic "named" dark bar on the leading edge of the wings. The species averages slightly longer than Common Baskettail, but it is best separated by the thinner abdomen that is narrowed near the thorax, giving a more spindle-shape to the abdomen. The species can easily be confused in the field with Common Baskettail, and thus observers are likely either overlooking this less common species or are reluctant to submit sight reports for it. In fact, the website editors determined (in late 2016) that one to several previous photos on this website are actually of Common Baskettails and not Slender Baskettails.

Epitheca cynosura Common Baskettail





NC counties: 99 or 99%
Number of records for 2017 = 75

High counts of:
400 - Camden - 2017-04-13
150 - Onslow - 2010-04-24
130 - Wake - 2013-05-03

Earliest date: Orange 2017-03-10
Latest date: Macon 1981-08-05

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

DISTRIBUTION: Statewide; undoubtedly occurs in every NC county, including those along the immediate coast.

ABUNDANCE: Common to occasionally abundant across the state. Often the most numerous species seen on an outing in the spring season. Dozens can sometimes be seen in a day.

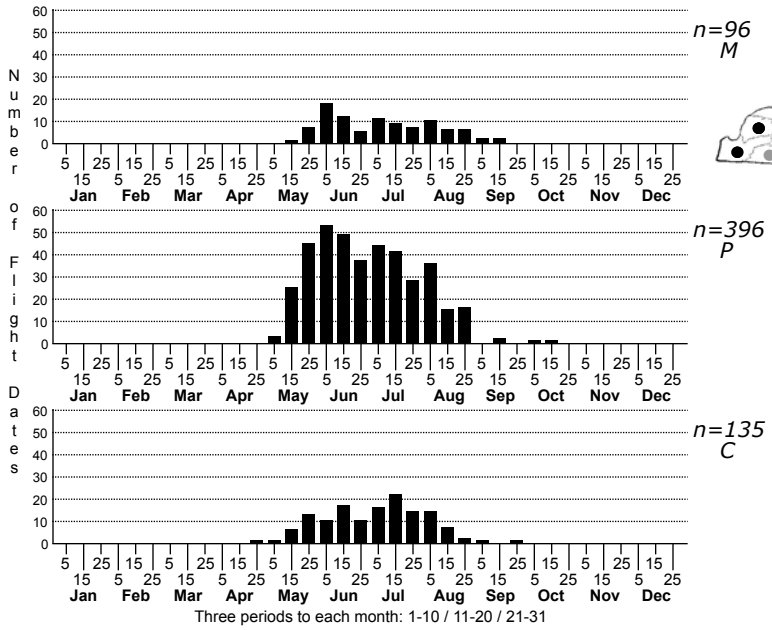
FLIGHT: Spring/early summer season only; mid-March to late June or early July downstate, and to early August in the mountains (where the flight begins in late March). It is infrequent downstate after the end of May.

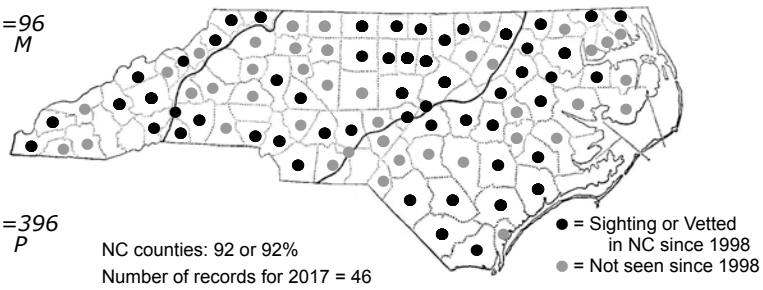
HABITAT: Mainly at still or slow-moving water of ponds, lakes, and pools; rarely at slow creeks and rivers.

BEHAVIOR: Males are often seen flying low over pools and ponds, perching quite frequently along the margins. Away from water, adults range widely to woodland margins, sunny roads and trails, and so forth, where they perch unwarily on twigs or other low vegetation and thus can be studied closely.

COMMENTS: Identification of most baskettails (except Prince) can be tricky, as some Mantleds, most Slender, and especially Robust baskettails closely resemble the Common Baskettail. In fact, there is probably no single field mark that might identify a dragonfly as a Common; a suite of marks, such as abdomen shape, abdomen width, and wing coloration must be used. Nonetheless, observers will quickly tire of seeing this species in spring, in hopes of finding less numerous baskettails, darners, and skimmers.

Epitheca princeps Prince Baskettail





NC counties: 92 or 92%
Number of records for 2017 = 46

Sight (not vetted) in 2017: Mitchell

High counts of:
50 - Camden - 2017-06-23
24 - Union - 2014-07-02
20 - Halifax; P - 2008-07-03

Earliest date: Wayne 1982-04-24
Latest date: Rowan 1978-10-11

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

DISTRIBUTION: Statewide; presumably occurs in all 100 counties. A few coastal counties lack a record, and probably absent on the Outer Banks.

ABUNDANCE: Fairly common to common essentially statewide, seemingly somewhat more numerous in the Piedmont than in the mountains or Coastal Plain. Rare toward the coast, and likely absent on the Outer Banks. Does not occur in swarms like a few other baskettails (Common and Mantled).

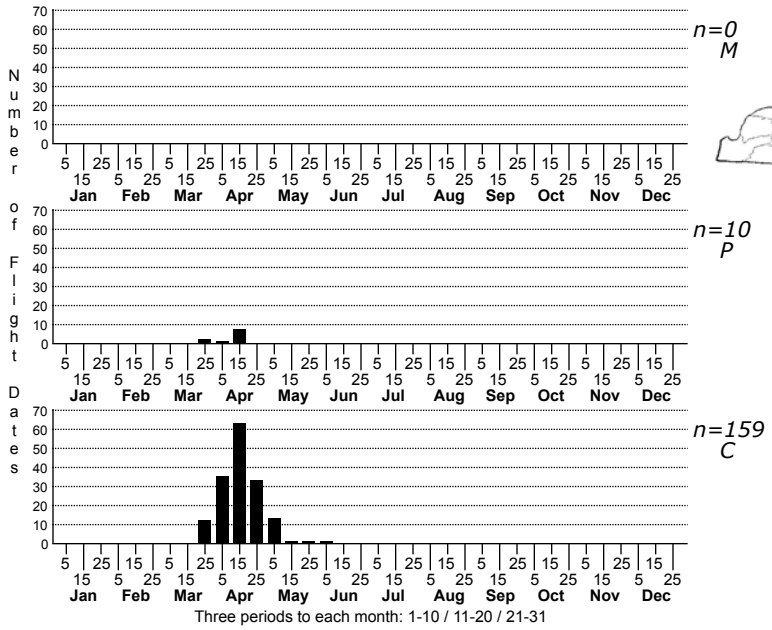
FLIGHT: A long flight period compared with other baskettails, and the only baskettail species that extends through the summer into early autumn. In the Coastal Plain, the flight occurs from late April to late September; in the Piedmont, from early May to mid-October (though scarce after August); and in the mountains, from late May to mid-September.

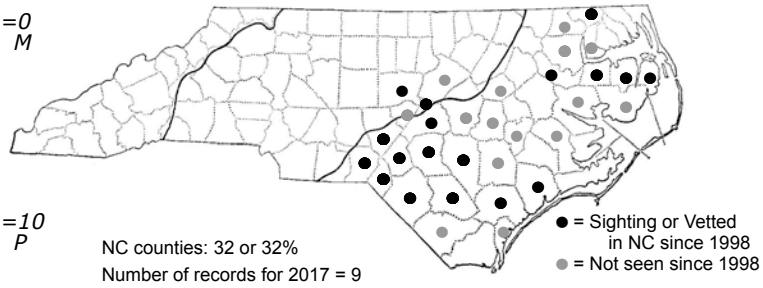
HABITAT: Slow-moving waters of lakes and ponds, or still rivers. Usually in open, sunny places.

BEHAVIOR: Males are often seen making long back-and-forth flights along canals, pond and lake shores, etc., in sunny areas well away from forests. Unlike the other baskettails, this species only infrequently perches.

COMMENTS: It is surprising that this species is included with the other four NC baskettails in the same genus (Epitheca), as the Prince Baskettail looks and behaves more like a species of darner or skimmer than a typical baskettail. The wings are boldly blotched in black, and the adults glide and fly in a choppy manner, with wings often held above the horizontal, for long periods of time. As they only infrequently perch, one normally makes the identification (easily) in flight.

Epitheca semiaquea Mantled Baskettail





NC counties: 32 or 32%
Number of records for 2017 = 9

High counts of:
35 - Moore; C - 2005-04-17
25 - Moore; C - 2007-04-06
25 - Sampson - 2004-04-05

Earliest date: Moore; C 2008-03-22
Latest date: Tyrrell 1959-06-06

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

DISTRIBUTION: Essentially only the Coastal Plain in NC, though it barely extends above the Fall Line from Wake and Chatham counties southward. Ranges inland only to Wake, Chatham, Moore, and Richmond counties.

ABUNDANCE: Fairly common to locally common in the Sandhills and the adjacent southern Coastal Plain; less common farther eastward and northeastward (e.g., no record yet for Brunswick County), but still at least fairly common locally, though probably rare in the extreme northeastern Coastal Plain. Rare in the narrow Piedmont part of the range. Can occur in swarms, with over 20 individuals seen in a day in some sites.

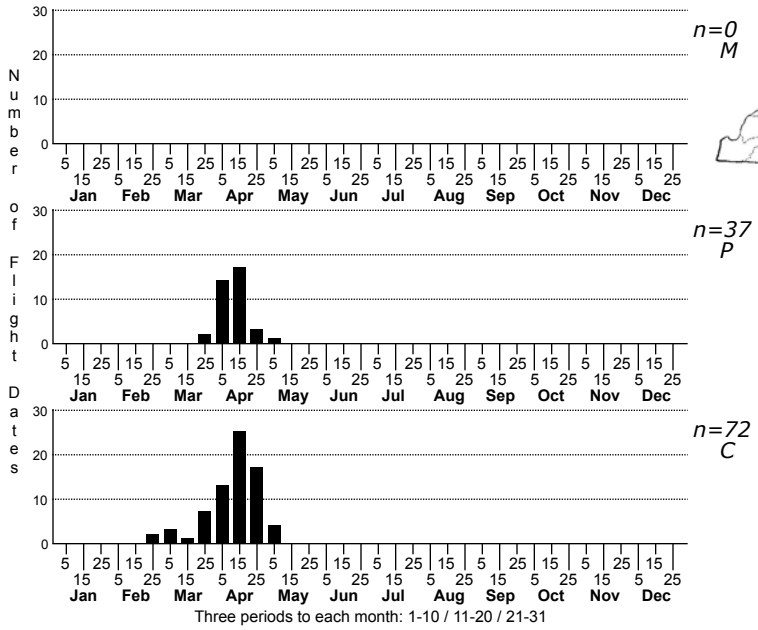
FLIGHT: Spring season only; late March through April, rarely to early June. The few Piedmont records end in mid-April, though it certainly flies there for a few more weeks.

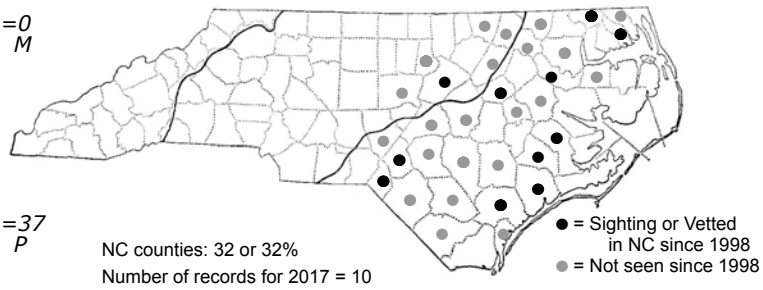
HABITAT: Lakes, ponds, and pools. Seems to be more numerous where these are acidic, such as in pocosin habitats to include Carolina bay lakes and ponds.

BEHAVIOR: Males are less often seen in patrols over water than are Common Baskettails. Adults are typically seen, along with many Common Baskettails, flying along dirt roads and other clearings, frequently stopping to perch obliquely on twigs and other vegetation close to the ground.

COMMENTS: The amount of dark brown or black on the hindwings is somewhat variable, and many Common Baskettails also show some dark pigment on the hindwings. However, Mantleds are the smallest baskettails and can often be identified by their small size while seen on the wing.

Epitheca spinosa Robust Baskettail





NC counties: 32 or 32%
Number of records for 2017 = 10

Vetted in 2017: Jones, Wake

High counts of:
10 - Craven - 2013-04-13
8 - Northampton - 1969-04-17
8 - Robeson - 1989-04-17

Earliest date: Pender 2018-02-25
Latest date: Harnett; C 1969-05-04

Status NC	Status US	Rank NC	Rank Global
W	-	S3?	G4

DISTRIBUTION: Occurs over most of the Coastal Plain and adjacent Piedmont, ranging inland only to Warren, Durham, Chatham, and Moore counties. Seemingly absent in the extreme eastern Coastal Plain, at least in most tidewater counties around the Albemarle and Pamlico sounds. Ranges north to New Jersey, but very rare and sporadic west of the Atlantic Coastal Plain, though there are a few records west to Oklahoma and Texas.

ABUNDANCE: Probably uncommon, to locally fairly common, over its range in the Coastal Plain and eastern Piedmont. Duncan Cuyler collected large numbers of this species, in several dozen counties, and thus it is not (or was not during his time) a rare species. However, most observers today are either unfamiliar with it or are reluctant to report it, due to difficulty of identification from Common Baskettail. Of note, Cuyler found it "fairly common" in the Dismal Swamp area.

FLIGHT: Spring season only, with the flight finishing about as early as any dragonfly species in the state. This flight period in the Coastal Plain is from very late February or early March to early May, and in the Piedmont from late March to early May. The latest state collection record is 4 May (likely the earliest "latest" date for any odonate in NC). Not surprisingly, Dunkle (2000) says "the earliest dragonfly within its range". According to Roble and Cuyler (1998) -- "Cuyler's surveys in North Carolina indicated that this species is fairly common at ponds, swamps and streams of all sizes; adults were found from 17 April to 7 May in western Gates County ... and the Dismal Swamp region ..."

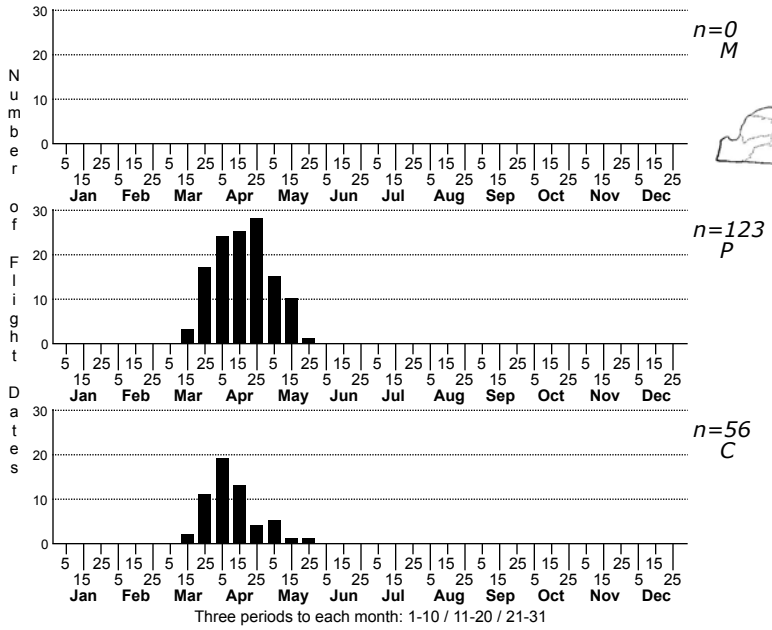
HABITAT: Still waters of swamps and ponds/pools in or near forests; probably scarce in open water of lakes and ponds.

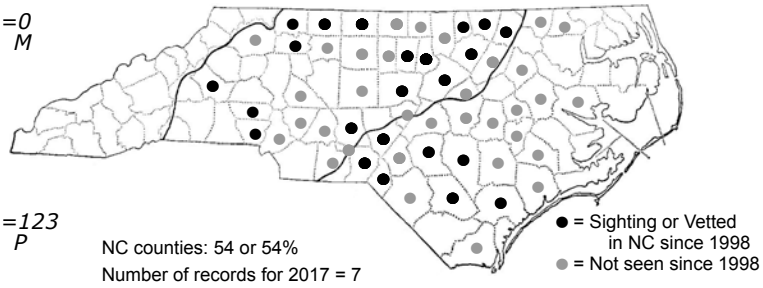
BEHAVIOR: Males patrol along swampy edges; little else reported.

COMMENTS: Though the species averages slightly longer, huskier (especially in the abdomen), and more hairy in the thorax than Common Baskettail, identification of Robust Baskettail must be made with care, as there are many photos of Common Baskettails (presumably) from the mountains and Piedmont with wide abdomens and very hairy thoraxes.

Even though the NC Natural Heritage Program ranks the species as S3? in NC, few people other than Duncan Cuyler are familiar with the species in NC. This "unfamiliarity" extends throughout its range, as Paulson (2011) says "The sparseness of records south and west of North Carolina is puzzling" and "seemingly rare in most parts of range". This suggests that most of the records rangewide are from NC, and the species is likely much more numerous here than to the north and south. Despite over 105 records with dates for NC (data from the University of Florida museum), the Natural Heritage Program retains the species on its Watch List until more new records are made. Thankfully, Conrad Wernett has netted and photographed several individuals in the hand, in Craven County. Mark Shields, John Petranka, Brian Bockhahn, and Kyle Kittelberger have also added a handful of new recent records, with photos.

Helocordulia selysii Selys's Sundragon





NC counties: 54 or 54%
Number of records for 2017 = 7

High counts of:
29 - Sampson - 2017-03-25
29 - Bladen - 2017-03-25
12 - Rockingham - 1996-04-22

Earliest date: Moore; C 2011-03-12
Latest date: Cumberland 1987-05-28

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

DISTRIBUTION: Nearly throughout the Piedmont and the Coastal Plain, though apparently absent from the extreme eastern part of the latter region (no records east of Hertford and Beaufort counties). Of sporadic occurrence in the western Piedmont, possibly absent from a few of these counties. No mountain records.

ABUNDANCE: Uncommon to occasionally or locally fairly common in the eastern half of the Piedmont; slightly less numerous (uncommon) though widespread in most of the Coastal Plain; rare to uncommon in the western Piedmont.

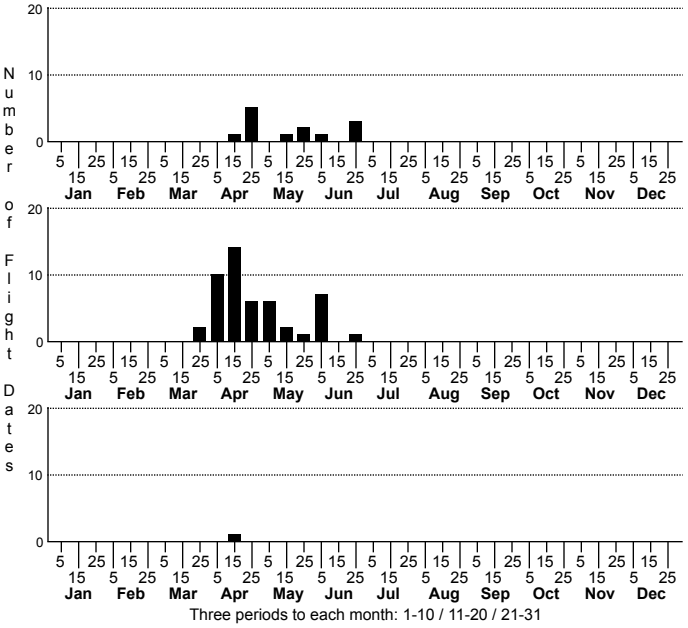
FLIGHT: First two-thirds of the spring season only; mid-March to late May, though scarce after early May.

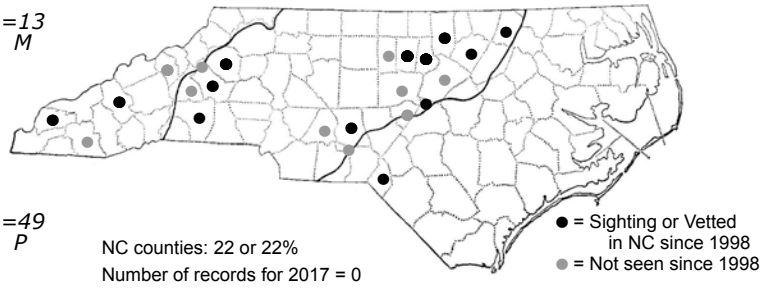
HABITAT: Small creeks and trickles, where sandy, and typically in shaded or semi-shaded places.

BEHAVIOR: Its behavior is similar to that of baskettails, with males patrolling small areas along creeks. However, as with baskettails, adults frequently move well away from water, feeding along dirt roads and wide, sunny trails, perching like those species in an oblique manner on twigs close to the ground. They can be somewhat unwary and studied/photographed at close range.

COMMENTS: As Dunkle (2000) calls the species "uncommon" over its range, and Beaton (2007) calls it "Uncommon to rare" in its GA range, the species must be more numerous in NC than in most other states in its range. Active field biologists will often find one or two each spring, though it seldom occurs in numbers. At first glance the two sundragons (genus Helocordulia) resemble baskettails (genus Epitheca), but their spindle-shaped abdomen (narrowed at the anterior end) and ochre-orange band/ring on abdominal segment 3 separates the two genera.

Helocordulia uhleri Uhler's Sundragon





NC counties: 22 or 22%
Number of records for 2017 = 0

High counts of:
8 - Orange - 2002-05-02
8 - Orange - 2006-03-31
4 - Caldwell - 1996-05-19

Earliest date: Durham 1976-03-24
Latest date: Orange 2006-06-26

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

DISTRIBUTION: Scattered over the mountains and Piedmont, with a gap (probably due to collecting effort) in the west-central portions of the Piedmont. Might well occur in all counties in the two provinces, as it ranges east to Halifax, Wake, Harnett, and Scotland counties. Probably occurs on very rare occasions in the Sandhills portion of the Coastal Plain.

ABUNDANCE: Less numerous in NC than Selys's Sundragon in most counties where both occur (i.e., the eastern Piedmont). Very uncommon to unncommon in the eastern third of the Piedmont, but seemingly quite rare westward, with most records in the western part of the state lying close to the Blue Ridge escarpment. The gap of records in the west-central Piedmont is bizarre and suggests that the species must be very rare there, but as there are many records from the foothills and from the eastern Piedmont, it certainly ought to be present in all Piedmont counties.

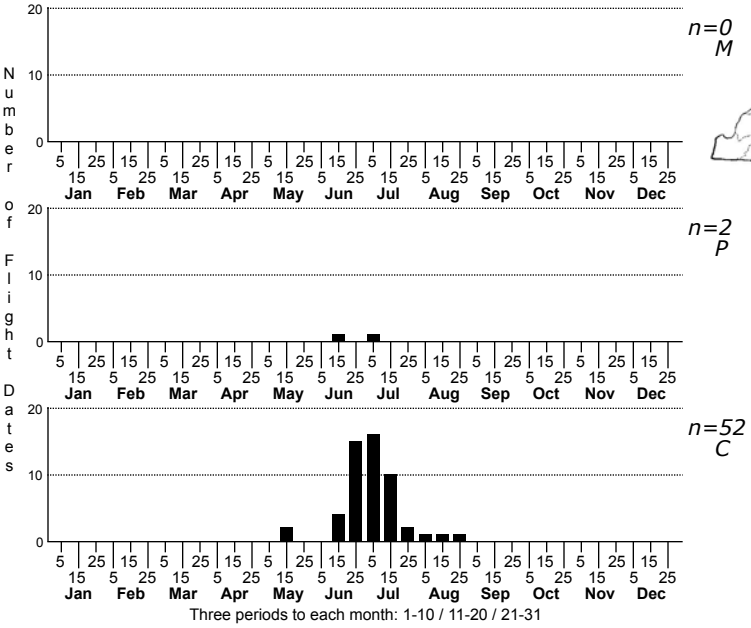
FLIGHT: Somewhat similar to Selys's Sundragon, though occurring later into early summer. In the Piedmont, from very late March or early April to late June, but scarce after early May. Dates in the mountains fall between mid-April and late June, and the single Coastal Plain record is for mid-April.

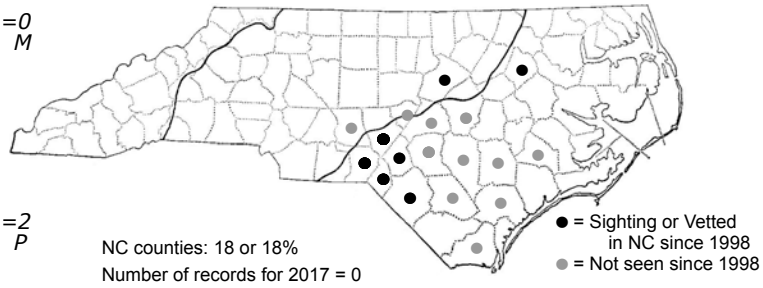
HABITAT: Creeks and slower-flowing rivers, in shaded or semi-shaded forested areas. Apparently in slightly larger bodies of water than for Selys's, but habitat certainly overlaps.

BEHAVIOR: Males patrol territories over creeks and rivers, but fly longer and faster patrols than does Selys's. Adults are like most baskettails and Selys's Sundragon in foraging well away from water along trails and roads, perching for easy observation.

COMMENTS: Though this species has a wider, more Northern, range than does Selys's, it is the less common of the two in NC, though active observers in the eastern Piedmont might see one or two Uhler's each spring. The two sundragons are quite similar in appearance, with Uhler's having a small amber spot (lacking in Selys's) at the base of each wing; these spots can be difficult to see in the field, but good, close photographs show the mark well.

Neurocordulia alabamensis Alabama Shadowdragon





High counts of:
6 - Moore; C - 1973-07-02
5 - Richmond; C - 1996-07-14
5 - Moore; C - 1966-06-25

Earliest date: Moore; C 1963-05-18
Latest date: Richmond; C 1997-08-22

Status		Rank	
NC	US	NC	Global
W	-	S3?	G5

DISTRIBUTION: Ranges across the southwestern 40-50% of the Coastal Plain, including the Sandhills region; essentially absent from the Piedmont, though there is a recent sight report from Wake County. As NC lies at the northeastern end of the range, the northern limits at present are Montgomery, Moore, Lee, Wake, and Edgecombe counties.

ABUNDANCE: Very difficult to assess for all five shadowdragons in NC because of their crepuscular habits. As it has been found in practically all potential counties in NC within its range, it must not be truly scarce, and the 54 records with available dates attest to it not being rare. Dunkle (2000) calls the species "common but seldom seen" across its full range, which might apply as well to NC. Likely, it is uncommon to fairly common in the Sandhills region, and rare to uncommon elsewhere in the southern Coastal Plain, but especially scarce in the Piedmont and the central Coastal Plain.

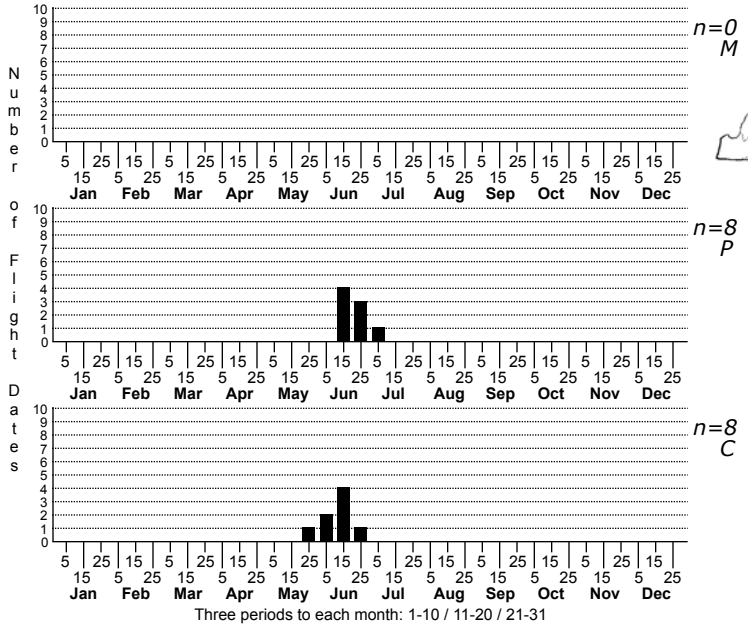
FLIGHT: The flight is from mid-May to late August, though most do not appear until mid-June, and the peak is from late June to mid-July.

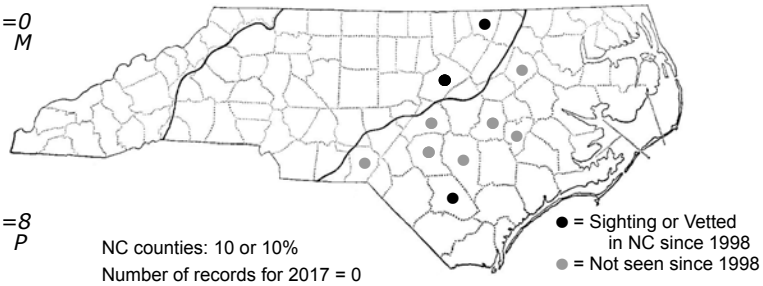
HABITAT: Small creeks in forested regions, often where sandy and with low flow.

BEHAVIOR: Strictly crepuscular, with most flying taking place about 30 minutes before dusk. It spends the remainder of the day hanging on twigs in shade in forests, where very seldom seen.

COMMENTS: To see shadowdragons, observers must visit creeks and other bodies of water in shaded places during the last hour of daylight, with a net handy to catch whatever may be seen flying over the water. In fact, Dunkle (2000) calls this species "One of the world's most elusive dragonflies" because of its very narrow flight time during the day, often for just 10-20 minutes near dusk. Though it is not rare in the state, it is poorly known by today's biologists/observers, and the NC Natural Heritage Program retains the species on its Watch List.

Neurocordulia molesta Smoky Shadowdragon





NC counties: 10 or 10%
Number of records for 2017 = 0

High counts of:
4 - Cumberland - 1968-06-18
2 - Wake - 2010-06-22
2 - Wake - 2010-06-17

Earliest date: Wayne 1970-05-21
Latest date: Warren 2016-07-06

Status		Rank	
NC	US	NC	Global
W	-	S3?	G4

DISTRIBUTION: Scattered in the western half of the Coastal Plain, north to Edgecombe County; range barely extends into the adjacent Piedmont (Wake and Warren counties). Range extends eastward only to Edgecombe, Lenoir, and Bladen counties; but it also occurs in the Sandhills region. Though the bulk of the range lies west of the state in the Mississippi drainage, the species appears to be practically absent from the mountains and Piedmont of NC.

ABUNDANCE: Secretive and difficult to survey (as are all shadowdragons), but seemingly less numerous than two shadowdragons (Alabama and Umber) within its NC range. Probably rare to locally uncommon.

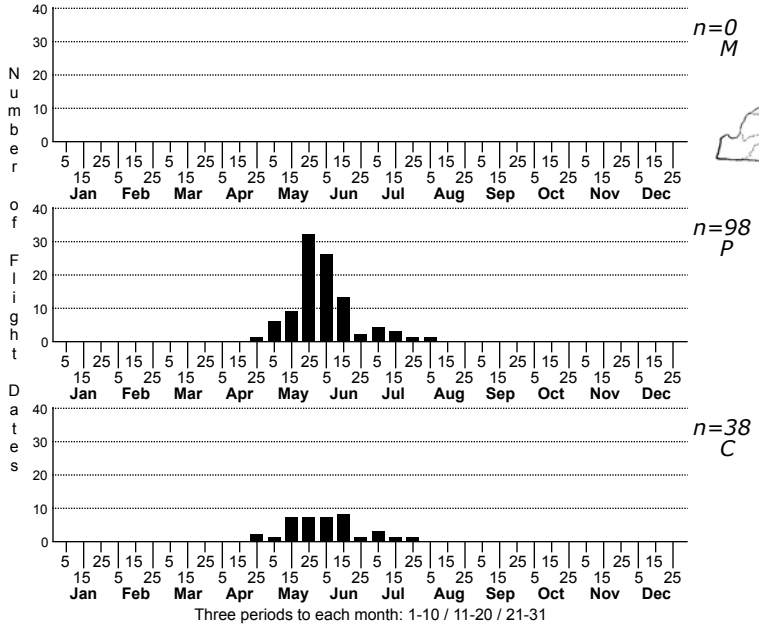
FLIGHT: Probably May into July. The NC dates available fall between 21 May and 6 July. A number of records were made in Wake County in the last 20 days of June 2010.

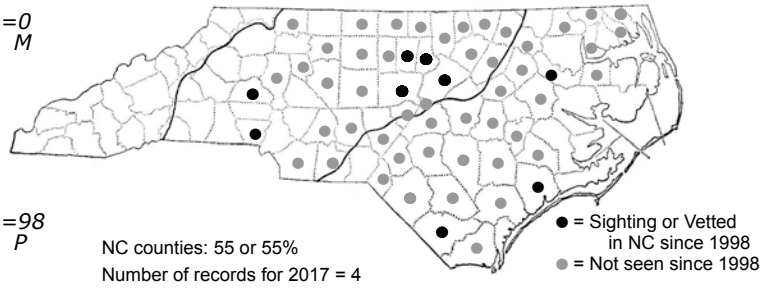
HABITAT: Occurs at larger bodies of water than does Alabama Shadowdragon -- rivers and larger creeks.

BEHAVIOR: As with all shadowdragons, Smoky Shadowdragons remain motionless, hanging from twigs and leaves in the forest shade during the day, and fly over water for only the last hour of daylight, with most activity right at dusk.

COMMENTS: The slightly smoky color of the wings, along with olive-green eyes, separates this species from the other shadowdragons. As with the other shadowdragons in NC, one must make a concerted effort in the last hour of daylight to see this species, and a net would be essential for identification in the poor light conditions when they are flying. On the other hand, Paul Scharf serendipitously found one on his lighted moth sheet in Warren County in 2016; his photos are uploaded on the OdonataCentral website. Though the species might not be rare in NC, there are records for just 10 counties, and thus the NC Natural Heritage Program has placed the species on its Watch List, in 2012. (One of the previous county records has been determined by our website editors to not be a Smoky Shadowdragon.)

Neurocordulia obsoleta Umber Shadowdragon





NC counties: 55 or 55%
Number of records for 2017 = 4

Vetted in 2017: Onslow

High counts of:
10 - Onslow - 2017-05-26
9 - Chatham - 1987-05-29
6 - Harnett; P - 1965-05-16

Earliest date: Durham 2016-04-26
Latest date: Wake 2010-08-06

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

DISTRIBUTION: Occurs over nearly all of the Piedmont and Coastal Plain, though the range is spotty near the Blue Ridge Escarpment counties and in the extreme eastern Coastal Plain, where possibly absent in a few coastal counties along the Outer Banks. No records for the mountains. The full range of the species is more northerly than most other shadowdragons, extending to Maine.

ABUNDANCE: Because of its crepuscular habits, abundance is poorly known, but based on the fact that it has been recorded from the majority of Piedmont and Coastal Plain counties within its range, and we have over 130 records with dates available, it is certainly not scarce. Likely uncommon to fairly common in much of its range in NC, though Dunkle (2000) calls it "uncommon" over its range, and Beaton (2007) calls it "probably uncommon to rare" in GA.

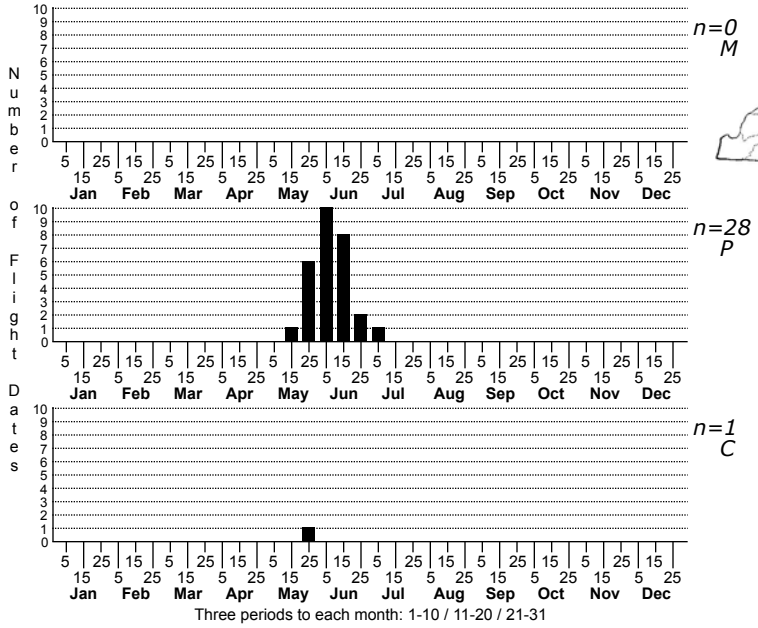
FLIGHT: The flight periods in both the Coastal Plain and the Piedmont are similar -- very late April to late July or early August.

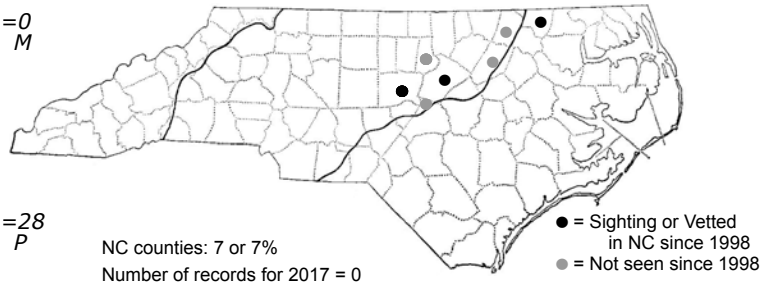
HABITAT: Rivers, typically large and clean; less often at creeks.

BEHAVIOR: As with all shadowdragons, adults hang from twigs and vegetation in the forest shade during the day, and emerge to fly only in the last hour of daylight. Males prefer to fly patrols over riffles in the rivers.

COMMENTS: It is surprising that such a secretive dragonfly could be recorded in NC from so many counties -- 55 in total. This is especially striking in comparison with the relatively few county records from neighboring states -- 2 in GA, 4 in SC, and 10 in VA (as of 2016 on the OdonataCentral website map). This must represent intense collecting effort on the part of Duncan Cuyler or others, as it would seem unlikely to be much more numerous in NC than in VA, for example, as the range of the species is centered on these two states.

Neurocordulia virginiensis Cinnamon Shadowdragon





NC counties: 7 or 7%
Number of records for 2017 = 0

High counts of:
14 - Chatham - 1976-06-02
6 - Chatham - 2000-06-08
6 - Chatham - 1994-06-13

Earliest date: Harnett; P 1965-05-16
Latest date: Durham 1963-07-04

Status NC	Status US	Rank NC	Rank Global
W	-	S3?	G4

DISTRIBUTION: A puzzling range in NC, so far as known, based on its "wide"overall global range. Known at present only from a handful of counties in the northeastern Piedmont -- west only to Durham and Chatham counties, and east to the Fall Line separating the Piedmont from the Coastal Plain. As this is a mostly Southern species, ranging north to southern Virginia, the lack of certain Coastal Plain records is striking or puzzling. A new county record (in 2013), for Northampton County, lies along the Fall Line, at Weldon. This record was added to the Coastal Plain flight chart on the PDF page; however, this record could just as easily have been included in the Piedmont flight chart.

ABUNDANCE: Seemingly rare to uncommon (and perhaps fairly common at one or two sites) in NC, but as this and other species of shadowdragons are crepuscular, determining the range and abundance is very difficult. Oddly, Dunkle (2000) calls the species "common" in its range, but Beaton (2007) calls it "probably uncommon" in GA. The fact that at least 14 individuals were collected in a single day at a Chatham County site suggests that it might be numerous in a few places within its narrow range.

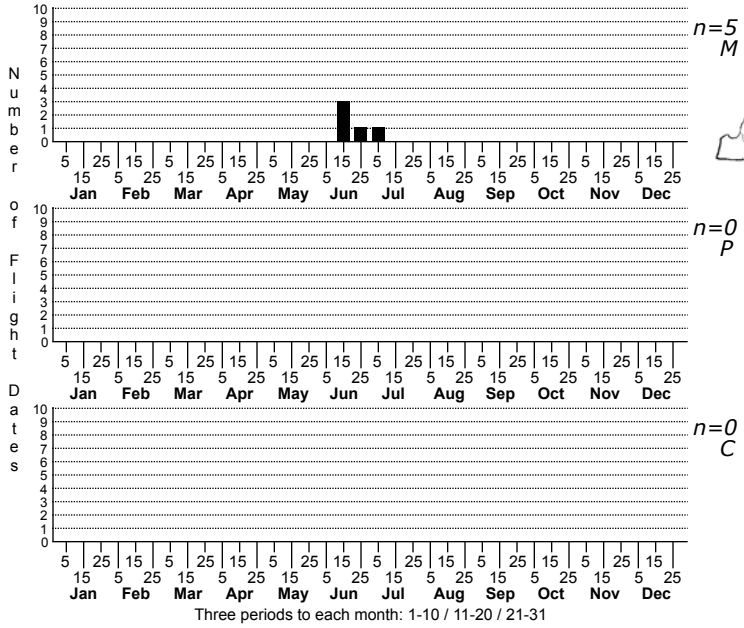
FLIGHT: The flight in NC occurs from mid-May to early July.

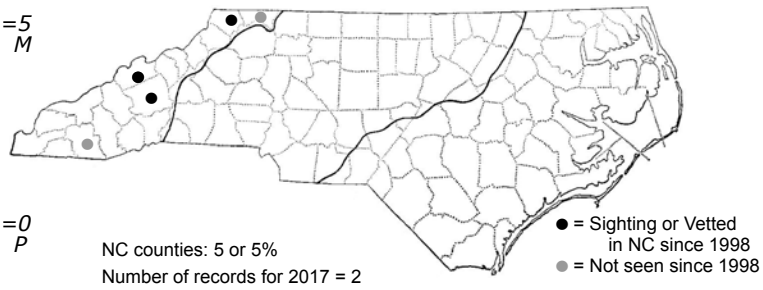
HABITAT: This is a riverine species, occurring at larger, clean ones with riffles.

BEHAVIOR: As with other shadowdragons, adults perch inconspicuously on twigs in the shade of forests during the day, emerging during the last hour of light to forage near rivers. Beaton (2007) mentions that the species is more likely than other shadowdragons to forage away from its breeding habitat (i.e., away from water).

COMMENTS: Based on records from throughout its range on the OdonataCentral website, it seems that there is a FL bias in Dunkle's (2000) considering the species to be "common". A "common" status seems to be true in FL and probably AL, but there are just two counties of occurrence shown on the website for each of GA, SC, TN, and VA. Thus, the seven counties known for NC is not out of line, and the Cinnamon Shadowdragon clearly is a rare to very uncommon dragonfly north of FL, and is much less numerous than the Umber Shadowdragon (which occurs with it in the NC Piedmont) north of FL. Despite there being fewer than 30 records with dates available, the NC Natural Heritage Program moved the species from the Rare List to the Watch List in 2012, as it wants more data on twilight survey efforts for shadowdragons before it considers any (other than the Stygian) to be truly rare.

Neurocordulia yamaskanensis Stygian Shadowdragon





NC counties: 5 or 5%
Number of records for 2017 = 2

Vetted in 2017: Buncombe, Ashe

High counts of:
8 - Madison - 1992-06-17
4 - Ashe - 2017-06-20
2 - Madison - 1998-07-09

Earliest date: Madison 1992-06-17
Latest date: Madison 1998-07-09

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

DISTRIBUTION: A Northern species, ranging south to the mountains of NC and TN. So far, in NC known from just five counties, but thankfully ranging from the VA state line to the GA state line; however, it has not yet been recorded from the latter state.

ABUNDANCE: Very rare or rare, but as it is crepuscular, it might not be rare at a few specific sites; in fact, 8 individuals were collected at a single site in Madison County in 1992, and four were seen at a site in Ashe County in 2017.

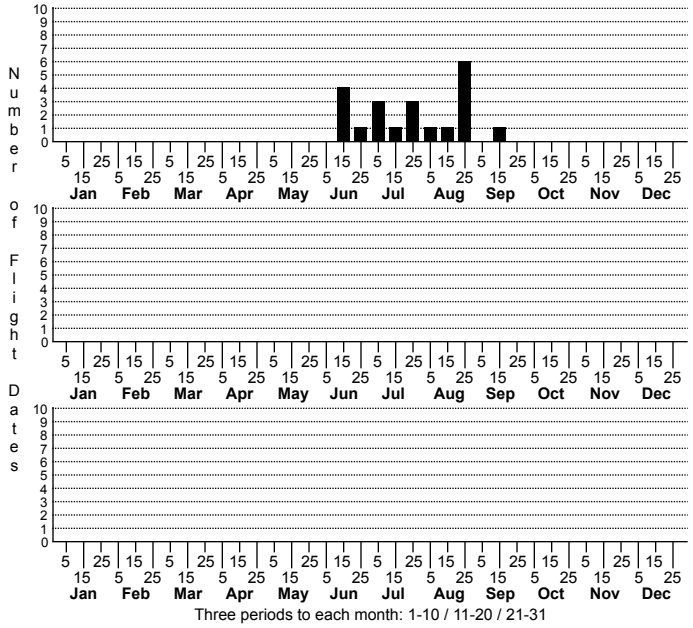
FLIGHT: Mid-June to at least early July, but this is based on just five records with dates.

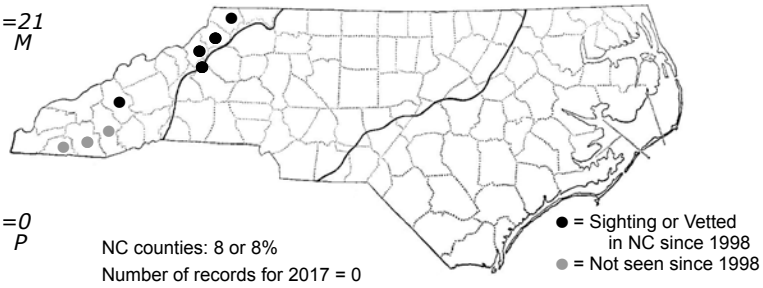
HABITAT: Larger rivers and lakes, but only where there is much wave action.

BEHAVIOR: This shadowdragon flies even later in the day than the others, typically not flying until sunset, and continuing for another 30 minutes, often flying later on moonlit nights. During the day, all shadowdragons perch in the shade of forests on twigs and leaves, where nearly impossible to find.

COMMENTS: Not surprisingly, this Northern species has been recorded at just a handful of sites in NC, and it is the only one of the five shadowdragons in NC that occurs in the mountains. The Madison records are from the French Broad River and the Macon record is from the Little Tennessee River. We suspect that the Alleghany record is from the New River, especially as a 2017 record for neighboring Ashe County is from the South Fork New River. Another 2017 record, for Buncombe County, surprisingly turned up in Vin Stanton's yard, though located only 1/4-mile from the French Broad River, its suspected habitat.

Somatochlora elongata Ski-tipped Emerald





NC counties: 8 or 8%
Number of records for 2017 = 0

High counts of:
4 - Macon - 1953-06-15
3 - Burke; M - 1991-08-23
2 - Avery - 2009-07-23

Earliest date: Macon 1953-06-13
Latest date: Burke; M 1990-09-11

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

Other Name: Ski-tailed Emerald

DISTRIBUTION: Strictly the mountains (and perhaps along the Blue Ridge Escarpment in Piedmont counties). Known from just eight counties in NC. The great majority of emeralds (genus Somatochlora) are Northern species, ranging south only to the mid-Atlantic states, and the Ski-tipped's range extends farther south than many of these, to northern GA.

ABUNDANCE: Rare to possibly uncommon in the northern mountains, but rare south of Avery and Burke counties. Considered to be "common" over its range by Dunkle (2000), but clearly it is a scarce species near the southern end of its range.

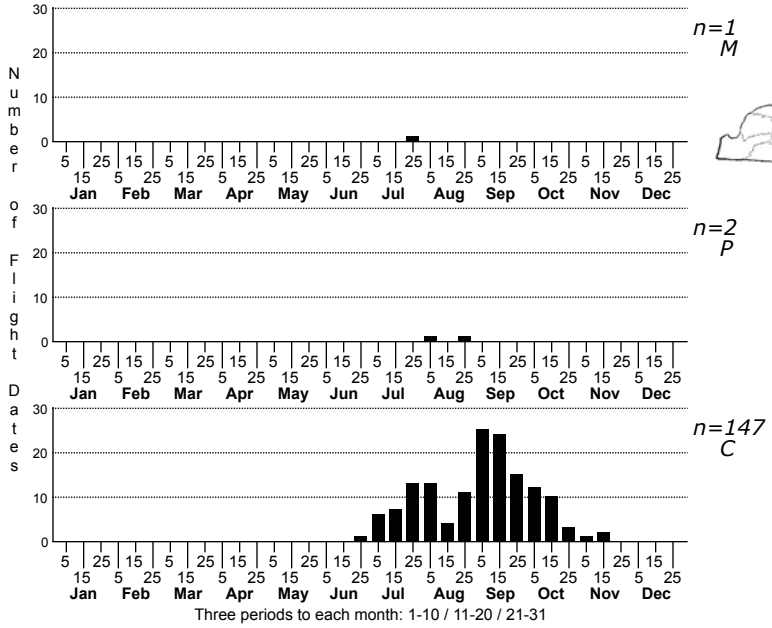
FLIGHT: Mid-June to the end of August; one record in mid-September.

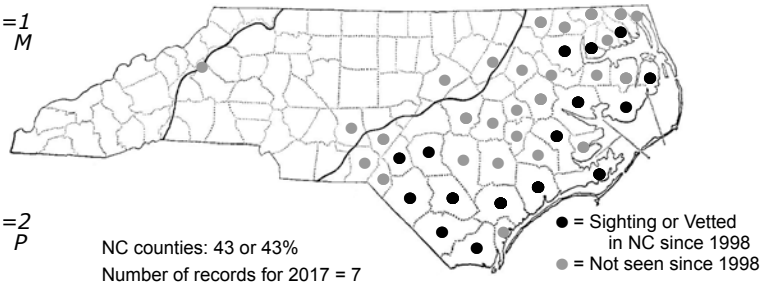
HABITAT: Slow-flowing streams, outlets of lakes and ponds, beaver ponds, bogs, etc., typically in open or partly open sites. In NC, favors open wetland sites at fairly high elevations (mainly over 3500 feet). Most records are from high-quality sites/natural areas.

BEHAVIOR: Males patrol territories over water about 1-2 feet high. However, in normal feeding, the adults often forage high, sometimes in shade.

COMMENTS: This is not an overly rare species in the northern mountain counties of NC. A handful of recent records have been made in the state, many documented with photos. As with many emeralds, the various species in the state can look very similar in flight, and observers and photographers must wait until they perch to be sure of the identification. Thankfully, most of the other emeralds in the state occur at lower elevations and often in somewhat more wooded settings than is this northern species.

Somatochlora filosa Fine-lined Emerald





High counts of:
63 - Pender - 2017-09-19
20 - Onslow - 2016-09-24
10 - Beaufort - 1990-09-04

Earliest date: Onslow 1978-06-27
Latest date: Pender 1994-11-14

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

DISTRIBUTION: Throughout the Coastal Plain, with records for nearly every county in the province, even along the coast. Occurs along the Fall Line in the extreme eastern Piedmont, and there is a collection record from far inland Burke County (mis-identified?).

ABUNDANCE: Fairly common and widespread in much of the Coastal Plain; probably uncommon in some areas closer to the Piedmont. It is one of the few dragonflies that is more numerous in the lower Coastal Plain than in the upper part of this province. It is very rare in the eastern Piedmont. According to Roble and Cuyler (1998), "Cuyler found that this species is common and widespread in the Coastal Plain of North Carolina, including the Dismal Swamp area."

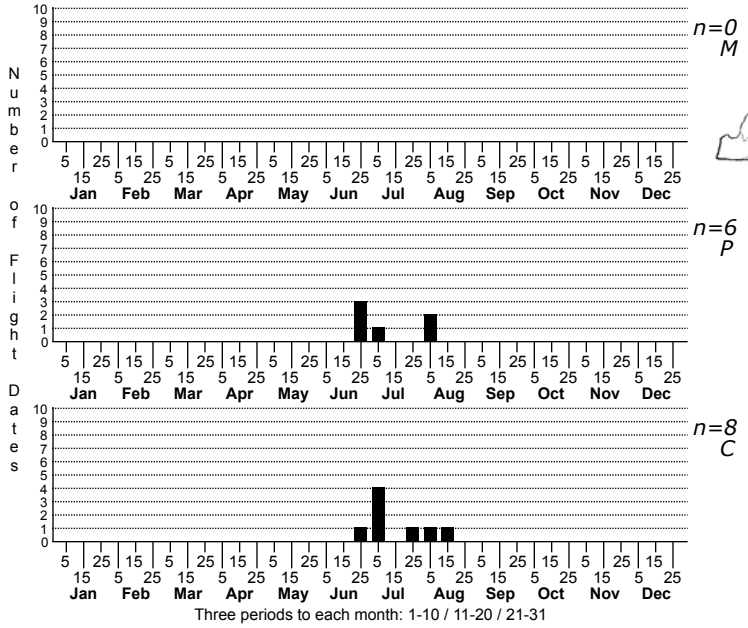
FLIGHT: Late June to mid-November, being one of the few dragonflies whose main flight is the fall season, where it often peaks in September or even into October. Interestingly, the three records from the Piedmont/foothills are from late July to late August, and not in the fall season at all.

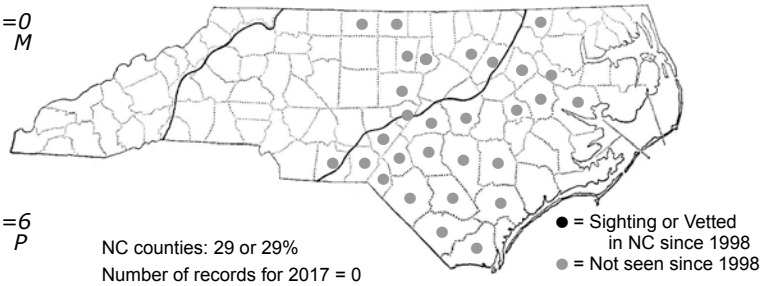
HABITAT: Both Dunkle (2000) and Beaton (2007) indicate that the breeding habitat is unknown, but suggest swamps, seeps, and other slow-moving waters in forested areas. This seems correct for NC, as it is often found near forested, swampy habitats, as opposed to flowing waters of riverine/creekside habitats or wide open waters of lakes and ponds.

BEHAVIOR: As with most emeralds, adults forage widely away from water, such as along forest edges and along roads and wide trails. They often fly quite high (over 10-20 feet), but occasionally they can be observed as they perch on a twig, at times within a few feet of the ground.

COMMENTS: This species can be numerous in the fall season near swampy woodlands and forested margins near wetlands, though finding one perched within easy viewing or photographing can be a challenge. Often the best way to see one is to net the dragonfly as it flies by, frequently over one's head. The "fine lines" on the side of the thorax, which give the species its common name, are not easily seen. Most other emeralds have more distinct thorax stripes/lines, whereas the numerous Mocha Emerald is solid-colored on the sides of the thorax.

Somatochlora georgiana Coppery Emerald





NC counties: 29 or 29%
Number of records for 2017 = 0

High counts of:
3 - Duplin - 1970-06-30
2 - Moore; C - 1972-07-07
2 - Edgecombe - 1985-08-17

Earliest date: Durham 1989-06-26
Latest date: Edgecombe 1985-08-17

Status NC	Status US	Rank NC	Rank Global
SR	-	S2?	G3G4

DISTRIBUTION: Present over the eastern Piedmont and western 2/3rds of the Coastal Plain. Ranges west to Rockingham and Anson counties; and east to Northampton, Beaufort, and Pender counties. It seems to be absent in the far eastern counties, as well as in the western half of the Piedmont and the mountains.

ABUNDANCE: Puzzling. Most references consider this to be a rare species, yet the great number of counties recorded in NC suggest otherwise. Hardly any biologist alive in NC seems to be familiar with the species, as there are no NC photos on websites and no recent observations. It has been recorded in 29 NC counties, but just one in VA, two in SC, and two in GA (OdonataCentral range map, 2016). And, specimens from Duncan Cuyler and others at the University of Florida yield only 14 date records. Where are all of the other records? Perhaps the species has also declined in recent decades, as a species this "widespread" and not overly difficult to identify should certainly have been found in the last 20 years. Despite what the map shows, this is clearly a rare species in NC today.

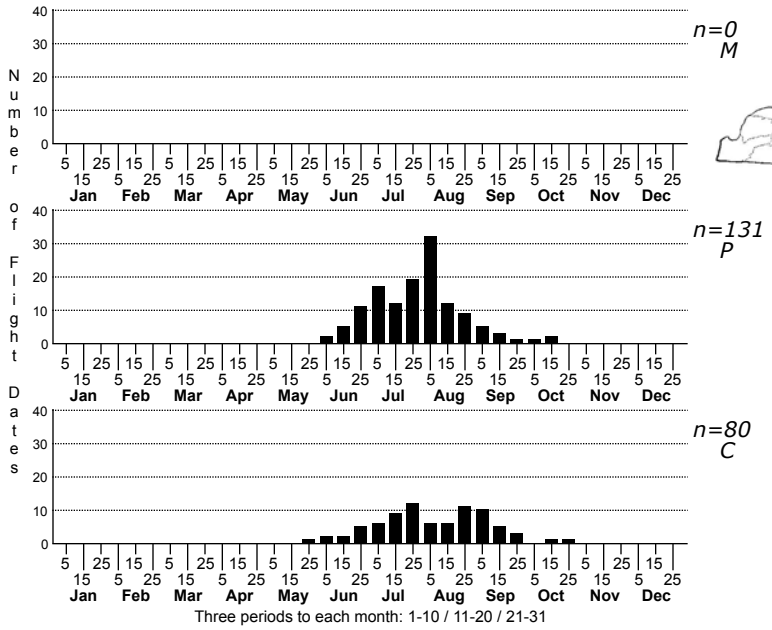
FLIGHT: The NC flight occurs between late June and mid-August.

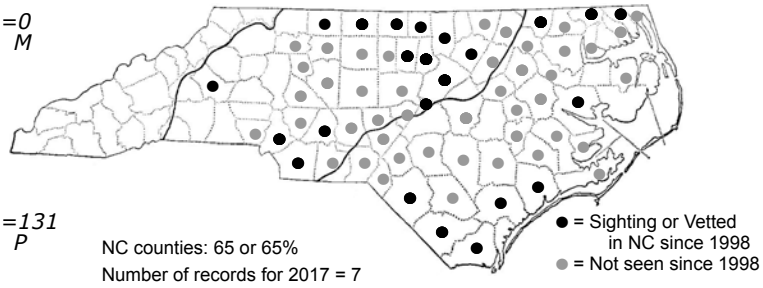
HABITAT: Creeks and other slow-moving acidic streams, in forested areas.

BEHAVIOR: Adults are somewhat secretive. They are most frequently seen flying 30 or more feet above ground, in late afternoon. They perch on twigs, but often well above ground. Males can sometimes be seen patrolling over streams.

COMMENTS: Exactly why there are so many more records for NC than in practically any other state -- just about half of all county records known are from NC (!) -- is not known. Despite it being colored like no other dragonfly, and should be obvious when seen, it is clearly not often encountered except with a purposeful search (such as near dusk), or with long nets to catch high-flying dragonflies. Because there have been no recent records, the NC Natural Heritage Program has moved the species from its Watch List to the Rare List in 2012. We agree with Paulson (2011): "This is one of our rarest dragonflies, very seldom encountered in most of its range." Some enlightenment on this mysterious species was made by Chris Hill, who netted and collected one in Horry County, SC, on 25 June 2015 (OdonataCentral photo and data). He indicated that the species is very hard to capture, and this strongly suggests that most of Cuyler's apparent non-specimen records were sight records.

Somatochlora linearis Mocha Emerald





NC counties: 65 or 65%
Number of records for 2017 = 7

Sight (not vetted) in 2017: Burke; P, Stokes

High counts of:
18 - Durham - 2010-08-08
12 - Orange - 2016-07-21
8 - Orange - 2016-08-21

Earliest date: Columbus 2017-05-28
Latest date: Camden 2009-10-22

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

DISTRIBUTION: Throughout the Coastal Plain (even near the coast), and the eastern and central Piedmont. Ranges west to Yadkin and Gaston counties. Not known yet from the mountains, despite range maps in reference books that shade in the entire eastern US.

ABUNDANCE: Uncommon to fairly common over much of the Coastal Plain and eastern third of the Piedmont, but uncommon in the central Piedmont. Perhaps uncommon also in the southeastern part of the Coastal Plain. This is generally the most numerous emerald in the Piedmont, and is the most numerous emerald in the Coastal Plain during the summer.

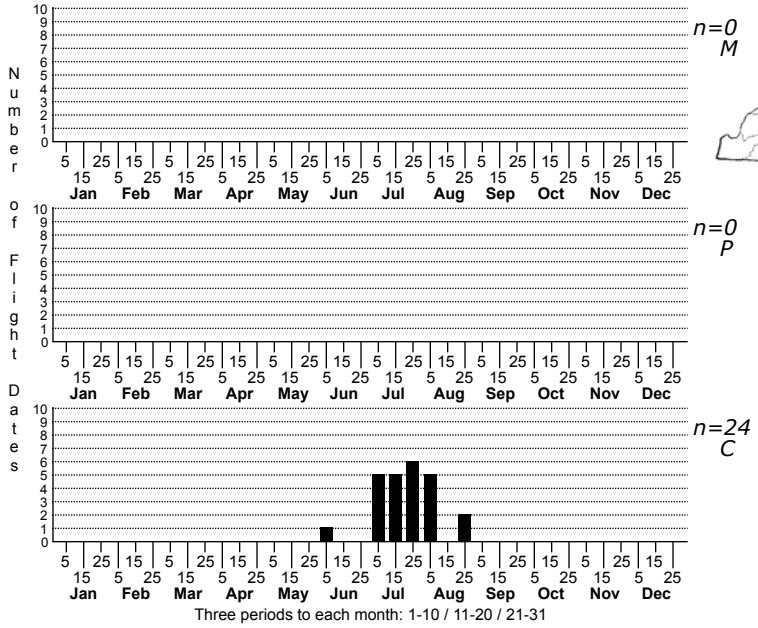
FLIGHT: Summer and early fall seasons, from early June into late September, and sparingly to mid-October. Not numerous after August.

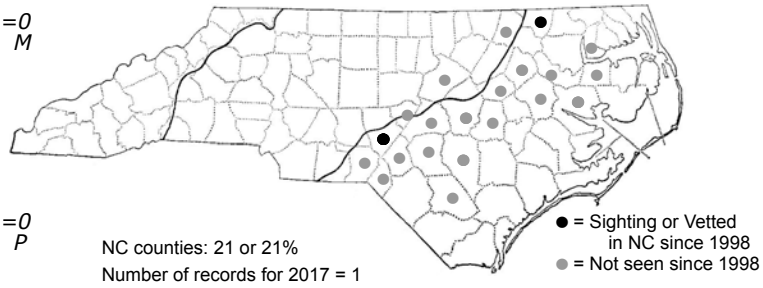
HABITAT: Small forested streams; Dunkle (2000) says streams about 1-3 yards wide are preferred.

BEHAVIOR: The species is most easily seen near small streams that are drying up. Away from streams, this emerald is often seen flying along wooded roads and wide trails, often at head height, back and forth, pausing to hover close to an observer. They spend most of the day perched in shady places, often hidden from an observer.

COMMENTS: Emeralds are usually seen in flight along and over forested roads, often at treetop height, and sometimes perching on telephone wires. They seem curious and may hover close to an observer, when the adult's bright green eyes and black thorax and abdomen are noticed. However, identification can be tricky in flight, and normally identification must be made of perched or netted individuals.

Somatochlora provocans Treetop Emerald





NC counties: 21 or 21%
Number of records for 2017 = 1

High counts of:
3 - Johnston; C - 1990-07-26
2 - Beaufort - 1996-08-21
2 - Beaufort - 1992-08-02

Earliest date: Moore; C 2017-06-07
Latest date: Scotland 1989-08-28

Status NC	Status US	Rank NC	Rank Global
W	-	S3?	G4

DISTRIBUTION: Strictly in the western and central Coastal Plain, though possibly in the extreme eastern Piedmont (along the Fall Line). Ranges east only to Chowan, Washington, Beaufort, and Bladen counties; and west to Wake, Lee, Moore, and Richmond counties.

ABUNDANCE: Difficult to assess because of its high-flying habits. All references consider it to be a scarce, though not necessarily rare, species. Based on the fact that it has been recorded in NC from 21 counties, it certainly isn't overly rare. Best considered as uncommon and very easily overlooked, within its narrow range in the state.

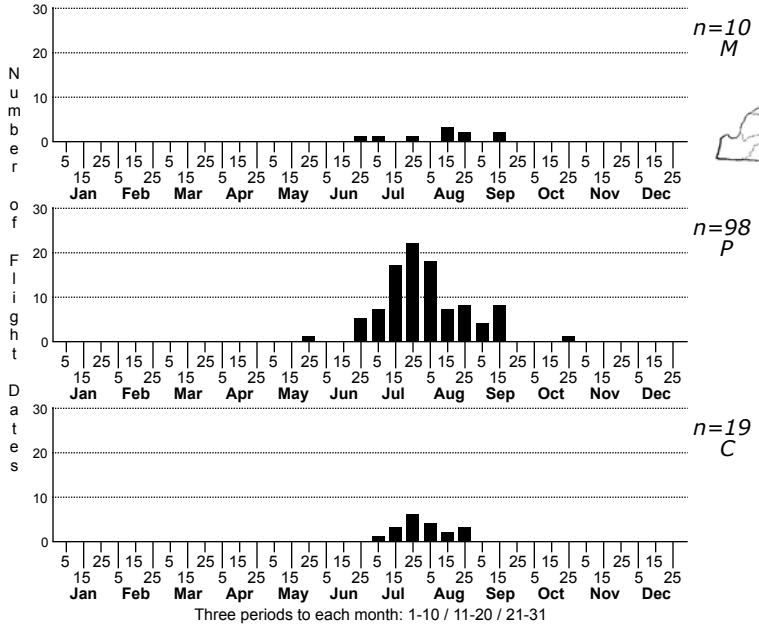
FLIGHT: The flight apparently occurs between early June and late August, though we only have one record before July, and this June record came in 2017.

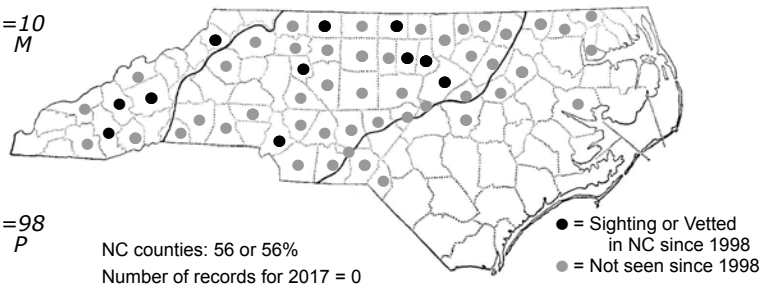
HABITAT: Small forested seeps and pools, perhaps very small streams.

BEHAVIOR: As the common name implies, this emerald is normally seen in flight, typically over head-height to treetop height, along and over forested roads and clearings. Adults normally perch high on twigs of canopy trees.

COMMENTS: This species is most likely one in which a net is required to verify records. An observer may often see high-flying dragonflies during the summer months along forested roads, especially near swamps and other wetlands. Perhaps a moderate number of these (at least in the Coastal Plain) are Treetop Emeralds, but this is only speculation. Getting a good photograph of a Treetop Emerald in a natural pose requires either much luck, much patience, or a strong telephoto lens! Interestingly, our only two records documented with photos are from the same site -- Weymouth Woods Sandhills Nature Preserve, 12 years apart!

Somatochlora tenebrosa Clamp-tipped Emerald





NC counties: 56 or 56%
Number of records for 2017 = 0

High counts of:
8 - Richmond; C - 1991-08-10
5 - Caswell - 1994-09-19
5 - Warren - 1996-08-02

Earliest date: Durham 2011-05-28
Latest date: Davidson 1985-10-25

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

DISTRIBUTION: Present over most of the mountains, throughout the Piedmont, and in the northern Coastal Plain. Seemingly absent from the southern Coastal Plain counties, except in the Sandhills region; no records east of Gates, Beaufort, Harnett, and Scotland counties. Probably occurs in all mountain counties, but recorded so far only in roughly half of the counties in that province.

ABUNDANCE: Generally uncommon but widespread in the Piedmont, somewhat less numerous than the Mocha Emerald. Rare to uncommon in the northern Coastal Plain and the Sandhills, but rare in the mountains.

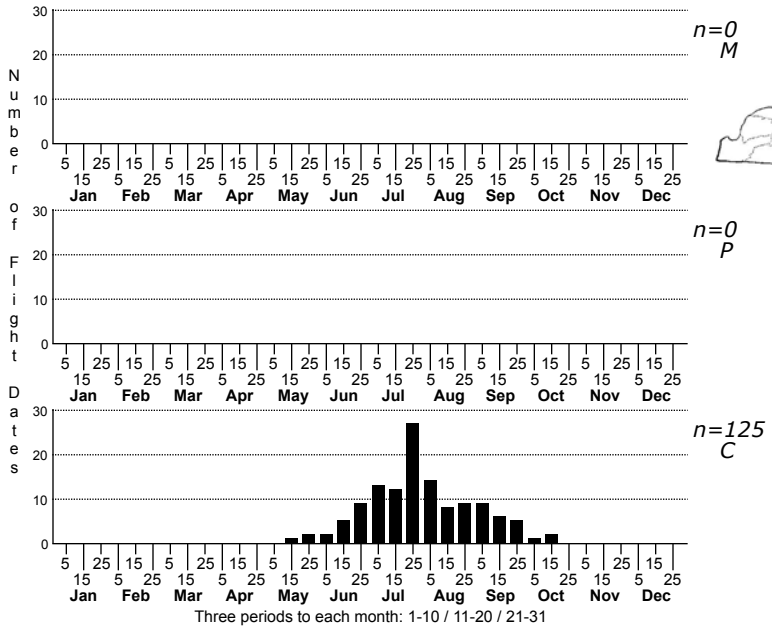
FLIGHT: Primarily the summer season, to early fall; generally from late June or early July to mid-September.

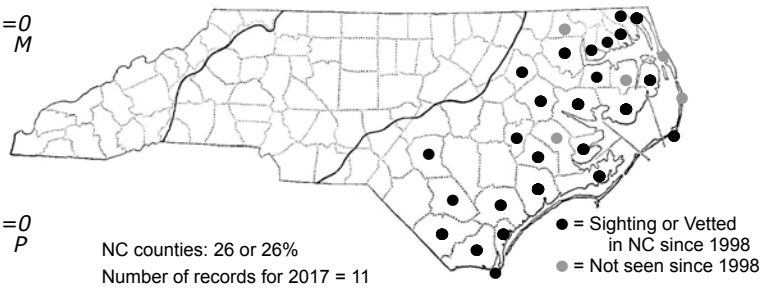
HABITAT: As with other emeralds, it breeds in small forested wetlands, such as small streams and seeps.

BEHAVIOR: Males may be seen flying patrols over the small streams, more easily noticed when the streams are becoming dry. Adults typically forage away from water along wooded roads, edges, and small clearings. They perch on twigs in the shade, often higher than does the Mocha Emerald.

COMMENTS: The male cerci are indeed "clamp-like" when seen from the side, rendering identification somewhat easy when seen well. Also, this species has stripes on the sides of the thorax, whereas Mocha is nearly devoid of such markings. Clamp-tipped and Mocha are the only emeralds normally seen in the Piedmont; even so, because emeralds perch in the shade, often not in conspicuous places, many persons have trouble becoming familiar with this group of dragonflies (even though members of the genus are collectively numerous in much of NC).

Brachymesia gravida Four-spotted Pennant





NC counties: 26 or 26%
Number of records for 2017 = 11

High counts of:
1000 - New Hanover - 2014-05-24
67 - Onslow - 2015-08-29
60 - Onslow - 2017-07-14

Earliest date: New Hanover 2008-05-18
Latest date: Dare; Mainland 2017-10-14

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

DISTRIBUTION: The lower half of the Coastal Plain only, inland to Hertford, Edgecombe, Cumberland, and Columbus counties. This is one of just 3-4 "coastal only" dragonflies in NC (along with Seaside Dragonlet, Needham's Skimmer, and Marl Pennant). A photograph of one in Cumberland County in 2013 extended the range inward by 15-20 miles in the southern part of the Coastal Plain.

ABUNDANCE: Common close to tidal/brackish waters; much less common -- rare to uncommon -- in areas well away (several dozen miles) from tidal waters.

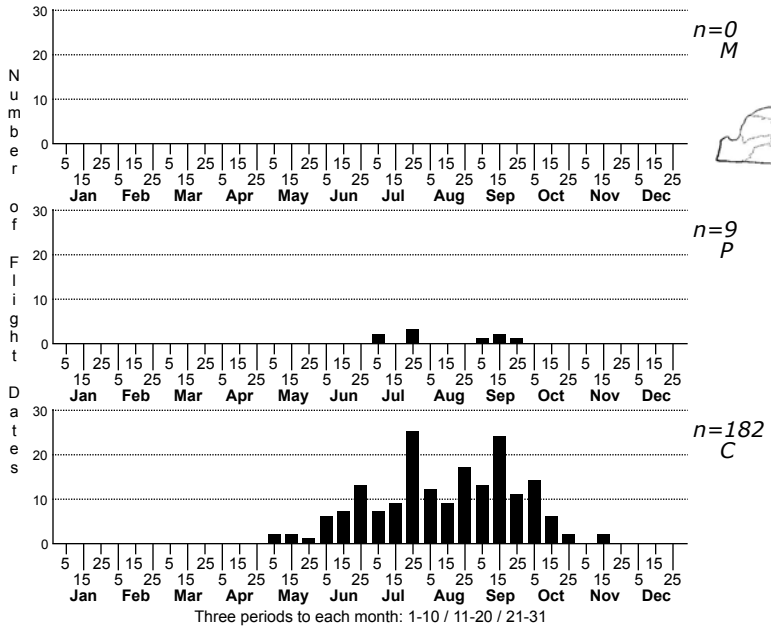
FLIGHT: A wide flight period during the warmer months, ranging from mid-May to late September, rarely into October.

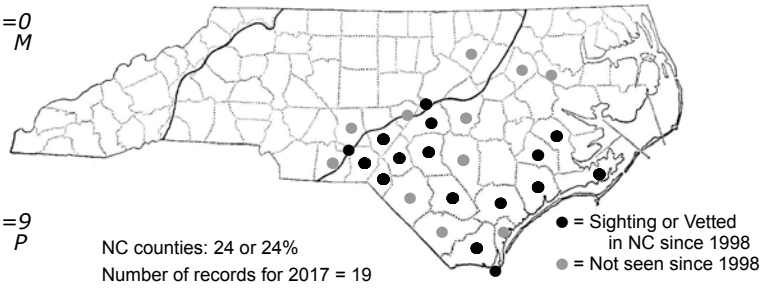
HABITAT: This is one of the few dragonflies in the East that favors brackish water for breeding; habitats include brackish lakes, ponds, and ditches, but also still fresh water habitats also.

BEHAVIOR: Adults are often seen in some numbers flying along ponds and ditches, frequently perching on twigs and vegetation in easy view of the observer.

COMMENTS: The white stigmas are very conspicuous and identify these dragonflies, even if the single large dark patch near the node on each wing isn't seen at first glance. Adults often obelisk. Thus, its behavior, unique markings, and occurrence in open habitats render it easy to identify and one of the favorites among odonate watchers.

Celithemis amanda Amanda's Pennant





NC counties: 24 or 24%
Number of records for 2017 = 19

High counts of:
100 - Craven - 2013-09-01
50 - Carteret - 2013-09-01
20 - Richmond; C - 2007-09-02

Earliest date: Richmond; C 2017-05-05
Latest date: Carteret 2015-11-11

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

DISTRIBUTION: The southern 2/3rds of the Coastal Plain and extreme eastern Piedmont, ranging sporadically north to Franklin (Piedmont), Edgecombe, and Martin counties. Of widespread occurrence in the Sandhills and southern 35-40% of the Coastal Plain. NC lies at the northern end of the species' range.

ABUNDANCE: Common in the Sandhills and southern/southeastern Coastal Plain counties, especially where pocosins, savannas, limesink ponds, and other non-riverine waters are present. Rare to uncommon north of Johnston and Craven counties, and rare in the narrow portion of the range into the Piedmont.

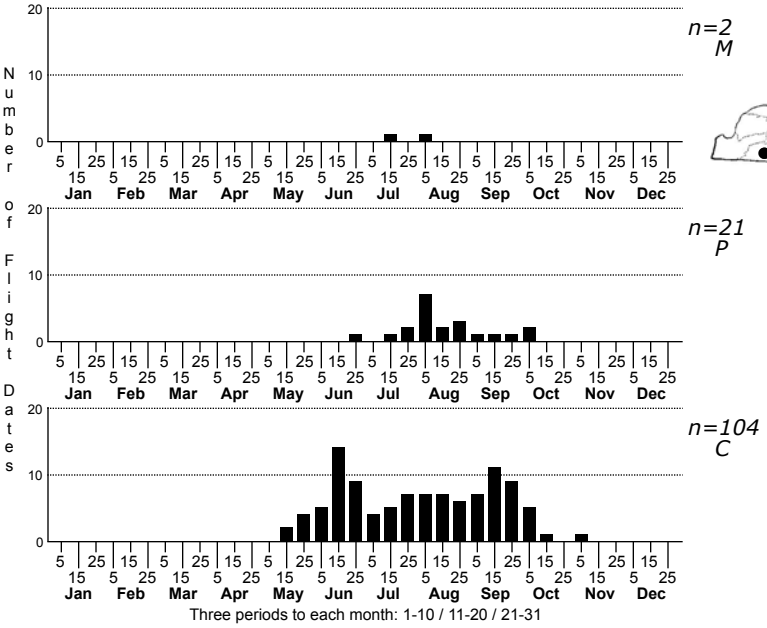
FLIGHT: Mainly in summer and early fall; early June (rarely as early as early May) into early October, rarely to mid-November.

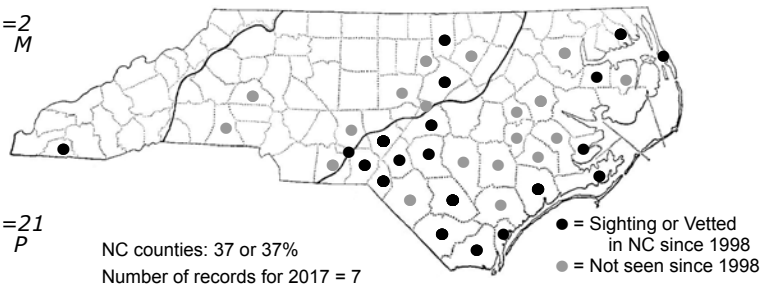
HABITAT: Breeds in pools, ponds, and lakes, where well vegetated.

BEHAVIOR: This species, as do most other pennants, perches on twigs and vegetation fairly low to the ground. Adults often forage well away from ponds, such as in savannas and flatwoods.

COMMENTS: This is one of the most often encountered dragonflies in late summer when one is walking in savannas, flatwoods, pocosin margins, and the vicinity of limesink ponds, in high quality natural areas such as found in Croatan National Forest, Holly Shelter Game Land, and the Sandhills Game Land. It, along with the Halloween Pennant, seems to forage farther away from water than do the other Celithemis pennants in NC.

Celithemis bertha Red-veined Pennant





NC counties: 37 or 37%
Number of records for 2017 = 7

High counts of:
22 - Bladen - 2015-08-23
15 - Bladen - 2009-06-25
15 - Cumberland - 2012-09-05

Earliest date: Onslow 2016-05-14
Latest date: Bladen 2017-11-01

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

DISTRIBUTION: Scattered over nearly all of the Coastal Plain and eastern Piedmont; a few records for the southwestern Piedmont (Catawba and Cleveland counties), plus an outlier in the southwestern mountains (Clay County). Found primarily in the southern half of the Coastal Plain (sporadic north of Harnett and Pitt counties). NC lies at the northern edge of the species' range; it has not yet been found in Virginia (according to Odonata Central), though it occurs in NC border counties.

ABUNDANCE: Uncommon to locally fairly common in the southern half of the Coastal Plain; rare in the northern half of the Coastal Plain and the extreme eastern Piedmont; very rare farther west.

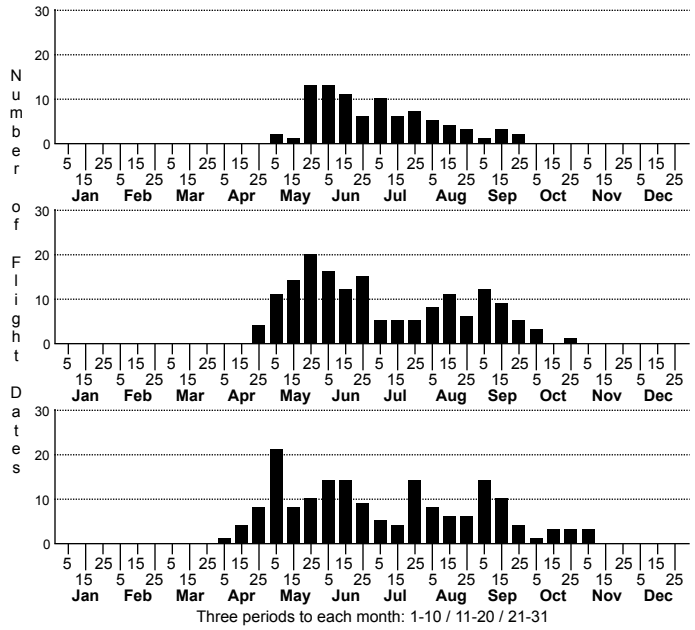
FLIGHT: In the Coastal Plain, the flight occurs from mid- or late May to early October; however, the earliest record for the Piedmont isn't until late June. The two mountain records with dates are for mid-July and early August.

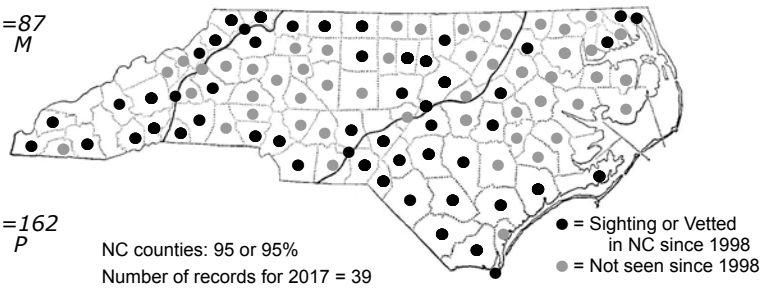
HABITAT: Primarily at ponds and lakes with much emergent vegetation along the shore.

BEHAVIOR: Unlike most other Celithemis pennants, adults seldom stray far from ponds or small lakes, and may forage well out in the water and perch on logs and other material emerging from the water.

COMMENTS: Though a common species, apparently, in FL (Dunkle 2000), it is not common northward. Beaton (2007) calls it "Uncommon below the Fall Line" in GA, and as NC lies at the northern edge of the species' range, it is no more numerous here (unlike the Amanda's Pennant, which is more common in NC than in GA). Despite it having been found in more than one-third of the counties in NC, including all in the southern Coastal Plain, it and the Double-ringed Pennant are the only ones (of seven species) in the genus that are not common (at least locally) in the state. It is most likely to be seen by working the margins of beaver ponds and man-made ponds in the Sandhills region. A surprising count of 15, documented by several photos, was made in the northeastern Piedmont in Granville County, in 2013. This particular site, at Butner, lies less than 30 miles from VA and thus gives hope that it might be present in that state close to Granville County.

Celithemis elisa Calico Pennant





NC counties: 95 or 95%
Number of records for 2017 = 39

High counts of:
75 - Onslow - 2016-06-12
40 - Orange - 2010-06-01
34 - Onslow - 2017-05-29

Earliest date: Brunswick 1990-04-10
Latest date: Onslow 2015-11-06

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

DISTRIBUTION: Statewide, but of spotty distribution in parts of the mountains (though likely occurring in all counties).

ABUNDANCE: Fairly common to occasionally common, and widespread, essentially throughout, but less numerous in the middle and higher elevations in the mountains.

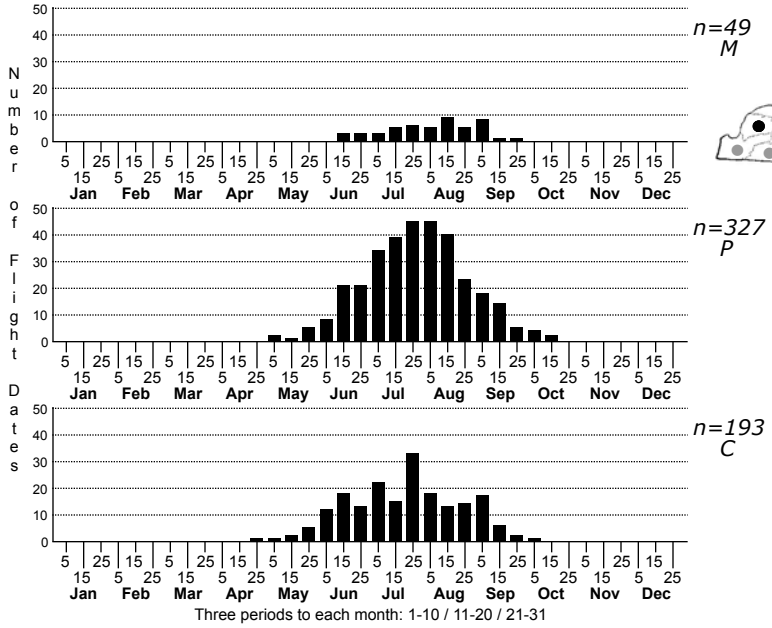
FLIGHT: Most of the flight season for dragonflies (except for early spring); downstate, generally from mid-April to early October, sparingly into early November. The flight in the mountains begins in early May and extends to late September.

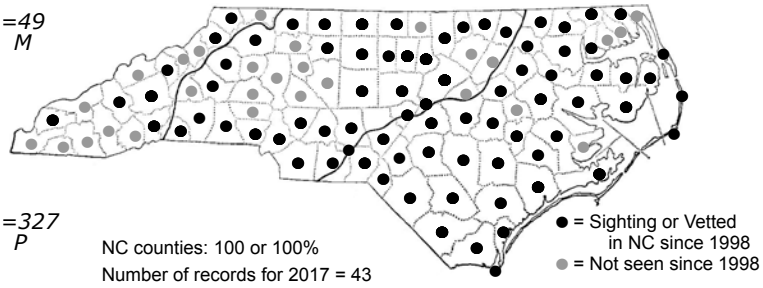
HABITAT: As with other Celithemis, it breeds at ponds and smaller lakes, typically with much vegetation along the shoreline. It occasionally breeds at slow creeks and rivers.

BEHAVIOR: Adults fly at ponds and perch on twigs and vegetation around pond margins. They also forage well away from water, preferring open habitats such as fields (rather than open woods and wooded margins). They are unwary when perching, as are most other pennants.

COMMENTS: This is one of the more colorful of the dragonflies, and adult males are quite stunning with their red and black abdomens and numerous burgundy/blood-red wing patches. Females and immatures, though highly patterned, could be confused with Halloween Pennants. Thankfully, because it occurs statewide and in open habitats, and it flies for many months of the year, it is one of the dragonflies that beginners should be able to observe and learn.

Celithemis eponina Halloween Pennant





NC counties: 100 or 100%
Number of records for 2017 = 43

High counts of:
100 - Orange - 2009-08-16
75 - Orange - 2012-07-09
65 - Wake - 2014-07-19

Earliest date: Gates 2005-04-23
Latest date: Cabarrus 1973-10-16

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

DISTRIBUTION: Statewide. This is one of the very few species with records for all 100 counties.

ABUNDANCE: Common over the Piedmont and Coastal Plain, but only uncommon to fairly common in the mountains. Though it is not normally seen in swarms, we have several one-day counts of 50 or more individuals. The abundance across the state is relatively low until July or August, and it is often missed on late spring and early summer field trips.

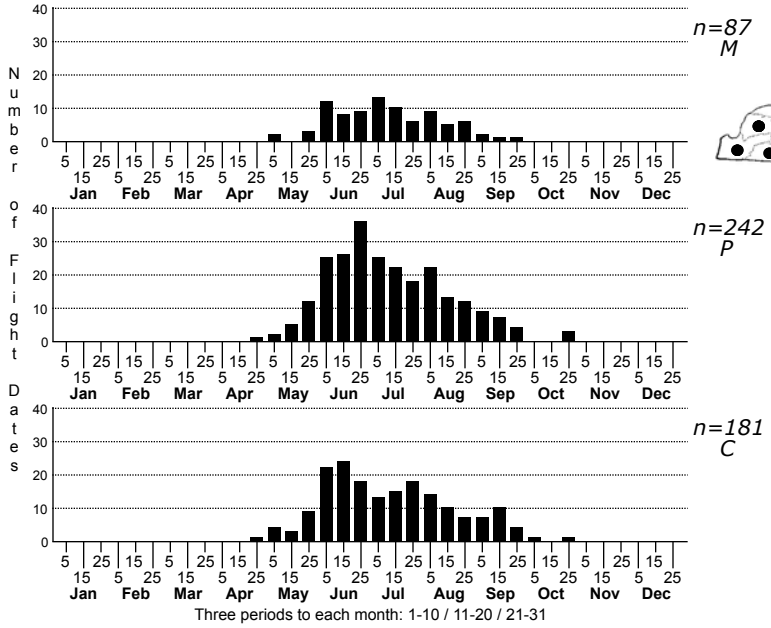
FLIGHT: An extended flight season, covering most of the warmer months -- very late April or early May to mid-October downstate, and from mid-June (if not earlier) to late September in the mountains.

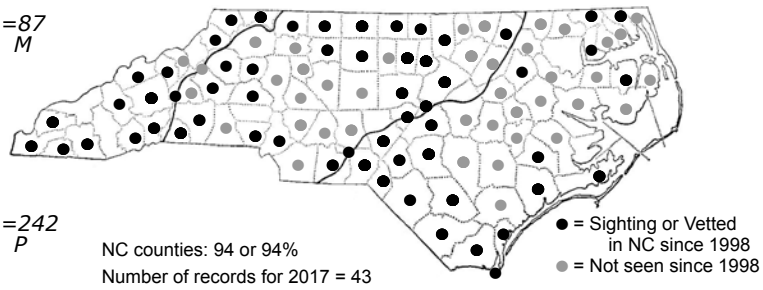
HABITAT: Breeds at ponds and lakes, and sometimes at marshes.

BEHAVIOR: This Celithemis pennant forages farther away from water than all others, and is actually not often seen at breeding waters. They are characteristically seen perching on the tips of blades of grasses or tall herbs in a field or powerline clearing, usually well removed from forested areas.

COMMENTS: In many respects, this is the most atypical of the Celithemis pennants. It often resembles a butterfly or moth in flight because the wings are heavily suffused with amber or ochre coloration so as to appear almost opaque. The many dark bands on the wings also might fool an observer into thinking the odonate is a butterfly or moth. It seems to "enjoy" flying in windy weather, with choppy wing beats. As with the Calico Pennant, this species should be easily seen and learned by beginners.

Celithemis fasciata Banded Pennant





NC counties: 94 or 94%
Number of records for 2017 = 43

Sight (not vetted) in 2017: Surry

High counts of:
50 - Caswell - 2007-07-21
50 - Orange - 2012-07-09
50 - Bladen - 2015-07-18

Earliest date: Orange 2006-04-27
Latest date: Orange 2014-10-28

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

DISTRIBUTION: Essentially statewide, though of spotty occurrence in the mountains. Likely occurs in all 100 counties, though not yet recorded from six counties (three in the mountains).

ABUNDANCE: Fairly common to often common in the Coastal Plain and Piedmont; fairly common in most of the mountains, but certainly rare or absent at higher elevations.

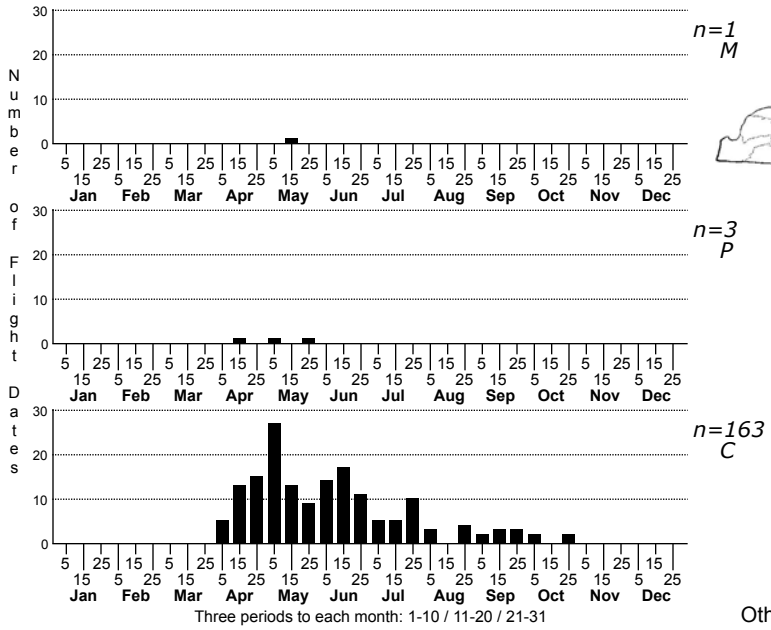
FLIGHT: Most of the flight season -- late April to late September, rarely into October. The mountain flight is barely shorter.

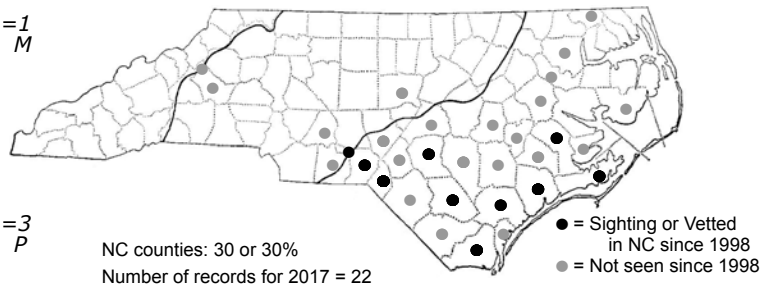
HABITAT: As with other pennants, it breeds at ponds and lakes, typically ones that are fairly open, frequently at man-made ponds.

BEHAVIOR: Males are most often seen along the margins of ponds, making short patrols out over the water. This species usually doesn't stray too far from the margins of ponds and lakes.

COMMENTS: This is another of our numerous pennants, perhaps slightly less numerous than Calico and Halloween pennants, but nonetheless quite widespread in the state and not hard to find by walking around the margins of open ponds and lakes with some marshy or emergent vegetation along the shores. Oddly, Dunkle (2000) gives its abundance rangewide simply as "local", which implies some scarcity or difficulty in finding, which does not fit the case in NC.

Celithemis ornata Ornate Pennant





High counts of:
60 - Carteret - 2017-05-03
51 - Carteret - 2016-05-08
50 - Scotland - 2009-08-23

Earliest date: Carteret 2017-04-04
Latest date: Bladen 1981-10-28

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

Other Name: Faded Pennant

DISTRIBUTION: Essentially limited to the Coastal Plain, barely ranging into the extreme southeastern Piedmont, with an odd outlier in Burke County in the foothills. However, it is primarily found in the southern half of the Coastal Plain (including Sandhills), being of spotty occurrence north of Harnett, Wayne, and Hyde counties. Apparently absent in the extreme northeastern Coastal Plain.

ABUNDANCE: Fairly common to common in the Sandhills; fairly common (to perhaps common) farther east in the southern half of the Coastal Plain. Rare to uncommon in the northern half of the Coastal Plain, and very rare in the Piedmont and the mountain foothills.

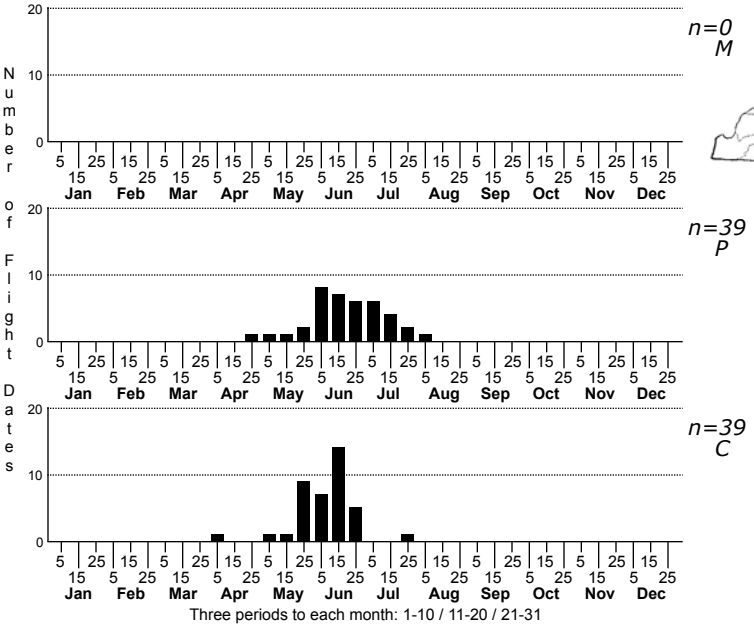
FLIGHT: A very long flight period, though less common after June. Occurs from early April to late October. Its flight is earlier in spring than most of the other Celithemis pennants.

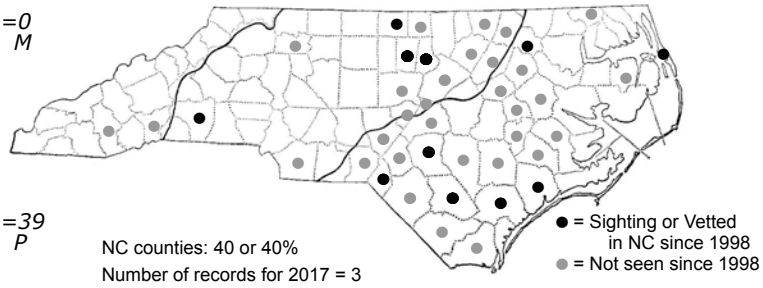
HABITAT: Ponds and smaller lakes, as with other pennants. These water should contain marshy or emergent vegetation along the margins.

BEHAVIOR: Males are often seen around the margins of ponds, perching on twigs and making short patrols. Adults forage short distances from water, usually in sunny areas, such as fields, but not nearly as much as do Halloween Pennants.

COMMENTS: This species can be confused with Amanda's Pennant, and both may occur at the same ponds. However, Amanda's has a broader amber or reddish patch on the hind wing and typically forages much farther from water than does the Ornate Pennant; its flight averages later in the season. As with so many other pennants, the best strategy to see an Ornate Pennant is to walk around a margin of a pond, such as in the Sandhills or lower Coastal Plain. Beaton (2007) calls the species "Uncommon" in GA, but it is quite numerous in NC, mirroring Dunkle (2000), who says "common" across the range of the species -- TX to NJ.

Celithemis verna Double-ringed Pennant





NC counties: 40 or 40%
Number of records for 2017 = 3

High counts of:
28 - Orange - 2014-05-31
20 - Orange - 2015-05-23
11 - Orange - 2017-06-05

Earliest date: Dare; OBU 2007-04-04
Latest date: Durham 1992-08-01

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

DISTRIBUTION: Primarily Coastal Plain and eastern Piedmont. A few records for the southern mountains and western Piedmont, but primary from Caswell, Chatham, and Union counties eastward. However, in the Coastal Plain it is of spotty occurrence in the extreme eastern counties and is possibly absent in a few counties near the coast.

ABUNDANCE: Generally uncommon in the inner half of the Coastal Plain and lower Piedmont, being most numerous in the Sandhills. Very rare to rare in the eastern Coastal Plain, especially close to the coast. Very rare in the central and western Piedmont and southern mountains. Apparently absent in most of the mountain region and western part of the Piedmont.

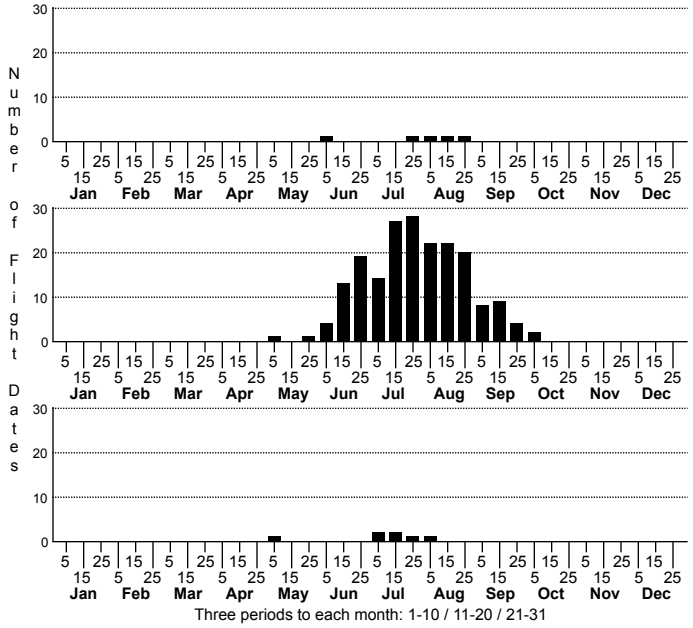
FLIGHT: Flight period is shorter and earlier than for other pennants (except Ornate) -- mainly from early May to late July, rarely to early August. There are just two April records.

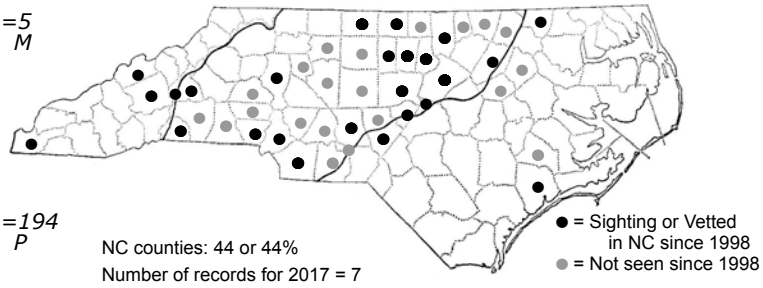
HABITAT: As with other pennants, it breeds at ponds and small lakes with much vegetation along the shore.

BEHAVIOR: Males are usually seen along the shore of a pond, making short patrols over the water or perching on twigs. Adults may forage short distances from water.

COMMENTS: This and the Red-veined are our only two "scarce" Celithemis pennants, and one may have to walk around several ponds or much lake shore (in the heart of the range) to find this species. Not helping is the fact that immatures and females are not overly easy to identify, and adult males look like small versions of Slaty Skimmers. By far our largest single-day counts have been at small ponds at Occoneechee Mountain State Natural Area in the eastern Piedmont; these ponds, however, are in sunny fields and not within the natural area. Oddly, this site in Orange County is not far from the western (inner) edge of the range in the state.

Dythemis velox Swift Setwing





NC counties: 44 or 44%
Number of records for 2017 = 7

Vetted in 2017: Onslow

High counts of:
60 - Orange - 2002-08-06
25 - Durham - 2013-06-20
15 - Chatham - 2010-07-11

Earliest date: Durham 2003-05-04
Latest date: Iredell 2008-10-05

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

DISTRIBUTION: Primarily the Piedmont, but also a few areas in the central and southern mountains (at low elevations) and in the western Coastal Plain, with quite disjunct records for Jones and Onslow counties in the lower Coastal Plain. Present in the western portion of the Sandhills region.

ABUNDANCE: Fairly common (and apparently increasing) in the Piedmont, except scarce to locally absent in the northwestern portion of the province. Very rare in the central and southern (low) mountains and Coastal Plain portion of the range. The species has slowly been expanding its range northeastward in recent decades.

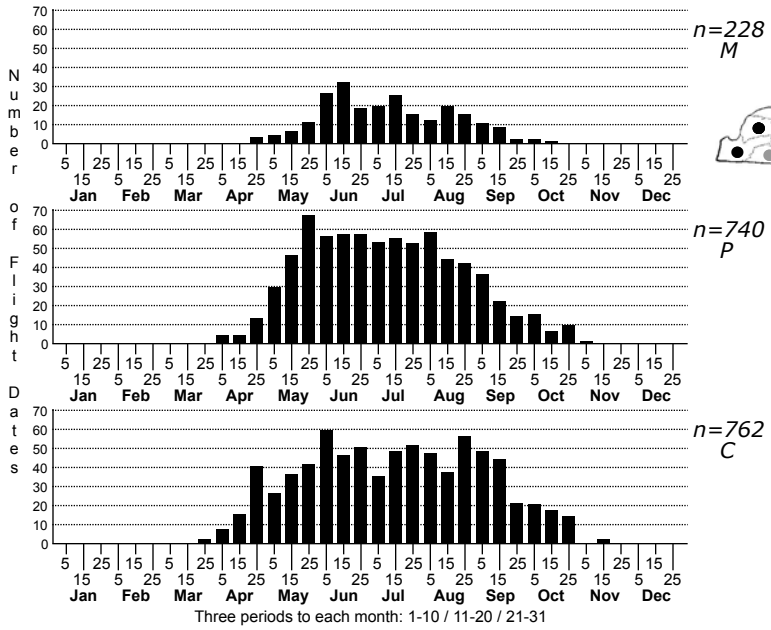
FLIGHT: Much of the warmer months, from early May to early October; however, most records fall between early June and late August. There are not enough data to define the flight periods in the mountains or Coastal Plain, as the above refers to the Piedmont province flight data.

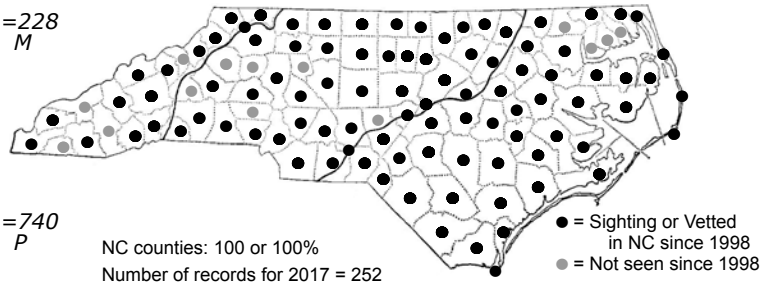
HABITAT: Ponds and small lakes, but might breed also at slow rivers or wide creeks. These waters are typically in open or partly open situations.

BEHAVIOR: Males are almost always seen close to the margin of a pond or lake, perching usually several to many feet above water on twigs of small trees along the margin. Females may forage farther from water but are much less often seen.

COMMENTS: This is our only Dythemis (setwing), and thus it looks and acts like no other dragonfly in NC. The narrow black abdomen has a conspicuous white dorsal spot on segment 7. Most notable is that adults typically perch in a "sprinter's stance", with abdomen raised, seemingly ready to bolt at any moment. Sometimes they perch with wings drooped and held forward, as do Blue Dashers, but they can just as often perch with wings held above horizontal, angled over their thorax. They are somewhat wary and people typically need binoculars (or a net) to see them well. A recent (2017) photographic record for Onslow County may suggest that the species is expanding its range into the eastern Coastal Plain.

Erythemis simplicicollis Eastern Pondhawk





High counts of:
500 - Durham - 2007-07-07
400 - Onslow - 2017-07-14
300 - Caswell - 2007-07-21

Earliest date: Pender 2017-03-24
Latest date: Hyde 1994-11-20

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

DISTRIBUTION: Statewide; occurs in all 100 counties.

ABUNDANCE: Abundant in every county, more so in the Coastal Plain than farther west. Excessively abundant in many Coastal Plain locales. This is the most omnipresent odonate in North Carolina, seen on more field trips than any other species.

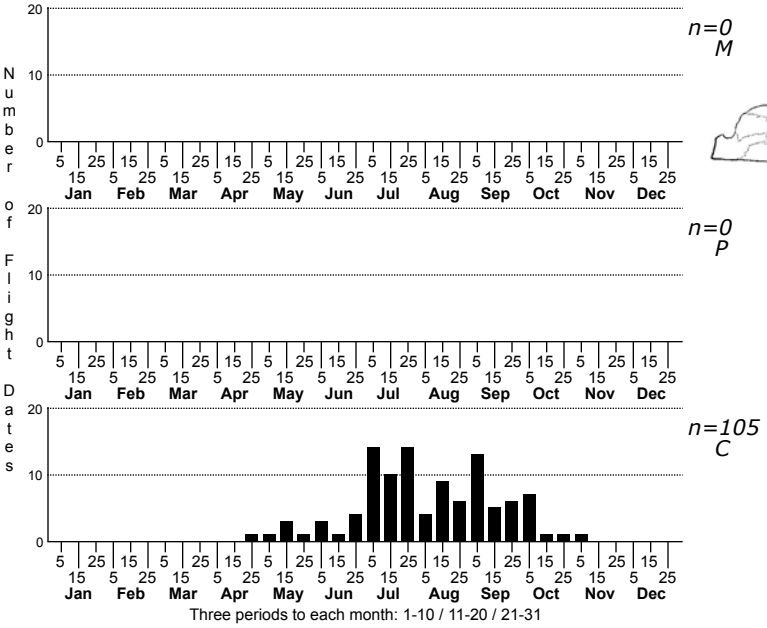
FLIGHT: Nearly throughout the dragonfly flight period, except absent in very early spring. The Coastal Plain flight extends from very late March or early April to late October, with one or two records for November. The Piedmont flight is slightly more narrow -- mid-April to late October, and the mountain flight is from late April to mid-October.

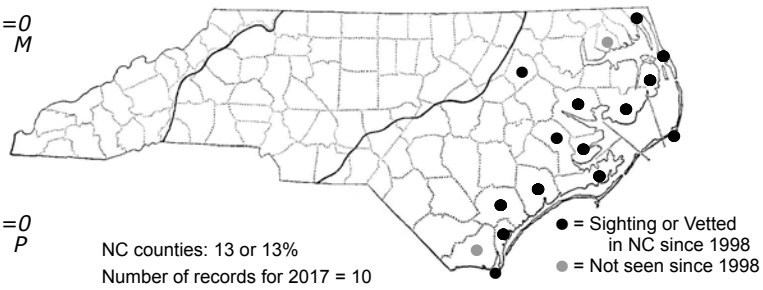
HABITAT: Ponds, lakes, swamps, and slower portions of river or creeks. Still waters.

BEHAVIOR: Adult males are found closer to water than are females and immatures, but they often are seen feeding well away from water. Females and immatures commonly forage far from water, along wooded roads and trails, in fields, and other open sites, though favoring areas close to woods. They often perch flat on the ground (as do many skimmers and some clubtails), but they also perch on twigs and other vegetation.

COMMENTS: This and the Blue Dasher are our most abundant dragonflies in NC, probably numbering in the tens of millions. In fact, Pondhawks are so excessively abundant in some areas in the Coastal Plain and they devour so many other insects that they nearly deplete sites of smaller butterflies, for example. This is our most predatory species, even consuming other Pondhawks! It takes practically no time to become familiar with the species, and they are adept at following you as you walk a jeep road or powerline clearing, ready to pounce on anything -- butterfly, moth, bee, etc. -- flushed by your footsteps.

Erythrodiplax berenice Seaside Dragonlet





NC counties: 13 or 13%
Number of records for 2017 = 10

Sight (not vetted) in 2017: Edgecombe

High counts of:
300 - Carteret - 2011-06-09
150 - Onslow - 2009-07-04
100 - Onslow - 2017-05-27

Earliest date: Carteret 2017-04-30
Latest date: Brunswick 1982-11-09

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

DISTRIBUTION: Strictly coastal, though found around the inner margins of Albemarle and Pamlico sounds and along other estuarine rivers.

ABUNDANCE: Common, at least along the southern and central coastal areas, and around the mainland side of Pamlico Sound. Seemingly less numerous around the margin of Albemarle Sound, as there are numerous counties along that "bay" without confirmed records. There are several counts of 150 or more individuals in a day, indicating that it can be locally abundant.

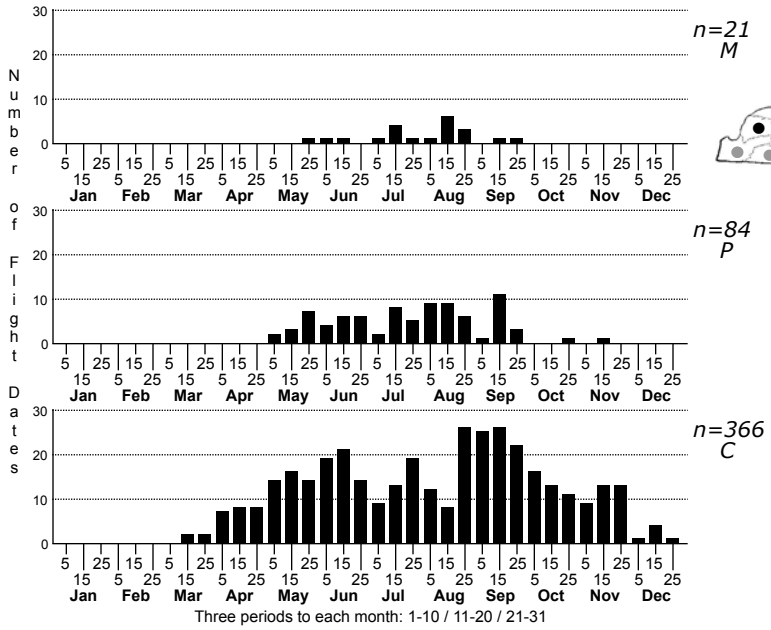
FLIGHT: Mostly late June to early October. However, there are a few records starting from the end of April, and as late as early November.

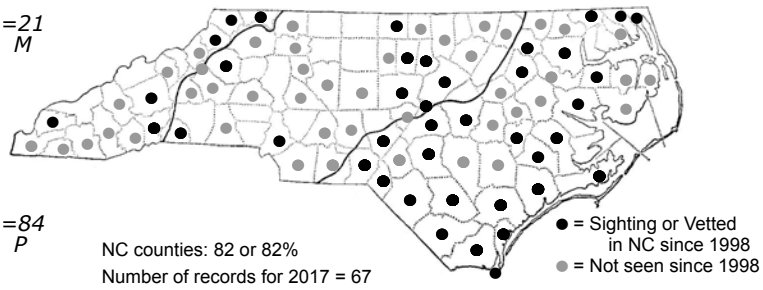
HABITAT: Brackish to salt marshes and other wet grasslands close to the coast.

BEHAVIOR: Both sexes perch conspicuously on twigs or other low vegetation, usually near a marsh but at times hundreds of yards from marshes.

COMMENTS: This is one of only several "estuarine" dragonflies in NC, along with Four-spotted Pennant, Needham's Skimmer, and Marl Pennant. If it weren't for its habitat, males would be easily confused with Double-ringed Pennant; however, in reality only Slaty Skimmer is of possible confusion, though the skimmer is much larger. Females and immatures look vaguely like Blue Dashers and various pennants. This species is usually easily found in its restricted habitat, though it can be overlooked because of its small size.

Erythrodiplax minuscula Little Blue Dragonlet





NC counties: 82 or 82%
Number of records for 2017 = 67

High counts of:
250 - Craven - 2011-10-28
250 - Onslow - 2017-05-29
225 - Carteret - 2016-10-14

Earliest date: Onslow 2016-03-12
Latest date: Onslow 2015-12-25

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

DISTRIBUTION: Statewide, and probably occurring in all 100 counties. However, distribution is somewhat spotty in the western half of the Piedmont and mountains, probably owing to its inconspicuous behavior and tiny size, making it hard to spot where not numerous.

ABUNDANCE: Easily overlooked because of its tiny size and inconspicuous behavior, and thus is much more numerous in reality than observations may suggest. Numerous (common) in the southern half of the Coastal Plain (Sandhills east to Croatan National Forest in Craven/Carteret counties); only fairly common in the northern Coastal Plain. Uncommon in the eastern half of the Piedmont, but rare to uncommon in the western Piedmont and mountains.

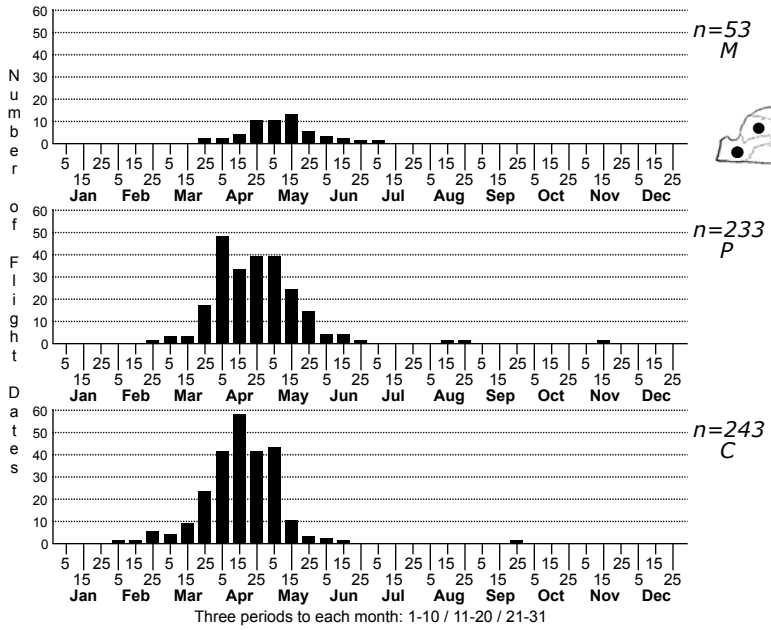
FLIGHT: A very long flight season. In the Coastal Plain from mid-March to late December, though not numerous until mid-May. The Piedmont flight is somewhat shortened -- from early May to mid-November. In the mountains, it is mainly from late May to late September.

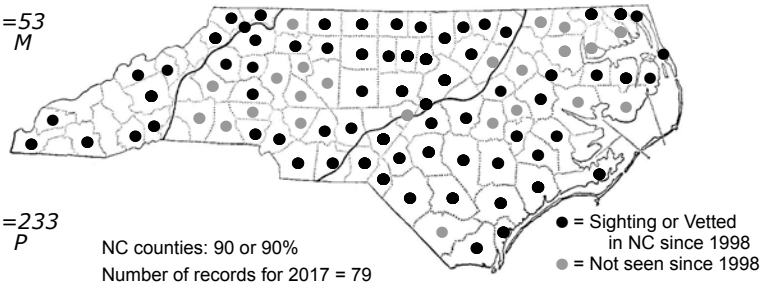
HABITAT: Ponds, lakes, marshes, and slower portions of rivers, typically places in full or partial sun.

BEHAVIOR: Next to the Elfin Skimmer, which is even smaller, this species is the most inconspicuous dragonfly that frequents open fields, powerline clearings, savannas, and other sunny places. Adults perch low in vegetation, often down in grasses and forbs, and make short flights, often barely above one's ankles.

COMMENTS: Males can be confused with the larger Eastern Pondhawk or slightly larger Blue Dasher, or with the slightly smaller Elfin Skimmer, and females can also be confusing to beginners. People who spend much time looking at wildflowers in savannas and powerline clearings become familiar with this species, as its favored foraging areas tend to be such diverse, moist herbaceous areas.

Ladona deplanata Blue Corporal





NC counties: 90 or 90%
Number of records for 2017 = 79

Vetted in 2017: Yancey
Sight (not vetted) in 2017: Dare; Mainland

High counts of:
200 - Durham - 2016-04-14
138 - Carteret - 2017-04-04
119 - Onslow - 2016-03-12

Earliest date: New Hanover 2018-02-06
Latest date: Durham 1979-11-20

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

DISTRIBUTION: Throughout the Coastal Plain and Piedmont; of spotty occurrence in the mountains, mainly at lower elevations.

ABUNDANCE: Common to locally abundant in the southern Coastal Plain, and common to very common in the rest of the Coastal Plain and in the eastern and central Piedmont. Fairly common in the western Piedmont, but rare to uncommon in the mountains, where it seems to be increasing (seven "new" county records were added in the past few years).

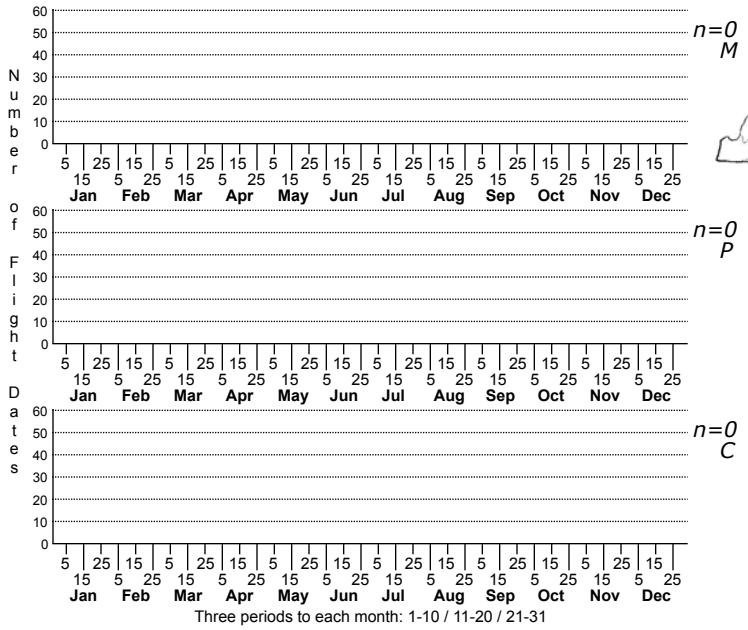
FLIGHT: Spring season only. In the Coastal Plain and Piedmont, the flight occurs from late February mainly to mid-May, but sparingly to mid-June. There are several odd records for late summer and fall; two (August and November) are specimens (correctly labeled?) and one (September) is a sight report (correctly identified?). The mountain flight occurs from late March to early June, very rarely to early July.

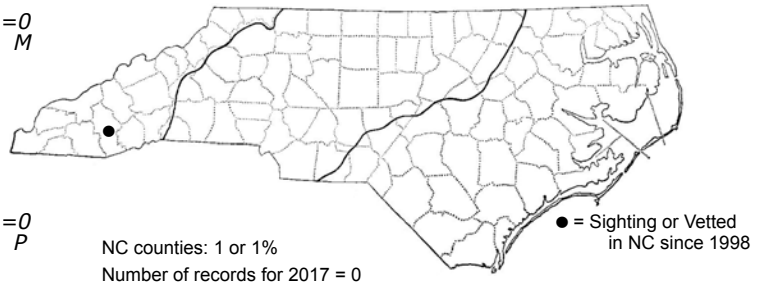
HABITAT: Ponds, lakes, and other slow-moving waters. Most numerous at somewhat infertile waters such as Carolina bay pools and lakes.

BEHAVIOR: Only the Common Whitetail, among numerous species in NC, behaves like a Blue Corporal. Both sexes forage primarily by perching on the ground, and by making flights in open woods, powerline clearings, and other semi-open areas (typically somewhat close to woods).

COMMENTS: This skimmer can be the most often seen dragonfly, along with the Common Baskettail, on a spring-season outing. Dozens can be seen in a day, mostly immatures and females, which can be easily identified by the white or cream "corporal" stripe on each shoulder. These shoulder stripes become blue and less conspicuous in the adult male. Because Blue Corporals usually perch on the ground on dirt roads, wide trails, and in powerline clearings, an observer quickly learns this species, often flushing them while looking for less common odonates or for butterflies.

Ladona julia Chalk-fronted Corporal





High counts of:
1 - Jackson - 2003-00-00

Earliest date: Jackson 2003-00-00
Latest date: Jackson 2003-00-00

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

DISTRIBUTION: This is a Northern species normally found south only to VA and WV. Quite a range extension occurred when ten larvae were collected in Jackson County in 2003. One should not assume that it occurs in most counties northward.

ABUNDANCE: Obviously extremely rare in the mountains.

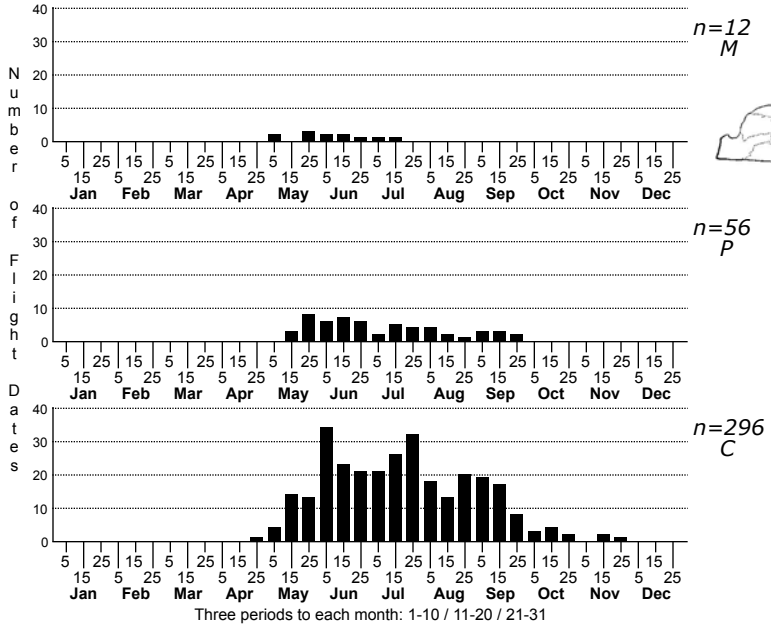
FLIGHT: Mainly in mid-summer. No flight date information for NC, as the record applies only to larvae and not to adults.

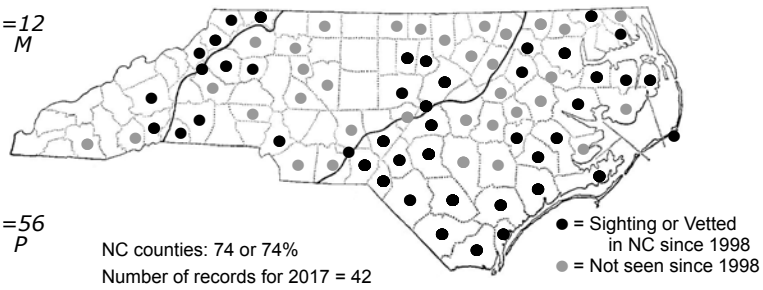
HABITAT: Breeds at bogs, boggy pond or lake margins, and slow portions of streams -- usually in quite acidic waters.

BEHAVIOR: The species often forages well away from water, by perching on the ground or other conspicuous places. In this regard, it is quite similar in behavior to the Blue Corporal and Common Whitetail.

COMMENTS: This is a very common dragonfly in Northern states, and being quite bold in perching and striking in appearance (at least males), it is a familiar species. If it were widely occurring in the NC mountains, there would certainly have been more records by now, as it is hard to overlook. The NC record came from Panthertown Bog. Here is the text submitted by Erika Yates on 17 July 2003: "... added to the dragonfly species composition which included sampling in the [Panthertown Valley] bog. I found a new state record, Ladona (Libellula) julia, verified by Dr. Mike May." However, her thesis indicates that she saw no adults, but did collect ten larvae, verified by Dr. May. [He is a co-author of several major reference works on odonates, and thus the NC Natural Heritage Program considers the record as valid.] However, this record does not appear on the OdonataCentral map, likely because there is no specimen or photo of an adult available for NC.

Libellula auripennis Golden-winged Skimmer





High counts of:
75 - Scotland - 2003-07-29
55 - Onslow - 2016-06-12
50 - Washington - 2009-06-19

Earliest date: Bladen 2016-04-27
Latest date: New Hanover 2017-11-25

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

DISTRIBUTION: Nearly statewide, though seemingly absent in the higher elevations in the mountains, and of spotty occurrence in the mountains and the western two-thirds of the Piedmont.

ABUNDANCE: Common in the Coastal Plain; uncommon to fairly common along the eastern edge of the Piedmont, but mostly uncommon in the Piedmont. Rare in the lower mountains.

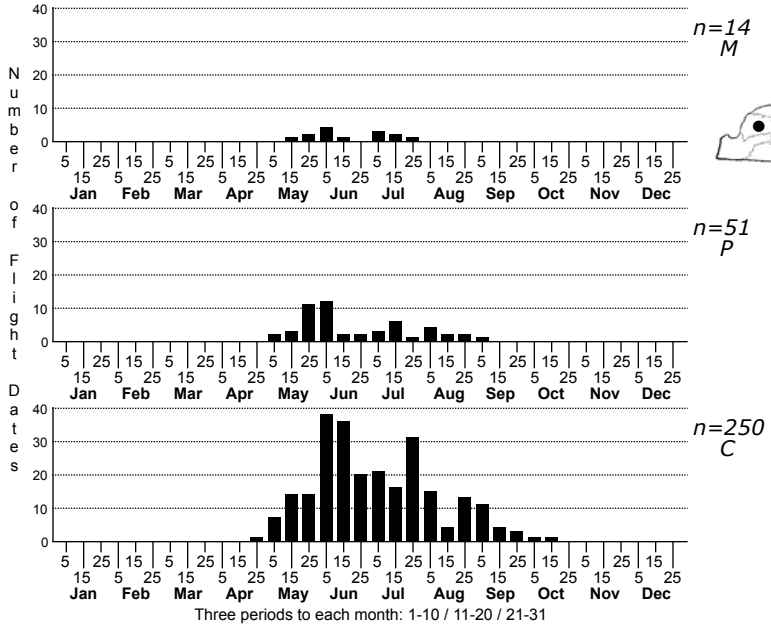
FLIGHT: The flight is from mid-May (and very late April in the Coastal Plain) to early October, sparingly into November, downstate. The mountain flight records are too few to suggest that the flight truly ends by mid-July; it ought to extend into September.

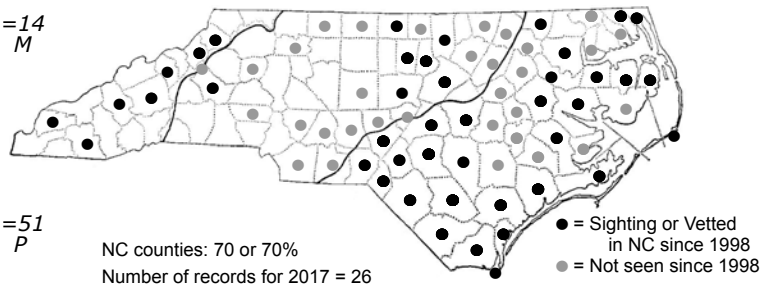
HABITAT: Ponds, lakes, marshes, ditches -- typically in open/sunny places.

BEHAVIOR: Males perch conspicuously on perches such as twigs around a pond or lake shore and make patrols over the water. They are quite wary at the water. Adults frequently forage in fields, powerline clearings, savannas, and other open or semi-open areas well away from water.

COMMENTS: Males are one of more beautiful dragonflies, with their scarlet-orange abdomen and wing veins. However, care must be taken to identify adult males, and especially females and immatures, from the closely related Needham's Skimmer, which is limited to brackish waters, though both species can occur in the same areas (up to a few miles from tidal water).

Libellula axilena Bar-winged Skimmer





NC counties: 70 or 70%
Number of records for 2017 = 26

Sight (not vetted) in 2017: Granville

High counts of:
40 - Brunswick; BHI - 2010-08-28
25 - Craven - 2007-07-22
15 - Columbus - 2015-06-17

Earliest date: Carteret 2017-04-30
Latest date: Jones 1975-10-15

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

DISTRIBUTION: Throughout the Coastal Plain and the eastern half of the Piedmont; spotty distribution in the western half of the Piedmont, though possibly could occur in all counties in the province. Only seven counties known from the mountains.

ABUNDANCE: Fairly common in the Coastal Plain, more so in the southern half of the province, where it can be common locally. Uncommon in the eastern half of the Piedmont, but rare west of Stokes, Cabarrus, and Union counties, including the mountains.

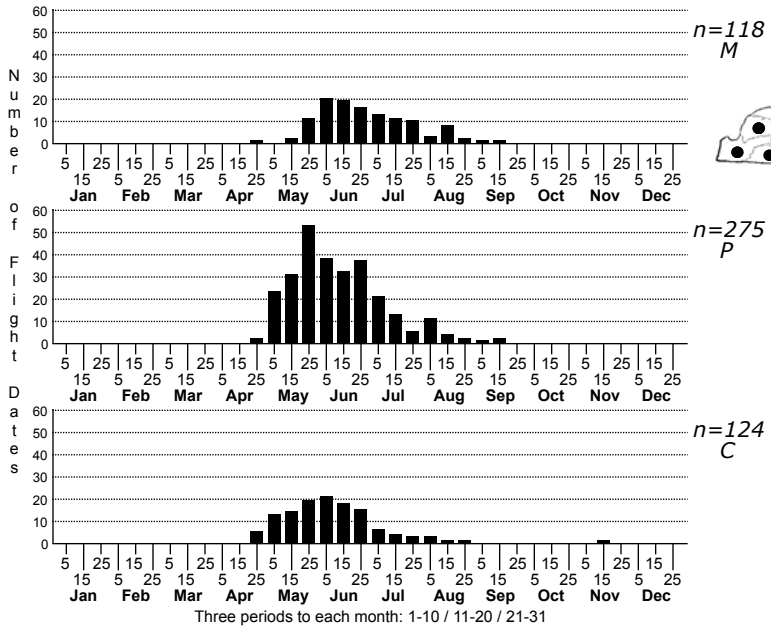
FLIGHT: Early May to early October in the Coastal Plain, and at least to early September in the Piedmont. Too few data from the mountains to adequately identify the flight period there; records fall between late May and late July.

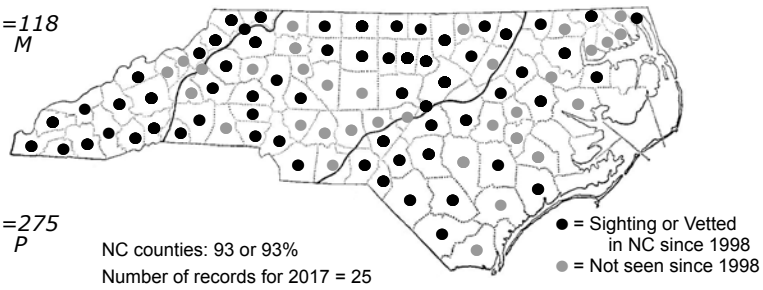
HABITAT: Ponds, pools in swamps and powerline clearings, and other still waters close to forests.

BEHAVIOR: Males perch on twigs, often at least 6 feet off the ground, along a forested edge next to water, such as a swampy pool or temporary pond in a powerline, and make patrols back and forth over the water. Adults typically forage close to forests and edges, such as along jeep trails and powerlines through bottomlands and swamps.

COMMENTS: Though not one of our truly common skimmers, the Bar-winged is still a numerous dragonfly and not hard to find in some Coastal Plain locales. As indicated above, it usually does not forage far from forests, and one is not likely to see it in open fields.

Libellula cyanea Spangled Skimmer





NC counties: 93 or 93%
Number of records for 2017 = 25

Sight (not vetted) in 2017: Wilkes; M

High counts of:
30 - Orange - 2009-06-04
30 - Graham - 2016-06-12
25 - Wilkes; P - 2007-05-30

Earliest date: Durham 1995-04-22
Latest date: Brunswick 1987-11-16

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

DISTRIBUTION: Statewide, but of spotty distribution in the extreme eastern Coastal Plain, at least on the Outer Banks and around the mainland portions of Pamlico Sound. Even so, it might be found in all NC counties.

ABUNDANCE: Common in the mountains; fairly common to common in the Piedmont and most of the Coastal Plain. Seemingly scarce (if not locally absent) on the Outer Banks and the eastern Pamlimarle Peninsula.

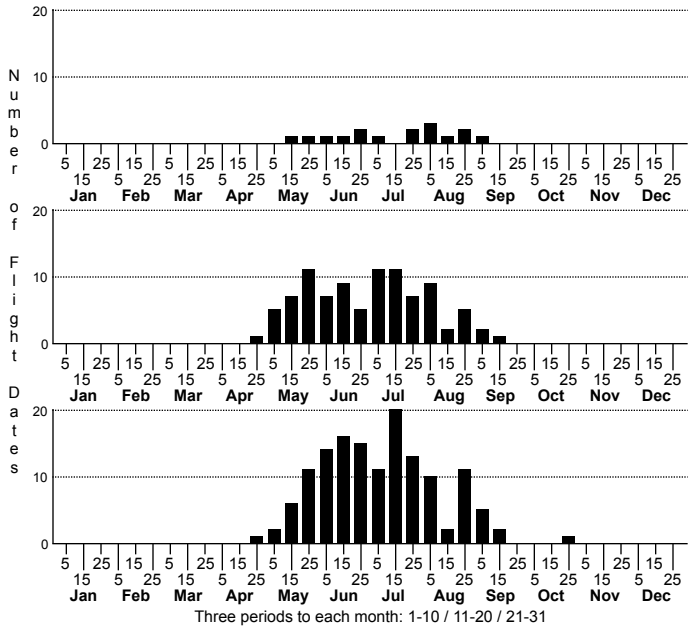
FLIGHT: A slightly shorter flight period than for many other skimmers -- very late April to mid-September. In the Coastal Plain, the latest records are only to late August, except for an odd mid-November record.

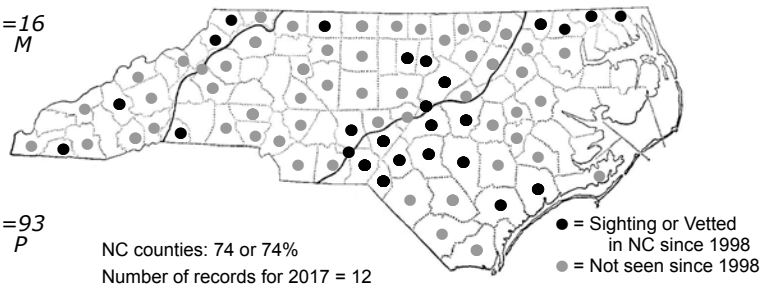
HABITAT: Ponds, small lakes, marshes, and other open waters with abundant floating or emergent vegetation.

BEHAVIOR: Males perch close to water and make short patrols. However, adults are typically seen well away from water, such as in powerline clearings, wide jeep roads, fields, and woodland edges. They perch on twigs, often fairly low and can be conspicuous or unwary when perching.

COMMENTS: This is our only dragonfly with black-and-white stigmas, rendering both males and females easy to identify, even though their body colorations can cause some confusion with other skimmers. The species seldom occurs in large numbers or swarms, as do some skimmers (such as Great Blue Skimmer, Common Whitetail, or Blue Corporal), but a handful are typically seen in the appropriate habitat and time of year.

Libellula flavida Yellow-sided Skimmer





NC counties: 74 or 74%
Number of records for 2017 = 12

Sight (not vetted) in 2017: Camden

High counts of:
10 - Moore; C - 2004-06-05
10 - Moore; C - 2007-06-09
10 - Scotland - 2007-06-16

Earliest date: Bladen 1990-04-26
Latest date: Bladen 1983-10-28

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

DISTRIBUTION: Nearly statewide, but apparently absent from the extreme eastern and northeastern Coastal Plain, where there are no records east of Gates, Bertie, and Carteret counties. Of spotty occurrence in the mountains, though likely present in all counties in that province.

ABUNDANCE: Uncommon to locally fairly common in the Sandhills; generally uncommon and local elsewhere over the Coastal Plain, Piedmont, and lower mountains. Rare in the eastern portions of the Coastal Plain and presumably the middle elevations of the mountains.

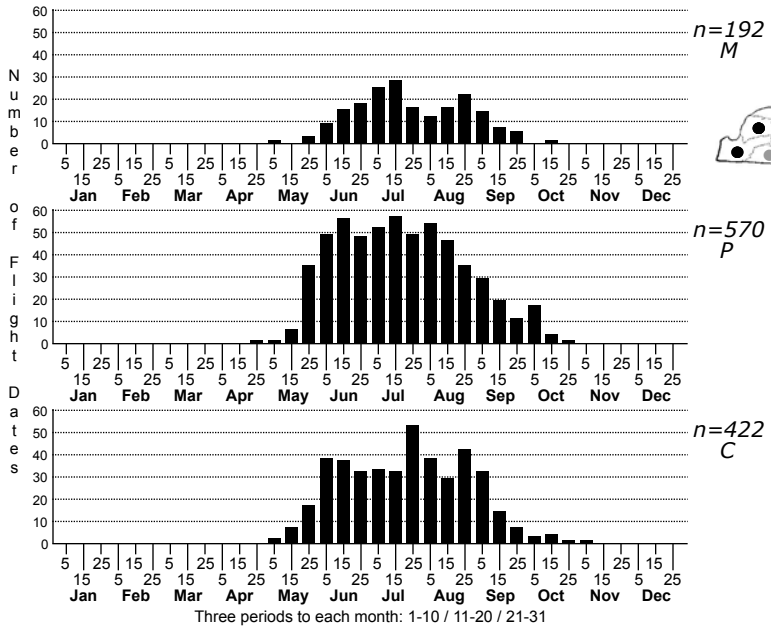
FLIGHT: Downstate, from late April to mid-September. Flies at least from mid-May to early September in the mountains.

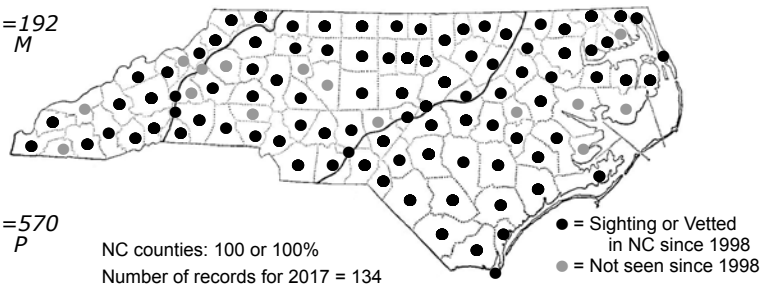
HABITAT: More specialized than with other skimmers, being restricted more to seepages, small streams, and boggy spots, often with sphagnum, such as pools in powerline clearings.

BEHAVIOR: Males perch fairly low on vegetation and make short patrols over their pools and other small patches of water, typically in partly sunny areas.

COMMENTS: This is one of our least numerous skimmers, though it is a dragonfly that most active observers see a few times within the year, assuming they look in the right places. Adult males have some similarity of appearance to Eastern Pondhawk and Great Blue Skimmer, though the Yellow-sided has amber leading edges to the wings. They do not stray too far from boggy places with sphagnum or other partly-open mucky soils. It is somewhat local in occurrence, as such boggy wetlands are not widespread across a given county.

Libellula incesta Slaty Skimmer





High counts of:
850 - Wake - 2013-07-06
465 - Wake - 2014-07-19
355 - Wake - 2013-09-06

Earliest date: Wake 2017-04-28
Latest date: Bladen 2017-11-01

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

DISTRIBUTION: Statewide, occurring in all 100 counties.

ABUNDANCE: Very common to abundant, though usually not in large swarms (such as with Eastern Pondhawk, Blue Dasher, or Common Baskettail). Abundance seems similar all across the state, though it might be slightly less numerous in the mountains.

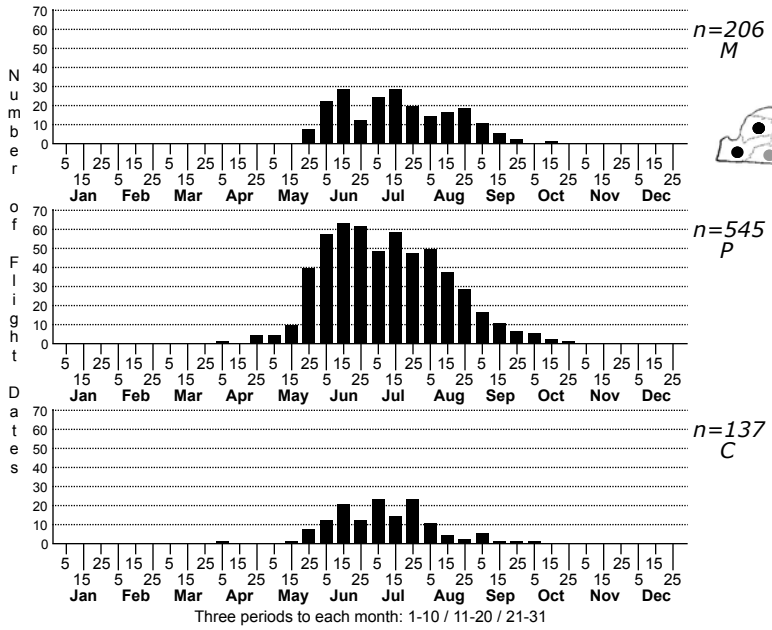
FLIGHT: Flies from early May to late October downstate, and to late September in the mountains.

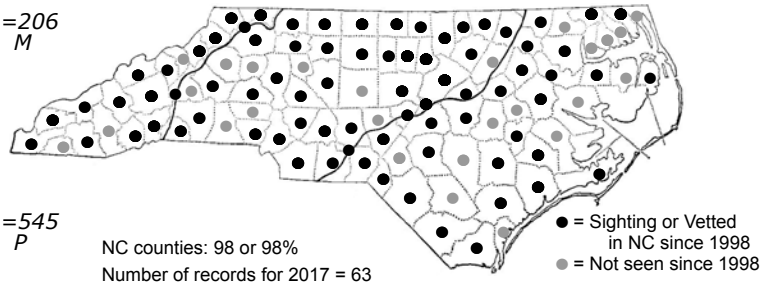
HABITAT: Widespread around still waters of ponds, lakes, marshes, pools and puddles, and slow portions of rivers or creeks -- typically in wooded or partly wooded situations.

BEHAVIOR: Males are very conspicuous for a dragonfly, as they perch on bare twigs or other vegetation around a pond or lake margin and make constant forays, often chasing anything that flies nearby. Adults forage some distance from water, but not in large numbers in fields or other treeless areas.

COMMENTS: It is difficult to visit a pond or lake margin in the summer without seeing a Slaty Skimmer. Usually a walk around the shoreline will produce a number of them, even though Blue Dashers typically will be the most abundant dragonfly at such a pond or lake. Because Slaty Skimmers are very pugnacious and active fliers, if the species is around, you should quickly know it! It is definitely one of the state's most abundant dragonfly species.

Libellula luctuosa Widow Skimmer





NC counties: 98 or 98%
Number of records for 2017 = 63

High counts of:
200 - Caswell - 2007-07-21
100 - Orange - 2009-06-11
100 - Orange - 2009-08-16

Earliest date: Gates 2012-04-01
Latest date: Mecklenburg 2017-10-22

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

DISTRIBUTION: Essentially statewide; only a few extreme eastern Coastal Plain counties lack records. Presumably present in all counties.

ABUNDANCE: Generally very common in the Piedmont and lower mountains; fairly common in the western Coastal Plain, though numbers decrease toward the coast, such that it is scarce in the eastern counties. Common in the middle elevations of the mountains. One of the more numerous dragonflies in the mountain province.

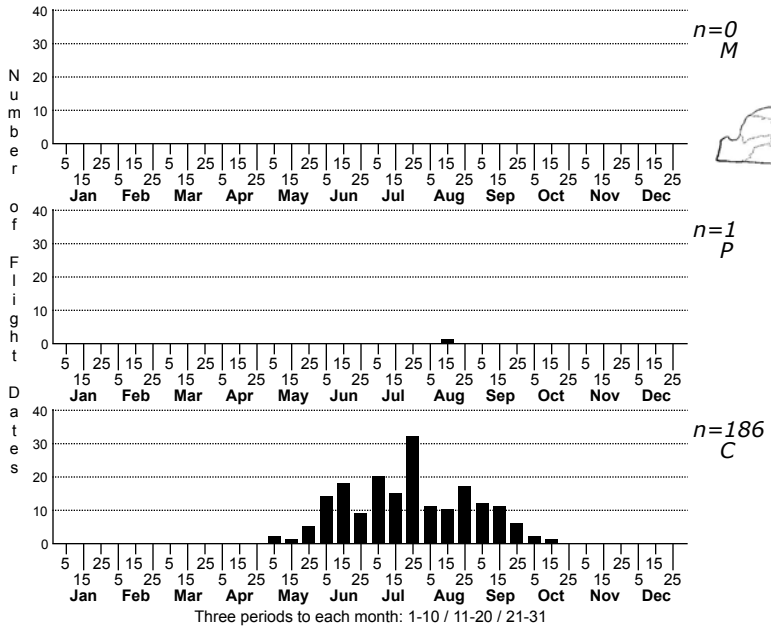
FLIGHT: Downstate, early or mid-April to mid-October, but not numerous until late May. In the mountains, the flight is from late May to late September.

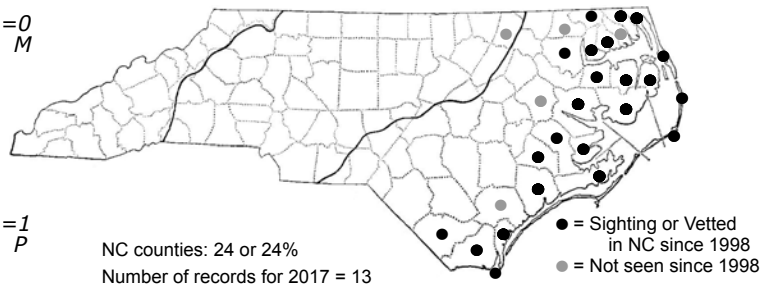
HABITAT: Typical breeding sites as for other skimmers -- ponds, small lakes, marshes, and pools.

BEHAVIOR: Unlike most other skimmers, this species typically moves away from water to spend most of its time foraging in fields, powerline clearings, woodland borders, and other sunny to partly sunny places. Adults often perch on twigs of woody plants or on herbaceous vegetation, in such open areas.

COMMENTS: This might be the "flashiest" of our skimmers, as they are quite common, perch in open places within easy view, and have bold wing patterns. The wide black and frosted white bands of the male are impossible to miss when on the wing. Numbers of the species are seldom large at any given locale, as they seem territorial, and swarms are not generally noted. Nonetheless, it can occasionally be the most often seen dragonfly on a Piedmont walk, especially away from pond margins.

Libellula needhami Needham's Skimmer





NC counties: 24 or 24%
Number of records for 2017 = 13

High counts of:
500 - Onslow - 2017-07-14
400 - Hyde - 2015-07-08
250 - Onslow - 2017-07-20

Earliest date: Tyrrell 1994-05-07
Latest date: New Hanover 2005-10-18

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Essentially coastal, though it does occur on the mainland side of Pamlico Sound and up estuarine rivers as far as tidal waters are present. A collection record for Halifax County is perhaps open to question, as this seems much too far inland.

ABUNDANCE: Common and widespread; present all around Albemarle Sound (unlike the Seaside Dragonlet), as well as around Pamlico Sound.

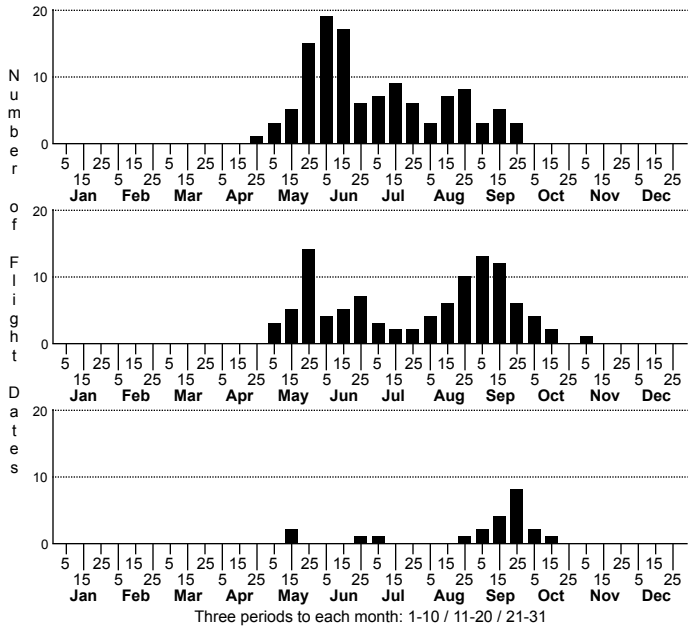
FLIGHT: Early May to mid-October; however, most records fall from mid-June to late September.

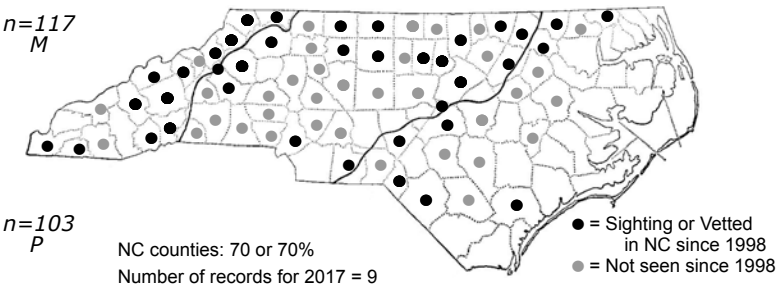
HABITAT: Brackish waters of marshes, tidal ponds, and other bodies of water in coastal areas (including some freshwater pools and ponds).

BEHAVIOR: Males patrol over tidal waters, including salt marshes. Adults do move away from tidal marshes and pools to forage in fields and other uplands, where they might come into competition with the closely related Golden-winged Skimmer.

COMMENTS: Males of this species are quite striking, even slightly more intense orange or scarlet than in the Golden-winged Skimmer, but identification needs to be made by study of the thorax, not by coloration. Also, Golden-winged is not typically found in tidal regions. An observer usually does not have to work hard to find this species, as it is much more conspicuous around tidal water than either the Four-spotted Pennant or the Seaside Dragonlet.

Libellula pulchella Twelve-spotted Skimmer





NC counties: 70 or 70%
Number of records for 2017 = 9

High counts of:
14 - Henderson - 2011-09-04
9 - Buncombe - 2012-05-27
8 - Watauga - 2010-05-26

Earliest date: Watauga 2012-04-30
Latest date: Durham 1980-11-09

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

DISTRIBUTION: Mountains, Piedmont, and western half of the Coastal Plain; seemingly absent in the eastern 40-50% of the Coastal Plain, as there are no records east of Gates, Pitt, Lenoir, and Pender counties.

ABUNDANCE: Uncommon to locally fairly common in the mountains. Uncommon in the Piedmont as a whole, though somewhat migratory, and in the eastern portions can be rather rare and is not resident there. A rare migrant in the western half of the Coastal Plain, where seen mainly in fall migration.

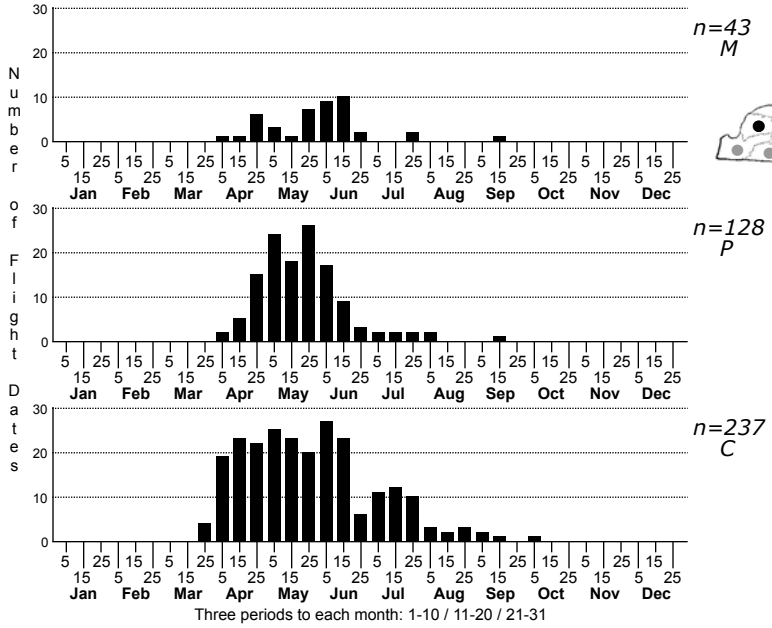
FLIGHT: In the mountains, where it is a resident (though some records might refer to migrants), the flight is from late April to late September. The Piedmont set of flight dates is from early May to early October, with a stray record for early November. The fact that there is a clear dip in records in midsummer in the Piedmont flight chart is a strong indication that the species is mainly a migrant, seen mostly in spring/early summer and late summer/fall. In the Coastal Plain, where migratory, the dates range from mid-May to mid-October, with most being from late August into October.

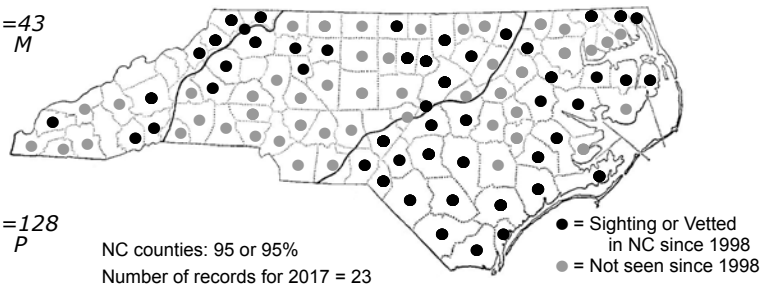
HABITAT: Ponds, lakes, and marshes, typically in open situations.

BEHAVIOR: Males are very conspicuous as they patrol, often hovering, over their pools and ponds. Adults are similar to other skimmers in that they often forage well away from water in fields and wooded borders.

COMMENTS: Much is still to be learned about its biology in NC. This species is one of the few dragonflies that is partly migratory in the state. Individuals appear in the Coastal Plain and in much of the Piedmont at sites away from breeding waters, often where observers are quite familiar with the general area. Plus, they are seen mainly in spring or late summer/fall. The female looks quite similar to the female Common Whitetail and thus could be overlooked. However, adult males are very conspicuous and elicit much excitement when seen, because of their "snazzy" appearance and relative scarcity in NC.

Libellula semifasciata Painted Skimmer





NC counties: 95 or 95%
Number of records for 2017 = 23

High counts of:
35 - Cumberland - 2015-06-06
30 - Craven - 2007-07-22
25 - Craven - 2009-07-03

Earliest date: Gates 2012-03-27
Latest date: Jones 1997-10-01

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

DISTRIBUTION: Essentially statewide, though likely scarce at middle elevations and perhaps absent at higher elevations in the mountains. Occurs throughout the Piedmont and Coastal Plain, including counties along the coast.

ABUNDANCE: Fairly common to occasionally common in the southern half of the Coastal Plain; uncommon to locally fairly common in the northern Coastal Plain and in the lower Piedmont; uncommon in the remainder of the Piedmont and lower mountains; scarce at higher elevations. Abundance is quite at odds with Dunkle (2000) for its entire range, and Beaton (2007) for GA, both which indicate "uncommon". Perhaps the species is more numerous in NC than in most other states. Seldom occurs in large numbers on a given day, but quite widespread, at least in much of the Coastal Plain.

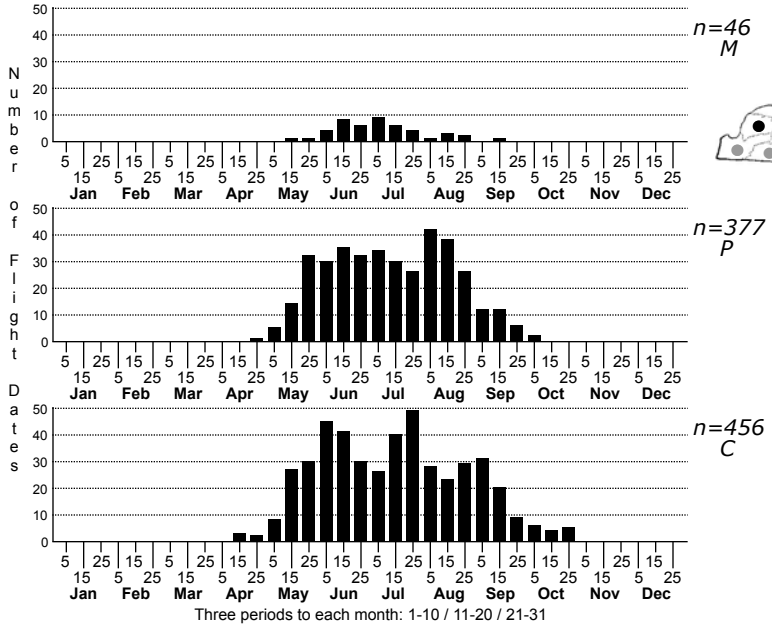
FLIGHT: Very late March or early April to mid-September, and rarely to early October, in the Coastal Plain and Piedmont; however, not numerous after late July. In the mountains, the flight occurs from late April to mid-September, but is scarce after mid-summer.

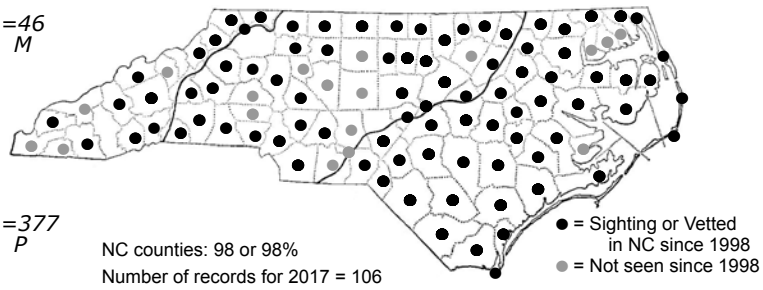
HABITAT: Marshes, bogs or boggy areas, grassy ponds, and other pools; favors semi-wooded areas.

BEHAVIOR: Less likely to spend much time around ponds, pools, and marshes than most other skimmers. Instead, adults are typically seen foraging well away from water (thus not making it clear what might be the breeding habitat), often in fields, savannas, powerline clearings, and woodland borders. They often perch conspicuously on tips of twigs or grass stems.

COMMENTS: This skimmer seldom occurs in swarms, but is often seen daily, at least in the southern Coastal Plain in the first part of the flight season. Because of their flashy wing pattern -- males and females look almost alike -- individuals are easily noticed, even by beginners or casual observers.

Libellula vibrans Great Blue Skimmer





NC counties: 98 or 98%
Number of records for 2017 = 106

Sight (not vetted) in 2017: Wilkes; M

High counts of:
200 - Robeson - 2017-05-27
125 - Martin - 2012-06-28
100 - Durham - 2010-06-06

Earliest date: Brunswick 2017-04-12
Latest date: Craven 2011-10-28

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

DISTRIBUTION: Essentially statewide, but as with several other skimmers, it is of spotty distribution in the mountains, though likely occurring in all counties in the province.

ABUNDANCE: Common, to locally abundant, in the Coastal Plain; common in the eastern and central Piedmont; somewhat less numerous (fairly common, at least locally) in the western Piedmont and lower mountains. This is one of the most numerous dragonflies in swamps and bottomlands.

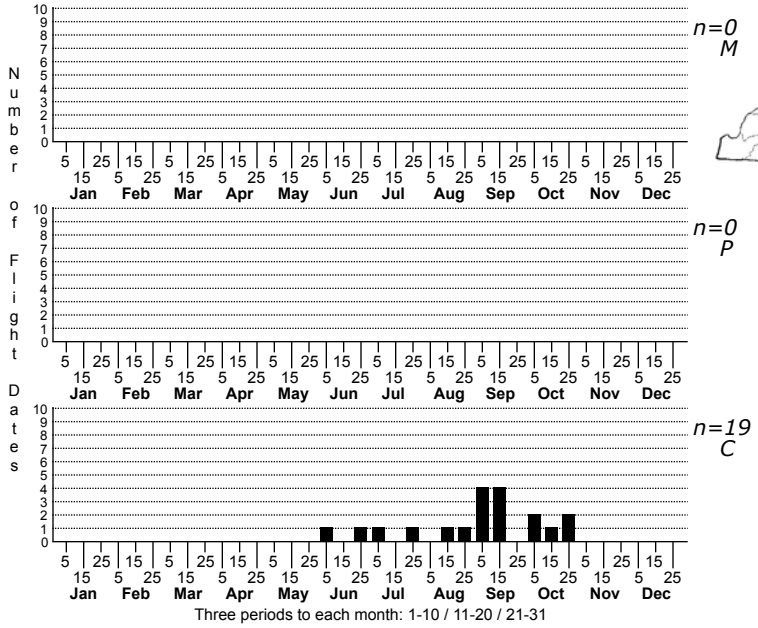
FLIGHT: Early May (very rarely in late April) into late September in the Piedmont and into late October in the Coastal Plain. The mountain flight, quite a bit narrower, is from mid-May to mid-September.

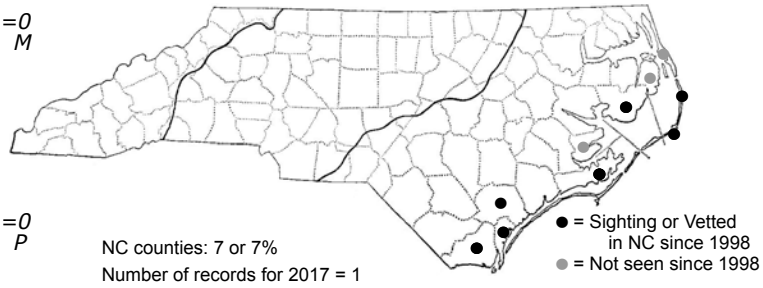
HABITAT: Still or slow-moving waters in mostly shaded areas, such as swamps and swampy pools, wooded beaver ponds, and very slow-moving streams.

BEHAVIOR: Males commonly perch around the margins of swampy pools and other wet areas in swamps and bottomlands. Adults typically stay close to forested areas, such as along roads through bottomlands and swamps. They usually perch on twigs of trees along the wooded edges, often 5-10' high. They can be quite pugnacious, with much chasing of other Great Blue Skimmers in their small territories.

COMMENTS: This is the largest of the Libellula skimmers, and though colored in pruinose pale blue like adult male Eastern Pondhawks and several other male skimmers, the male Great Blue Skimmer is separated by its very pale blue thorax (contrasting with the slightly darker abdomen) and greenish-blue eyes. They can occur in swarms of a dozen or more in a very small area. This species is one of the most common dragonflies (next to Eastern Pondhawk) that one sees along roads through swamps and bottomlands, especially as seen from bridges over swampy rivers and creeks.

Macrodiplax balteata Marl Pennant





NC counties: 7 or 7%
Number of records for 2017 = 1

Vetted in 2017: Pender

High counts of:
20 - Hyde - 2015-07-08
15 - Carteret - 2014-10-04
10 - Carteret - 2014-10-18

Earliest date: Dare; OBM 2015-06-10
Latest date: Carteret 2016-10-29

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

DISTRIBUTION: Strictly coastal, ranging north in its overall range only to southeastern VA (one recent record only). Interestingly, the first record for GA came in 2006, and there are a number of recent county records for coastal SC. It is not clear if the species is a permanent resident or is at least partly migratory in NC.

ABUNDANCE: In recent years, generally uncommon to (and very locally) fairly common along the NC coast, essentially only from Cape Hatteras southward. Dunkle (2000) calls it "common coastally", though that may apply mainly to FL. For whatever reason, until a decade ago there were very few records of the species north of FL, but owing to global warming or some other factors, the species is increasing in numbers or at least increasingly straying northward, in NC, SC, and GA.

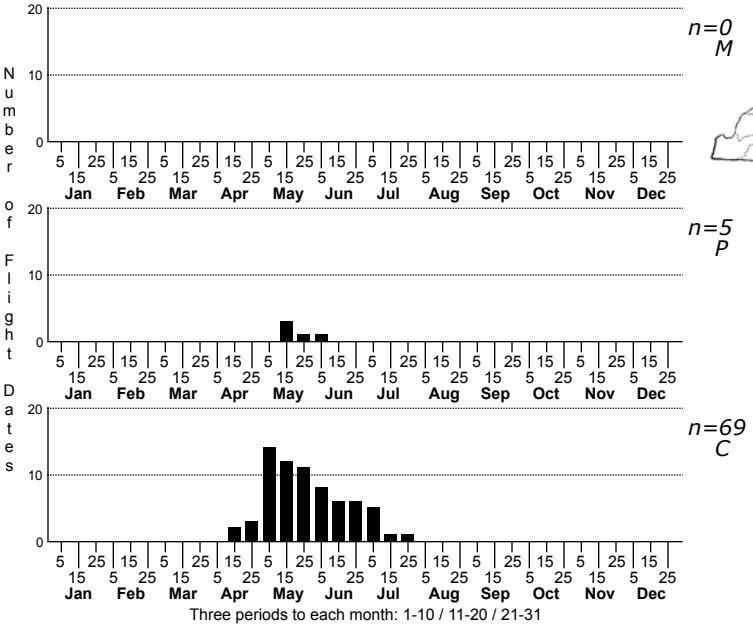
FLIGHT: The flight occurs from early June to the end of October; however, most records are in September and October. This pattern of flight dates may suggest that the species is primarily a post-breeding migrant/stray from farther south. A resident pennant species should have a flight season starting at least by early summer, and have peak numbers in summer or before September. However, more data are needed to clarify the situation, and there is certainly the possibility that this species is a scarce resident (though maybe with immigrants moving into the state in fall).

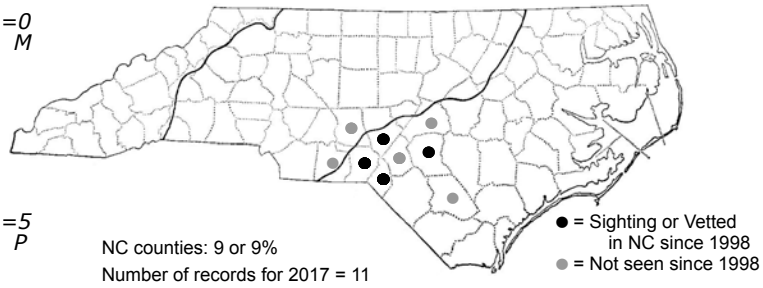
HABITAT: Unusual for most dragonfly species in NC; breeds in brackish ponds or other pools with high pH waters, such as possibly man-made marl ponds near the coast or other man-made lakes and ponds in coastal areas. The highest state counts have been at a natural lake (Lake Mattamuskeet) and from tidal marshes. Thus, it has a fairly wide array of sunny coastal habitats, from salt water (tidal marshes) to fresh water (lakes and ponds).

BEHAVIOR: Males perch at the pools or marsh edges, often on twigs or stems in the water; they make forays over the water. However, they may occur in fields or other open areas somewhat far away from coastal water. Apparently females also stay close to water when foraging.

COMMENTS: Some important records of Marl Pennant were made in fall 2014 at Fort Macon State Park in Carteret County, with a former state record one-day count of 15 individuals, documented by several photos. A handful of other recent records have been made, with photos now available for Dare, Hyde, Carteret, Pender, New Hanover, and Brunswick counties. Of the five primarily coastal dragonflies in NC -- along with Needham's Skimmer, Roseate Skimmer, Four-spotted Pennant, and Seaside Dragonlet -- the Marl Pennant is the only scarce species. Hopefully, it is a resident species in NC! Even if not, it can be somewhat reliably seen in September or October at tidal marshes and other coastal waters.

Nannothemis bella Elfin Skimmer





NC counties: 9 or 9%
Number of records for 2017 = 11

High counts of:
300 - Scotland - 2017-05-08
150 - Scotland - 2017-05-07
120 - Scotland - 2017-05-13

Earliest date: Scotland 2017-04-15
Latest date: Scotland 1985-07-21

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

DISTRIBUTION: In NC, it is restricted to the Sandhills region, plus the adjacent western Coastal Plain (Bladen County). Although one might assume the northern edge of the range lies in NC, the whole range covers the Atlantic seaboard from southeastern Canada south to FL and LA, and west to MN. Clearly, the species has a highly disjunct overall range; it almost certainly is not found in most or nearly all other Coastal Plain counties to the VA line.

ABUNDANCE: Uncommon to locally fairly common in the Sandhills, but as it is the smallest dragonfly, it is very easily overlooked. Probably rare east of the Sandhills. Might occur in the adjacent edge of the Piedmont.

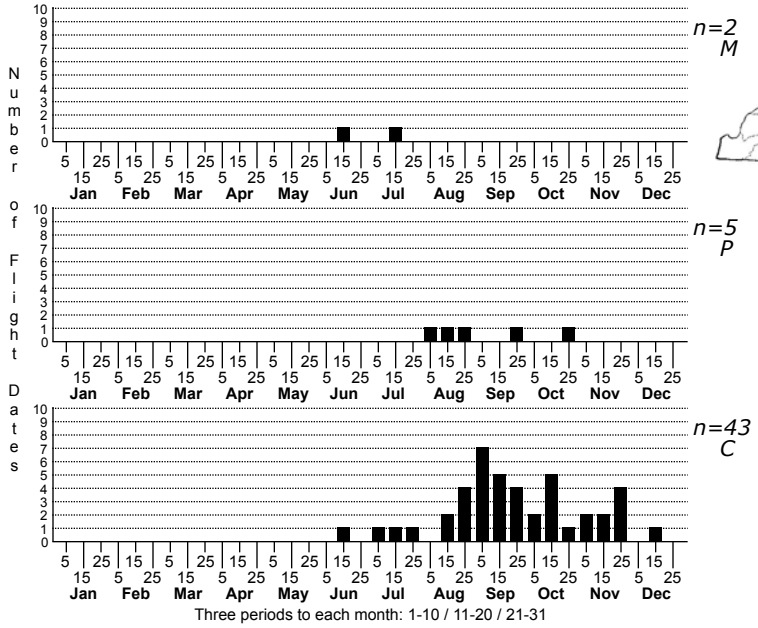
FLIGHT: A rather narrow flight period; mid-April to late July.

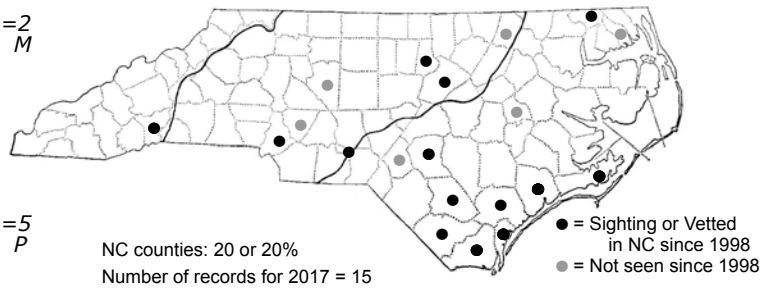
HABITAT: Highly restricted to boggy spots, with much sphagnum; often at seepages. These can be around the margins of beaver ponds or man-made ponds, damp places in powerline clearings, and natural fire-maintained seepage slopes.

BEHAVIOR: Adults perch and fly very close to the ground/water, often no more than 4-5" off the ground, amid grasses, sedges, and rushes. They seldom arise above the height of the herbaceous vegetation.

COMMENTS: To see the species, one must go to boggy places around a pond margin or a wet powerline clearing in the Sandhills, and expect to get one's feet damp. They can be confused with Little Blue Dragonlet, which shares its habitat but is slightly larger and has a less obvious club. Be careful where you step, as you might have them underfoot!

Orthemis ferruginea Roseate Skimmer





NC counties: 20 or 20%
Number of records for 2017 = 15

Vetted in 2017: Gates
Sight (not vetted) in 2017: Bladen

High counts of:
9 - Onslow - 2017-10-05
7 - Onslow - 2017-11-03
6 - Cumberland - 2013-09-05

Earliest date: Henderson 2013-06-16
Latest date: New Hanover 2017-12-19

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

DISTRIBUTION: A northbound stray or migrant in most areas of the state, but almost certainly now a resident in the extreme southeastern counties, north to Carteret County. Widely scattered over the Coastal Plain, with a few Piedmont records, and two from Henderson County in the mountains. Greatly expanding its range northward; thus, the county map will likely become out-of-date very quickly. Primarily found along the southern coast, north somewhat regularly to Carteret County, but one must assume it is not a resident (yet) away from coastal counties, based on its very spotty range inland.

ABUNDANCE: Increasing in recent years; probably rare 10 or 20 years ago. Now, it is generally uncommon in coastal counties northward to Carteret County. Very rare farther inland and northward. Our peak single-day count is just nine individuals, though this number should be surpassed in the next few years.

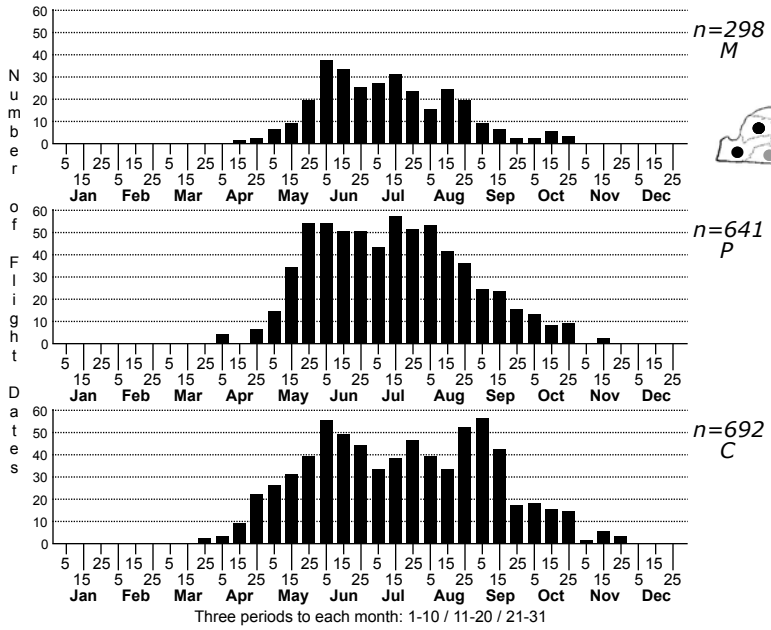
FLIGHT: Mid-June to late November, but mostly from mid-August to mid-October. These dates suggest a fall migrant species, moving north after breeding farther to our south. However, there are likely a few sites along and near the coast where it is a resident.

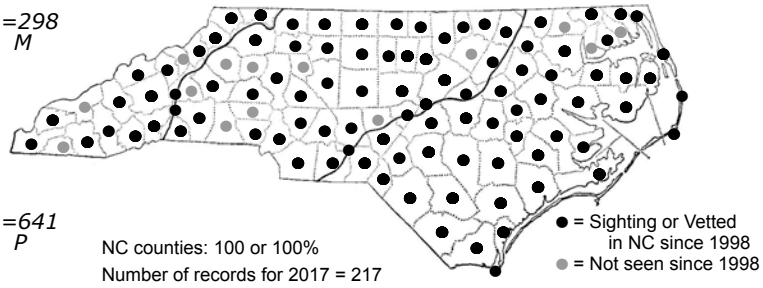
HABITAT: Generally at ponds, marshes, and lakes. Despite it being seen mainly near the coast, most breeding waters are probably fresh, though it does use brackish waters.

BEHAVIOR: Males are very conspicuous as they perch on twigs at their pools or ponds; they are quite active and do much chasing and patrolling. Adults will often feed well away from pools, as do most other skimmers.

COMMENTS: The deep rose-pink color of the male's abdomen is not often seen in the animal kingdom, even in birds or butterflies, and is more reminiscent of the rosy color of the petals of many wildflowers! This species is currently undergoing a rapid northward expansion in the range and in numbers. It is not hard to find at various places around Wilmington, such as near gardens and other suburban places. But questions remain, especially regarding residency status in NC away from the southern coast. It was dropped as a Watch List species by the NC Natural Heritage Program in fall 2010.

Pachydiplax longipennis Blue Dasher





NC counties: 100 or 100%
Number of records for 2017 = 217

High counts of:
1225 - Wake - 2013-07-06
965 - Wake - 2013-06-12
885 - Wake - 2014-07-19

Earliest date: Moore; C 2012-03-27
Latest date: New Hanover 2015-11-28

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

DISTRIBUTION: Statewide, occurring in all 100 counties.

ABUNDANCE: Abundant throughout. This is arguably the most numerous dragonfly in NC (and the eastern United States), possibly even outnumbering the ubiquitous Eastern Pondhawk.

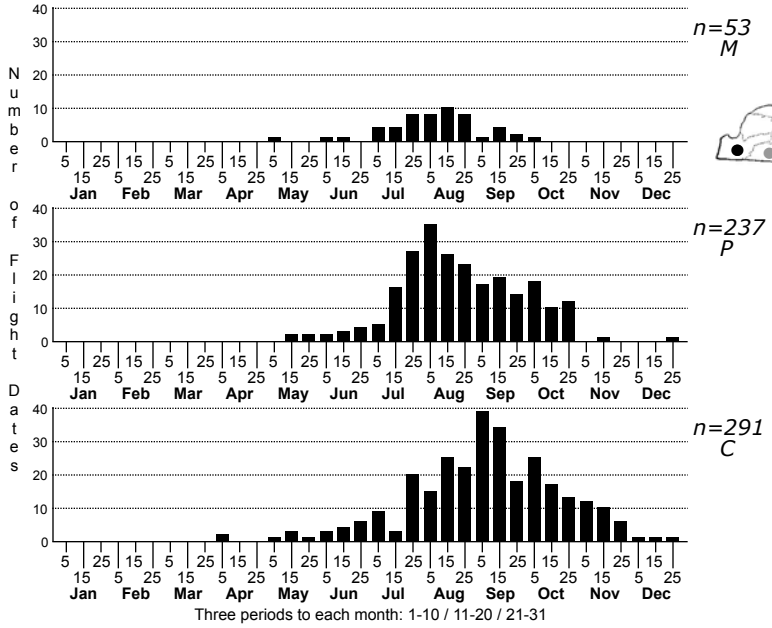
FLIGHT: Throughout most of the odonate flight season. Downstate, from late March or early April to late October, rarely to late November. In the mountains, from late April to late October.

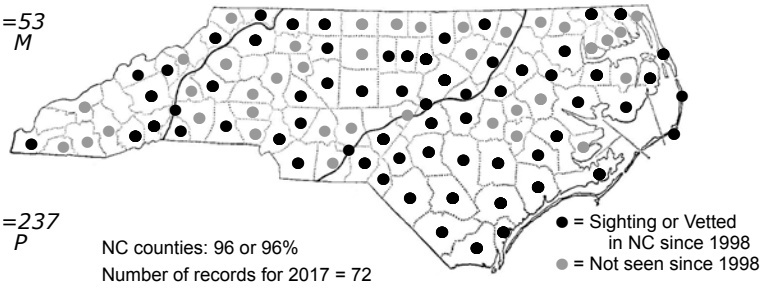
HABITAT: A wide range of still water, from ponds, lakes, ditches, canals, pools, and marshes; occasionally in slow-moving portions of rivers or creeks.

BEHAVIOR: Males are frequently seen perching on twigs or herbaceous vegetation along the margin of a pond, making short forays over the water for patrolling purposes. Both sexes feed well away from water, especially females. They perch conspicuously, typically within 3-4' of the ground, in fields, powerline clearings, savannas, and many other places, both in full sun or partial shade.

COMMENTS: For many species of skimmers, pennants, and other members of the Family Libellulidae, an observer hopes to find a given species by walking along the shoreline of a still body of water. This is seldom a problem with finding Blue Dashers, as every pond seems to have a dozen or more individuals, often equaling or exceeding the number of all other dragonflies of other species! Total numbers of Blue Dashers in NC must total in the tens of millions.

Pantala flavescens Wandering Glider





NC counties: 96 or 96%
Number of records for 2017 = 72

Sight (not vetted) in 2017: Johnston; P

High counts of:
200 - Onslow - 2017-09-27
50 - New Hanover - 2015-09-13
35 - Washington - 2008-08-22

Earliest date: Onslow 2017-04-08
Latest date: Wake 2015-12-29

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

DISTRIBUTION: Essentially statewide, but not as numerous in the mountains as downstate, as a handful of counties there lack records. Nonetheless, presumed to occur in all 100 counties.

ABUNDANCE: A widespread species, seen often during the year, especially during the fall season. Abundance is difficult to assess or describe, as it is migratory and does not establish permanent colonies, though generally fairly common to at times common across the state, being somewhat more numerous in the Coastal Plain than farther westward. Observers frequently see individuals in cities and towns, attempting to lay eggs on shiny car hoods; however, large numbers are seldom seen in a given day, and it is often missed in field work in "the country". Seems to be most often seen along or near the coast in the fall, migrating southward (presumably).

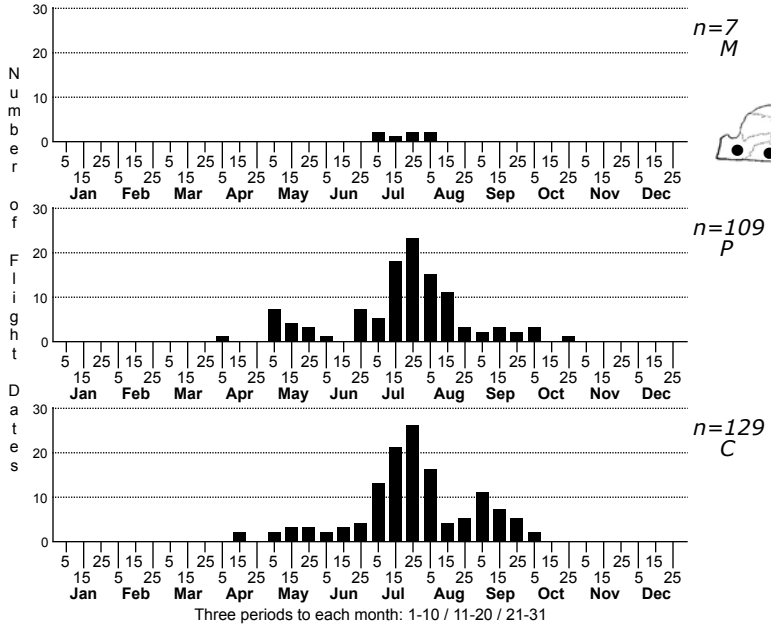
FLIGHT: Downstate, from early May to early December, most frequently reported in mid-summer and fall, though the highest numbers of individuals are seen from late August to late September. There is even a record for late December. In the mountains, the flight is from early June to early October.

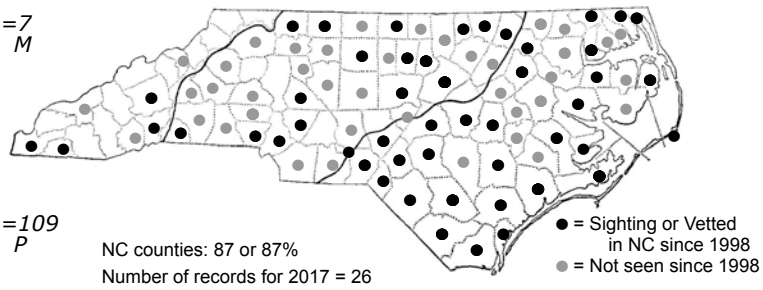
HABITAT: Unlike all other dragonflies except the related Spot-winged Glider, it uses small, temporary puddles and pools for depositing eggs. These can be rainwater pools on city streets, as well as puddles in powerline clearings and other ephemeral ponds.

BEHAVIOR: Only the two gliders (Pantala) share the "wandering" habit of foraging. Males may patrol temporary pools where eggs have been laid, and females (of course) can be seen ovipositing in such temporary pools. However, they spend most of their time in wide-ranging flights, often 5-10' or higher, over all types of open country, from fields, marshes, towns, dunes, and even offshore! Like swallows and swifts, these dragonflies seldom seem to perch, but when found hanging from a twig, they can be somewhat unwary.

COMMENTS: Wandering Gliders can literally be seen anywhere, from downtown streets to over the Gulf Stream. Because they are constantly on the wing, identification can be difficult, and often one must assume that an amber-colored dragonfly, with no obvious wing markings (to rule out saddlebags, for example), is a Wandering Glider -- especially if seen close to the coast in the fall. A range map for this species is a bit misleading, as it is a hit-and-run type of breeder, with no site fidelity.

Pantala hymenaea Spot-winged Glider





NC counties: 87 or 87%
Number of records for 2017 = 26

High counts of:
75 - Durham - 2010-07-25
50 - Wake - 2008-05-25
30 - Wake - 2012-08-04

Earliest date: Caswell 1998-04-04
Latest date: Alamance 1971-10-24

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

DISTRIBUTION: Occurs over all of the Coastal Plain and Piedmont (though lacking records for a few counties in the Piedmont). It is of sporadic occurrence in the mountains, where it has been found in just 40% of the counties.

ABUNDANCE: As with the Wandering Glider, this is a migratory species, constantly on the move, with abundance difficult to assess. Uusually less numerous than Wandering Glider, though it can occur in swarms, more so than does the Wandering. Generally uncommon in the Coastal Plain and Piedmont, though it may be fairly common at times, especially in the Coastal Plain, even though our three highest one-day counts are in the lower Piedmont. Very rare to rare in the mountains.

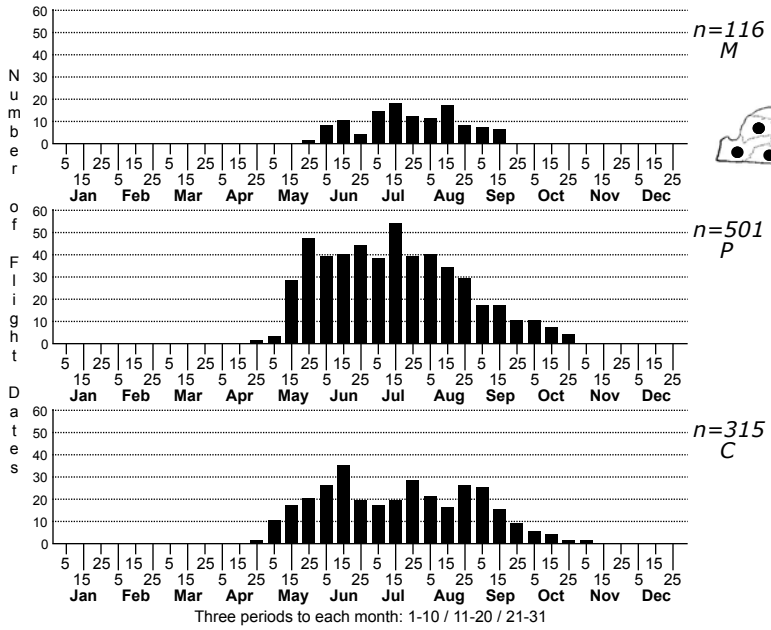
FLIGHT: Early or mid-April to late October downstate, though the bulk of the records are from late June to mid-September. The few mountain records are concentrated from early July to early August, but the flight there is certainly longer than just a month.

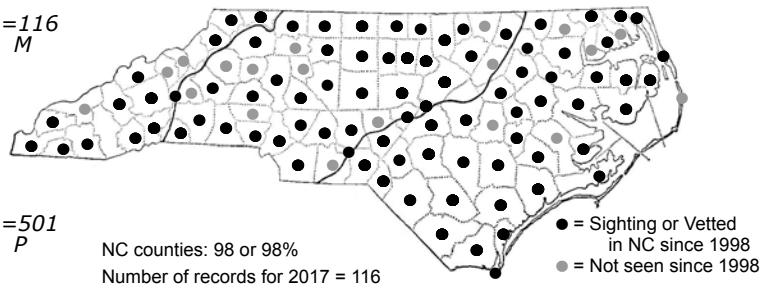
HABITAT: Similar to Wandering Glider, it uses small, temporary puddles, pools, and shallow ponds for breeding.

BEHAVIOR: Males may be seen patrolling near puddles, and females may be seen ovipositing at such wet places, though Spot-winged Gliders seldom seem to enter cities to attempt ovipositing on shiny car hoods and rainwater pools in streets. Adults forage widely over all types of habitats, especially open areas along and near the coast.

COMMENTS: This species is not familiar to casual observers, despite records from 87 of the 100 counties, because adults infrequently perch, and identification must often be made in flight. Having a net handy to catch such non-perching dragonflies helps! Adults do have a small dark patch at the base of the hind wing, as the common name indicates; sometimes an observer can see this spot in the field, though the overall color of the adult Spot-winged is a bit buffier/browner than the amber-colored Wandering Glider.

Perithemis tenera Eastern Amberwing





NC counties: 98 or 98%
Number of records for 2017 = 116

Sight (not vetted) in 2017: Halifax; C

High counts of:
325 - Wake - 2013-07-04
315 - Wake - 2014-06-13
200 - Person - 2011-06-24

Earliest date: Bladen 2016-04-27
Latest date: Bladen 2017-11-01

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

DISTRIBUTION: Statewide, but as with so many other "statewide"species, it has not been recorded from all mountain counties, though presumably occurring in all 100.

ABUNDANCE: Common to locally abundant essentially statewide, but slightly less numerous (but still common) in the mountains. There are several one-day counts of 200 or more individuals.

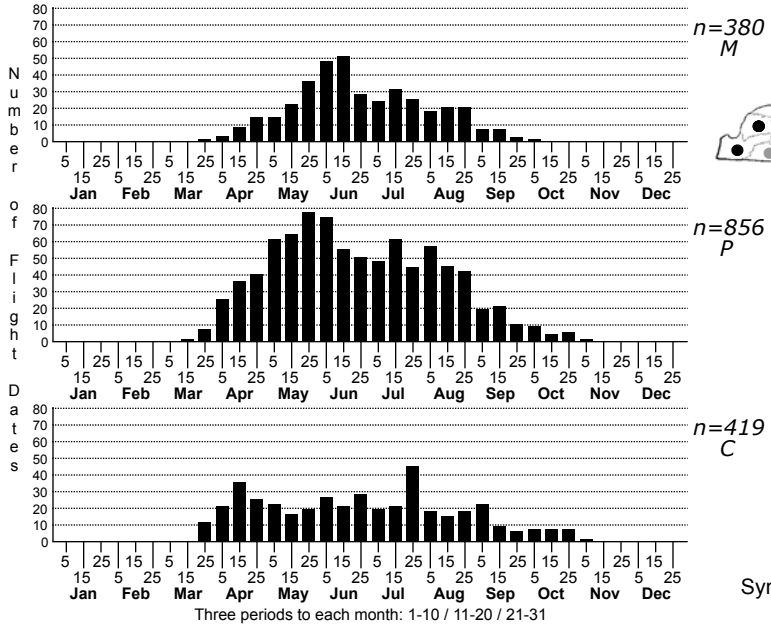
FLIGHT: Downstate, the flight occurs from early May to late October; in the mountains, from late May to mid-September.

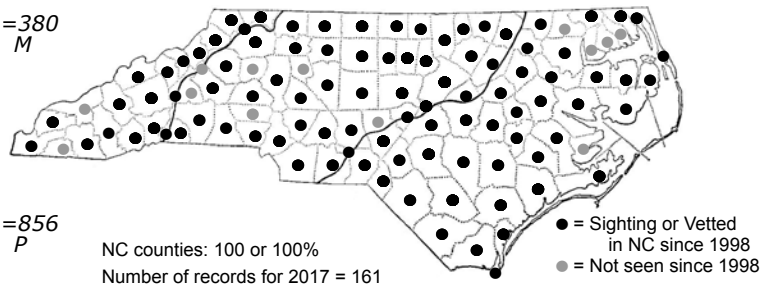
HABITAT: Ponds, small lakes, marshes, and pools are used for breeding. Slow-moving portions of rivers or creeks may be used on occasions.

BEHAVIOR: This is an active and conspicuous dragonfly, despite being one of the smallest species. Adults often perch conspicuously on the tips of twigs and grasses, close to water. Adults will forage long distances from water, and they are among the most "urban" of dragonflies, often found in gardens, arboretums, and other places in cities where suitable prey items might occur.

COMMENTS: This species is a wasp mimic, with its highly colored wing patches and veins. Adults often obelisk. Females are somewhat similar in coloration to the Halloween Pennant, but the latter species is much larger in size. One would think that a dragonfly whose average length is less than 1" would be difficult to observe and easy to overlook (such as with the Elfin Skimmer), but the Eastern Amberwing is a "unique" species in NC -- there are other amberwings elsewhere -- that seems to want to draw attention to itself, often looking like a butterfly or wasp rather than a dragonfly (at a quick glance).

Plathemis lydia Common Whitetail





High counts of:
55 - Wake - 2013-04-27
55 - Durham - 2015-05-30
50 - Wake - 2012-07-17

Earliest date: Durham 1990-03-19
Latest date: Gates 2014-11-10

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

Synonym: *Libellula lydia*

DISTRIBUTION: Statewide, occurring in all 100 counties.

ABUNDANCE: Very common to abundant across the state, not seeming to vary considerably in numbers from one province to another. Though seldom occurring large swarms -- the highest one-day count is "just" 55 individuals -- it is among the most widespread species in terms of habitats from wet to dry, wooded to open.

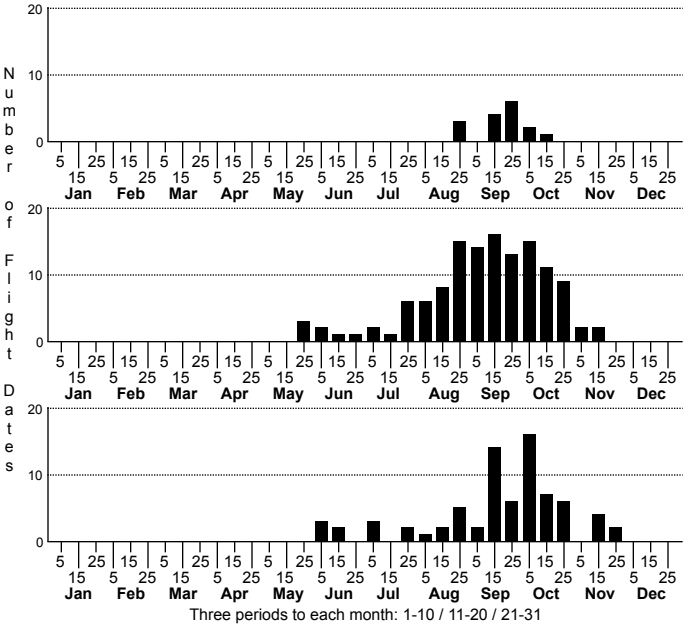
FLIGHT: Nearly the entire odonate flight season, from late March to late October, sparingly into November.

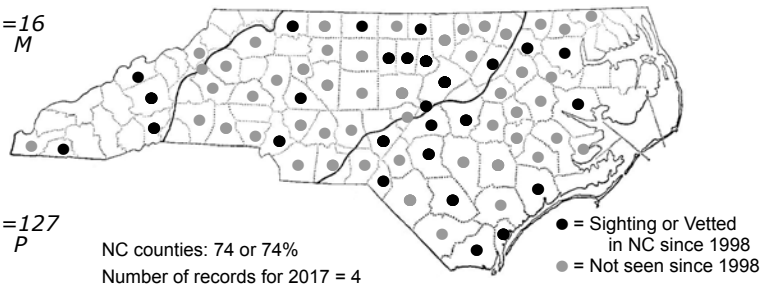
HABITAT: Ponds, lakes, swamps, seeps, pools, and other open water. Probably uses smaller, temporary pools and ditches more than most other dragonflies.

BEHAVIOR: Adults commonly perch flat on the ground, especially on mud or other damp ground, such as pond shores, muddy spots in powerline clearings, and so forth. They also perch more often on concrete, wood, and other man-made structures than do most other dragonflies. They do perch on twigs and vegetation, but not as frequently as do most other skimmers. They forage well away from water, in fields, woodland borders, powerline clearings, as well as at pond margins, etc.; they often come into urban habitats such as gardens and yards.

COMMENTS: This may be the most conspicuous or obvious dragonfly in NC, especially to the layman; they are impossible to miss or overlook when present, as they perch on the ground where observers frequently walk. In fact, one quickly tires of them, despite their attractiveness. Though females could be confused with the scarce Twelve-spotted Skimmer, in general this a very easily identified dragonfly.

Sympetrum ambiguum Blue-faced Meadowhawk





NC counties: 74 or 74%
Number of records for 2017 = 4

Vetted in 2017: Madison

High counts of:
50 - Wake - 2008-09-21
28 - Wake - 2014-10-09
21 - Wake - 2014-10-01

Earliest date: Wake 2013-05-25
Latest date: New Hanover 2015-11-27

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

DISTRIBUTION: Throughout the Piedmont and the western 3/4th of the Coastal Plain. Apparently absent in far eastern counties (no records east of Gates, Martin, and Pamlico counties). Scattered in the mountains, but presumably rare to absent at middle and higher elevations.

ABUNDANCE: Uncommon to locally fairly common, but easily overlooked, in the Piedmont and Coastal Plain. Rare in the mountains, as well as in the eastern Coastal Plain.

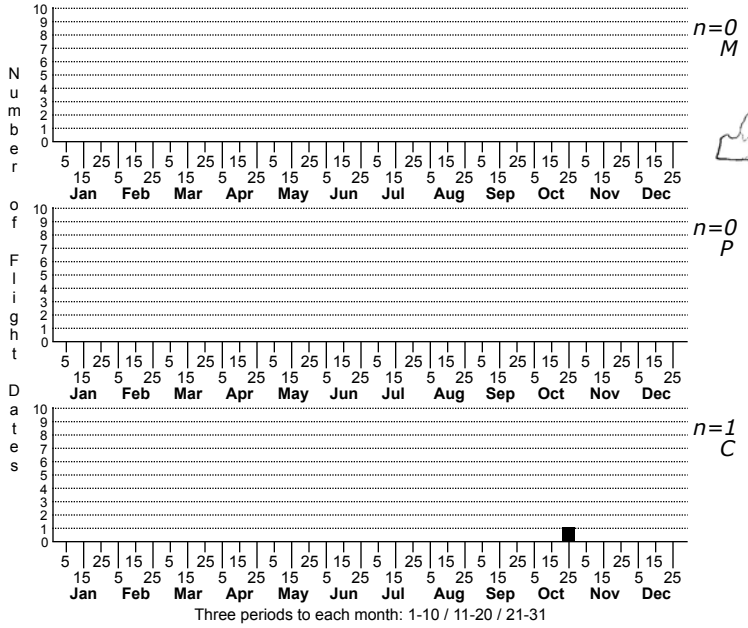
FLIGHT: Downstate, occurs from very late May to late November, though mainly is present from late July to late October. In the mountains, the meager dates fall between late August and mid-October. One of the relatively few dragonflies whose peak numbers are in the fall season (e.g., September and early October).

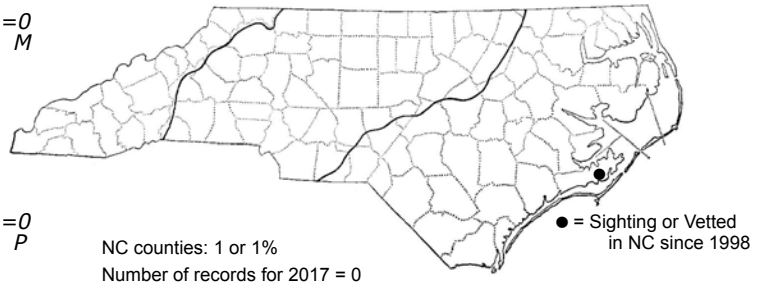
HABITAT: Small, semi-shaded or shaded pools in floodplains, swamps, or marshes.

BEHAVIOR: Adults tend to perch on twigs or leaves fairly high off the ground, typically 5' or higher, and thus are not as readily seen as most other pennants/gliders/skimmers. They can easily be overlooked because of this perching behavior, and their feeding bouts also do not take them often to the margins of pools and ponds.

COMMENTS: Males are rather colorful, with their reddish abdomen (with black spots) and blue to green forehead. But, their habit of perching somewhat high, often in shade or partial shade in moist woods and borders, combined with a fairly small size (under 1.5"), makes them hard to become familiar with (despite records for nearly 75% of the NC counties).

Sympetrum corruptum Variegated Meadowhawk





High counts of:
1 - Carteret - 2007-10-30

Earliest date: Carteret 2007-10-30
Latest date: Carteret 2007-10-30

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

DISTRIBUTION: Resident in the western and central parts of the continent, but just a migrant or stray in the southern Atlantic Coast states. Perhaps resident east to western TN and the panhandle of FL. Accidental or stray to NC, where the only record known to us is one photographed in Carteret County in 2007.

ABUNDANCE: Stray; casual or accidental. GA has a few records, and NC, SC, and VA have at least one each.

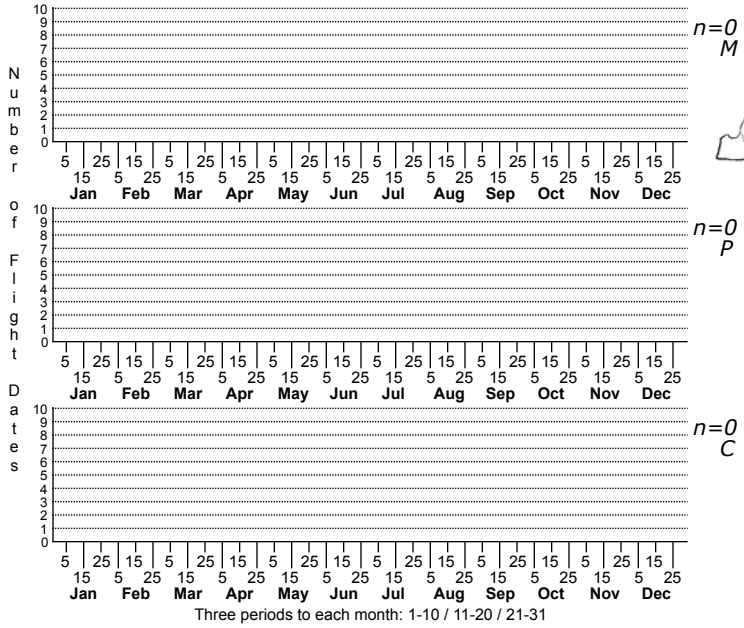
FLIGHT: Probably most likely to occur in late summer or fall. The only NC date available is 30 October.

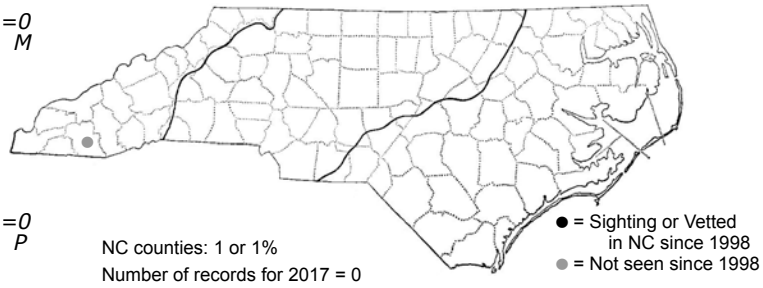
HABITAT: Breeds at ponds and slow portions of streams. A stray to the East Coast, such as this species, could be seen practically anywhere, especially in coastal habitats. The one found in 2007 in NC was in dune habitat along a barrier island.

BEHAVIOR: As the species is presumed to be a migrant, it could theoretically be seen anywhere in the state. The adults perch fairly low to the ground, and sometimes even on the ground.

COMMENTS: This species is reported for NC in the IORI website checklist prepared by Bick and Mauffray (1999-2004). However, Cuyler's unpublished data contains no records for the species for NC. Fortunately, Randy Newman photographed one at Fort Macon State Park in fall 2007 for the first definitive record, though we assume there must be an older record/report prior to 2004. At any rate, the species is a stray to the East Coast.

Sympetrum internum Cherry-faced Meadowhawk





NC counties: 1 or 1%
Number of records for 2017 = 0

High counts of:

Earliest date: ?
Latest date: ?

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

DISTRIBUTION: This is a Northern and Midwestern species, ranging generally south to VA and KY. There is a report/record from Macon County listed in OdonataCentral. No data, other than coordinates, are provided. The range map as shown in Paulson (2011) does extend down into NC to include this area.

ABUNDANCE: Presumed very rare, if it truly occurs in NC.

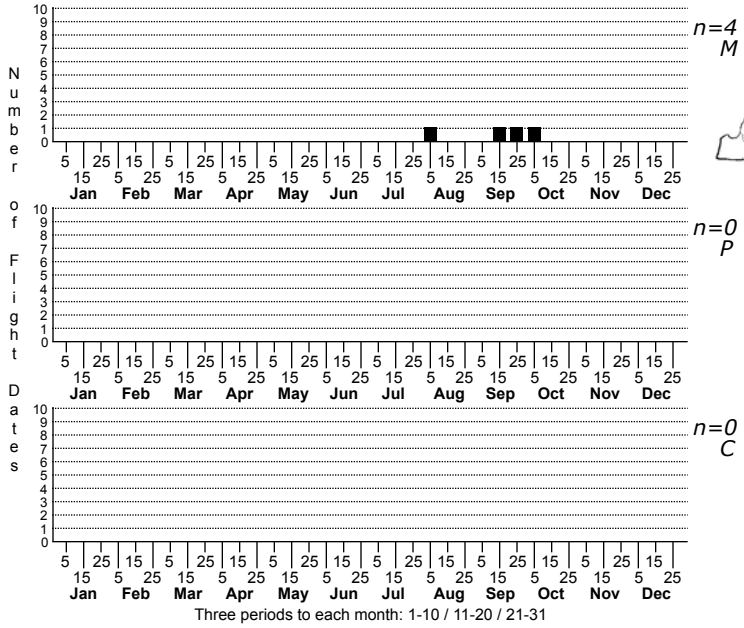
FLIGHT: Probably June into September or October.

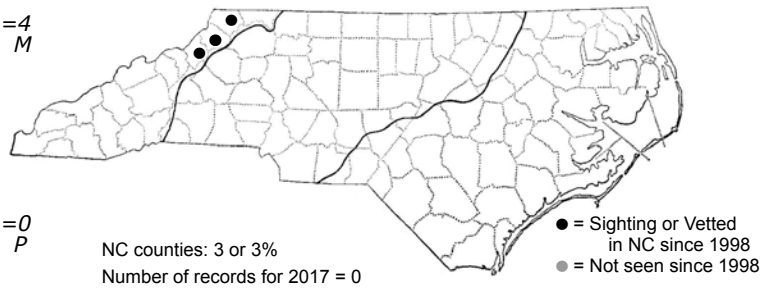
HABITAT: Marshy edges of lakes, ponds, and other open wet areas.

BEHAVIOR: Probably like other meadowhawks.

COMMENTS: It is very unfortunate that the report in OdonataCentral has no observer/photographer/collector name, no date, and no other information, to let readers know if the report is legitimate. However, the website does say that the record has been "vetted", thus approved by an expert. Nonetheless, all previous checklists for NC did not include this species; thus, it might be assumed that the report is recent (2005 or later). The NC Natural Heritage Program has added the species to its Watch List in 2012. If the data become available, as this species is not considered to be a migrant, it might be moved over to the Rare List.

Sympetrum obtrusum White-faced Meadowhawk





High counts of:
2 - Watauga - 2011-08-08
1 - Ashe - 2005-09-18
1 - Ashe - 2005-10-02

Earliest date: Watauga 2011-08-08
Latest date: Ashe 2005-10-02

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

DISTRIBUTION: One of many far Northern meadowhawks, this species' southern end of the range barely reaches NC, where limited to the extreme northern mountains. Records only for Ashe, Watauga, and Avery counties.

ABUNDANCE: Presumed rare in the very limited portion of the range, though it has been found in recent years in each of the three counties within the known range.

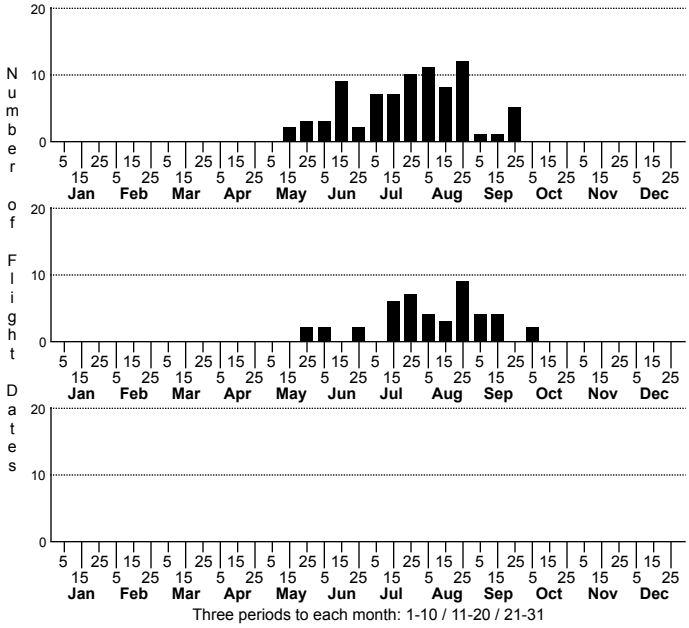
FLIGHT: Mid-summer to fall only, with the NC records from 8 August to 2 October.

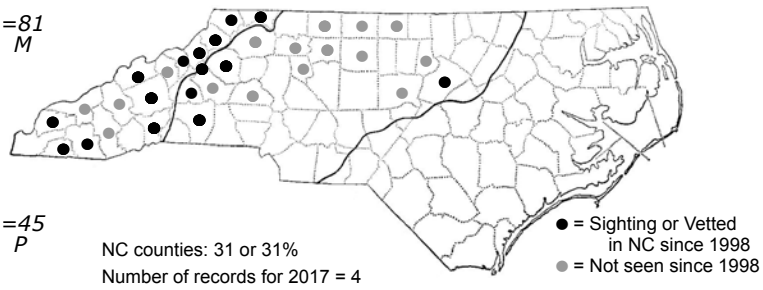
HABITAT: Still or slow-moving water of lakes, ponds, slow sections of streams, marshes, and bogs.

BEHAVIOR: Adults forage in nearby fields or clearings near water, perching on the tips of grasses and forbs.

COMMENTS: Males have intense red abdomens and a white face, rendering them very striking. However, Ruby Meadowhawk males are also bright red, though their face is not white. Ted Wilcox has provided several excellent photos from Ashe County, which provided a new county record; Curtis Smalling photographed one in 2011 from Watauga County; and Ed Corey added an Avery County record in 2008. Duncan Cuyler's database has a record just for Watauga County.

Sympetrum rubicundulum Ruby Meadowhawk





NC counties: 31 or 31%
Number of records for 2017 = 4

High counts of:
33 - Buncombe - 2012-06-08
30 - Avery - 2009-07-23
30 - Buncombe - 2013-06-30

Earliest date: Buncombe 2012-05-11
Latest date: Wake 2006-10-05

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

DISTRIBUTION: Throughout the mountains and foothills of the Piedmont, and also present in the northern half of the Piedmont; records south to Wake, Chatham, Davie, and Rutherford counties. Apparently absent from the southeastern portion of the Piedmont and all of the Coastal Plain.

ABUNDANCE: Fairly common, to locally common, in the mountains; uncommon in the foothills, but rare in the northern Piedmont east to Caswell and Guilford counties, and apparently very rare east to Wake County. Surprisingly there seems to be only one recent record for the Piedmont east of the foothills, suggesting a population decline there.

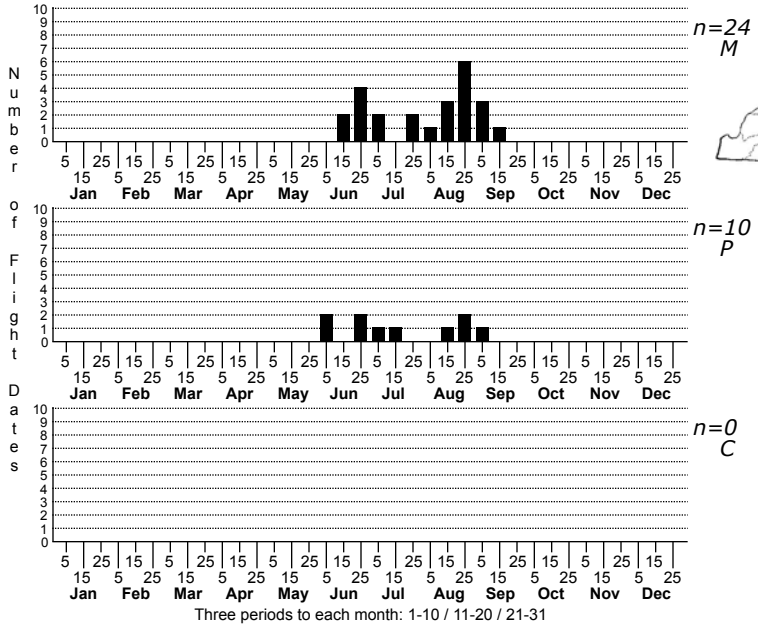
FLIGHT: Unlike most other meadowhawks, this species flies mainly in summer. The mountain flight occurs from mid-May to late September. The Piedmont flight is similar -- late May to early October.

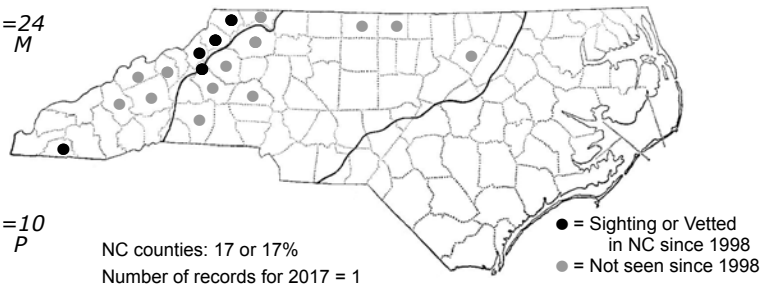
HABITAT: Mainly breeds at temporary pools and ponds, marshes, and other small bodies of water.

BEHAVIOR: Adults forage away from these small pools, perching on twigs and other vegetation, often fairly low.

COMMENTS: Considering the bright red color of the males, its habit of perching in somewhat conspicuous places, and its flight in the middle of the season when many people are out looking for odonates, the species is only infrequently reported away from the mountains, thus "corroborating" that it is definitely not a numerous dragonfly in most of the Piedmont. In fact, the great increase in the number of odonate watchers in the Piedmont strongly indicates that the species has declined east of the mountains, as Cuyler's many collections from the Piedmont have not been backed up by recent photos and observations. In this latter region, it is clearly outnumbered by Autumn and Blue-faced meadowhawks. Fortunately, it can be quite numerous in the mountains, and there are a few daily counts there of at least 30 individuals.

Sympetrum semicinctum Band-winged Meadowhawk





NC counties: 17 or 17%
Number of records for 2017 = 1

High counts of:
8 - Ashe - 2007-08-09
6 - Watauga - 2017-09-04
4 - Watauga - 2009-09-14

Earliest date: Franklin 1974-06-06
Latest date: Watauga 2009-09-14

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

DISTRIBUTION: This is another Northern meadowhawk, but its range extends southward in the mountains to northern GA. In NC, it is found mainly in the mountains and foothills of the Piedmont, but there are a few records in the northern Piedmont away from the mountains (Rockingham, Caswell, and Franklin counties).

ABUNDANCE: Uncommon in the northern mountains, but rare in the central and southern mountain counties; rare in the Piedmont foothills; very rare east of the foothill ranges in the northern Piedmont. We have no recent reports from east of the mountains/foothills, which clearly indicates that the species has declined in recent decades in the Piedmont.

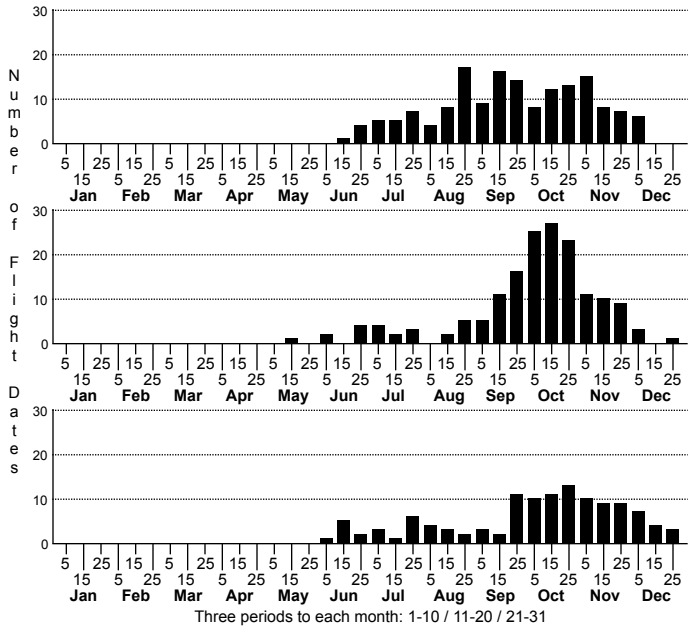
FLIGHT: Mid-June to mid-September in the mountains; early June to early September in the Piedmont.

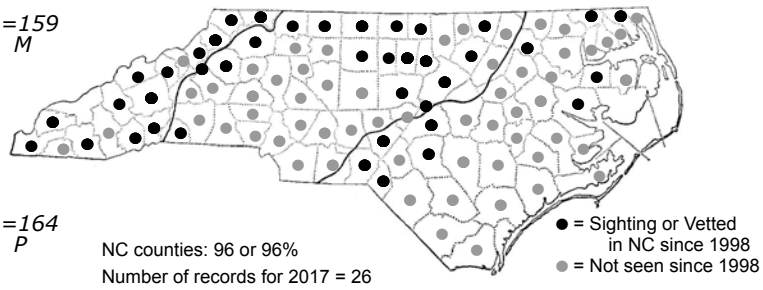
HABITAT: Unusual for most dragonflies, it favors marshes, bogs, and wet meadows for breeding.

BEHAVIOR: Adults forage from tips of grasses and sedges in or very close to marshes and bogs.

COMMENTS: Because this species seems to be tied to a fairly limited and specific habitat -- marshes, wet meadows, and bogs -- it can be specifically searched for. As the basal half of each wing is sooty in color, coupled with the dull reddish abdomen, the male is quite unmistakable. It is more widespread in the mountains than is the White-faced Meadowhawk, which also can occur in cool/cold bogs, marshes, and other open wetlands.

Sympetrum vicinum Autumn Meadowhawk





NC counties: 96 or 96%
Number of records for 2017 = 26

High counts of:
30 - Watauga - 2015-09-18
30 - Alleghany - 2017-09-27
25 - Alleghany - 2017-09-27

Earliest date: Caldwell 1999-05-17
Latest date: Durham 1978-12-25

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

Other Name: Yellow-legged Meadowhawk

DISTRIBUTION: Statewide, with records for all but four counties. Probably scarce on the Outer Banks and the eastern "Pamlimarle"Peninsula -- no records yet for Hyde and Dare counties.

ABUNDANCE: Fairly common and widespread in the mountains and Piedmont; uncommon to (at least formerly) fairly common in the Coastal Plain, but oddly there are few recent records for most of the Coastal Plain. Most numerous in the mountains, where our three largest daily counts have been made. Clearly the most numerous of the meadowhawks in NC. Even so, it does not occur in large numbers, though we now have three daily counts of 20 or more.

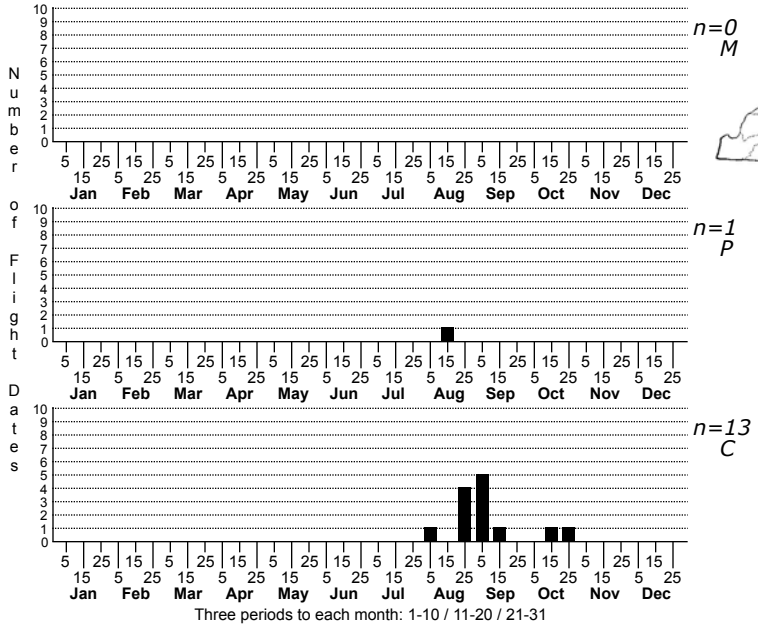
FLIGHT: Flies from early or mid-June into December, and there is even a record for 25 December! The mountain flight starts somewhat later, in mid- to late June. It is the most frequently seen dragonfly species in November and December, and the bulk of its flight takes place in fall -- September into November.

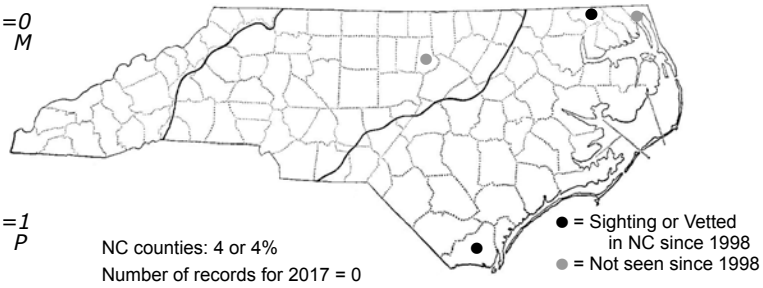
HABITAT: Still waters of ponds, marshes, and slow creeks, typically in wooded or semi-shaded places.

BEHAVIOR: Adults are frequently seen in fields, powerline clearings, and woodland borders in the fall, often perching on the tips of grasses or forbs or twigs. However, it is a fairly small species and can easily be overlooked.

COMMENTS: This species was formerly called the Yellow-legged Meadowhawk, until the common name was changed several years ago. Both common names -- Yellow-legged and Autumn -- are suitable, though other meadowhawks fly in the autumn. Of all of the numerous dragonflies in NC, this is probably the one that observers don't see their first individual until September or even October. Females and immatures are a dull amber/yellow, matching the color of dead grasses, rendering them hard to spot, particularly as they average only 1.0 - 1.4" in length.

Tramea calverti Striped Saddlebags





NC counties: 4 or 4%
Number of records for 2017 = 0

High counts of:
3 - Gates - 2014-09-10
2 - Brunswick - 2006-10-29
2 - Currituck - 1969-08-09

Earliest date: Currituck 1969-08-09
Latest date: Brunswick 2006-10-29

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

DISTRIBUTION: Breeds north only to the southern half of TX. However, it strays somewhat regularly to the East Coast of the United States. There are records for four NC counties -- Durham, Gates, Currituck, and Brunswick.

ABUNDANCE: Casual stray to the coast and lower Coastal Plain of NC. Accidental inland (Durham County).

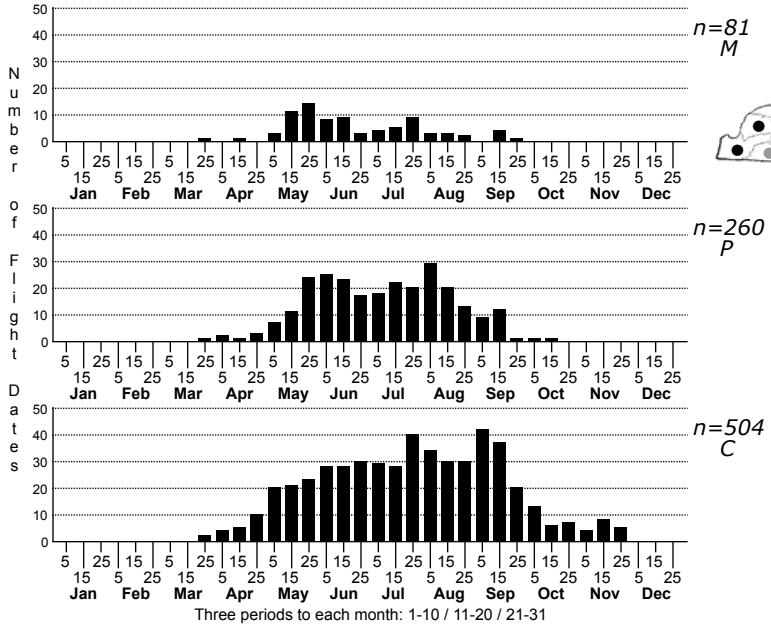
FLIGHT: Late summer and fall. The NC records fall between 9 August and 29 October. Most of the flight dates are from Merchants Millpond State Park in Gates County in 2014.

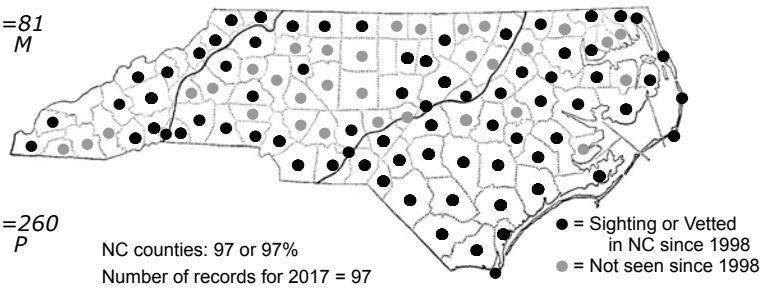
HABITAT: In NC, the species can occur anywhere, primarily near the coast, as it is a stray.

BEHAVIOR: As with other saddlebags, adults spend most of the time in flight, perching infrequently. They often hover or glide, with seemingly little effort. The individual seen in Brunswick County acted like a Carolina Saddlebags or Wandering Glider, flying mainly over head height, with much gliding.

COMMENTS: This is a very rare migrant/stray. Harry LeGrand, Jeff Pippen, and Ricky Davis saw one on 29 October 2006 at a golf course just north of Calabash. Fortunately, it perched briefly, and Pippen and Davis got recognizable photos to document the record. Floyd and Signa Williams saw and netted two individuals (at least) over a two-day period in late August 2014 at Merchants Millpond State Park, obtaining several photos for confirmation. However, the observations did not stop there; they noted up to three at that site well into October! Duncan Cuyler is responsible for the other records, collecting one in Durham County and two in Currituck County.

Tramea carolina Carolina Saddlebags





NC counties: 97 or 97%
Number of records for 2017 = 97

High counts of:
75 - Onslow - 2016-06-12
50 - Scotland - 2008-04-19
50 - New Hanover - 2015-09-13

Earliest date: Pender 2008-03-26
Latest date: Onslow 2015-11-29

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

DISTRIBUTION: Statewide, with only three counties (two in the mountains) lacking records. Obviously occurs in all 100 counties.

ABUNDANCE: Common and widespread in the Coastal Plain and Piedmont, and can be very common at times in the Coastal Plain, especially close to the coast. Fairly common in the mountains.

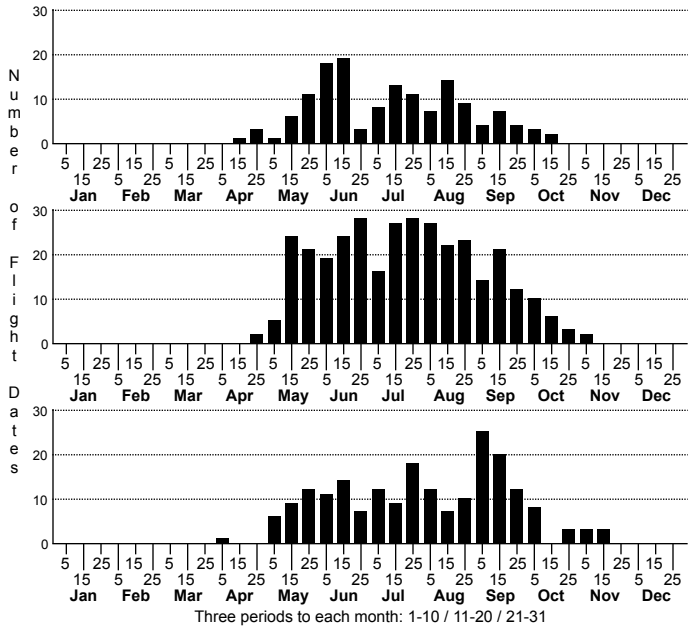
FLIGHT: In the Coastal Plain, it flies almost throughout the odonate flight season -- very late March to mid-November; however, not numerous in the spring. In the Piedmont, it also begins in late March, but the latest date is just mid-October. In the mountains, it has also been seen as early as late March, but the last date is in late September.

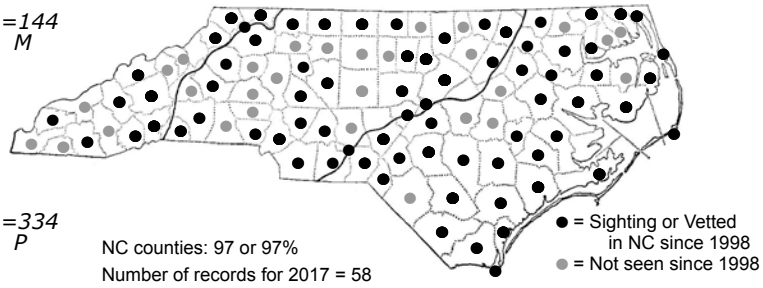
HABITAT: Breeds at ponds, lakes, marshes, and other open, still waters.

BEHAVIOR: Males are often seen flying over ponds and lake margins, usually higher above water than other species, and perching on twigs farther from shore than most species. Adults are most frequently seen in gliding flight well above head height, typically 8-15' off the ground, usually over open country. They seemingly can stay airborne for an hour or longer, and observers often get impatient waiting for such an individual to come to a perch.

COMMENTS: This and the Black Saddlebags are frequently seen gliding over one's head when an observer is walking near the beach, or in a field, or in an open garden, or near a large pond. The two can be difficult to distinguish until they appear in front of a dark background and the observer can see the abdomen color (or the large pale abdomen spot of the Black Saddlebags). This species is partially migratory, as large numbers can at times be seen along the coast in fall.

Tramea lacerata Black Saddlebags





NC counties: 97 or 97%
Number of records for 2017 = 58

High counts of:
45 - Durham - 2009-10-04
45 - Wake - 2014-07-19
25 - Wake - 2014-07-26

Earliest date: Onslow 2012-04-04
Latest date: Camden 2010-11-20

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

DISTRIBUTION: Essentially statewide, with only three widely scattered counties lacking records. Certainly present in all 100 counties.

ABUNDANCE: Common across the state, with abundance seemingly quite similar in each province. Statewide abundance is slightly less than that of the Carolina Saddlebags, but there are many more records of the Black Saddlebags for the mountains than there are for the Carolina Saddlebags. (The Carolina outnumbers the Black in the Coastal Plain.)

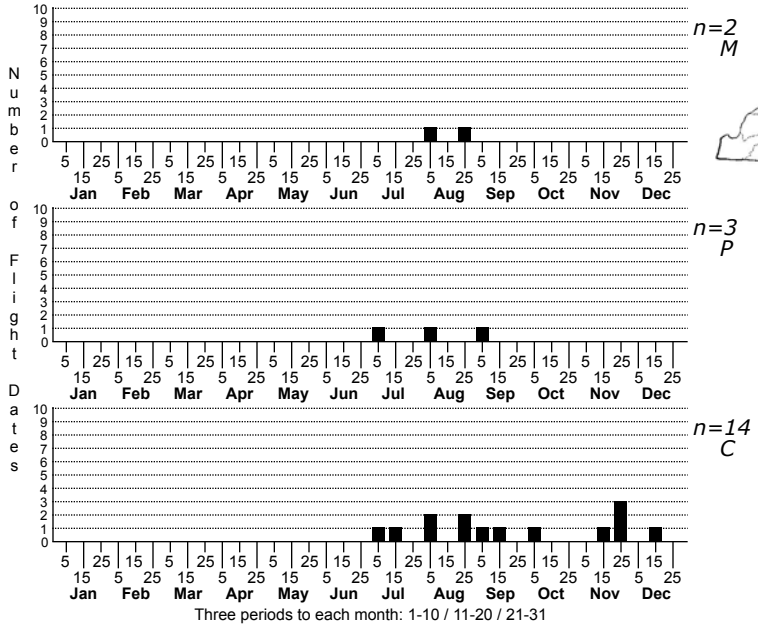
FLIGHT: In the Coastal Plain, it ranges from early April (scarce before mid-May) to mid-November. The Piedmont flight is from late April to early November; the mountain flight is from mid-April to mid-October, but it is scarce in the spring.

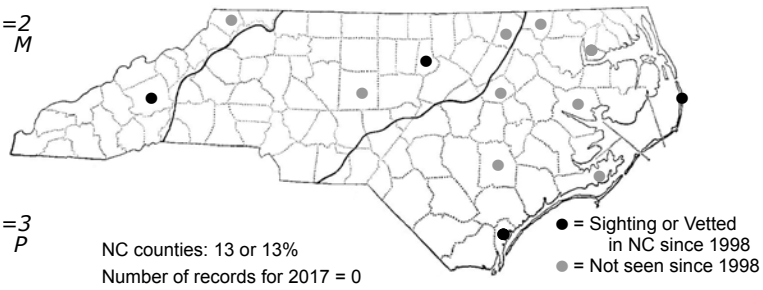
HABITAT: Ponds, lakes, marshes, and other still water in open places.

BEHAVIOR: Essentially the same as for Carolina Saddlebags. Usually seen in flight -- gliding or slowly flapping -- about 8-15' feet above ground, seldom coming to a perch.

COMMENTS: If one were not aware that Black Saddlebags and Carolina Saddlebags were different species, an observer might think that Blacks are females of Carolinas, as the two species tend to be the same size, often fly together, and are similar in abundance. Exactly what micro-habitat, food items, etc., differentiate these two is not obvious. As with the Carolina, some individuals along the coast are probably migrants, but it is not nearly as numerous a fall migrant along the coast as is the Carolina.

Tramea onusta Red Saddlebags





NC counties: 13 or 13%
Number of records for 2017 = 0

High counts of:
3 - Ashe - 1972-08-04
2 - New Hanover - 2015-11-27
2 - New Hanover - 2015-11-28

Earliest date: Randolph 1985-07-03
Latest date: New Hanover 2016-12-18

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

DISTRIBUTION: This is a species primarily of the western and central parts of the United States, and is a migrant or stray to most Atlantic Coast states. The status in NC is very confusing. A few references indicate that NC lack records; Paulson (2011) states that there are "no North Carolina records". The OdonataCentral database gives only three NC records -- a photograph from Dare County in 2003 from Pea Island NWR, two photos from New Hanover County in 2015, and another from the latter county in 2016. Several other unconfirmed reports have appeared in the literature. The University of Florida database, containing thousands of specimens from Duncan Cuyler, actually gives a stunning ten county records for Red Saddlebags! Are all of these specimens correctly identified (i.e., are not the very similar Carolina Saddlebags)?

ABUNDANCE: Presumed very rare migrant, and perhaps mainly near the coast, as the only three records that have been confirmed are from coastal counties. However, as it looks very similar to Carolina Saddlebags, most people would easily overlook the species.

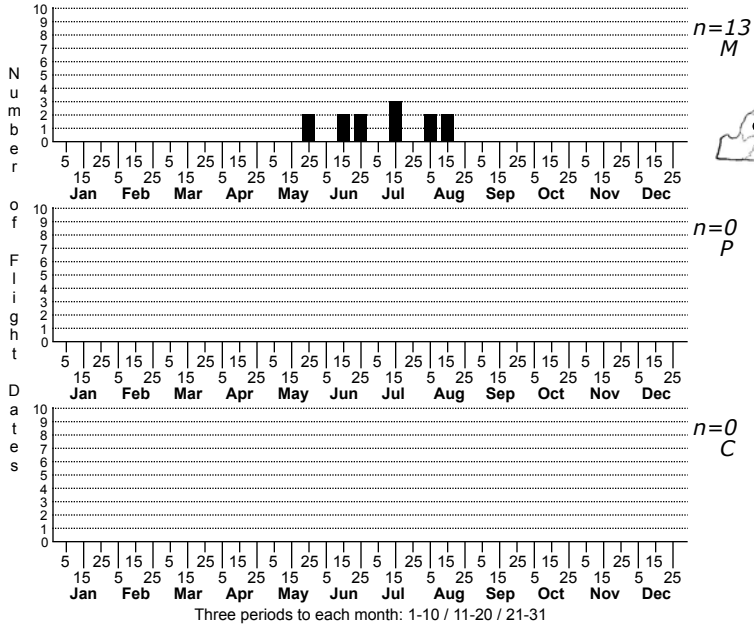
FLIGHT: Presumably only in summer and fall. The photo records are for 22 August; 19, 25, 27, and 28 November; and 18 December. The collection records, if correct, fall between 3 July and 2 October.

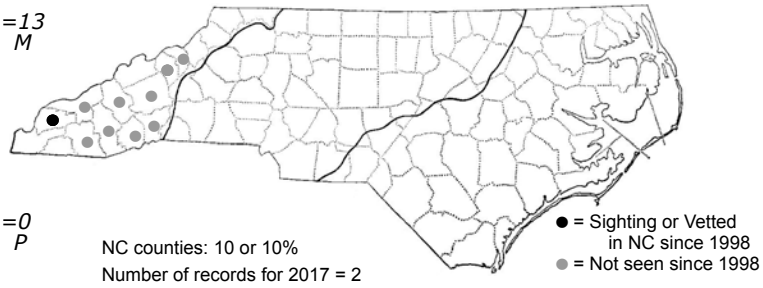
HABITAT: The NC photo records are presumably from the vicinity of coastal ponds -- Pea Island refuge (perhaps around an impoundment) and Carolina Beach State Park (limesink ponds). Paulson (2011) indicates that lakes and ponds are primary habitats, as well as canals and other slow-moving waters.

BEHAVIOR: Probably similar to other saddlebags, which typically fly above or at head height over mainly open areas -- ponds, fields, etc. They perch somewhat infrequently, and when they do perch, not surprisingly it is often over a person's eye level.

COMMENTS: No species in the state has more confusing data and status than the Red Saddlebags. Is it a not-so-rare migrant/ stray, easily overlooked amid the common Carolina Saddlebags, or is it casual to very rare as a stray? This is a difficult species to separate from the common Carolina Saddlebags through binoculars or the naked eye. However, the Red Saddlebags has a somewhat smaller hind wing patch, a somewhat duller red abdomen (despite the common name) with smaller areas of black on the terminal segments, and several other characters. Unraveling this mystery might take a few years, if ever! Thankfully, Mark Shields observed and photographed two individuals on both 27 and 28 November 2015 at Carolina Beach State Park, to further confirm its presence in the state. He also photographed two individuals at that park in November 2016, and another there in December 2016, suggesting that the species may be a regular fall visitor to southeastern NC and not just a casual stray far out of its normal range.

Calopteryx amata Superb Jewelwing





NC counties: 10 or 10%
Number of records for 2017 = 2

High counts of:
3 - Graham - 2017-07-18
2 - Haywood - 1990-05-30
2 - Graham - 2017-07-18

Earliest date: Yancey 1960-05-29
Latest date: Yancey 1996-08-17

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

DISTRIBUTION: The southern two-thirds of the mountains, if not the entire mountain region. The range map in Paulson (2011) shows that this region is a southerly disjunct area from central WV, with apparently no records for western VA. Thus, this Northeastern species might truly be missing from the northern counties of the NC mountains.

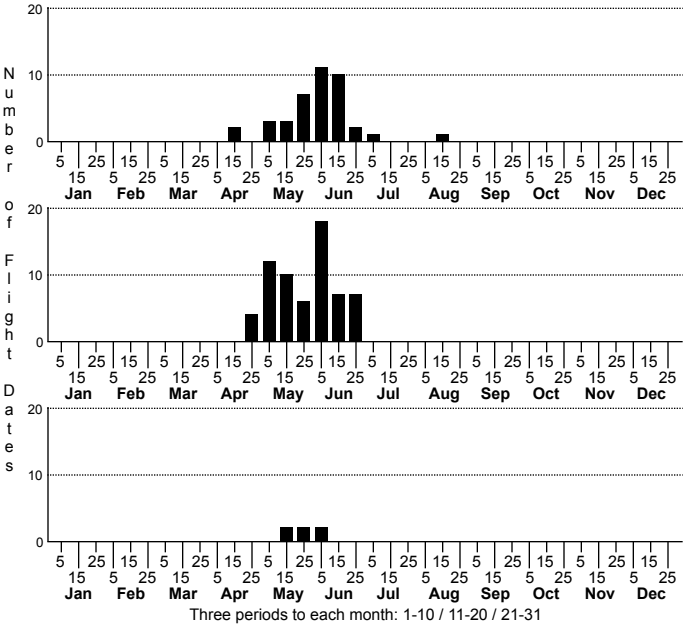
ABUNDANCE: Rare. Probably overlooked, as well, as most of the records are over 25 years old. Even though there are records for 10 of the roughly 17 true mountain counties (with nine counties documented by collections), we have only 13 records with flight dates. Also, the peak one-day count appears to be only three individuals. Because its habitat is quite widespread, there is no reason to suspect a decline in the population in the state.

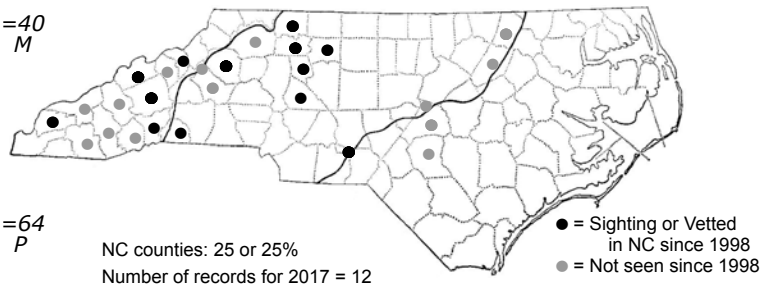
FLIGHT: The meager flight data indicate a flight period (at a minimum) of late May to mid-August.

HABITAT: Small, rocky streams in wooded areas.

COMMENTS: The NC Natural Heritage Program considered this as a Watch List species in 2010. However, as there are so few recent data, and relatively few records overall, that Program elevated the species to the Rare List in fall 2012. Thankfully, the website received its first photo record, made by Owen McConnell in 2015 in Graham County, which was a new county record as well.

Calopteryx angustipennis Appalachian Jewelwing





NC counties: 25 or 25%
Number of records for 2017 = 12

Vetted in 2017: Mitchell
Sight (not vetted) in 2017: Rowan

High counts of:
25 - Yadkin - 2017-05-17
15 - Madison - 2012-05-17
15 - Caldwell - 2016-05-09

Earliest date: Madison 2012-04-12
Latest date: Jackson 1989-08-12

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

DISTRIBUTION: Nearly throughout the mountains and Piedmont foothills. Scattered records near the Fall Line of the eastern Piedmont and upper Coastal Plain, but of uncertain presence in most of the central and eastern Piedmont. This central and eastern portion of the Piedmont has been rather well worked -- especially the Triangle area (Wake, Durham, and Orange counties), and thus the species may be truly absent in much of the middle of the state. There is also an odd gap in the northern mountains, where there are no known records between Mitchell County and the VA state line.

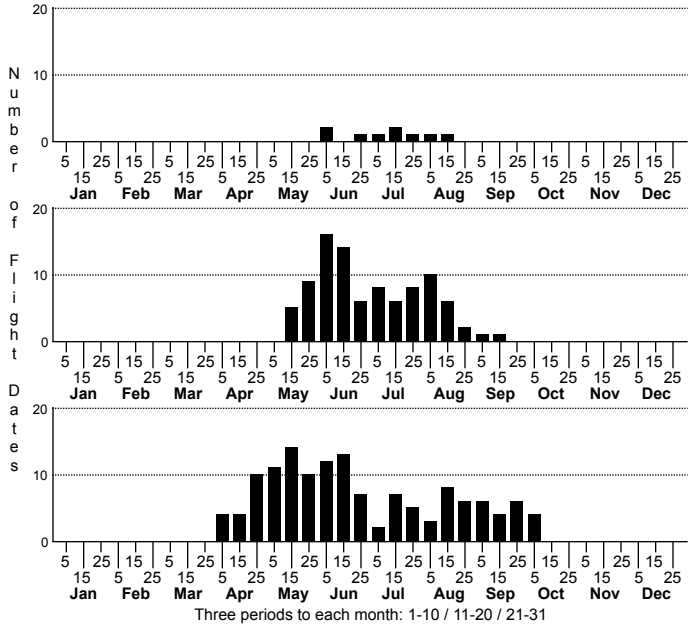
ABUNDANCE: Uncommon to locally fairly common in the mountains, but seemingly rare (but likely not absent) in the northern mountains. Uncommon (at least locally) in the northwestern Piedmont, but very rare eastward, with no recent records between Forsyth, Davie, and Rowan counties on the west and Harnett and Richmond counties on the east. Very rare to locally absent (?) in the central and eastern Piedmont and western edge of the Coastal Plain. In fact, there are no records since 1998 for these Fall Line counties.

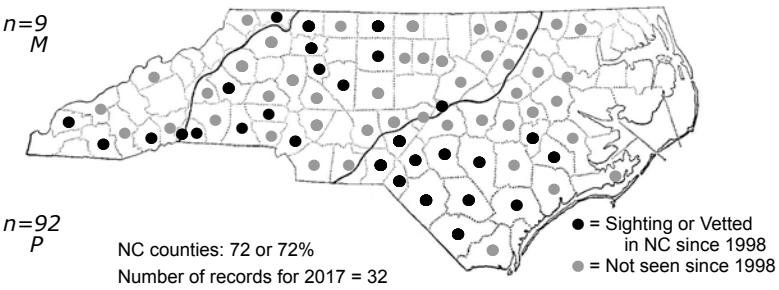
FLIGHT: Mainly mid-April to mid-August, at least in the mountains, and probably also in the Piedmont. However, records downstate are only from late April to late June.

HABITAT: Rivers and large streams, usually where rocky and with moderate current.

COMMENTS: The gap in the range in the Piedmont is most unusual, and might actually be real, as there has been much odonate field work conducted in the eastern half of the Piedmont. Any records east of the western Piedmont are greatly needed to clarify this range. Perhaps the northern mountain counties are too high in elevation for this species; records are needed in this region, as well, to fill an odd gap. The fact that there are no records east of Forsyth County since 1998 is clearly a sign of recent declines in the population near the Fall Line, as this should be an easily identified species.

Calopteryx dimidiata Sparkling Jewelwing





NC counties: 72 or 72%
Number of records for 2017 = 32

High counts of:
450 - Columbus - 2017-05-17
450 - Robeson - 2017-05-17
350 - Bladen - 2016-05-27

Earliest date: Sampson 1990-04-01
Latest date: Moore; C 1982-10-05

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

DISTRIBUTION: Nearly statewide, but seemingly absent from the northeastern third of the Coastal Plain -- the "Pamlimarle Peninsula"and the counties north of Albemarle Sound. Of spotty occurrence in the mountains, but likely present in all counties there except perhaps ones lacking low elevations (e.g., Yancey, Mitchell, Avery, Watauga).

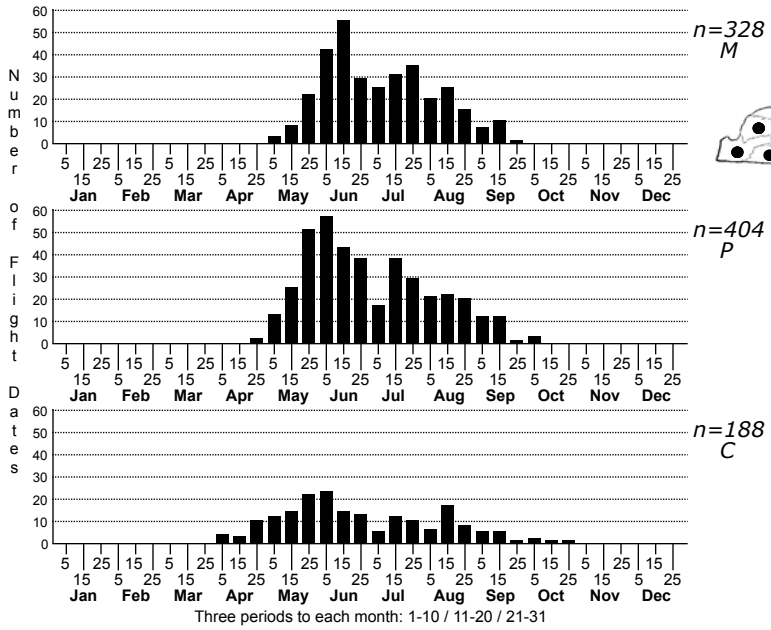
ABUNDANCE: Uncommon to locally fairly common throughout the Piedmont and most of the Coastal Plain, except for the northeastern third of the latter province, where rare to absent. Uncommon in the central Coastal Plain, but can be quite common in the southern portion of this province (with several daily counts of 350 or more individuals). Very rare in the mountains.

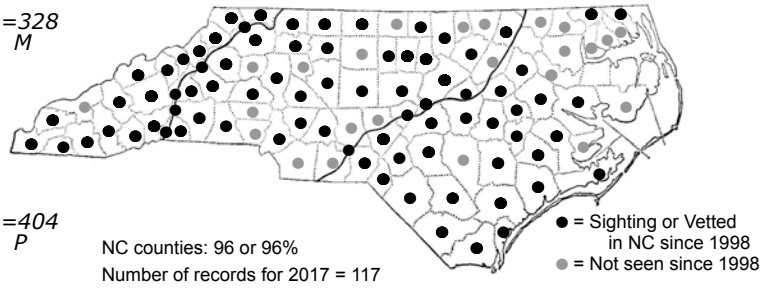
FLIGHT: Early April to early October in the Coastal Plain, but so far just from mid-May to mid-September in the Piedmont. Though there are at least nine counties with records for the mountains, we have flight data only from early June to mid-August.

HABITAT: Small streams, generally where fast-flowing and acidic, and not necessarily in forested areas.

COMMENTS: Range maps in Paulson (2011) and Beaton (2007) show all of NC within the range of the species. This may be generous and "broad-brush", as it appears to be truly absent in northeastern NC and maybe absent in some of the northern mountain counties. The species is surprisingly rare in the mountains, considering its relative numbers in the Piedmont. Also, despite the heavy amount of odonate field work in the northeastern Piedmont, where many biologists live, there are no recent records there!

Calopteryx maculata Ebony Jewelwing





NC counties: 96 or 96%
Number of records for 2017 = 117

Vetted in 2017: McDowell; M

High counts of:
118 - Onslow - 2016-06-04
118 - Jones - 2016-06-04
98 - Buncombe - 2012-05-16

Earliest date: Sampson 1990-04-01
Latest date: Brunswick 1971-10-27

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

DISTRIBUTION: Statewide, lacking records only in four far eastern counties, though likely present in all 100 counties.

ABUNDANCE: Very common (to locally abundant) across the state, except less numerous in the eastern Coastal Plain. Seemingly rare in counties surrounding Albemarle Sound, and perhaps absent on the Outer Banks. One of the most abundant odonates in the mountain province.

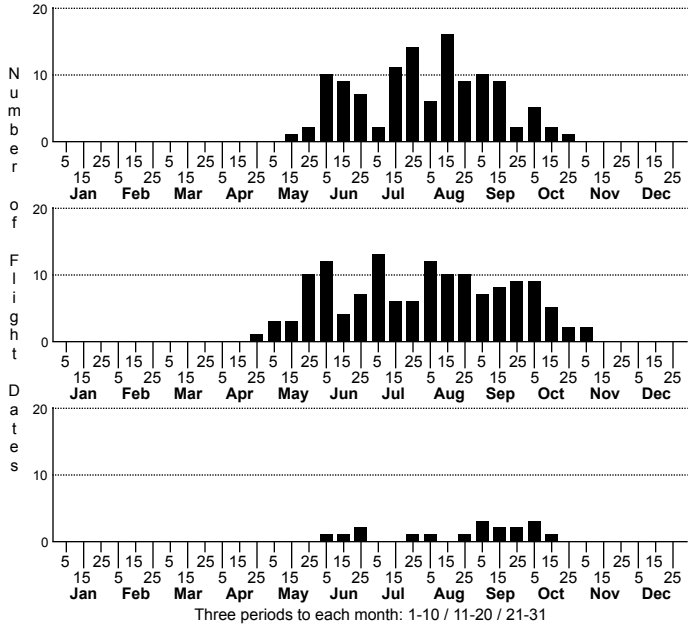
FLIGHT: Early April to late October in the Coastal Plain; late April or early May to early October in the Piedmont, and to late September in the mountains.

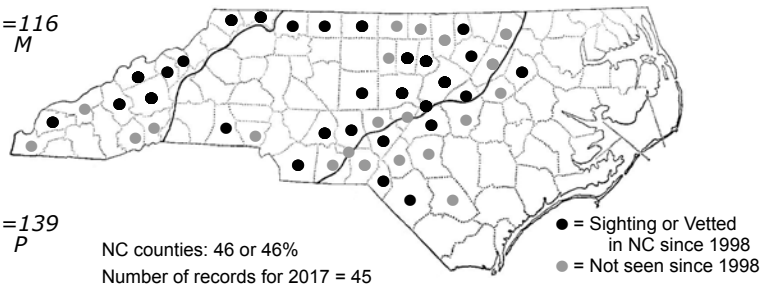
HABITAT: A wide variety of stream habitats, but most common along small forested streams.

BEHAVIOR: Where present, easily seen flitting slowly amid vegetation close to a stream, usually in shade or in small openings inside a forest.

COMMENTS: This is, by far, our most commonly seen member of the Family Calopterygidae (Broad-winged Damsels), and it is also one of the most obvious and easily identified of all of our damselflies.

Hetaerina americana American Rubyspot





NC counties: 46 or 46%
Number of records for 2017 = 45

Vetted in 2017: Mitchell
Sight (not vetted) in 2017: Robeson

High counts of:
1155 - Wake - 2012-09-27
600 - Wake - 2012-07-20
600 - Wake - 2012-07-20

Earliest date: Chatham 2017-04-22
Latest date: Durham 1964-11-07

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

DISTRIBUTION: Throughout the mountains, presumably throughout the Piedmont, and the western third of the Coastal Plain, including the Sandhills. Absent from the eastern 60-65% of the Coastal Plain; absence of records from much of the western Piedmont is likely due to poor survey coverage.

ABUNDANCE: Common to locally abundant in the mountains, and also in the eastern Piedmont, near the Fall Line. Seemingly quite rare in the western half of the Piedmont, for unknown reasons. Also, rare (or very uncommon) in the western Coastal Plain/ Sandhills.

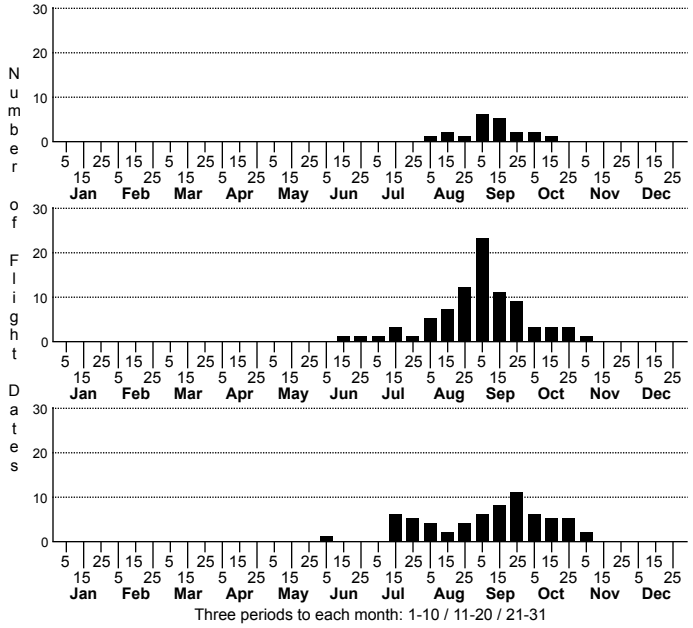
FLIGHT: Late April to early November in the Piedmont; apparently slightly shorter flight period in the mountains -- mid-May to late October. Coastal Plain flight period probably is similar to that of the Piedmont, though currently we have flight dates only from early June to mid-October.

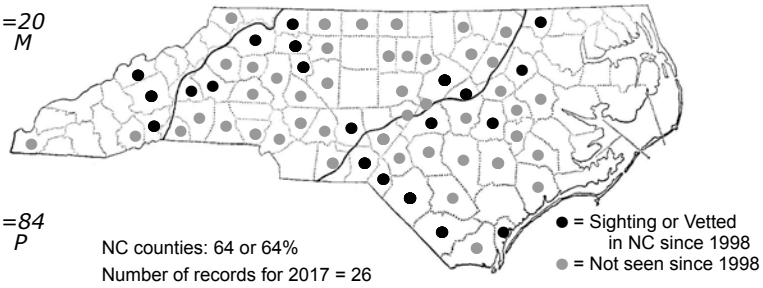
HABITAT: Rocky streams and rivers, generally where clear and with moderate current.

BEHAVIOR: Typically seen perched on rocks or stems/twigs very close to the river or large stream, often in somewhat open/ sunny conditions.

COMMENTS: There are a number of daily counts over 75 individuals, and a few over 500 individuals; yet the range is rather puzzling. Some of these high counts are close to the Fall Line, and others are in the mountains. Yet, how can there be no records at all, much less counts of over 10 individuals, from essentially any foothills county or other counties nearby in the Piedmont? It would seem that there are plenty of suitable rocky streams and rivers in this area. This species is one of the larger and more beautiful of the damselfies, with the deep red/crimson color of the thorax and wing bases of the adult males being quite spectacular in sunlight.

Hetaerina titia Smoky Rubyspot





NC counties: 64 or 64%
Number of records for 2017 = 26

Sight (not vetted) in 2017: Edgecombe

High counts of:
100 - Robeson - 2016-08-27
100 - Columbus - 2016-08-27
30 - Robeson - 2016-09-25

Earliest date: New Hanover 2015-06-04
Latest date: Moore; C 1965-11-06

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

DISTRIBUTION: Present essentially throughout the Piedmont and the southern and western Coastal Plain; apparently absent from the eastern third of the Coastal Plain. Scattered across the length of the mountains, but with several large gaps in the range. No records yet east of Northampton, Pitt, and Onslow counties. Records only for 1/3rd of the mountain counties, but likely present in all 17 counties there, as the distribution covers counties from the VA state line to the GA state line.

ABUNDANCE: Uncommon over its range in the state. Locally fairly common to common at a few sites in the western Coastal Plain/Sandhills and eastern Piedmont; however, not reported recently from most of the counties in these latter areas.

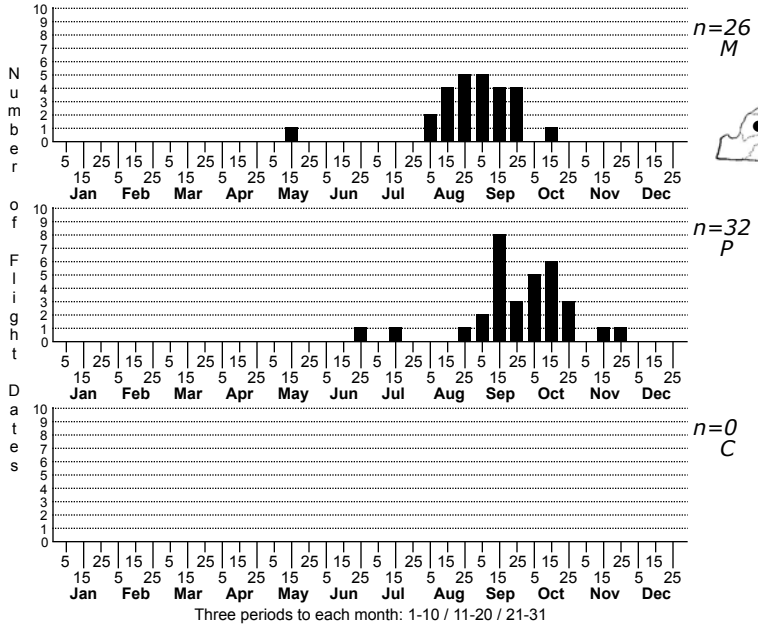
FLIGHT: Mid-June to early November in the Piedmont and Coastal Plain. The mountain records are fairly late in the season -- early August to mid-October.

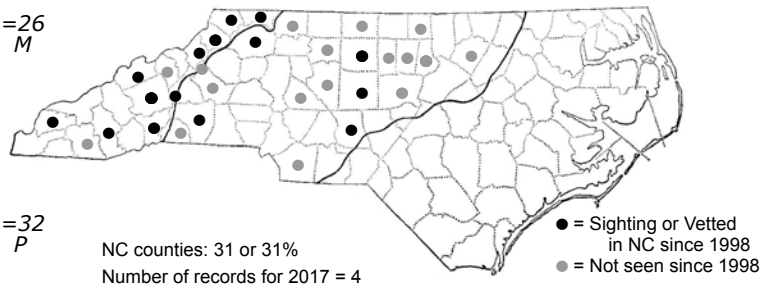
HABITAT: Rivers and larger streams, typically where the current is slow to moderate flowing. Apparently at larger rivers and slower-flowing waters than is the American Rubyspot, though the habitats overlap, and both can occur along the same stream or river.

BEHAVIOR: This species is more wary than is the American Rubyspot, making photography or close observation of one more challenging.

COMMENTS: Considering the large number of counties known for the species (over 60), we have recent records for barely 20 of them. In some species, this would indicate a decline in the population of the species. It is premature to say that a decline has occurred, and perhaps the species is being overlooked as American Rubyspots. At any rate, the relative scarcity of recent records is surprising, if not disturbing, for such a fairly large and conspicuous species. Thankfully, Mark Shields had several quite large counts of the species in August - September 2016 along the Lumber River.

Archilestes grandis Great Spreadwing





NC counties: 31 or 31%
Number of records for 2017 = 4

Vetted in 2017: Alleghany

High counts of:
12 - Madison - 2016-10-14
4 - Forsyth - 1977-09-18
3 - Henderson - 2011-05-12

Earliest date: Henderson 2011-05-12
Latest date: Durham 1979-11-24

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

DISTRIBUTION: Apparently throughout the mountains and Piedmont; and seemingly absent from the Coastal Plain. The range appears to stop at the Fall Line.

ABUNDANCE: Rare to uncommon in the mountains and the Piedmont foothills; rare in the remainder of the Piedmont, and very rare along the eastern edge of the range (Fall Line vicinity).

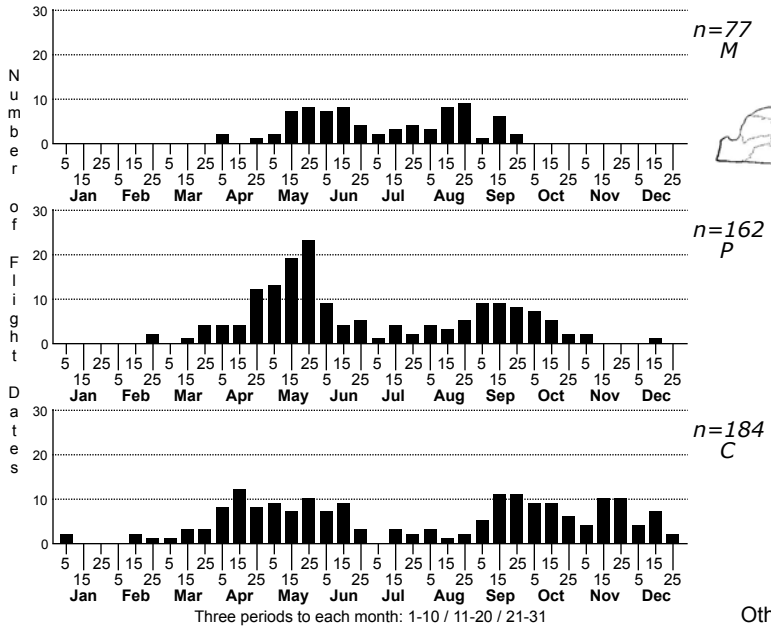
FLIGHT: In the mountains, generally from early August to late September, and in the Piedmont mainly from late June to late November. A report from mid-May is perhaps in error.

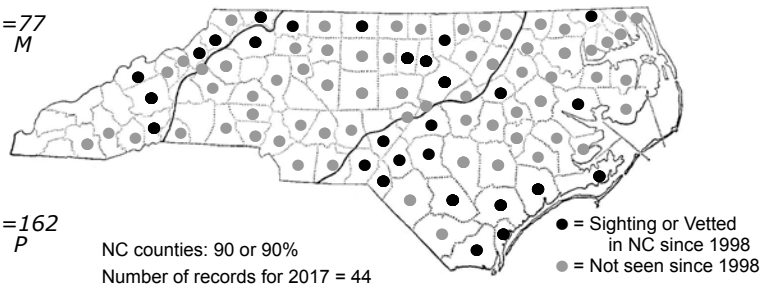
HABITAT: Along slow streams, but sometimes in rather degraded places.

BEHAVIOR: It can often be seen well away from streams, such as around ponds or in fields/forest edges.

COMMENTS: This is a very large damselfly, larger than other spreadwings. The range seems a bit spotty in the mountains and western Piedmont, though the species is assumed to occur throughout these regions, and there are a number of recent records. Only in the past few years have records been made for the central and eastern Piedmont counties; however, the well-worked Triangle area (Orange, Durham, and Wake counties) has not had records in several decades.

Lestes australis Southern Spreadwing





NC counties: 90 or 90%
Number of records for 2017 = 44

High counts of:
31 - New Hanover - 2016-12-18
25 - Buncombe - 2012-05-16
23 - New Hanover - 2016-11-19

Earliest date: Onslow 2017-01-03
Latest date: Onslow 2015-12-25

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

Other Name: Common Spreadwing, Northern Spreadwing

DISTRIBUTION: Essentially statewide, even to the coast (where many odonates are rare or absent). No records yet from several counties at the southwestern tip of the state, but probably present in all 100 counties.

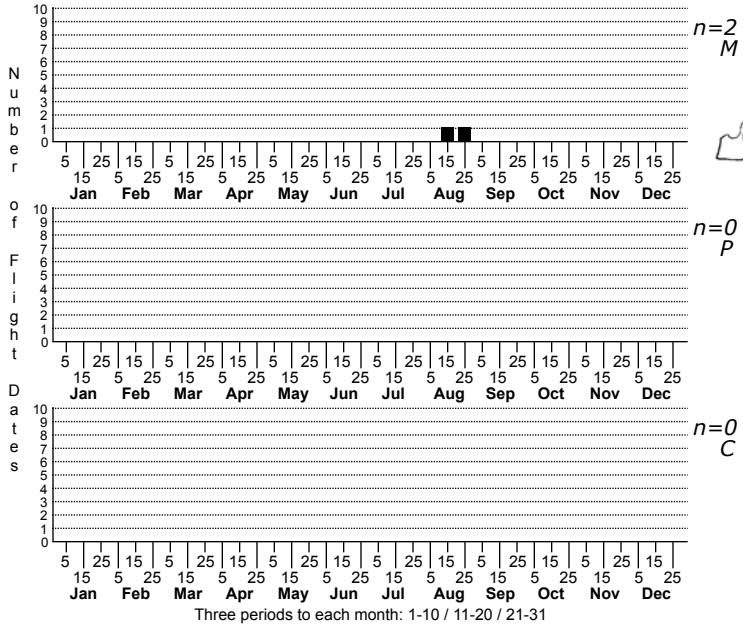
ABUNDANCE: Fairly common to often common in the mountains and Piedmont, except scarce (rare?) in the extreme southwestern counties. Fairly common and widespread in most of the Coastal Plain.

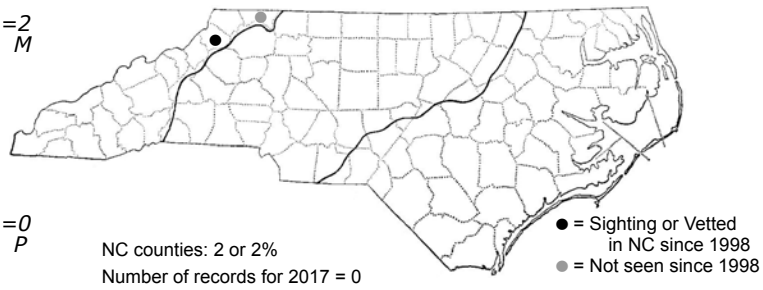
FLIGHT: A remarkably wide flight period, even into early winter. In the Coastal Plain and Piedmont, from early March to mid-December (rarely near the coast into January). There is even a late February record for the Piedmont. In the mountains, the flight occurs between late April and late September.

HABITAT: Generally around ponds or small lakes, with much vegetation around their margins, including marshes.

COMMENTS: Until recently, this was considered as a subspecies of the Common Spreadwing; however, that species was split into two species -- Southern Spreadwing and Northern Spreadwing (not in North Carolina). Mark Shields has provided a number of early winter records for the species at a few coastal ponds.

Lestes congener Spotted Spreadwing





NC counties: 2 or 2%
Number of records for 2017 = 0

High counts of:
2 - Watauga - 2007-08-18
2 - Alleghany - 1987-08-25

Earliest date: Watauga 2007-08-18
Latest date: Alleghany 1987-08-25

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

DISTRIBUTION: Currently the northwestern mountains only. NC is near the southeastern edge of the range of this widespread species.

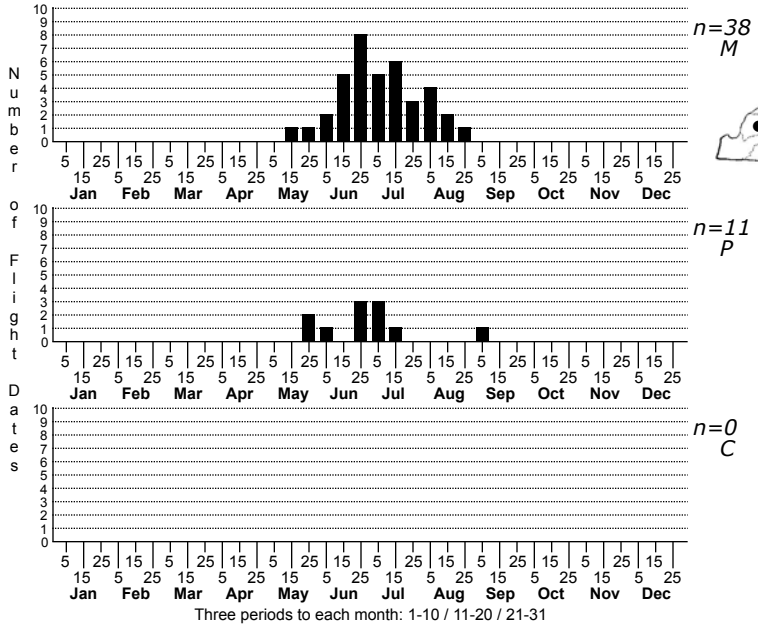
ABUNDANCE: Males can be abundant in good habitat within at least part of the range. It is possible that the species is not actually rare in the northwestern corner of the state, just poorly surveyed for. However, as we are aware of just two records, it must be considered to be rare in the state, south only to Watauga County.

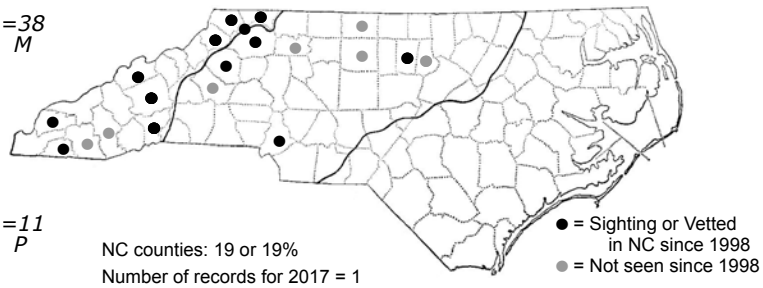
FLIGHT: Paulson (2011) lists flight dates from May to October over the range. Ted Wilcox reported two individuals on 18 August from Watauga County, and there is a collection record of two individuals on 25 August from Alleghany County.

HABITAT: Lakes and ponds, with some emergent vegetation around the margins. Roosts in woody vegetation, to a height of 10 feet.

COMMENTS: The species is obviously poorly known in the state. Additional surveys should be conducted in Ashe and Avery counties, particularly around alder thickets.

Lestes eurinus Amber-winged Spreadwing





NC counties: 19 or 19%
Number of records for 2017 = 1

High counts of:
12 - Alleghany - 1988-08-01
12 - Wilkes; M - 2015-06-16
8 - Buncombe - 2013-08-01

Earliest date: Buncombe 2015-05-20
Latest date: Guilford 1987-09-09

Status NC	Status US	Rank NC	Rank Global
W	-	S3	G4

DISTRIBUTION: Scattered throughout the mountains and the northern Piedmont. The only record for the southern half of the Piedmont is for Mecklenburg County. This is a northern species nearing the southeastern extent of its range in the state; there are records from South Carolina and western Georgia.

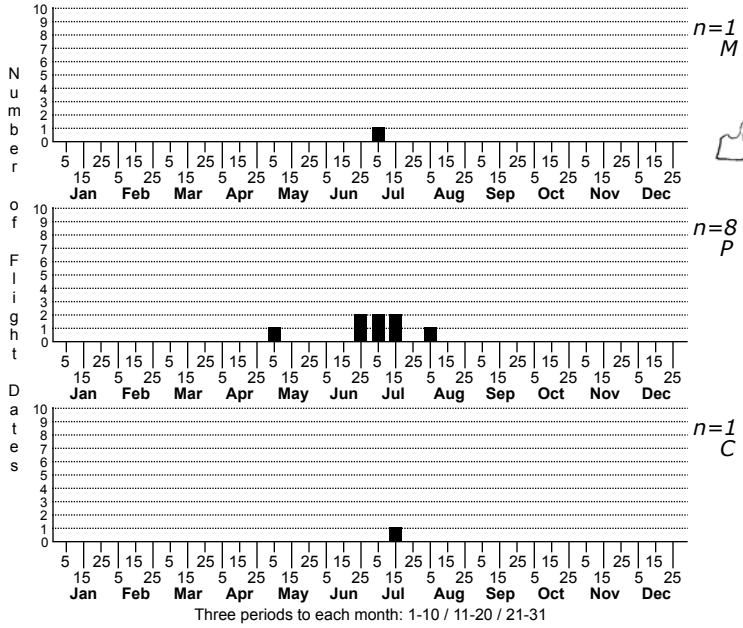
ABUNDANCE: Uncommon and local in the mountains; seemingly quite rare in some areas of the mountains. Rare in the Piedmont portion of the range. There are only two daily counts of more than 8 individuals.

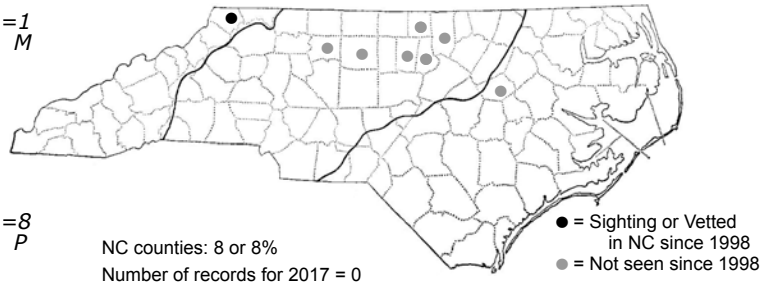
FLIGHT: In the mountains, from mid- or late May to late August. The few Piedmont records fall between late May and early September.

HABITAT: Mainly in ponds and lakes, even small wetlands, but with some emergent vegetation along the shores.

COMMENTS: Considering the potential to occur in most Piedmont counties, we have only a few recent records from the province, possibly suggesting a decline in this region. Thankfully, there have been a moderate number of recent records, many documented with photos, for the mountains. The NC Natural Heritage Program put the species on its Watch List in late 2012.

Lestes forcipatus Sweetflag Spreadwing





NC counties: 8 or 8%
Number of records for 2017 = 0

High counts of:
3 - Person - 1980-07-15
2 - Person - 1979-07-16
2 - Guilford - 1990-05-04

Earliest date: Guilford 1990-05-04
Latest date: Durham 1975-08-02

Status		Rank	
NC	US	NC	Global
W	-	S2S3	G5

DISTRIBUTION: This is a northern species whose range extends south only to NC, TN, and northern GA. In the state, it is limited to the northern third of the state, thus far recorded only in the northern mountains and northern Piedmont, with an odd disjunct record for Wilson County.

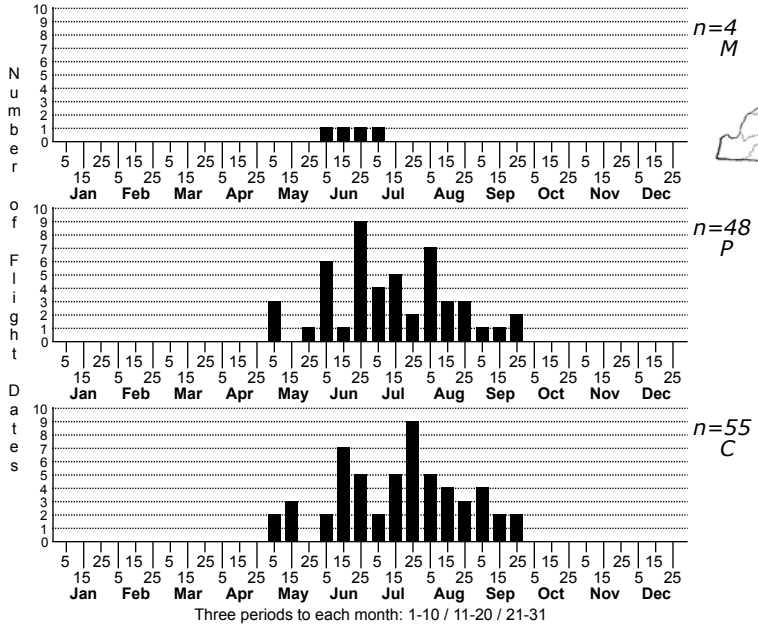
ABUNDANCE: Rare or overlooked. Rare in the Piedmont and extreme northern mountains, and presumed extremely rare in the northwestern Coastal Plain. However, the species is quite similar to other spreadwings, and thus is presumably overlooked, as well.

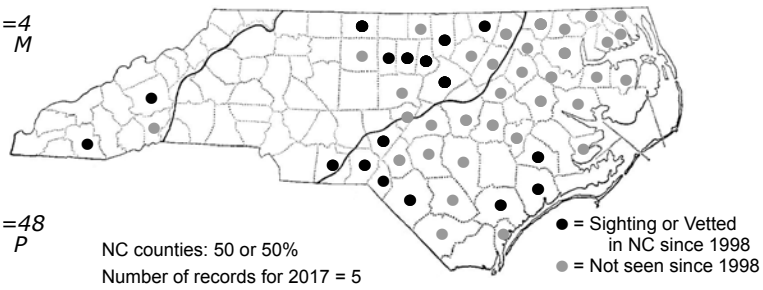
FLIGHT: Probably June into September; this is the spread of dates for GA. The Piedmont flight in NC is from early May to early August. The single record (a sight report) for the mountains is for early July, whereas the single one for the Coastal Plain is for mid-July.

HABITAT: Ponds and lakes with emergent vegetation, even in small pools.

COMMENTS: Though there are seven old county records for the Piedmont and Coastal Plain, we have no recent records for these provinces, despite a moderate number of biologists. Maybe the similarity to other spreadwings is the main reason for this lack of recent records. Though there are very few records for NC, the fact that few persons actually search for scarce damselflies, and some of these insects are easily confused with others, the NC Natural Heritage Program has kept the species on its Watch List instead of moving it to the Rare List.

Lestes inaequalis Elegant Spreadwing





NC counties: 50 or 50%
Number of records for 2017 = 5

Sight (not vetted) in 2017: Scotland

High counts of:
6 - Tyrrell - 1989-07-25
6 - Lenoir - 1995-05-03
5 - Orange - 2001-09-01

Earliest date: Wake 2010-05-01
Latest date: Durham 1998-09-28

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

DISTRIBUTION: Throughout the Coastal Plain -- except perhaps absent along parts of the immediate coast -- westward to the central Piedmont; thus, the eastern half of the state, plus a few mountain records. There is also a collection record for the southern mountains (Henderson County), and recent sight records for Buncombe and Macon counties. Interestingly, Paulson's (2011) range map shows the entire state within the range, as the species is present throughout the eastern half of the country. With the recent mountain records, it must be assumed to occur in the intervening western half of the Piedmont, as well.

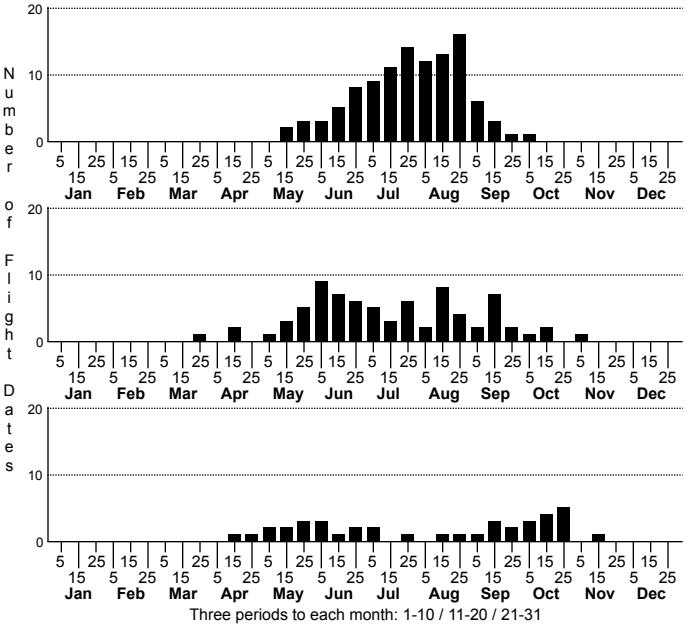
ABUNDANCE: Despite records for most of the counties within the range (50 counties), we have barely 20 recent records. Thus, it seems to be uncommon over the eastern Piedmont and most of the Coastal Plain, and likely is rare in many areas close to the coast (where there are no records for most counties that border the coast). Very rare in the southern mountains, and absent to very rare over the northern mountains and the western Piedmont.

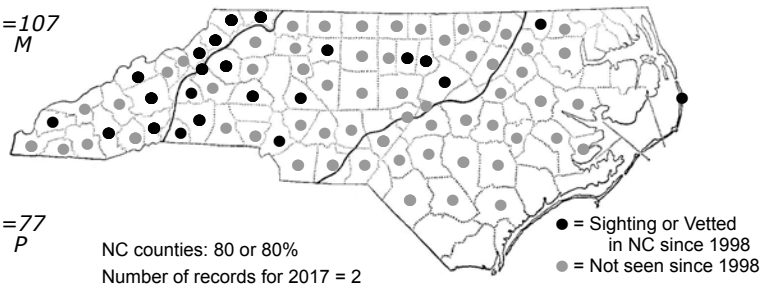
FLIGHT: The flight period in both the Coastal Plain and the Piedmont is from early May to late September. The few mountain records fall between early June to early July, but the flight should certainly occur into August there.

HABITAT: Ponds and lakes with emergent vegetation, including marshes. It also occurs along slow-moving streams, as long as marshy vegetation is present.

COMMENTS: The relative scarcity of recent records is puzzling. Perhaps it is being overlooked, but there are also few biologists currently working in the Coastal Plain, especially on damselflies, and especially in the northern half of the province.

Lestes rectangularis Slender Spreadwing





NC counties: 80 or 80%
Number of records for 2017 = 2

High counts of:
15 - Buncombe - 2013-05-21
14 - Ashe - 2007-07-29
14 - Watauga - 2007-08-18

Earliest date: Davie 1975-03-28
Latest date: Pender 1992-11-18

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

DISTRIBUTION: Nearly statewide, but practically absent close to the coast. This species ranges over most of the eastern United States.

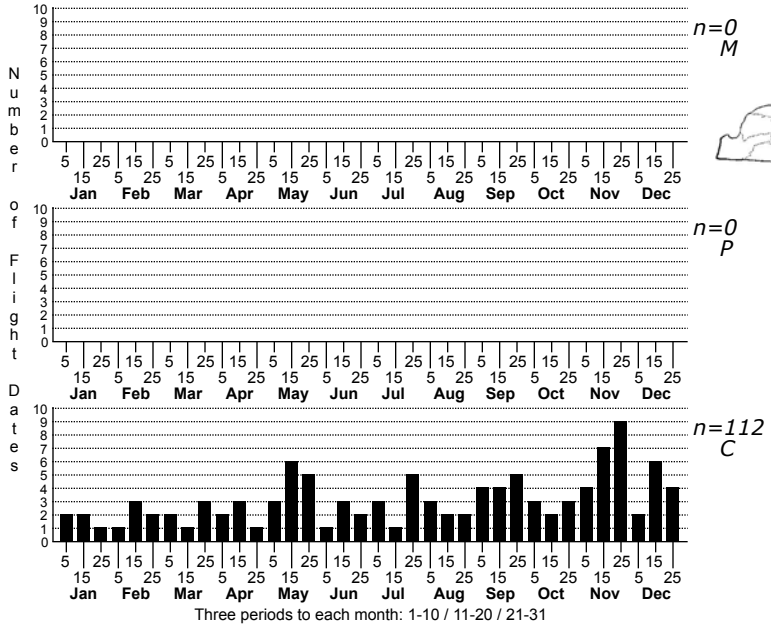
ABUNDANCE: Fairly common to common, and widespread, in the mountains; generally uncommon to fairly common in the Piedmont; uncommon in the western and central Coastal Plain. Only one record for the counties north or south of Albemarle Sound, and no records in most southern coastal counties. Clearly more numerous in the mountains than downstate, with our three highest single-day counts representing each of three such counties.

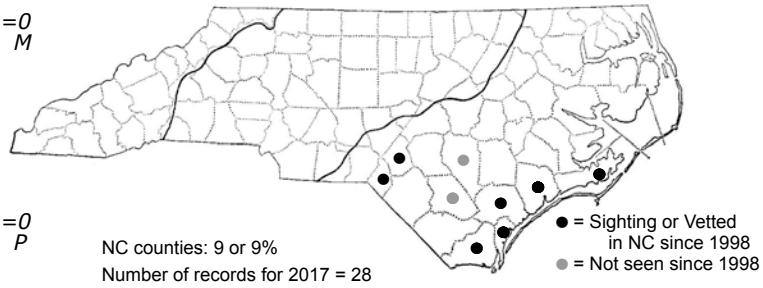
FLIGHT: A long flight period, covering most of the odonate season. From late March to early November in the Piedmont, and mid-April to mid-November in the Coastal Plain. Surprisingly, the earliest record in the mountains isn't until mid-May, and it occurs to at least early October.

HABITAT: Marshy areas, typically around ponds or lakes, but also sometimes slow streams with emergent vegetation.

COMMENTS: This is one of the more numerous damselflies in the mountains, but it is widespread downstate. Its range in the lower Coastal Plain needs more elucidation, though it is certainly scarce close to tidal water.

Lestes vidua Carolina Spreadwing





NC counties: 9 or 9%
Number of records for 2017 = 28

Vetted in 2017: Scotland

High counts of:
354 - Carteret - 2016-09-04
254 - Carteret - 2016-10-23
233 - Carteret - 2016-06-26

Earliest date: Onslow 2017-01-03
Latest date: Onslow 2015-12-30

Status NC	Status US	Rank NC	Rank Global
SR	-	S2?	G5

DISTRIBUTION: Restricted to the southern Coastal Plain, north to Scotland, Hoke, Sampson, Onslow, and Carteret counties. However, as Paulson (2011) shows the range of this Southeastern species extending north to the Great Dismal Swamp, VA, area, it might occur elsewhere in the NC Coastal Plain north of the existing range.

ABUNDANCE: Generally rare, but can be very locally abundant close to the coast. Found to be quite abundant at sites in New Hanover, Onslow, and Carteret counties in 2015 and 2016. Beaton (2007) also calls it "Rare to uncommon and local" in GA.

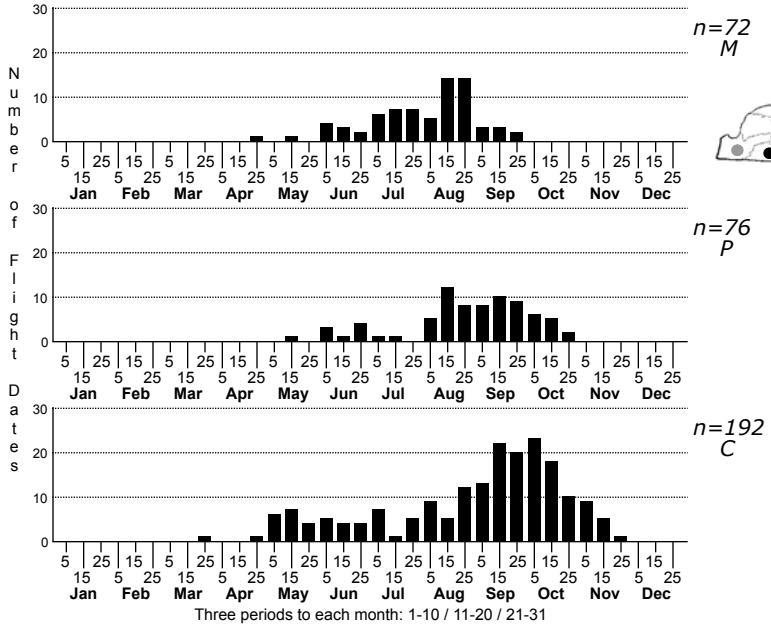
FLIGHT: Beaton (2007) shows flight dates from mid-March to mid-November for GA, but adds: "Flight season is not fully understood, more readily found during April-May and September-October (especially fall) and largely absent during the middle of the season." Mark Shields found the species to occur in all months of the year at single pond sites in Carteret and Onslow counties, even in the winter months. Very few other odonates can be seen throughout the year.

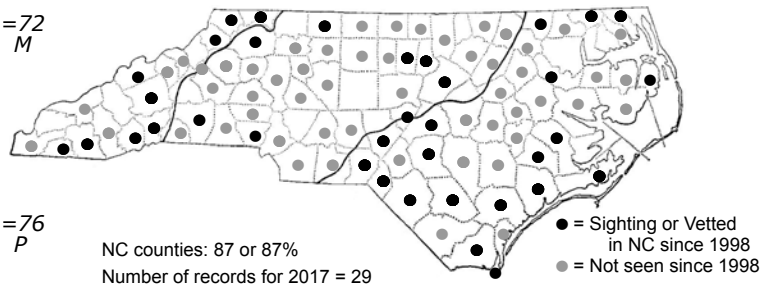
HABITAT: Edges of lakes and ponds, including temporary ponds. May also occur at freshwater marshes.

BEHAVIOR: According to Beaton (2007), males are usually found over water, perching on plants, while females can be found along the shoreline away from open water.

COMMENTS: This species clearly deserves some search efforts in North Carolina. Until 2015, it was one of the most poorly-known damselflies in the state, as evidenced by only 12 known records from just six counties prior to that year. As a result, the NC Natural Heritage Program elevated the species from its Watch List to its Rare List in Fall 2012. Thankfully, Mark Shields has found the species to be much less rare than previously thought. He found the species at clusters of pond sites in Onslow and Carteret counties throughout the year from late 2015 to late 2016, with several triple digit counts! In addition, he found it common in fall 2016 to late 2017 at several ponds in New Hanover County. Andrew Rapp photographed one in Brunswick County in 2016, as well. In 2017, Mark Shields and Hunter Phillips slightly extended the range west to Scotland County; this is our first record from the Sandhills region. Thus, the species might best be moved from Significantly Rare to Watch List.

Lestes vigilax Swamp Spreadwing





NC counties: 87 or 87%
Number of records for 2017 = 29

High counts of:
120 - Carteret - 2016-05-25
50 - Buncombe - 2011-08-21
45 - Scotland - 2017-10-07

Earliest date: Carteret 2016-03-29
Latest date: Carteret 1990-11-21

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

DISTRIBUTION: Statewide, being recorded from over 85 counties, with "absences"in scattered counties across the state. Presumed to occur in all 100 counties, unless absent along the immediate northeastern coast.

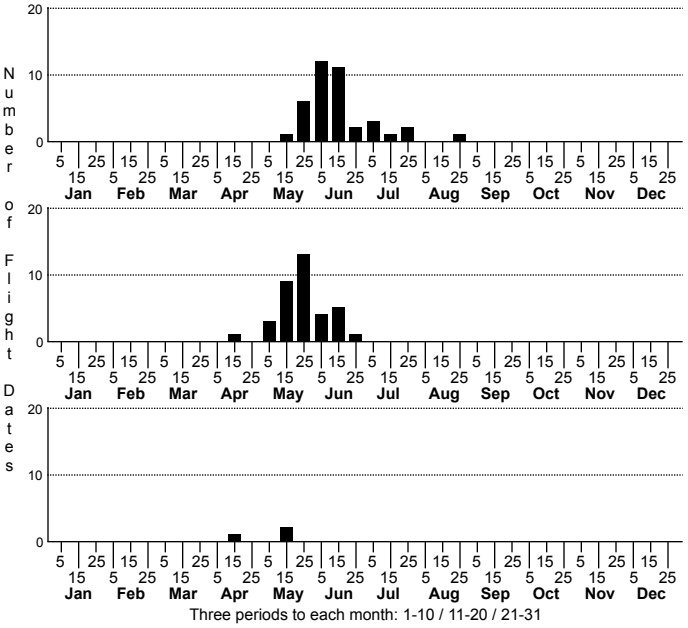
ABUNDANCE: Fairly common to common in the mountains, and locally very common in parts of the Coastal Plain. Oddly, appears to be less numerous (i.e., uncommon) in the intervening Piedmont, as there are barely more records there than in the mountains, which has a much smaller geographic range and many fewer observers than in the Piedmont. There are single-party counts of at least 20 individuals in each of the three provinces; one count surpasses 100 individuals in the lower Coastal Plain.

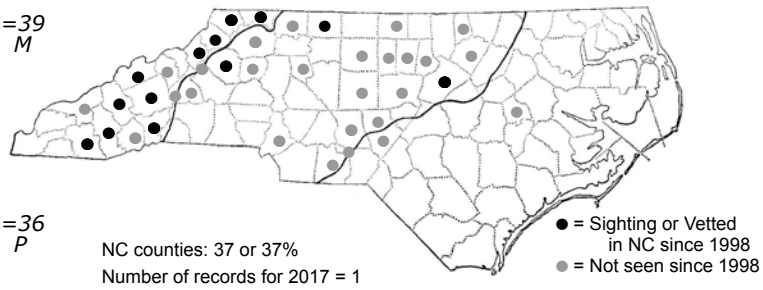
FLIGHT: A wide flight period, extending to late autumn. In the Coastal Plain, it occurs from late April to late November. Piedmont records fall between mid-May and late October; mountain records fall between mid-May and late September. There is a very early state date of 29 March for the lower Coastal Plain.

HABITAT: Ponds and lakes in somewhat wooded country, especially where shrubs grow in the water; or where marshy vegetation grows along the margins of such waters.

COMMENTS: This is another reasonably common spreadwing across the state, with large numbers of records in all three provinces. Mark Shields has added many dozens of records in the past several years from the southern coastal area.

Amphiagrion saucium Eastern Red Damsel





NC counties: 37 or 37%
Number of records for 2017 = 1

High counts of:
50 - Wake - 2010-06-21
20 - Wake - 2010-05-30
12 - Ashe - 2008-06-07

Earliest date: Wake 2017-04-14
Latest date: Jackson 2002-08-24

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

DISTRIBUTION: Throughout the mountains, and presumably throughout the Piedmont. Perhaps present in the western Sandhills, and an isolated record for the central Coastal Plain. The species is a somewhat Northern species, ranging south to central GA.

ABUNDANCE: Fairly common, to locally common, in the mountains. Seemingly rare in the western half of the Piedmont, and uncommon in the eastern half, though it can be locally numerous there. Very rare in the western Coastal Plain.

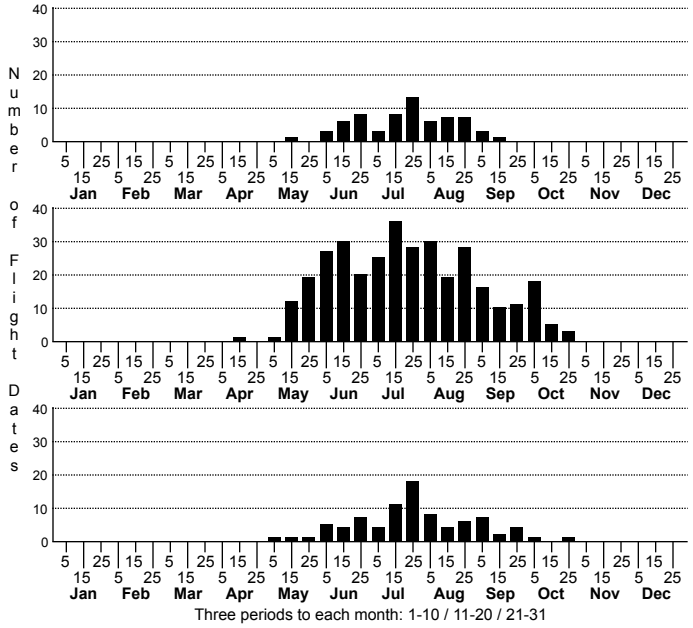
FLIGHT: A flight that ends rather early in the season, by mid-summer. The mountain flight occurs between mid-May and late July, with a photo record from fairly late August. The Piedmont flight is from early May to late June, but it should occur into August. The very few Coastal Plain records are in a narrow window from mid-April to mid-May, but records should occur into July or August.

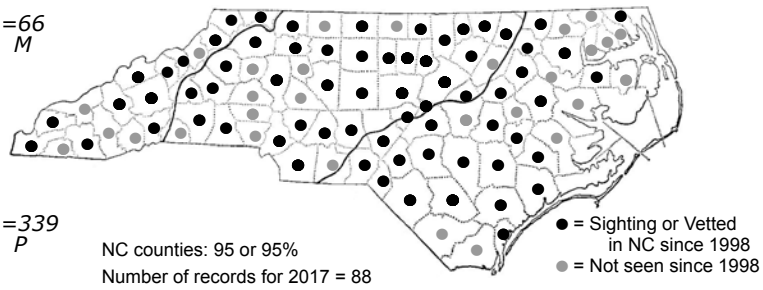
HABITAT: Small streams, seeps, bogs, or marshes, with thick vegetation.

BEHAVIOR: Perches on grasses and sedges, never on flat leaves.

COMMENTS: The absence of county records for much of the central and southwestern Piedmont is odd, considering that there are daily counts in Wake County, at the eastern edge of the Piedmont, of 20 and 50 individuals. It is not a species that is difficult to identify; thus, this odd abundance pattern might be real.

Argia apicalis Blue-fronted Dancer





NC counties: 95 or 95%
Number of records for 2017 = 88

Sight (not vetted) in 2017: Halifax; C, Mitchell, Yancey

High counts of:
100 - Chatham - 2010-07-11
50 - Durham - 2007-06-24
50 - Person - 2011-06-24

Earliest date: Union 2015-04-14
Latest date: Edgecombe 2017-10-28

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

DISTRIBUTION: Essentially statewide, though possibly absent in the eastern Tidewater Region. Presumably absent on the Outer Banks.

ABUNDANCE: Common to locally very common in the Piedmont and western Coastal Plain, particularly around flowing water in the Piedmont. Fairly common to locally common in the mountains and the central and southern Coastal Plain. Rare in the northeastern and far eastern Coastal Plain, and probably absent near the coast there.

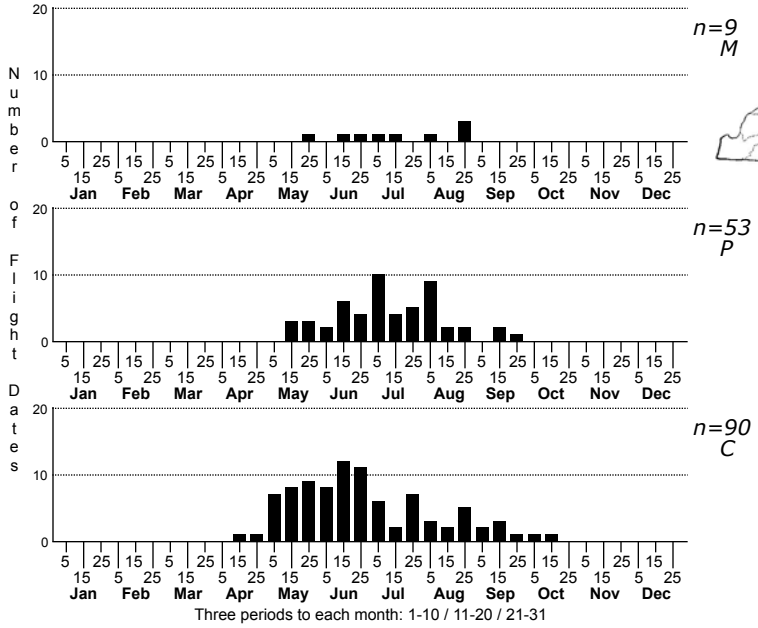
FLIGHT: Mid-May through late October in the Piedmont, and early or mid-May to early October in the Coastal Plain. The flight in the mountains is from mid-May at least to mid-September (and likely later).

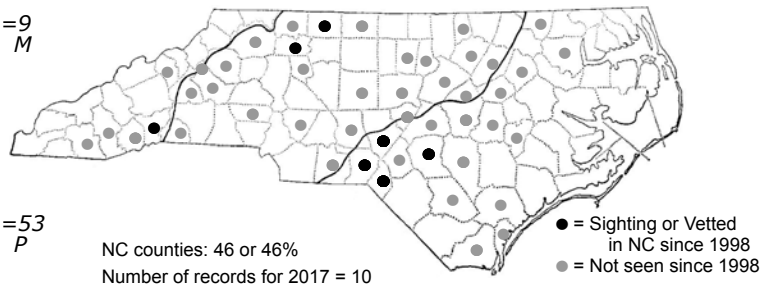
HABITAT: Favors rivers and large streams, but can be found away from water. Also occurs around lake and pond margins.

BEHAVIOR: Prefers open areas with sunlight, using rocks, ground, or available vegetation.

COMMENTS: This is one of our most common and widespread damselflies, except near the northeastern coastal areas. There are several one-day counts of at least 50 individuals, all from the lower Piedmont.

Argia bipunctulata Seepage Dancer





NC counties: 46 or 46%
Number of records for 2017 = 10

High counts of:
100 - Scotland - 2007-06-16
40 - Moore; C - 2014-06-04
25 - Scotland - 2017-05-15

Earliest date: Scotland 2008-04-19
Latest date: Scotland 1996-10-16

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

DISTRIBUTION: Scattered throughout the Piedmont and western two-thirds of the Coastal Plain; of spotty occurrence in the mountains and eastern Coastal Plain, and apparently absent in the Tidewater zone.

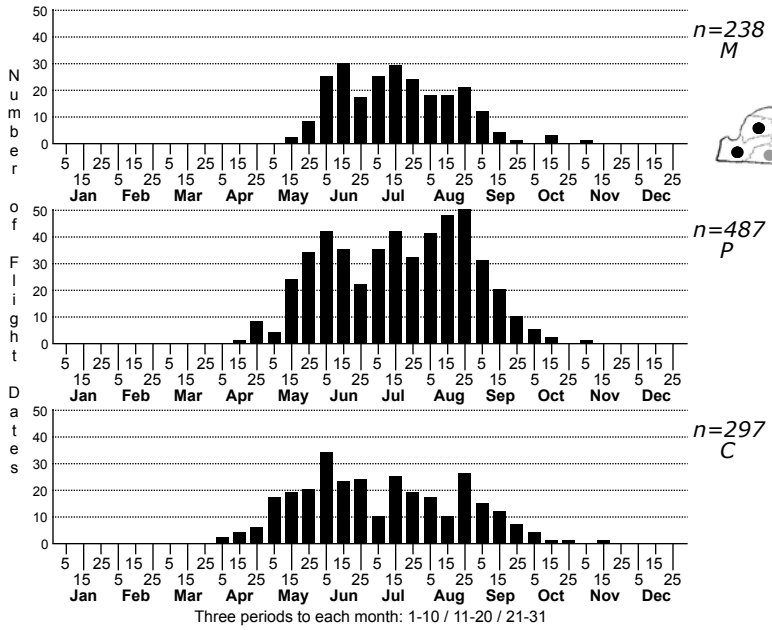
ABUNDANCE: Fairly common to locally common in the Sandhills region. Elsewhere, uncommon (and perhaps local) across the Piedmont and the western 50-60% of the Coastal Plain (excluding the Sandhills). Rare in the mountains and central Coastal Plain, and apparently absent in nearly all counties that border the Albemarle and Pamlico sounds.

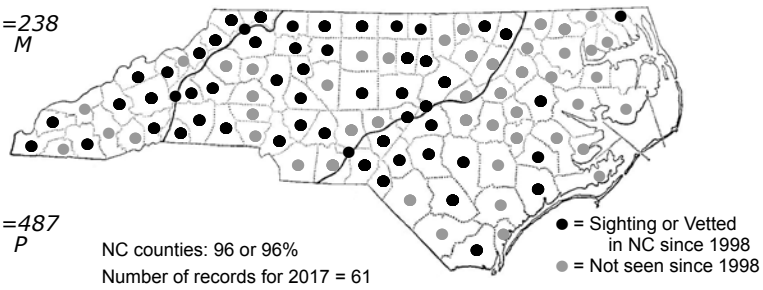
FLIGHT: Mid-April to mid-October in the Coastal Plain, and mid-May (if not earlier) to late September in the Piedmont. The few mountain records fall between late May and late August.

HABITAT: As the name implies, found around seeps or boggy places, where there are abundant sedges.

COMMENTS: This dancer can be easily overlooked because it often perches low in dense herbaceous vegetation around pond margins and seepage areas. A one-day tally of 100 in Scotland County is by far the most seen in a single day; the next highest tally is 40 individuals. Paulson (2011) indicates that, because its seepage habitat is somewhat limited, populations tend to be localized and not widespread over a large region. Despite it having been reported from over 45 counties in the state, one must travel to the Sandhills to have a reasonable chance of finding this species.

Argia fumipennis Variable Dancer





NC counties: 96 or 96%
Number of records for 2017 = 61

Sight (not vetted) in 2017: Camden

High counts of:
100 - Scotland - 2007-06-16
75 - Scotland - 2017-05-15
70 - Bladen - 2009-06-25

Earliest date: Lenoir 1991-04-07
Latest date: Richmond; C 1988-11-15

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

DISTRIBUTION: Essentially statewide, with the exception being the northeastern Coastal Plain, where it appears to be legitimately absent from several counties Two subspecies are represented in North Carolina: Argia fumipennis fumipennis in the eastern Piedmont and Coastal Plain, and A. f. violacea in the western Piedmont and mountains.

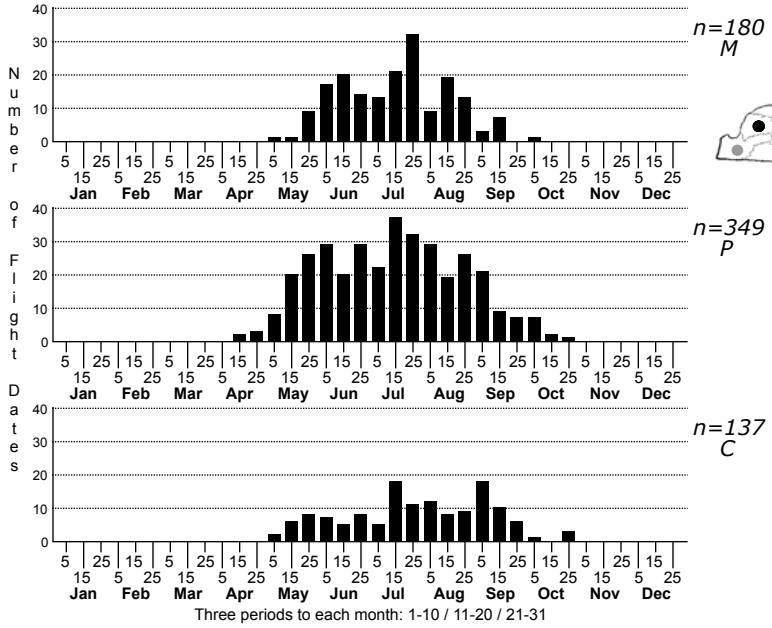
ABUNDANCE: Common to locally abundant across the state (except rare to absent in the extreme northeast); can often be the most numerous damselfly at a site. Most numerous in the Sandhills, where our largest one-day totals have been made.

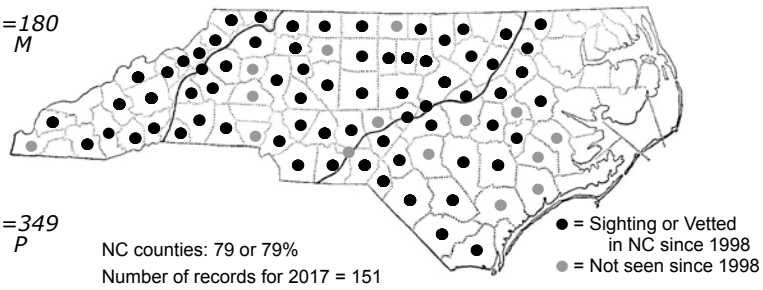
FLIGHT: The flight occurs nearly throughout the odonate flight season, as the Coastal Plain records fall from early April to mid-November. The Piedmont flight occurs between late April and early November, while the mountain flight starts slightly later -- mid-May to early November.

HABITAT: Extremely widespread in habitats. Around small streams, ditches, pond margins, and other slow waters; usually where there are grasses and sedges. May often feed well away from water.

COMMENTS: As the name implies, this species has highly variable color patterns, though there is generally some lavender coloration on the thorax. It is another of our more familiar damselflies in the state, being common to very common in each of the three provinces and recorded from every county except for five in the northeastern corner of the state.

Argia moesta Powdered Dancer





NC counties: 79 or 79%
Number of records for 2017 = 151

High counts of:
815 - Wake - 2014-06-25
575 - Wake - 2013-07-27
200 - Orange - 2012-07-09

Earliest date: Orange 2017-04-12
Latest date: Bladen 1981-10-28

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

DISTRIBUTION: Throughout the mountains, Piedmont, and the western two-thirds of the Coastal Plain. Absent from most of the northeastern third of the Coastal Plain (i.e., nearly all counties around Albemarle and Pamlico sounds).

ABUNDANCE: Common to very common/abundant in the eastern Piedmont; common elsewhere across the mountains, Piedmont, and western 60-65% of the Coastal Plain, though less numerous in the southwestern part of the mountains. May be legitimately absent from nearly all counties in the Tidewater zone (around Albemarle and Pamlico sounds).

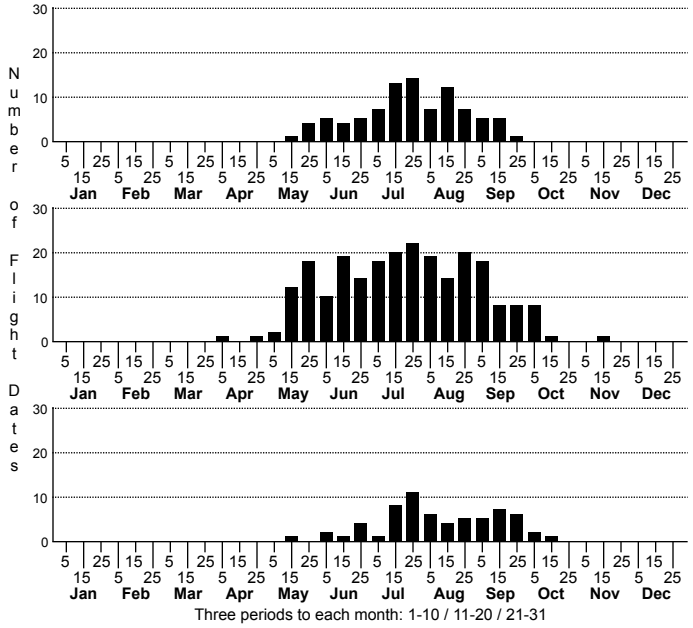
FLIGHT: The Piedmont flight occurs from late April to late October, and the Coastal Plain flight is at least from early May (if not earlier) to late October. The mountain flight occurs from early May to early October.

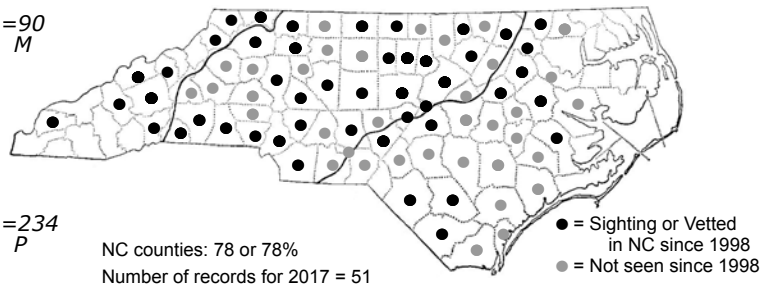
HABITAT: Found along rivers and streams, more so along rockier ones and larger ones than all other dancers. Can also be found along roads and other places away from water, when foraging.

BEHAVIOR: This is the most frequently seen dancer along rockier streams and rivers, often perching on exposed rocks.

COMMENTS: The highest counts in the state are all from the eastern Piedmont, though this might be an artifact of observer coverage rather than a true abundance pattern. Adult males are easily identified by their very glaucous (whitish) "bloom", particularly on the thorax.

Argia sedula Blue-ringed Dancer





NC counties: 78 or 78%
Number of records for 2017 = 51

Sight (not vetted) in 2017: Yancey

High counts of:
1220 - Wake - 2012-09-27
769 - Wake - 2012-10-06
331 - Wake - 2013-08-31

Earliest date: Orange 2017-04-02
Latest date: Wake 2014-11-11

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

DISTRIBUTION: Occurs over most of the state, but apparently absent in the eastern third or quarter of the Coastal Plain (i.e., the Tidewater area). Probably present over all of the mountains, but just one record for the southwestern counties.

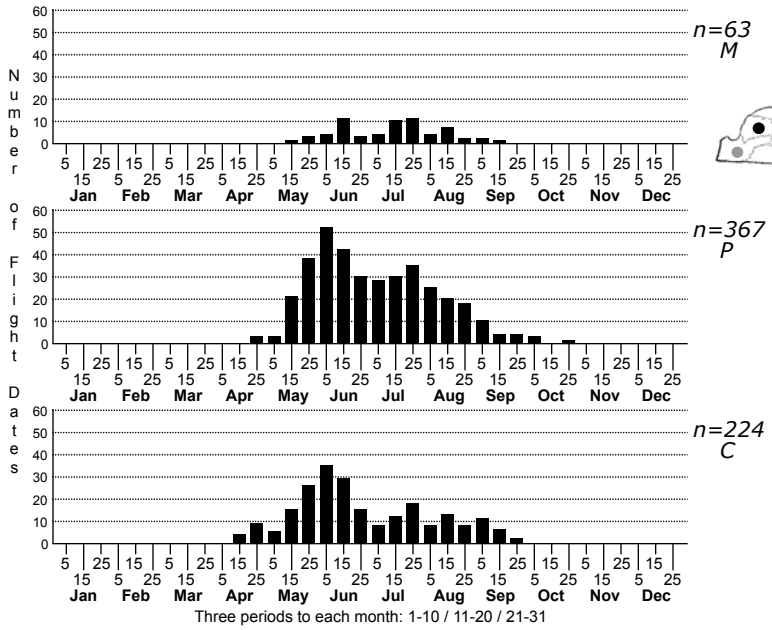
ABUNDANCE: Common to locally abundant (at least near the Fall Line) in the Piedmont; fairly common in the western Coastal Plain, but likely uncommon to locally fairly common in the remainder of the Coastal Plain part of the range. Uncommon to locally fairly common in the mountains, but apparently rare (though likely not absent) in the southwestern counties. Presumed absent in the Tidewater zone, from Pamlico Sound to the VA border.

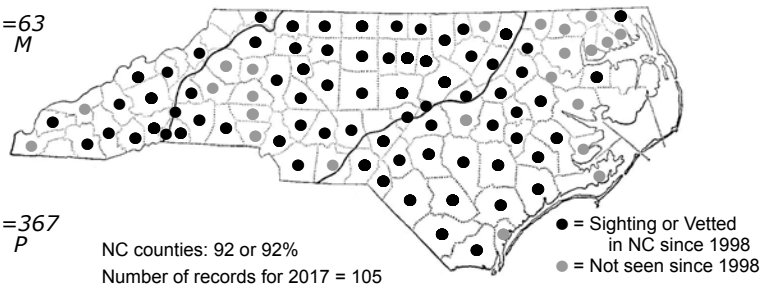
FLIGHT: The Piedmont flight occurs from early May to mid-October, sparingly to mid-November. The mountain flight is from mid-May to late September, whereas the Coastal Plain flight occurs from mid-May to mid-October.

HABITAT: Streams and rivers, typically where somewhat rocky, and usually where there is some herbaceous vegetation along the water. Sometimes around shores of lakes and ponds, and can be found along roads and other corridors away from water.

COMMENTS: There have been a few remarkably high counts for the species along the Neuse River below the Falls Lake dam. This is another of the common species of dancers, normally easily found in most parts of the state. The absence of records for the extreme southwestern mountains seems puzzling, considering that range maps include most of the Southeastern states.

Argia tibialis Blue-tipped Dancer





NC counties: 92 or 92%
Number of records for 2017 = 105

Sight (not vetted) in 2017: Halifax; C, Yancey

High counts of:
335 - Wake - 2013-05-31
235 - Pender - 2017-05-19
125 - Columbus - 2017-05-17

Earliest date: Brunswick 2017-04-12
Latest date: Wake 2012-10-25

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

DISTRIBUTION: Statewide, though possibly absent along the extreme northeastern coastal areas. Likely found in all mountain counties, though a few in the northern mountains lack records.

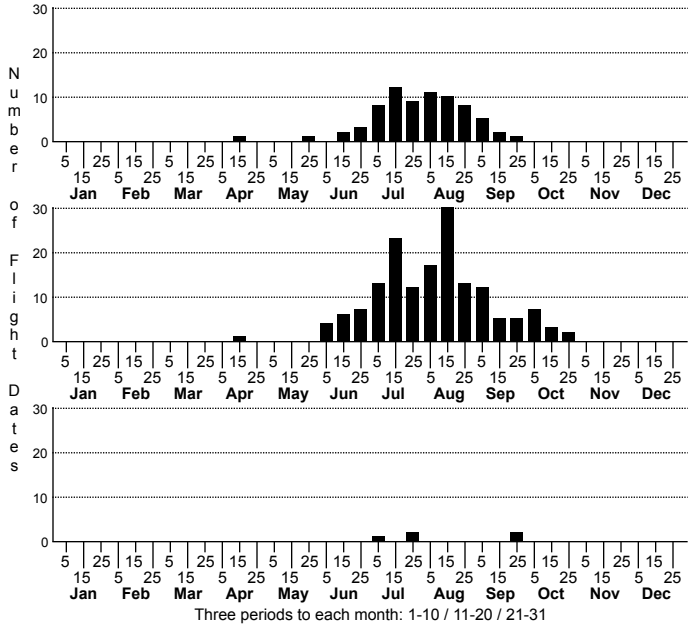
ABUNDANCE: Common to locally very common in the Piedmont and most of the Coastal Plain; fairly common to locally common in much of the mountains. Not common in the eastern part of the Coastal Plain, but at least uncommon to fairly common, except rare to absent in the extreme northeastern counties.

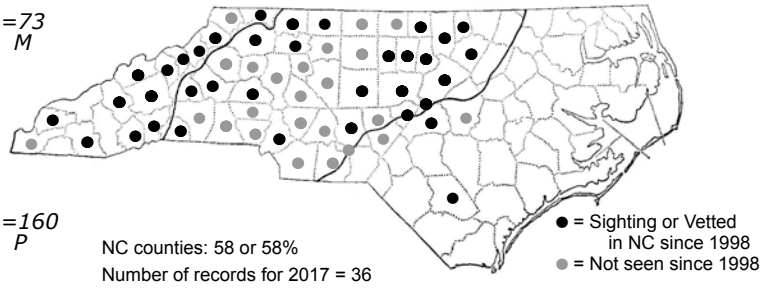
FLIGHT: Downstate, occurs from late April to late September (and probably later) in the Coastal Plain and to late October in the Piedmont. The mountain flight occurs between mid-May and mid-September.

HABITAT: Small and mainly wooded creeks/streams, typically with a few riffles. Less often along rivers or larger streams without riffles. Typically closer to forested creeks than other dancers.

COMMENTS: This is still another dancer species that is common across most of the state and occurs in nearly all counties, but as with many, it is scarce or absent in the extreme northeastern part of the Coastal Plain. In GA, Beaton (2007) says it is "Often the most numerous dancer at any given site"; however, in NC, it shares abundance with a number of other dancer (Argia) species and does not seem quite as numerous as the Variable, Powdered, and Blue-ringed dancers.

Argia translata Dusky Dancer





NC counties: 58 or 58%
Number of records for 2017 = 36

Sight (not vetted) in 2017: Bladen

High counts of:
15 - Wake - 2009-08-07
15 - Wake - 2009-08-13
12 - Yancey - 2017-07-26

Earliest date: Buncombe 1989-04-14
Latest date: Wilkes; P 2016-10-24

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

DISTRIBUTION: Throughout the mountains and Piedmont (though no records yet for the extreme northeastern corner of the Piedmont). Nearly absent from the Coastal Plain, though present along the Fall Line in a few such counties. There is a recent sight report from Bladen County, in the south-central Coastal Plain, outside of the confirmed range. Oddly, the range map in Paulson (2011) shows it nearly "absent"in the Piedmont of both VA and SC.

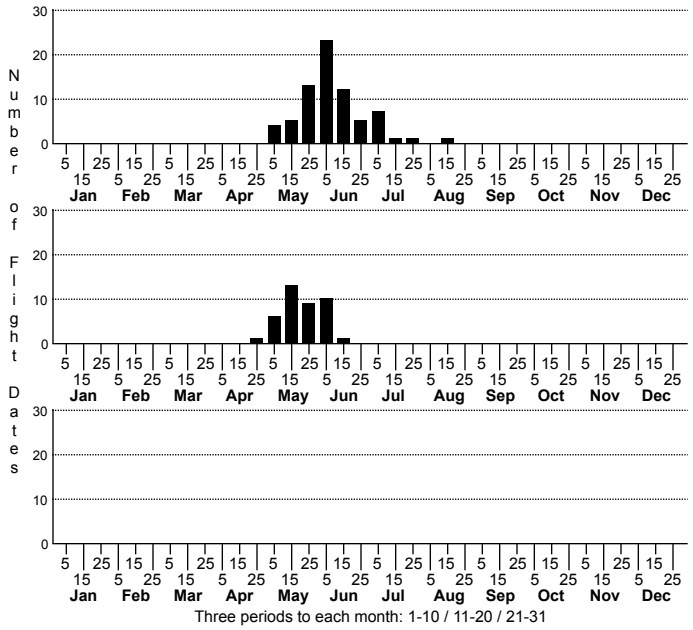
ABUNDANCE: Fairly common in the Piedmont and mountains (at least locally); nowhere truly common, as the peak one-day counts are just 15 individuals. Absent, or nearly absent, rom the Coastal Plain, except near the Fall Line.

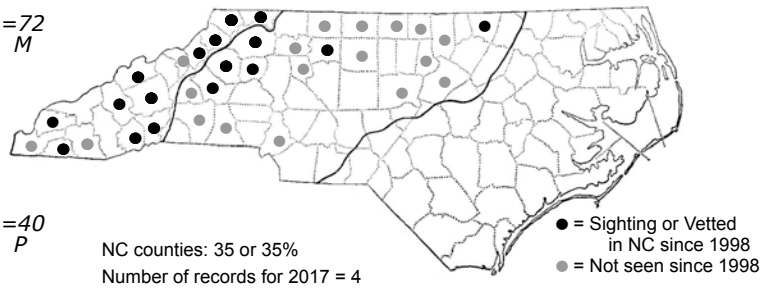
FLIGHT: In the mountains and Piedmont, mainly late May or early June to late October (Piedmont) and to late September (mountains). Each province has a very early record for mid-April. The few Coastal Plain records are from early July to late September.

HABITAT: A variety of rivers and creeks; scarce at ponds or lakes. Often on rocks in the creek or river.

COMMENTS: The seeming near-absence of records from the VA and SC Piedmont is puzzling, considering that it not only has been found in nearly all such counties in NC (except lacking in the extreme northeastern corner of the Piedmont), but that there are some single-day counts in double-digits. One must presume that it is being overlooked, especially in VA.

Chromagrion conditum Aurora Damsel





NC counties: 35 or 35%
Number of records for 2017 = 4

High counts of:
20 - Buncombe - 2016-06-06
20 - Alleghany - 2017-06-01
14 - Watauga - 2007-06-21

Earliest date: Cleveland 1970-04-29
Latest date: Haywood 2007-08-18

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

DISTRIBUTION: Throughout the mountains; scattered over most of the Piedmont, though possibly absent in the extreme southeastern counties. Absent from the Coastal Plain.

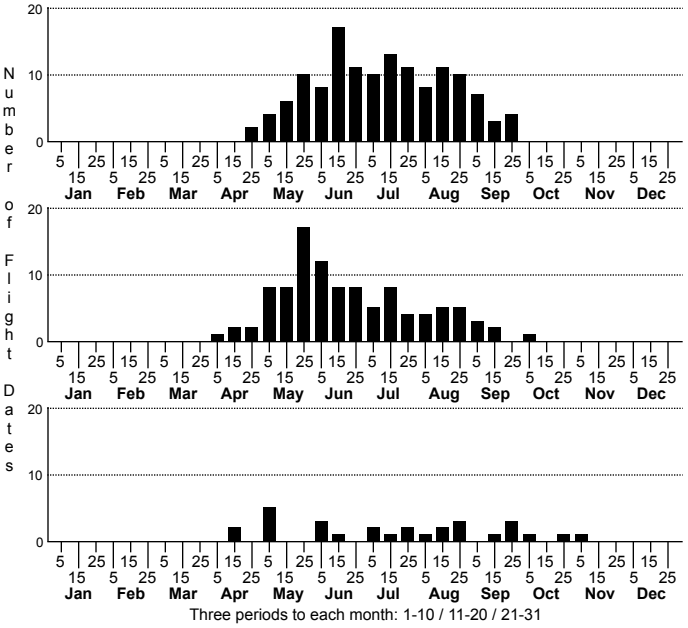
ABUNDANCE: Fairly common in the mountains, at least locally. Rare over most of the Piedmont, but apparently uncommon in the foothills. Possibly absent in a few counties in the southeastern Piedmont. The highest counts are from the mountains and foothills.

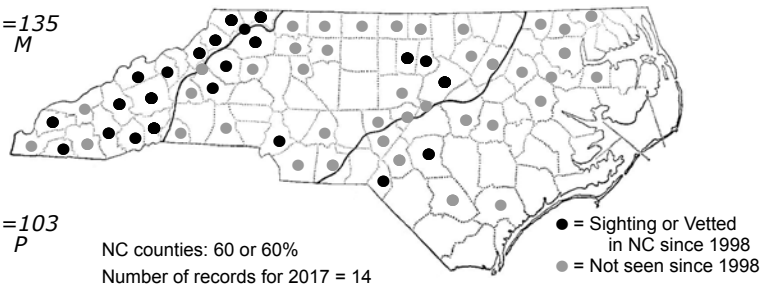
FLIGHT: The mountain flight is from early May to mid-August, wheras the Piedmont flight is from late April to mid-June. However, there is no reason the flight in the Piedmont should be narrower than that in the mountains, and it likely flies throughout July and into August.

HABITAT: Still waters of pools/ponds -- such as beaver ponds, bogs, seeps, and slow streams. Not often found far from water.

COMMENTS: There are relatively few recent records from the Piedmont, especially the southern half of the Piedmont. Does this indicate a recent decline? The species should be easily identified, at least with photographs.

Enallagma aspersum Azure Bluet





NC counties: 60 or 60%
Number of records for 2017 = 14

High counts of:
180 - Wake - 2016-07-09
175 - Wake - 2017-05-19
105 - Wake - 2016-05-14

Earliest date: Wake 2017-04-09
Latest date: Bladen 1968-11-02

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

DISTRIBUTION: Throughout the mountains, and essentially throughout the Piedmont; nearly throughout the Coastal Plain, but essentially absent in the eastern quarter, especially in the Tidewater zone.

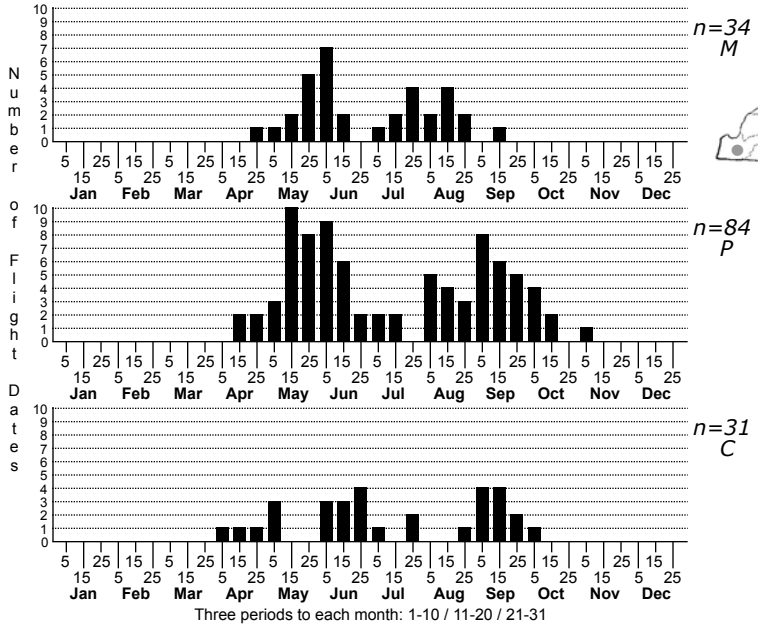
ABUNDANCE: Common in the mountains, at least locally. Uncommon in the Piedmont, though may be locally fairly common to common. Rare in the Coastal Plain, and possibly absent close to the coast, especially in the far eastern counties.

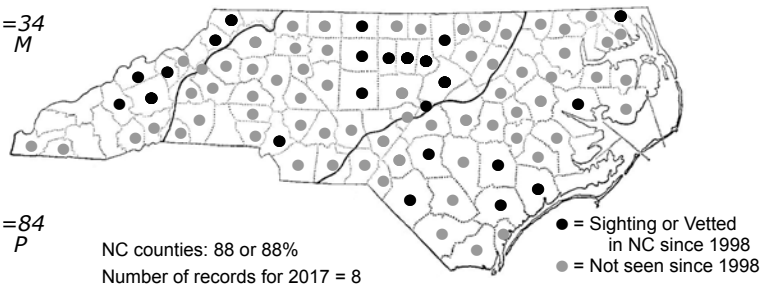
FLIGHT: The mountain flight occurs from late April to late September. The Piedmont flight is slightly longer -- mid-April to early October, and the Coastal Plain flight even slightly longer -- mid-April to early November.

HABITAT: Ponds and small lakes, usually with emergent vegetation. Waters should be without fish.

COMMENTS: The species is more easily found in the NC mountains than downstate. Yet, the three highest counts are from the eastern Piedmont -- from Wake County, and thus it is disturbing or at least odd there are no records for 35-40% of the Piedmont counties, and recent records from just several of the counties in this province. Is the species really that scarce in central NC, considering its local abundance in the mountains and Wake County? Of note is that the species is very rare in the SC Piedmont, found just in a few foothill counties.

Enallagma basidens Double-striped Bluet





NC counties: 88 or 88%
Number of records for 2017 = 8

High counts of:
35 - Orange - 2009-06-13
15 - Madison - 2012-06-08
15 - Orange - 2016-09-16

Earliest date: Onslow 2017-04-05
Latest date: Alamance 2016-11-06

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

DISTRIBUTION: Essentially statewide. Though absent from a handful of mountain and far eastern Coastal Plain counties, it likely occurs in essentially all 100 counties.

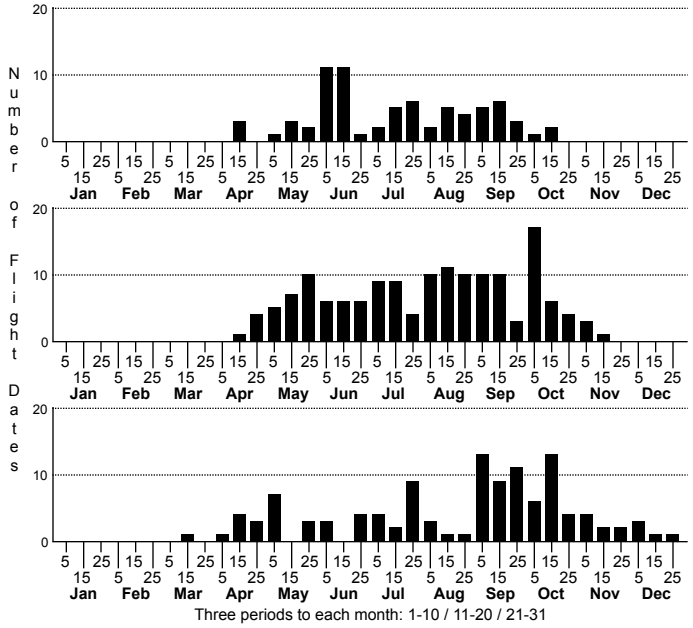
ABUNDANCE: Fairly common in the mountains and Piedmont, but mostly uncommon in the Coastal Plain, and rare near the coast.

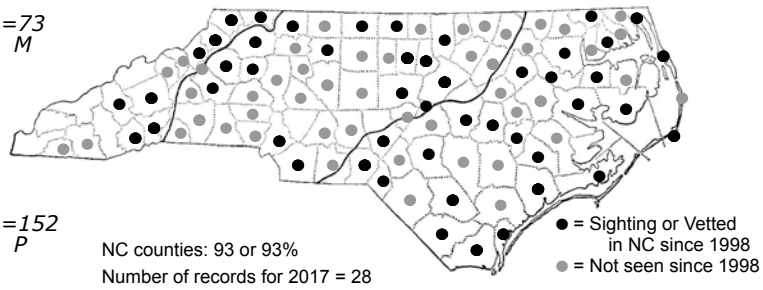
FLIGHT: The flight starts in April in all provinces, being a bit earlier in the Coastal Plain and Piedmont (early or mid-April) than in the mountains (late April). The long flight continues to mid-October (rarely to early November) in the Piedmont, at least to early October in the Coastal Plain, and to mid-September in the mountains.

HABITAT: Ponds and small lakes, as well as slow-moving streams, usually where there is emergent vegetation.

COMMENTS: As with so many of our damselflies, the number of recent records with flight dates is far fewer than what would be expected from the large number of county records historically -- implying little effort at studying damselflies by more recent biologists. Though the species occurs perhaps in all 100 counties, it is not overly common anywhere, with just one single-day tally of over 15 individuals.

Enallagma civile Familiar Bluet





NC counties: 93 or 93%
Number of records for 2017 = 28

High counts of:
85 - Scotland - 2017-05-27
66 - Wake - 2012-10-12
60 - Richmond; C - 2017-05-07

Earliest date: Onslow 2017-03-11
Latest date: Onslow 2016-12-23

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Statewide. Though no records for four counties in the southwestern tip of the state, it is assumed to occur in all 100 counties.

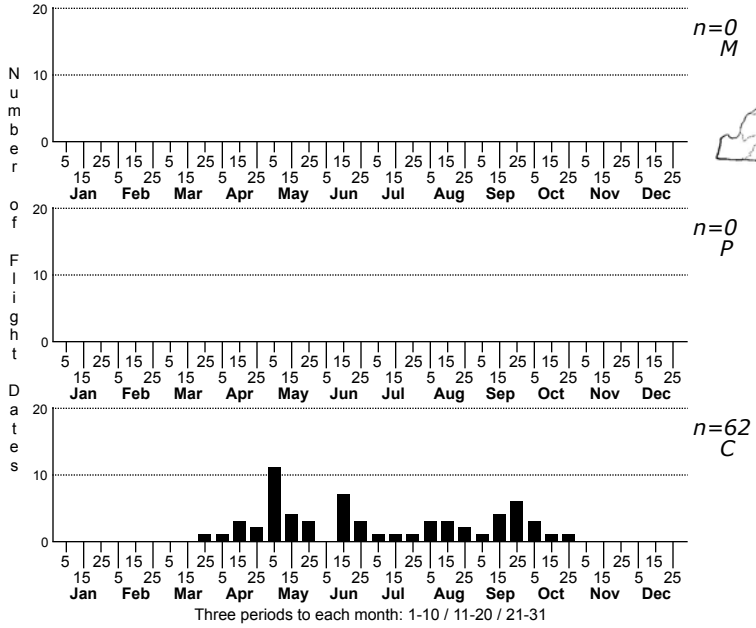
ABUNDANCE: Common and widespread across the Coastal Plain and Piedmont; common in the northern and central mountains, but less numerous in the southwestern mountains.

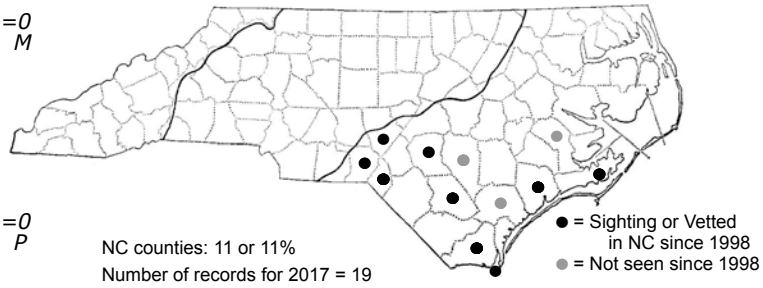
FLIGHT: A very long flight period for a damselfly -- from early April to late December in the Coastal Plain (though scarce after early November). In the Piedmont and mountains, the flight starts around mid-April and extends to mid-November in the Piedmont and to mid-October in the mountains.

HABITAT: A wide array of ponds and other still water habitats, even slow-moving rivers -- especially where emergent vegetation is present.

COMMENTS: This is one of the state's most common damselflies, and one of the few that is numerous in truly coastal counties. Even so, it does not occur in large swarms.

Enallagma concisum Cherry Bluet





NC counties: 11 or 11%
Number of records for 2017 = 19

Sight (not vetted) in 2017: Moore; C

High counts of:
44 - Brunswick - 2017-05-02
34 - Bladen - 2017-05-07
25 - Carteret - 2017-05-03

Earliest date: Carteret 2016-03-29
Latest date: Carteret 2016-10-23

Status NC	Status US	Rank NC	Rank Global
-	-	S3?	G4

DISTRIBUTION: The southern third/half of the Coastal Plain only, north to Craven Sampson, Cumberland, and Moore counties. NC lies at the northeastern end of the species' range.

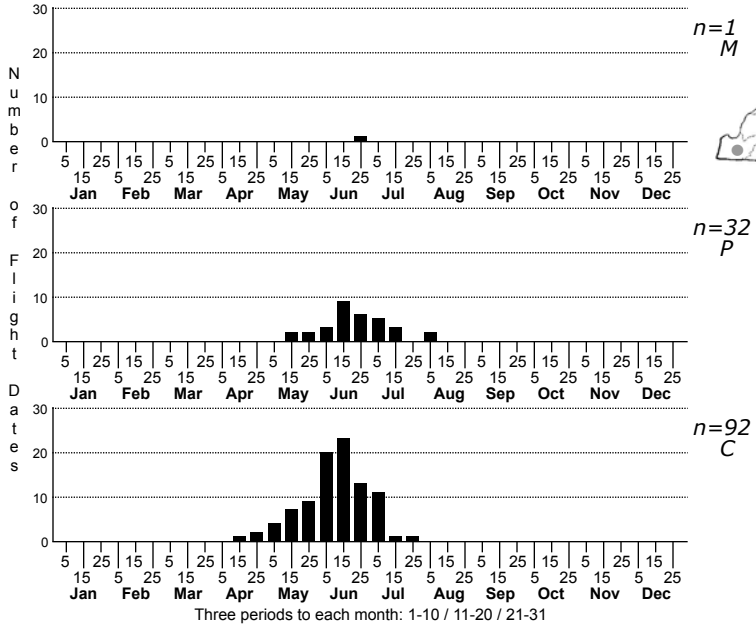
ABUNDANCE: Generally uncommon, but locally fairly common at a few sites, especially in the Sandhills region. There are several single-day counts of over ten individuals, and in 2017 several observers have tallied over 30 individuals in a day.

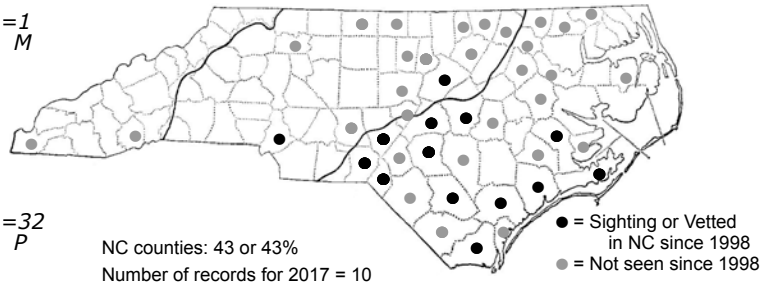
FLIGHT: The flight is moderately extended, from very late March to late October.

HABITAT: Ponds or lakes with sandy bottoms, particularly where there is much emergent vegetation.

COMMENTS: There are quite a few "holes" in the county range map, suggesting that the species is a bit local in occurrence. Though it is given an S3? SRANK by the NC Natural Heritage Program, it might not quite warrant a Watch List status. There have been quite a few records for the species in 2017, including several sizable counts, and thus the SRANK probably should be moved to S3S4 or S4. It is clearly no longer a potential Watch List species.

Enallagma daeckii Attenuated Bluet





High counts of:
85 - Carteret - 2016-05-25
67 - Carteret - 2016-05-08
60 - Moore; C - 2013-06-12

Earliest date: Moore; C 2008-04-16
Latest date: Rockingham 1971-08-07

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

DISTRIBUTION: Roughly the eastern half of the state, and highly scattered elsewhere to the west. Specifically, nearly throughout the Coastal Plain (though perhaps absent in some Tidewater counties), the eastern third of the Piedmont, and very sparingly westward to include the extreme southern mountains. Presumed absent from the central and northern mountains; however, presumed to occur as a rarity in the western Piedmont counties.

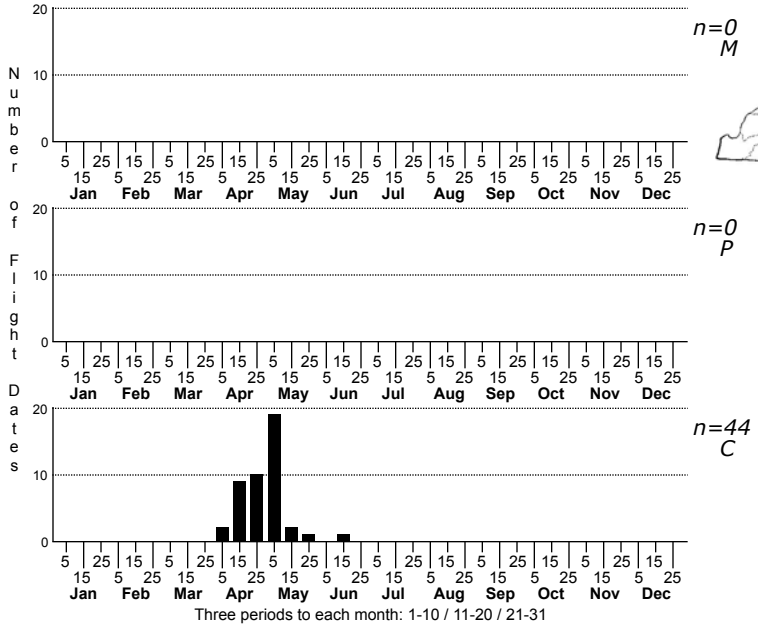
ABUNDANCE: Common in the Sandhills, but mostly uncommon elsewhere in the southern half of the Coastal Plain (though locally common in Carteret County). Rare to uncommon in the northern Coastal Plain, and perhaps absent close to the northern coast. Rare in the eastern Piedmont, and very rare at best elsewhere in the Piedmont and southern mountains.

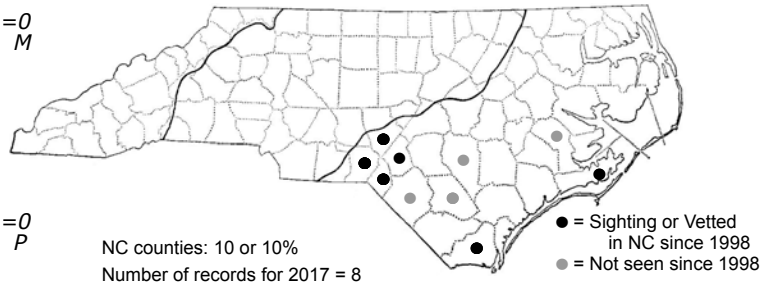
FLIGHT: A shortened flight for a bluet, seemingly not occurring after mid-summer. In the Coastal Plain, it occurs from mid-April only to late July, and in the Piedmont from mid-May to early August. The only date record available for the mountains is for late June.

HABITAT: Sand-bottomed ponds and lakes, almost always in wooded areas and with shrubby margins.

COMMENTS: Our two highest counts are now from the southeastern coastal area. There are also several sizable single-day counts from the Sandhills. Despite there being at least 15 county records west of the Fall Line, there are just two recent reports from this large area, from Mecklenburg and Wake counties. The species is fairly distinctive in its "skinny" look, and thus it has possibly declined in the Piedmont. New records for the Piedmont, and the northern half of the Coastal Plain, are greatly needed.

Enallagma davisi Sandhill Bluet





NC counties: 10 or 10%
Number of records for 2017 = 8

Vetted in 2017: Carteret

High counts of:
25 - Scotland - 2008-04-19
14 - Sampson - 1966-05-08
12 - Scotland - 2011-05-05

Earliest date: Carteret 2017-04-04
Latest date: Richmond; C 1969-06-13

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

DISTRIBUTION: Primarily the Sandhills region, but sparingly east to the southeastern corner of the state. As NC lies at the northern end of the range, the current northern limits are Craven, Sampson, and Moore counties.

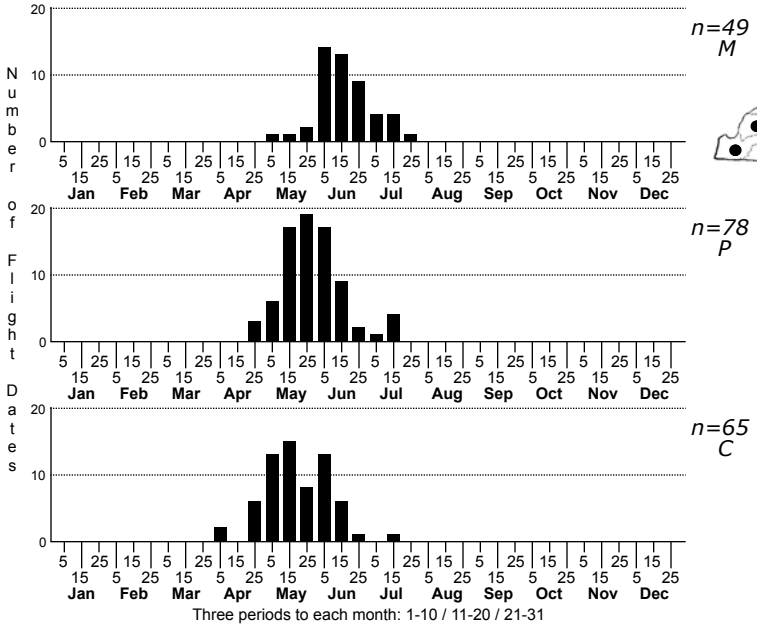
ABUNDANCE: Generally uncommon and local, eastward to Sampson and Bladen counties, and very rare east to Carteret County. Fairly common at a few favored locales in the Sandhills.

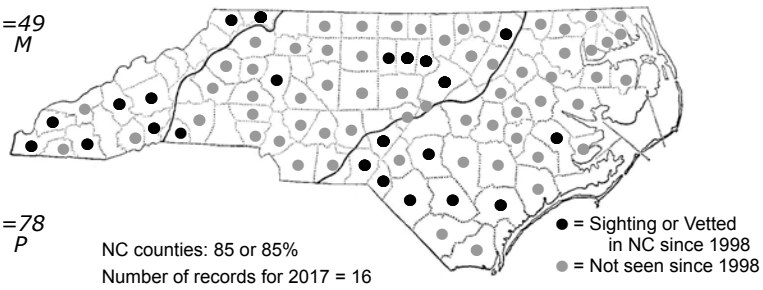
FLIGHT: A spring-season flight only, unusual for a bluet. The flight occurs from early April to mid-June, but is mostly over by mid-May.

HABITAT: Sandy-bottomed lakes or large ponds, with emergent vegetation along the shore.

COMMENTS: Though there are many dragonflies with a flight period in the spring season only, there are few such "spring only" damselflies. As with the Cherry Bluet, the species does not seem quite scarce enough to be considered as a Watch List species by the NC Natural Heritage Program. Thankfully, we now have a few recent records away from the Sandhills, documented by photos, from as far east as Carteret County and southeast to Brunswick County. Surprisingly there are no records yet for Cumberland County, much of which lies in the Sandhills region.

Enallagma divagans Turquoise Bluet





NC counties: 85 or 85%
Number of records for 2017 = 16

High counts of:
120 - Wake - 2014-05-19
50 - Pender - 2016-05-01
40 - Halifax; P - 2013-06-15

Earliest date: Sampson 1990-04-01
Latest date: Ashe 2007-07-29

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

DISTRIBUTION: Essentially statewide. Possibly absent in one to several high-elevation mountain counties, and possibly a county or two along the Outer Banks. Nonetheless, the assumption should be made that it occurs in all counties.

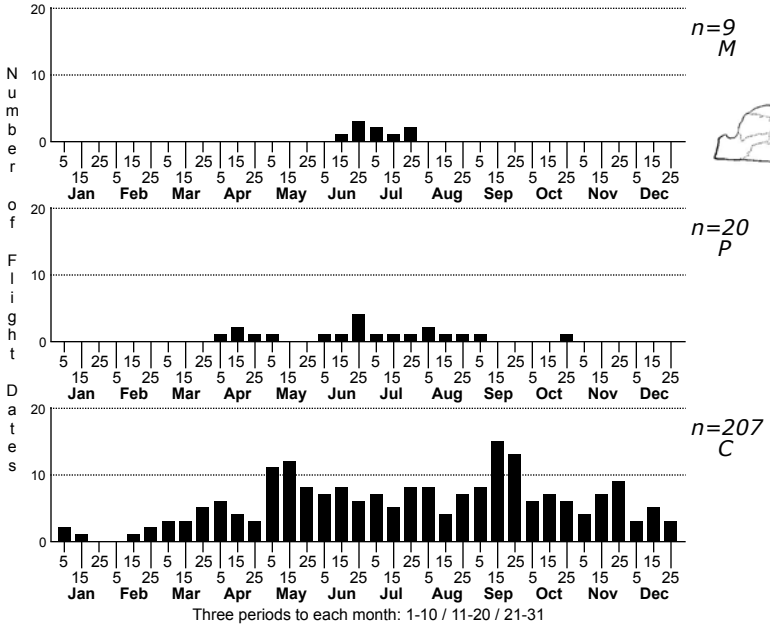
ABUNDANCE: Generally fairly common across the state, though certainly rare in the extreme eastern counties and in the higher elevations. A one-day count of 120 was made in the eastern Piedmont in 2014, tripling the previous single one-day count of 40.

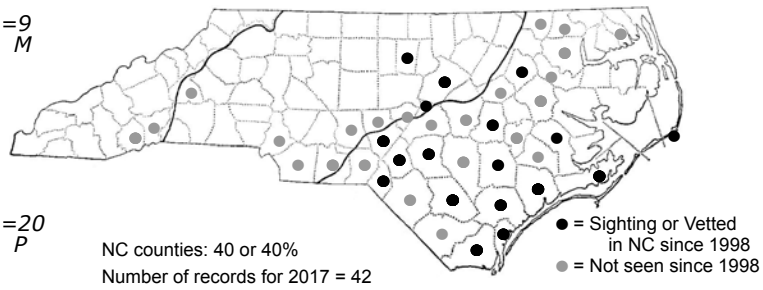
FLIGHT: This is another bluet that ends its flight by mid-summer, as opposed to in the fall season. In the Coastal Plain, it occurs from early April only to mid-July. The Piedmont flight is from late April to mid-July, and the mountain flight is slightly later -- early May to late July. There are no August records as yet for the entire state.

HABITAT: Varied. More often at slow-moving streams, but it also is found along pond and lake margins.

COMMENTS: It seems odd that the known counties for it in the mountains are spottily distributed, considering that there are a few notably high counts for the species there. This suggests that the species can be numerous at the lower elevations (below 3,000 feet), but that at middle and high elevations can be quite scarce. There are relatively few recent records from the Piedmont, and essentially no photos; has it declined in this province?

Enallagma doubledayi Atlantic Bluet





NC counties: 40 or 40%
Number of records for 2017 = 42

Vetted in 2017: Craven

High counts of:
1950 - Onslow - 2017-05-29
1930 - Onslow - 2016-05-19
1200 - Onslow - 2016-05-07

Earliest date: Onslow 2017-01-03
Latest date: Onslow 2015-12-30

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

DISTRIBUTION: Generally throughout the Coastal Plain, and the southeastern third of the Piedmont; also sparingly in the southern mountains. Seemingly absent over most of the northwestern half of the state, including most of the Piedmont and most of the central and northern mountains. This is basically an Atlantic slope species, not found west of the Appalachians and rarely within them.

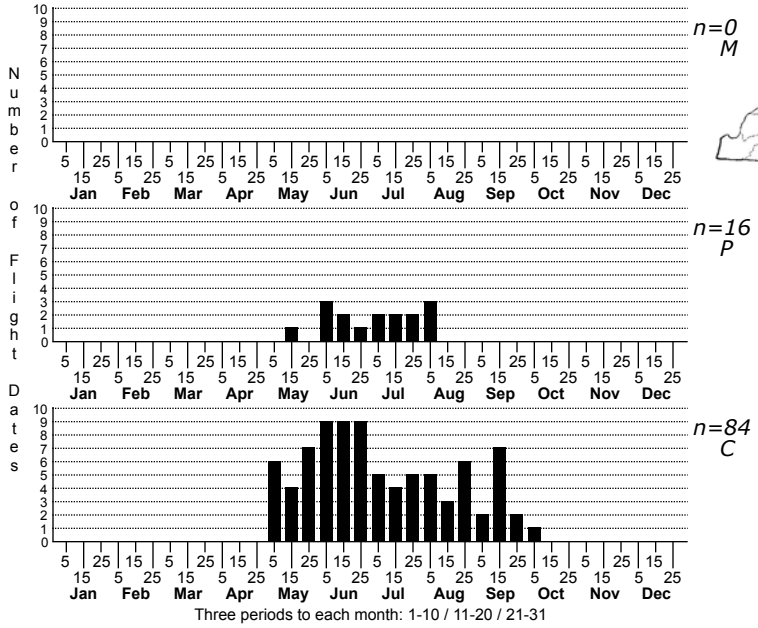
ABUNDANCE: Often overlooked because of identification difficulties, especially with Familiar and Big bluets. Uncommon to locally abundant in the southern half of the Coastal Plain, and rare to uncommon in the northwestern part of the Coastal Plain. Obviously rare in the extreme eastern Coastal Plain and the southeastern Piedmont, and very rare west to McDowell, Henderson, and Transylvania counties.

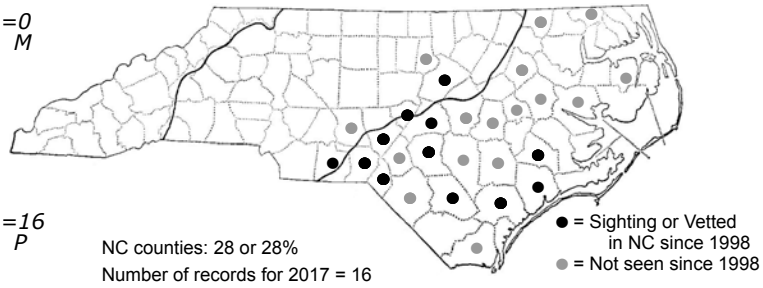
FLIGHT: A very wide flight period, extending to early winter. In the Coastal Plain, records occur from mid-February to mid-January. The relatively few Piedmont records fall between early April and late October, whereas mountain records occur only from mid-June to late July (so far).

HABITAT: A variety of ponds and lakes, rarely slow-moving creeks/rivers, at least where emergent vegetation is present. Mainly a pond species.

COMMENTS: Beaton (2007) notes that the species in GA is likely under-reported, and certainly the same can be said for NC. Though there are specimen records for about 35-38% of the counties, until a few years ago there were no posted photos on the website, suggesting that recent biologists had trouble distinguishing the species from other bluets by sight or even by photographs. Thankfully, we now have at least a dozen photos on the website. Much more data are desired to flesh out the range in the state, such as in the southern Piedmont and in the far-eastern Coastal Plain. Interestingly, Paulson (2011) calls it common, and the now more than 200 records with dates for the Coastal Plain suggest that it is locally abundant, at least in the southern half of the province. Most of these recent records have come from field work done by Mark Shields, especially at several limesink ponds.

Enallagma dubium Burgundy Bluet





NC counties: 28 or 28%
Number of records for 2017 = 16

High counts of:
50 - Bladen - 2017-05-26
30 - Moore; C - 2017-09-17
12 - Richmond; C - 2017-08-12

Earliest date: Pender 2016-05-01
Latest date: Richmond; C 2016-10-01

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

DISTRIBUTION: Scattered over nearly all of the Coastal Plain, and sparingly into the extreme eastern Piedmont. Absent from the western half of the state, and possibly absent in northern coastal areas.

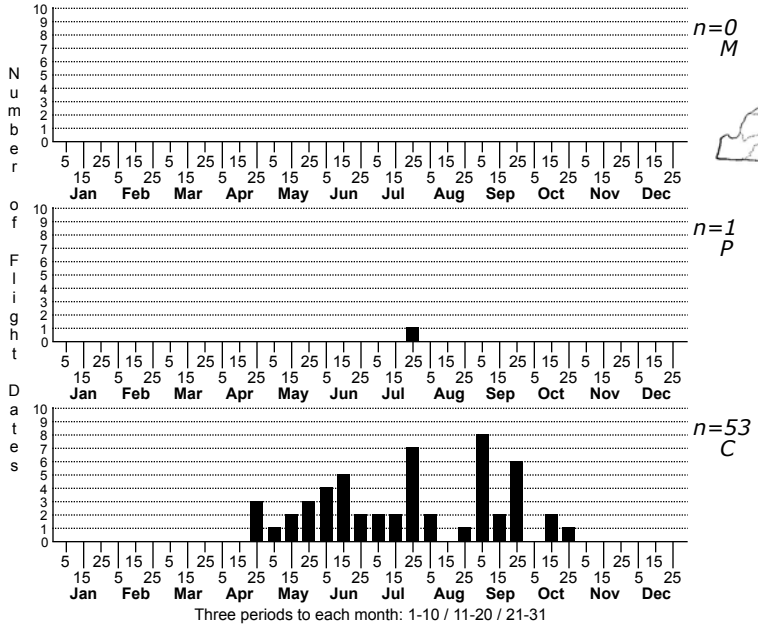
ABUNDANCE: Generally uncommon (to locally fairly common) in the southern half of the Coastal Plain, and rare and of spotty occurrence in the northern half. Rare to very uncommon in the narrow Piedmont portion of the range. Through 2016, the highest single-day count was only six individuals, but there have been several counts of double-digit individuals, including an excellent one-day tally of 50, in 2017.

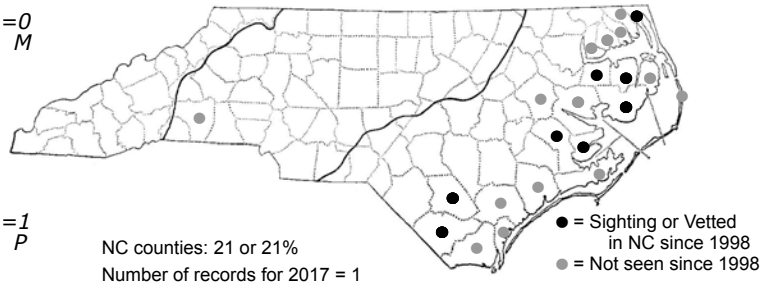
FLIGHT: The Coastal Plain flight occurs from early May to very early October, whereas that in the adjacent Piedmont is from mid-May to early August.

HABITAT: Generally in highly vegetated ponds or small lakes, especially with floating vegetation such as lily pads.

COMMENTS: The male has a red and black thorax, fairly similar to that of the Cherry Bluet. Through 2016 we had very few recent records, but a stronger interest in studying odonates, especially damselflies, has taken place in at least the southern Coastal Plain in 2017. However, few people are searching for damselflies currently in the northern Coastal Plain, though it seems likely that the species has always been relatively rare in this part of the range.

Enallagma durum Big Bluet





NC counties: 21 or 21%
Number of records for 2017 = 1

High counts of:
217 - Hyde - 2016-06-19
30 - Bladen - 2017-05-11
16 - Columbus - 2012-10-23

Earliest date: Columbus 1967-04-23
Latest date: Columbus 2012-10-23

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

DISTRIBUTION: Primarily the eastern half of the Coastal Plain; generally absent from the western half of the Coastal Plain counties, and absent from the Sandhills. Absent in the mountains and Piedmont, except for a record from Rutherford County. As would be expected from the NC range, this species' US range is mainly limited to tidal and estuarine areas, north to ME, though it does occur over most of peninsular FL. In addition, the OdonataCentral range map shows scattered records for TN, northeastern AL, and north-central GA; thus the collection record for Rutherford County may well be legitimate.

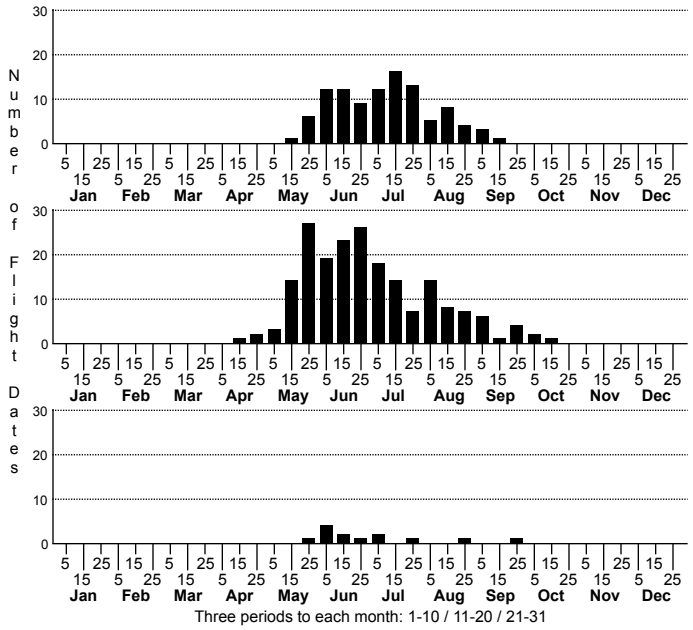
ABUNDANCE: Locally fairly common in coastal counties and those in the Tidewater zone, as there are several one-day counts of over 15 individuals. Rare to uncommon farther inland (such as in Bladen County). There is an excellent one-day count of 217 individuals, from Hyde County; however, the next highest single day count is 30 individuals.

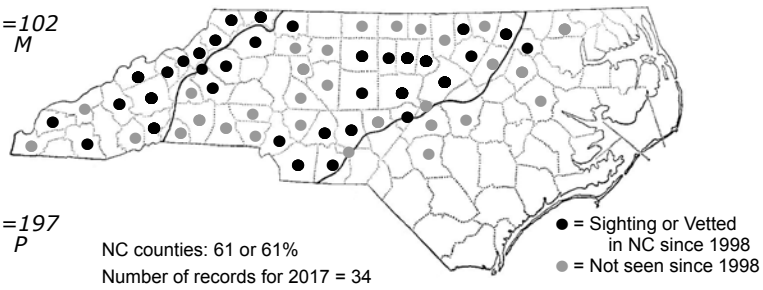
FLIGHT: The flight occurs from late April to late October. The Rutherford County record is for late July.

HABITAT: Unusual for most damselflies -- mainly along the lower portions of large rivers near or at estuaries, including the vicinity of brackish marshes. Also at large lakes with sandy bottoms, such as Lake Waccamaw.

COMMENTS: This species has a range in NC like no other damselfly, but quite a bit like several dragonflies, particularly Needham's Skimmer, Four-spotted Skimmer, and Seaside Dragonlet.

Enallagma exsulans Stream Bluet





NC counties: 61 or 61%
Number of records for 2017 = 34

Sight (not vetted) in 2017: Burke; M, Halifax; C

High counts of:
235 - Durham - 2013-08-24
170 - Durham - 2014-06-05
115 - Wake - 2014-06-25

Earliest date: Anson 2017-04-20
Latest date: Montgomery 1995-10-18

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

DISTRIBUTION: Throughout the mountains and Piedmont; also in the upper Coastal Plain, east to Hertford, Pitt, and Cumberland counties.

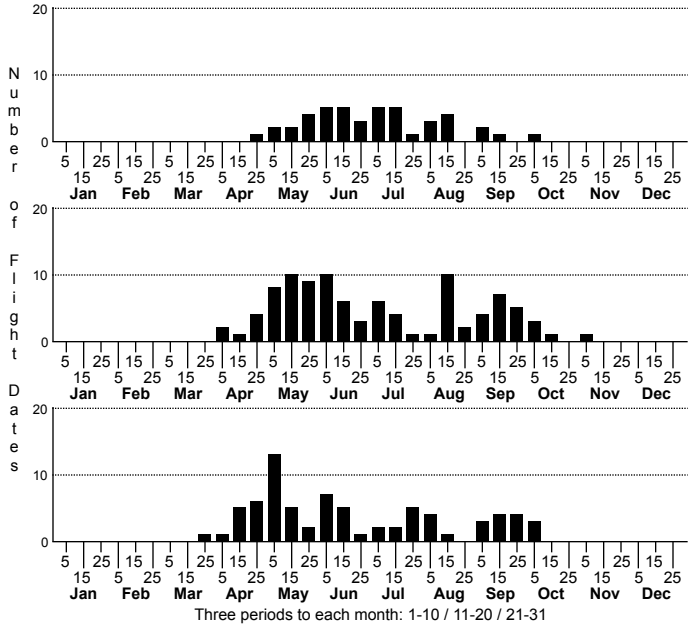
ABUNDANCE: Common, at least locally, in the mountains and Pidemont; rare in the Coastal Plain portion of the range. Several counts of at least 100 individuals in a day have been made in the eastern Piedmont.

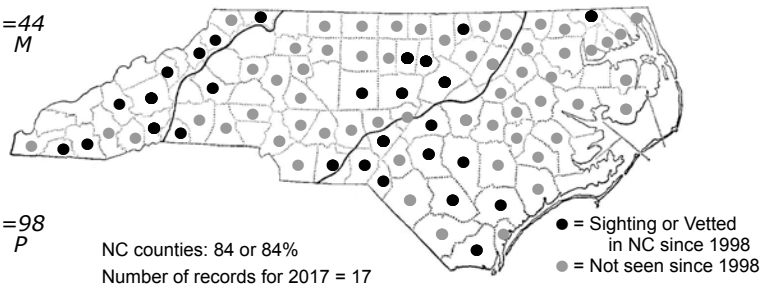
FLIGHT: Late April to mid-October in the Piedmont, and mid-May to at least mid-September in the mountains. The relatively few dates from the Coastal Plain fall between late May and late September, though the flight ought to be similar to that in the Piedmont.

HABITAT: A wide variety of creeks and rivers, with slow to moderate current.

COMMENTS: This species generally avoids lakes, ponds, and other still waters -- unlike nearly all other bluets.

Enallagma geminatum Skimming Bluet





NC counties: 84 or 84%
Number of records for 2017 = 17

High counts of:
345 - Wake - 2014-05-13
175 - Wake - 2013-05-12
80 - Wake - 2010-05-30

Earliest date: Gates 2012-03-27
Latest date: Orange 2016-11-02

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

DISTRIBUTION: Essentially statewide, though of spotty distribution in the mountains and upper Piedmont, and close to the coast. However, it likely occurs in all 100 counties.

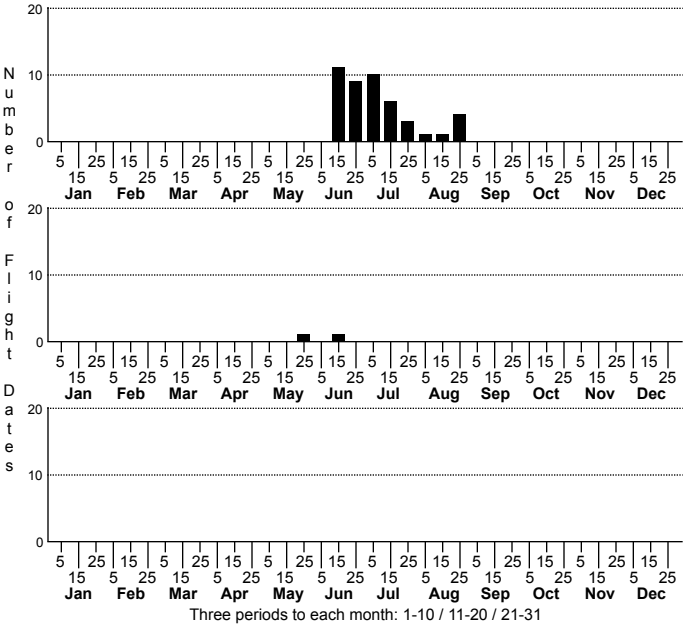
ABUNDANCE: Fairly common statewide, and locally common (several daily counts over 75 individuals). Not obviously more numerous in one province over another, though the spotty county distribution in the mountains suggests that it may be less numerous there than downstate.

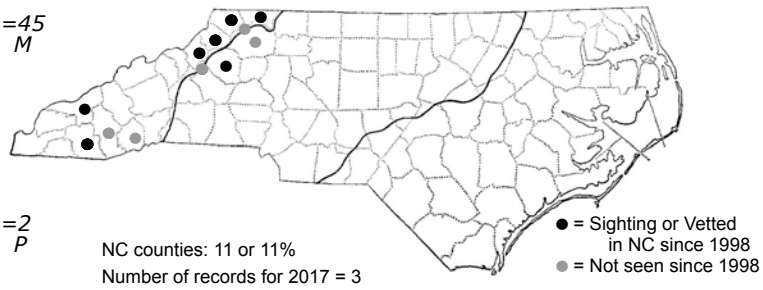
FLIGHT: A long flight season, downstate from late March or early April to mid-October (and sparingly to early November). In the mountains, it flies from late April to early October.

HABITAT: A variety of still, open waters, typically lakes and ponds, especially where there are lily pads or other floating vegetation.

COMMENTS: Additional field work in the western third of the state ought to provide new county records. However, there are fewer lakes and ponds in that part of the state that contain water lilies and other floating vegetation, not that this is a requirement to find this bluet.

Enallagma hageni Hagen's Bluet





NC counties: 11 or 11%
Number of records for 2017 = 3

High counts of:
39 - Macon - 1953-06-13
25 - Watauga - 2010-06-20
25 - Macon - 2017-07-20

Earliest date: Caldwell 2001-05-23
Latest date: Ashe 2003-08-28

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

DISTRIBUTION: Essentially throughout the mountains, and likely the extreme upper Piedmont foothills. Not surprisingly, NC lies at the southern end of the species' range, it not having yet been recorded from SC, and just at one site in extreme northeastern GA. There is a surprisingly wide gap in records in the central mountains, and fairly heavily worked Buncombe County lacks a record.

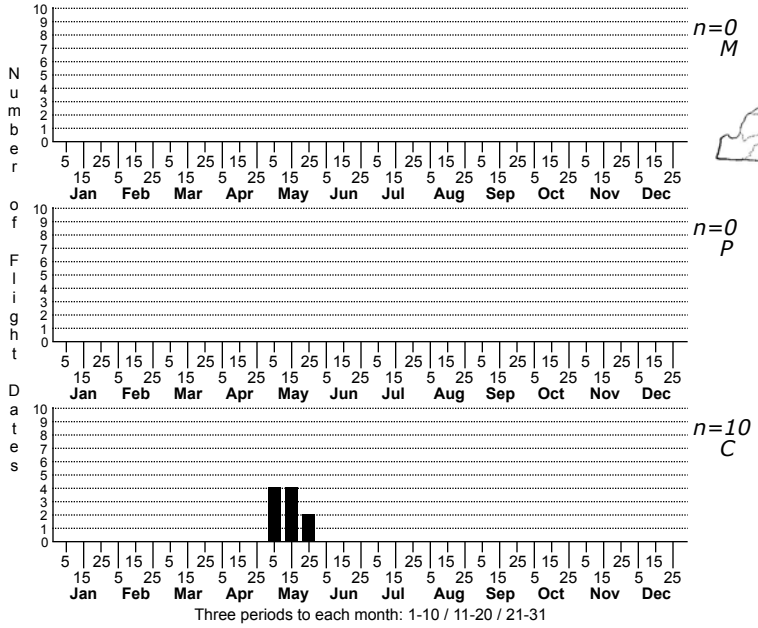
ABUNDANCE: Uncommon to locally fairly common in the mountains, but very rare in the upper parts of Piedmont foothill counties. Interestingly, there is a count of 39 individuals from Macon County; thus, it isn't overly rare in parts of the southern mountains. Paulson (2011) says "Often most common species at large northern lakes." Of course, such is not the case in NC, at the southern edge of the range.

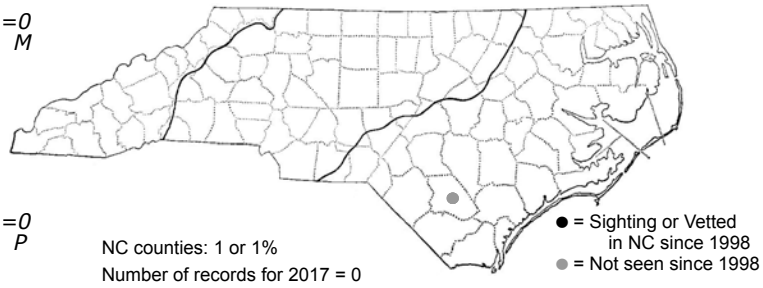
FLIGHT: The NC records in the mountains fall between mid-June and late August, though the flight there likely starts in May. The few Piedmont records are only for late May and mid-June.

HABITAT: Ponds, small lakes, and other open water with much emergent vegetation; often at bogs and marshes.

COMMENTS: Though there are numerous dragonflies that occur in NC only in the mountains, there are very few such damselflies with this type of range. The lack of records in the central mountain counties is puzzling, though this may represent poor coverage in its pond-like habitats.

Enallagma minusculum Little Bluet





NC counties: 1 or 1%
Number of records for 2017 = 0

High counts of:
17 - Bladen - 1965-05-09
8 - Bladen - 1965-05-09
6 - Bladen - 1966-05-08

Earliest date: Bladen 1965-05-08
Latest date: Bladen 1966-05-30

Status NC	Status US	Rank NC	Rank Global
W	-	SE?	G4

DISTRIBUTION: Largely disjunct population, known only from White Lake in Bladen County; the major portion of the range is Northeastern, south only to southern NJ (OdonataCentral range map). Believed (as of 2014) to be an introduced population.

ABUNDANCE: Can be common along lakeshores with emergent vegetation, within its main range. If it still occurs in NC, it likely must be quite local and rare, especially as nearly all records were over 25 years ago, and most of the shoreline of White Lake is heavily developed.

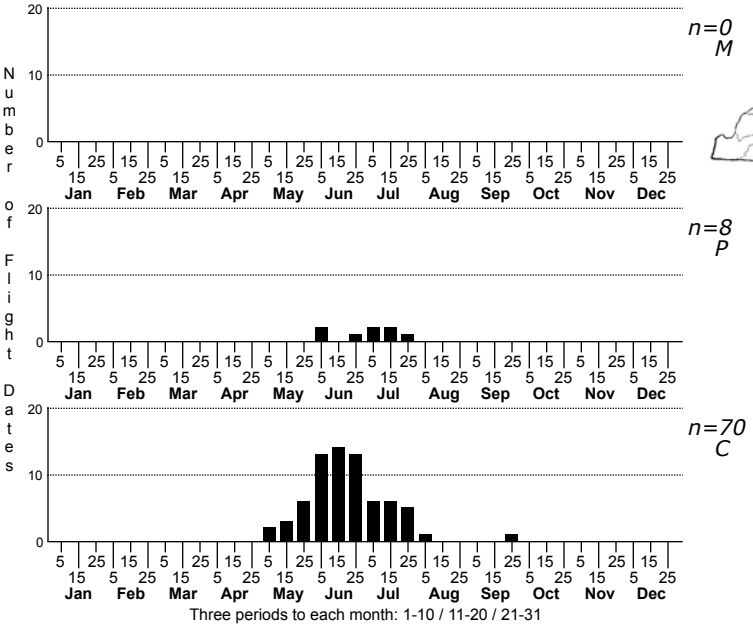
FLIGHT: The 10 dates for NC fall within a narrow time window -- early May to late May.

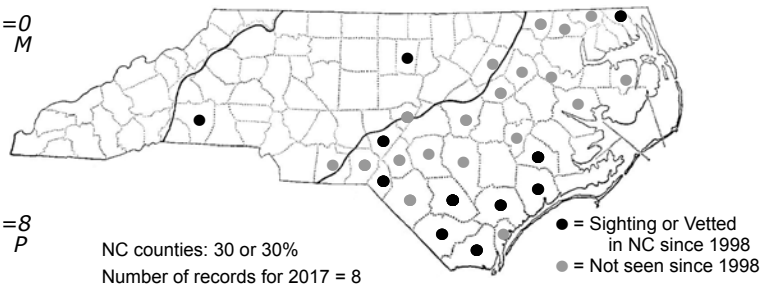
HABITAT: Floating or emergent vegetation along lakeshores.

COMMENTS: This is likely the rarest damselfly in NC, if it still exists. The last observation was May 1997, thus giving hope that it still occurs around White Lake. Mark Shields kayaked completely around White Lake on 11 May 2017 specifically searching for this species, but he found none. Thus, it may well be gone from the lake, though perhaps other surveys a week or two earlier or later than 11 May might still be warranted.

Other bay lakes in Bladen County have been well-worked over the past few decades -- Jones, Baytree, Singletary, etc.; yet, there are no records for them, the reason a few biologists wonder why a northern species would be disjunct far to the south at only White Lake, and not at other similar lakes. Therefore, in Fall 2014 the NC Natural Heritage Program created a new Watch List category: Watch Category 6, which includes species known to occur in North Carolina which current data suggest are likely not native to North Carolina but whose native occurrence is plausible. A small population was recently (2011) found in southern NJ, though the gap in the range to Bladen County, NC, is still nearly 400 miles.

Enallagma pallidum Pale Bluet





NC counties: 30 or 30%
Number of records for 2017 = 8

Vetted in 2017: Orange

High counts of:
75 - Onslow - 2016-06-04
75 - Jones - 2016-06-04
21 - Bladen - 2008-06-15

Earliest date: Brunswick 2017-05-02
Latest date: Jones 1968-09-28

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

DISTRIBUTION: Essentially limited to the Coastal Plain, where it likely occurs in all counties (though there are records for only 55-60% of them). Also occurs sparingly in the extreme southeastern Piedmont, near the Sandhills region; and a photo from Orange County (from 2003) extends the range westward into the northeastern Piedmont. A sight report for Rutherford County, in the far-western Piedmont, is open to question; there are no known Piedmont, much less upper Piedmont, records for SC or GA (on the OdonataCentral map).

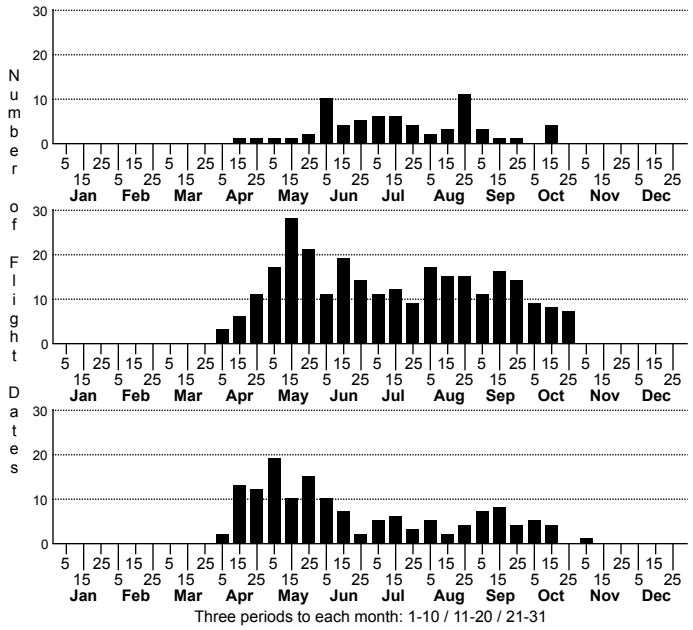
ABUNDANCE: Uncommon to locally fairly common in the southern Coastal Plain -- Sandhills area east to Jones and Onslow counties, but generally rare elsewhere in the Coastal Plain. Very rare in the narrow portion of the range in the Piedmont.

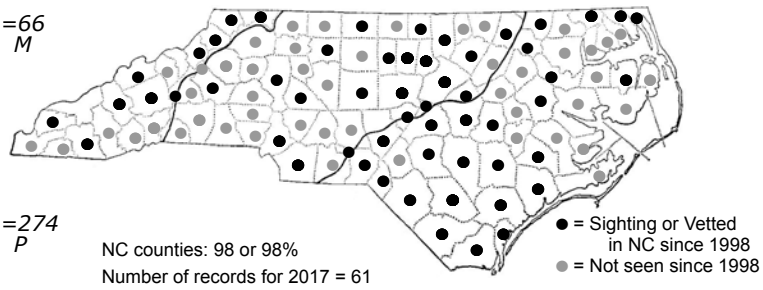
FLIGHT: In the Coastal Plain, the flight occurs between early May and early August, with a collection record from late September being quite late. The few flight dates for the Piedmont occur from early June to late July.

HABITAT: Lakes and ponds, especially where there are shrubby or swampy areas around the waters.

COMMENTS: In the past several years, there have been quite a few photographs to document the species, especially in the southern Coastal Plain. However, recent observations/photos from the northern two-thirds of this province have been lacking, due perhaps mainly to poor surveys of damselflies in this part of the state. Some form of documentation for the Rutherford County report is needed, as it seems that the species is absent from the Piedmont throughout its range, except very close to the Fall Line.

Enallagma signatum Orange Bluet





NC counties: 98 or 98%
Number of records for 2017 = 61

Sight (not vetted) in 2017: Halifax; C

High counts of:
325 - Wake - 2013-09-14
265 - Wake - 2012-08-16
260 - Wake - 2015-09-19

Earliest date: Wake 2016-04-02
Latest date: Bladen 2017-11-01

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

DISTRIBUTION: Statewide, lacking records from just two mountain counties. Certainly present in all 100 counties. Unlike many damselflies with a "statewide"range, this species has been recorded from all coastal counties.

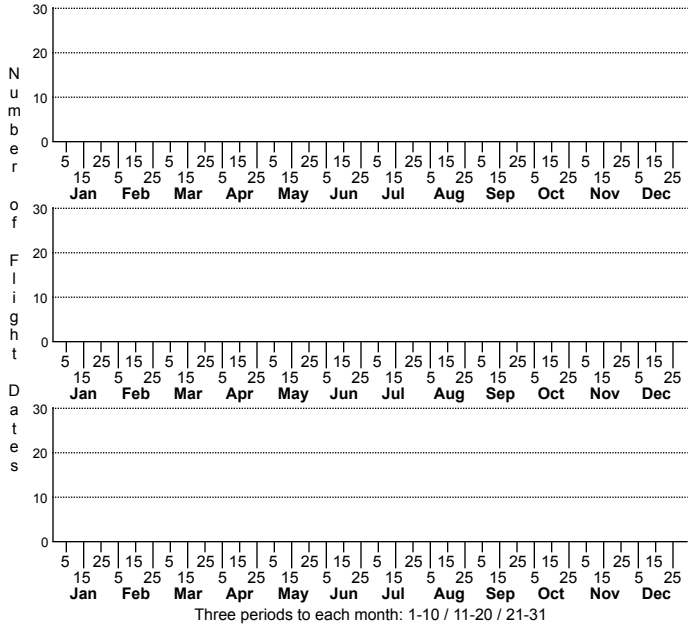
ABUNDANCE: Common and widespread in the Coastal Plain and Piedmont; locally abundant in a few areas. Fairly common to perhaps locally common in the mountains.

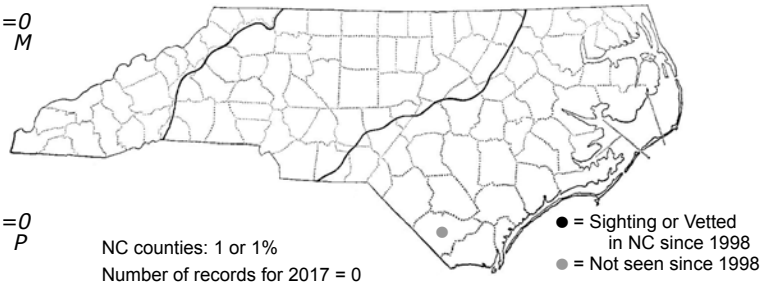
FLIGHT: A long flight period -- early or mid-April to late October, in all three provinces.

HABITAT: A broad range of lakes, ponds, and slow-moving streams.

COMMENTS: This is as widespread in the state as any damselfly, and is reasonably common as well. The orange color on the male is quite noticeable.

Enallagma sulcatum Golden Bluet





High counts of:

Earliest date: ?
Latest date: ?

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

DISTRIBUTION: Specimen known from Columbus County (generally presumed to be Lake Waccamaw), though this record does not show up in the list of specimens housed at the University of Florida, where all of Duncan Cuyler's specimens are housed. Paulson (2011), however, show a dot for southeastern NC in the range map in his book. This species is limited to the Gulf Coast region, from southern AL to central FL; the nearest population is northern FL.

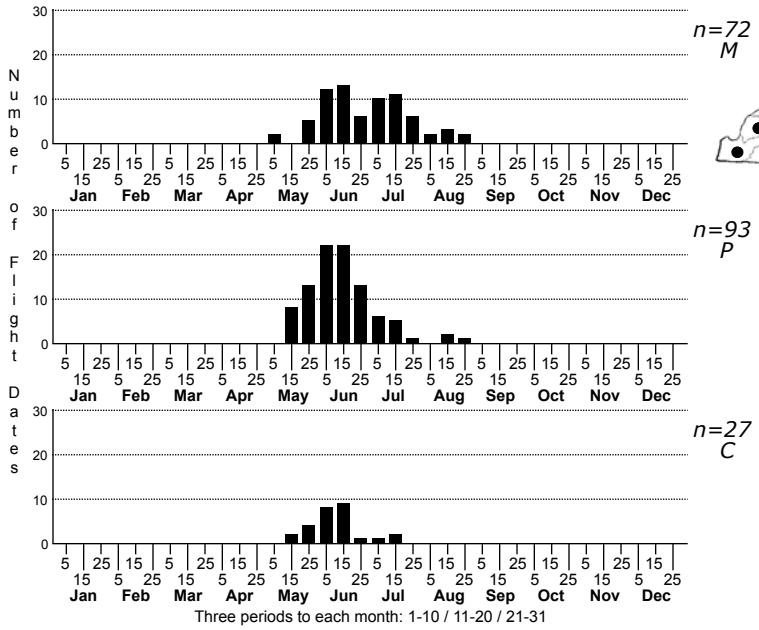
ABUNDANCE: Unknown in the state; can be very abundant in FL. It is possibly extirpated from the state, if it ever were positively documented from the state. Recent surveys for Golden Bluet along the shore of Lake Waccamaw have been negative for this species, though it is not 100% certain that the purported record came from this lake.

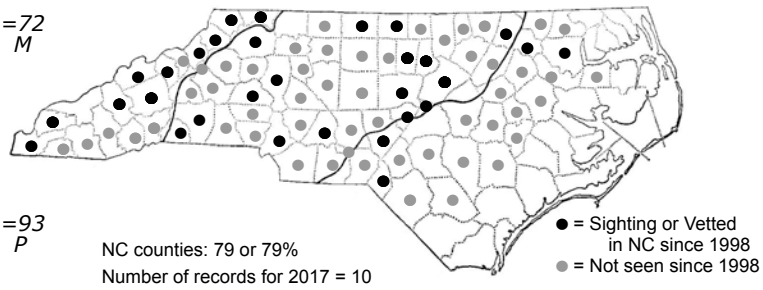
FLIGHT: In FL, flies from February to November. The flight in NC is unknown.

HABITAT: Sand-bottomed lakes with lots of shore vegetation (including grasses and lilypads).

COMMENTS: This, along with the Little Bluet, may be the most poorly known damselfly in NC. However, unlike the northern Little Bluet, it is more likely that a southern species of large natural sand-bottomed lakes (Florida) would be disjunct to NC, which does have such lakes in Bladen and Columbus counties. [Note that the Belle's Sanddragon and the Sandhill Clubtail also share this highly disjunct range from FL to sand-bottomed bay lakes in southeastern NC.] GA and SC have very few such sand-bottomed natural lakes. Because the whereabouts of the specimen(s) is not known, and thus there is no information about how recent the record is (assuming that it is a Golden Bluet), the NC Natural Heritage Program has moved its rank to SU (need more information to provide an accurate State Rank).

Enallagma traviatum Slender Bluet





NC counties: 79 or 79%
Number of records for 2017 = 10

High counts of:
100 - Orange - 2009-06-11
75 - Orange - 2010-06-05
60 - Buncombe - 2012-06-16

Earliest date: Graham 2016-05-02
Latest date: Wake 2017-08-26

Status		Rank	
NC	US	NC	Global
-	-	S5	G5

DISTRIBUTION: Throughout the mountains and Piedmont, and over the western half of the Coastal Plain, barely reaching the counties along the western part of Albemarle Sound.

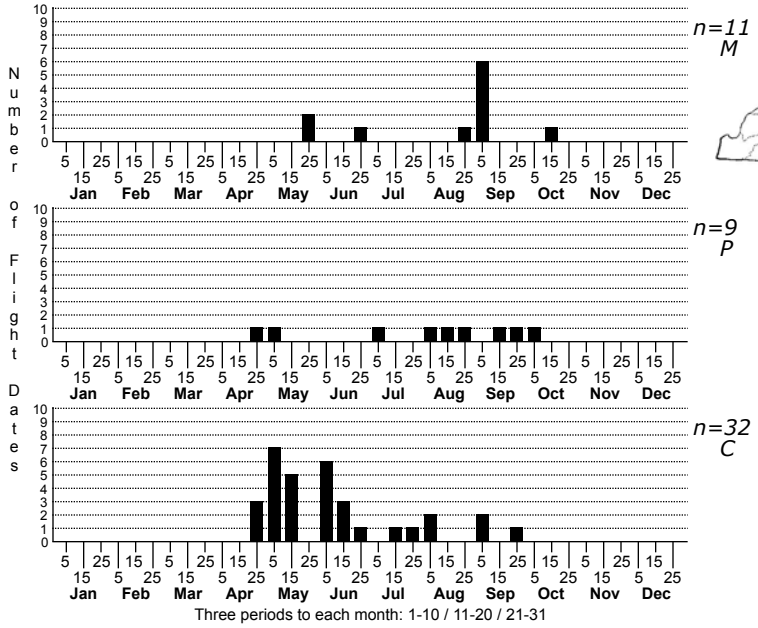
ABUNDANCE: Fairly common, to locally common, over the mountains and Piedmont; uncommon in the Coastal Plain, with but one recent report. More numerous in the mountains than downstate.

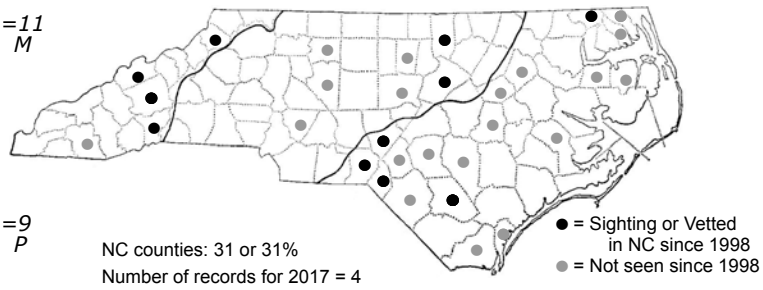
FLIGHT: Early May to late August in the mountains, and likely so also downstate. However, Piedmont records fall only from mid-May to mid-August, and Coastal Plain records only to mid-July.

HABITAT: A variety of lakes and ponds, typically with emergent vegetation.

COMMENTS: As with so many of our damselflies, there are few people looking for them in recent years in the Coastal Plain; thus, it is no surprise that there are collection records for about half of these counties, with but a single recent flight date record.

Enallagma vesperum Vesper Bluet





NC counties: 31 or 31%
Number of records for 2017 = 4

Vetted in 2017: Madison

High counts of:
8 - Bladen - 2017-05-07
5 - Henderson - 2008-05-27
5 - Buncombe - 2011-09-07

Earliest date: Wake 2016-04-24
Latest date: Buncombe 2012-10-12

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

DISTRIBUTION: Widely scattered over the entire state, though no records yet for the upper third of the Piedmont. In theory, could occur in all 100 counties, but so far (2017) recorded only from 31 of them.

ABUNDANCE: Rare to locally uncommon over the range in the state; the peak one-day count is just 8 individuals. The many counties in the Coastal Plain and Piedmont where it has yet to be recorded attests to the difficulty of finding the species in the state.

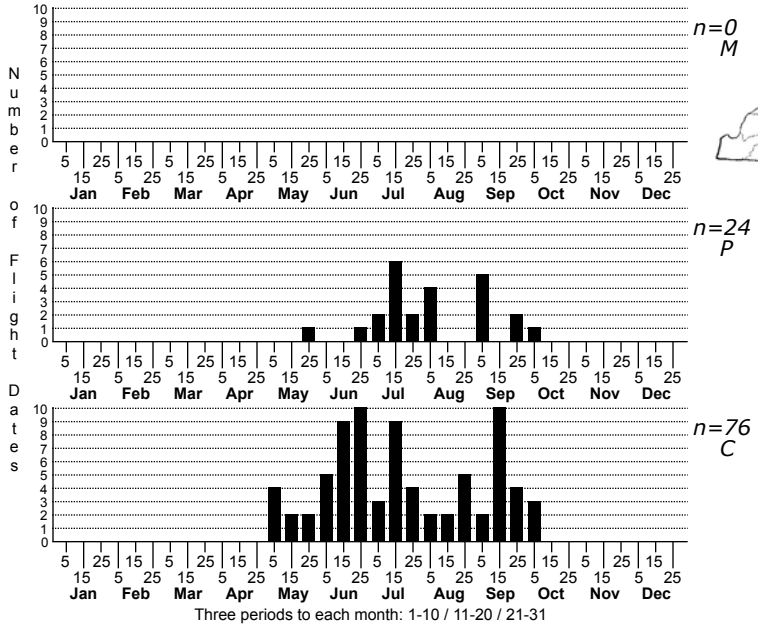
FLIGHT: In the Coastal Plain and Piedmont, it occurs from late April to early October. In the mountains, the relatively few records fall from late May to mid-October. More data are needed to fill in gaps in the flight charts, though it appears that the starting and ending dates of the flight periods are rather well established.

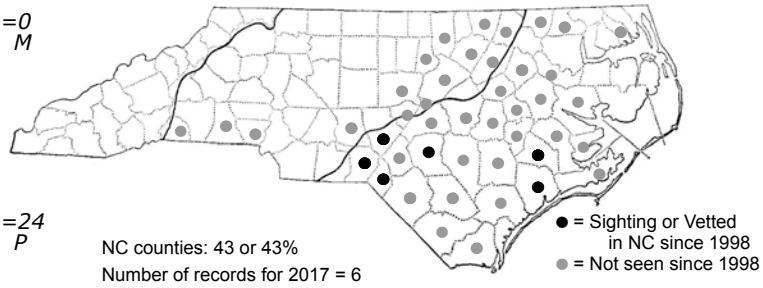
HABITAT: Lakes or ponds, typically where forests are nearby, for perching. Waters with lily pads are often used.

BEHAVIOR: As the name implies, the species flies mainly in late afternoon into twilight.

COMMENTS: The unusual daily flight timing is perhaps responsible for the scarcity of records for this otherwise geographically widespread species, which ranges from the Gulf Coast north to southern Canada. Males have a bright yellow thorax.

Enallagma weewa Blackwater Bluet





NC counties: 43 or 43%
Number of records for 2017 = 6

High counts of:
10 - Richmond; C - 2015-06-14
10 - Onslow - 2017-05-27
8 - Moore; C - 2016-06-17

Earliest date: Richmond; C 2017-05-07
Latest date: Nash 1976-10-06

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

DISTRIBUTION: Nearly throughout the Coastal Plain, and the extreme eastern and southern Piedmont. Absent from the mountains and the northwestern half of the Piedmont. Perhaps absent in a few counties in the northeastern Coastal Plain, such as those around Albemarle Sound.

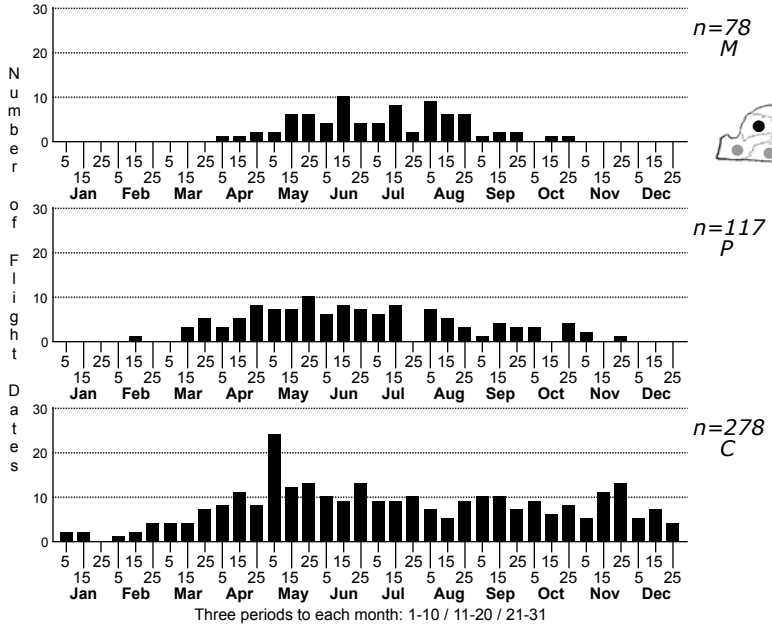
ABUNDANCE: Though recorded from most Coastal Plain and lower Piedmont counties, suggesting that it isn't rare, there are few recent reports, and just several photographs. Thus, presumed to be uncommon and overlooked within the range, if not in decline in numbers. Likely to now be rare in the Piedmont portion of the range, as (despite many observers in the Triangle region) there are no recent records from this province.

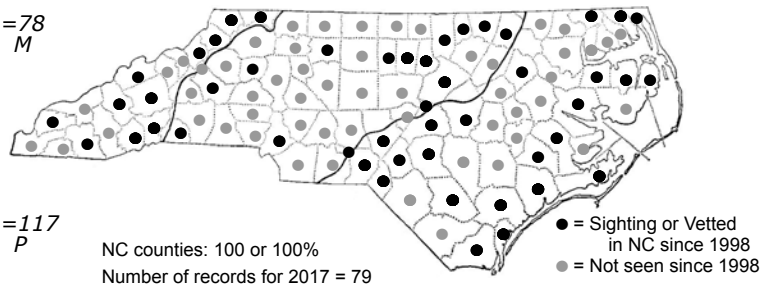
FLIGHT: In the Coastal Plain, the flight occurs from early May to early October, and the Piedmont flight is similar, though the earliest record is from late May.

HABITAT: Unusual for a damselfly: as the name suggests, it is found around blackwater (acidic) streams, rarely around larger rivers and lakes, but again with tannic (acidic) waters. However, several recent records have been at margins of lakes and ponds (in the Sandhills, where waters are acidic).

COMMENTS: It seems remarkable that Cuyler, and possibly others, have collected the species from 40 or more counties, yet there are few recent observations. This scarcity of recent records is likely due to the fact that few observers look for odonates along blackwater streams; most field work is done around ponds, lakes, and larger creeks and rivers. Certainly a species that has been recorded (collected) in ecologically "impoverished" counties such as Edgecombe, Wilson, Greene, Lenoir, and Duplin cannot be that scarce. Sadly, there are just a few known photographs available (so far) for the species in NC, and none as yet from the northern half of the Coastal Plain or eastern Piedmont.

Ischnura hastata Citrine Forktail





NC counties: 100 or 100%
Number of records for 2017 = 79

High counts of:
1000 - Scotland - 2007-06-16
1000 - Scotland - 2007-06-24
329 - Carteret - 2016-03-29

Earliest date: Onslow 2017-01-03
Latest date: Onslow 2015-12-30

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

DISTRIBUTION: Statewide, found in all 100 counties.

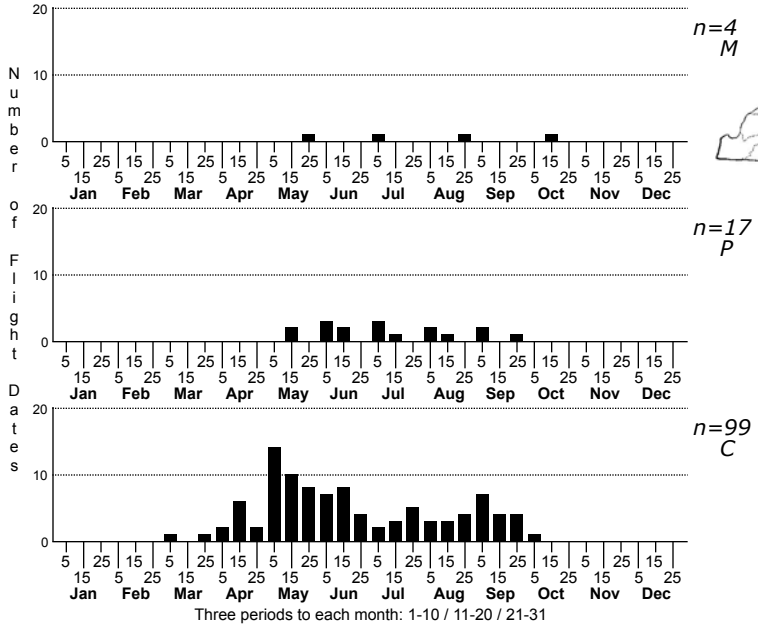
ABUNDANCE: Common to locally abundant in the Coastal Plain, and common westward. There are several counts of 1,000 individuals in a day, and others with over 100 individuals; most of these are in the Sandhills region of the Coastal Plain, but there are now several triple-digit counts for a coastal county (Carteret).

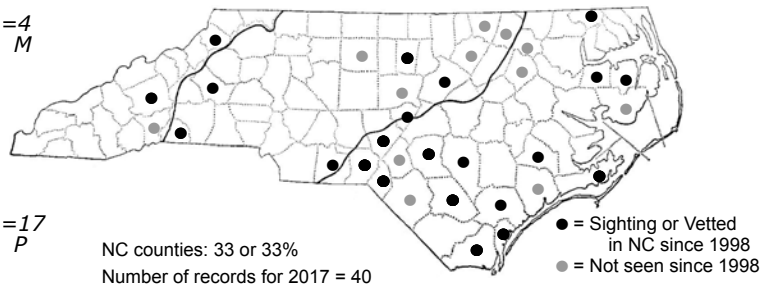
FLIGHT: A very long flight period. Primarily early March to mid-January in the Coastal Plain, but has been recorded in all months in the province. The Piedmont flight is from mid-March to late November, whereas in the mountains the flight is from early April to late October. There is also a record for mid-February in the Piedmont.

HABITAT: Lakes or ponds with much grassy vegetation around the margins; bogs, marshes. May also be found along slow-moving rivers.

COMMENTS: This is certainly one of the most abundant odonates (not just damselflies) in NC, from the coast to the mountains.

Ischnura kellicotti Lilypad Forktail





NC counties: 33 or 33%
Number of records for 2017 = 40

Vetted in 2017: Washington
Sight (not vetted) in 2017: Sampson

High counts of:
540 - Bladen - 2017-05-07
75 - Bladen - 2017-05-26
40 - Lee - 2013-06-12

Earliest date: Carteret 2017-03-08
Latest date: Buncombe 2011-10-17

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

DISTRIBUTION: Spottily distributed over most of the Coastal Plain and the eastern third of the Piedmont; also sparingly in the mountains and foothills. Many gaps in the range (records for less than half of the counties within the Coastal Plain and Piedmont portion of the range). Might be truly absent in some counties in the western Piedmont and parts of the mountains.

ABUNDANCE: Uncommon to locally common in the Sandhills and at Suggs Millpond (= Horseshoe Lake) in Bladen County. Rare to locally uncommon elsewhere in the Coastal Plain and eastern Piedmont. Rare in the foothills/mountain part of the range. Ought to be present in the western parts of the Piedmont and at least the lower mountain counties.

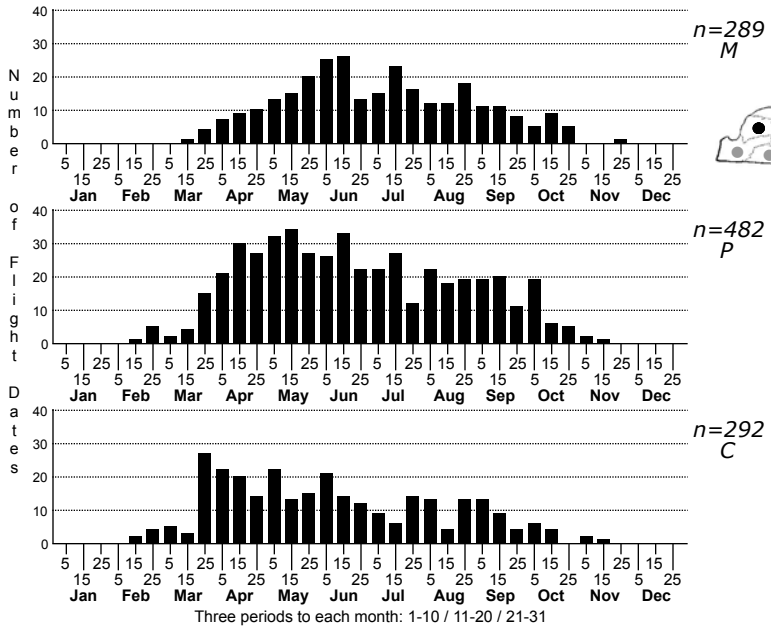
FLIGHT: In the Coastal Plain, it occurs from early March to early October. The Piedmont flight occurs from mid-May (and likely earlier) to late September. The few mountain dates fall from late May to mid-October, suprisingly late.

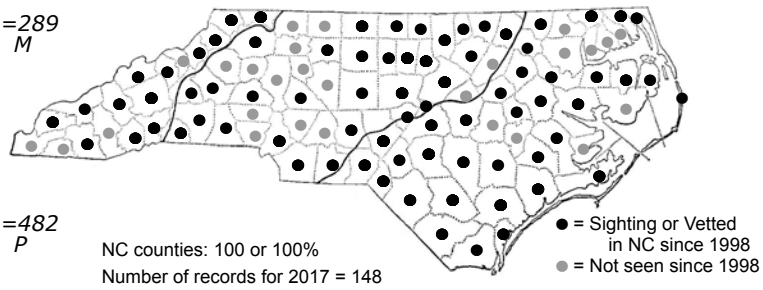
HABITAT: As the common name implies, it is essentially found only at lakes or ponds with lilypads.

BEHAVIOR: Adults can be identified by their habit of curving the abdomen such that the club typically touches the lilypad.

COMMENTS: There is much opportunity for biologists to "fill in the holes" in the range map with new county records. In fact, several new county records were added in 2016 and 2017. Though the species is considered to be "Common below the Fall Line" in GA (Beaton 2007), it certainly is not so in NC. The number of recent records, as compared with those older collection records by Cuyler, suggests that the species may be increasing in numbers and range in the state.

Ischnura posita Fragile Forktail





NC counties: 100 or 100%
Number of records for 2017 = 148

Sight (not vetted) in 2017: Halifax; C

High counts of:
475 - Wake - 2013-04-27
375 - Wake - 2014-04-23
245 - Wake - 2013-05-03

Earliest date: New Hanover 2017-02-12
Latest date: Buncombe 2011-11-25

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

DISTRIBUTION: Statewide, recorded from all 100 counties.

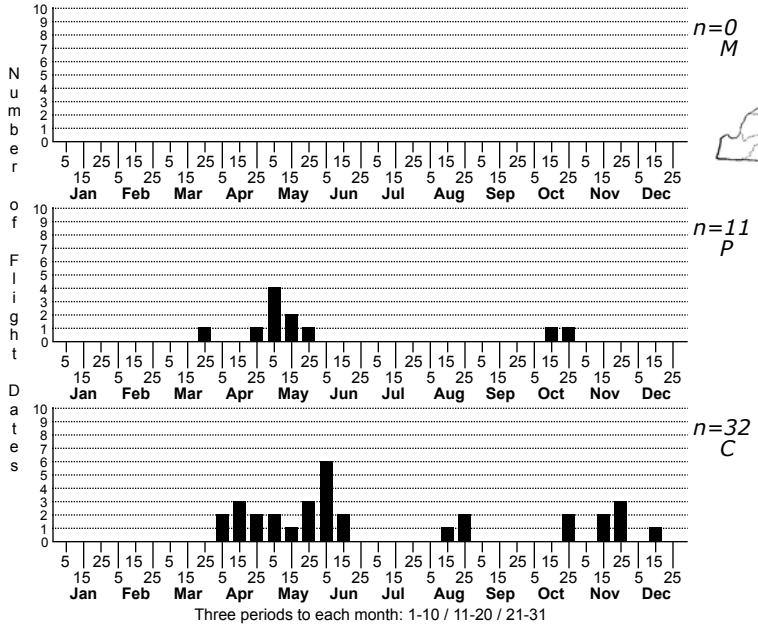
ABUNDANCE: Common to abundant; arguably the most widespread and frequently seen damselfly in the state, though not occurring in the abundance that the Citrine Forktail can be found in the Sandhills region.

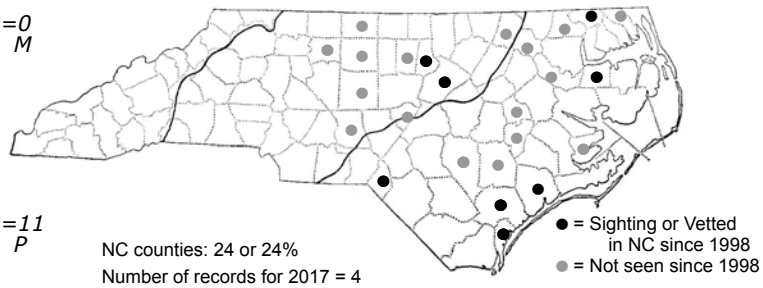
FLIGHT: As with many forktails, the flight is very long -- mid-March to mid-November. There is also a very early record on 12 February.

HABITAT: A wide variety of wet grassy areas, typically around pond or lake margins, slow-moving streams, etc.

COMMENTS: As with the Citrine Forktail, this is an easily found species, all across the state for most of the warmer months. Because it is a tiny species, its numbers in the state may equal or exceed the numbers of individuals of abundant dragonfly species such as Blue Dasher and Eastern Pondhawk.

Ischnura prognata Furtive Forktail





NC counties: 24 or 24%
Number of records for 2017 = 4

High counts of:
8 - Sampson - 1996-05-01
5 - Forsyth - 1990-05-04
4 - New Hanover - 2017-11-25

Earliest date: Durham 1986-03-30
Latest date: New Hanover 2017-12-19

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

DISTRIBUTION: Scattered over most of the Coastal Plain and the eastern half of the Piedmont. Recorded from slightly fewer than half of the counties within this range.

ABUNDANCE: Rare to very uncommon, but certainly overlooked in its shady habitat. The peak count of just 8 individuals is indicative of its scarcity, as is its spotty range in the state.

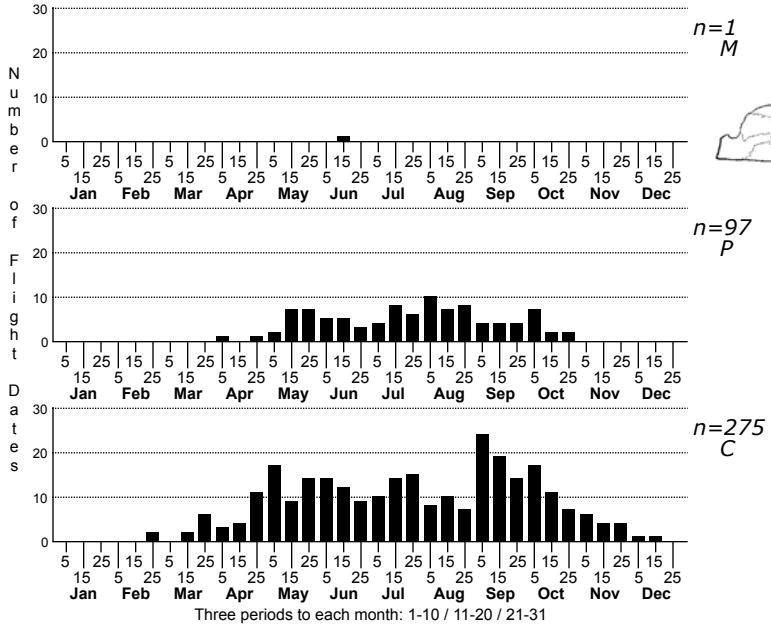
FLIGHT: The flight patterns are oddly "bimodal", almost as if a migratory species or one that aestivates in the warmer months. For example, the combined Coastal Plain and Piedmont flights are from late March or early April to the first half of June. There is a major gap until records again appear from mid-August to mid-December. Where are the individuals in late June, July, and the first half of August?

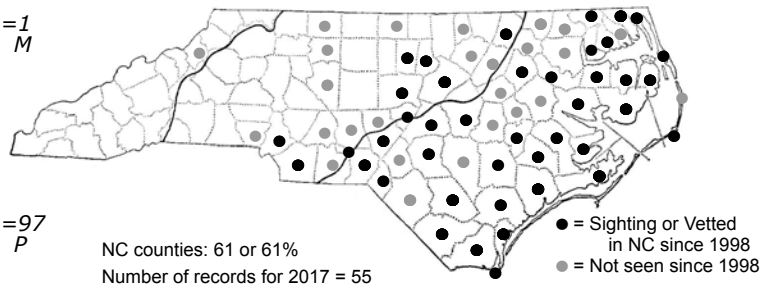
HABITAT: Streams, swamp edges, and other pools under heavy shade, essentially always under a forest canopy.

BEHAVIOR: Quite shy, this species comes by its common name honestly. Individuals perch low, often hidden in vegetation.

COMMENTS: This species' odd habitat selection -- shaded waters in forests -- makes it somewhat more difficult to survey for, and observe/photograph -- than other damselflies. This behavior is at least partly responsible for its spotty range in the state. Mark Shields has provided several recent (2016-17) photos from the southeastern corner of the state.

Ischnura ramburii Rambur's Forktail





NC counties: 61 or 61%
Number of records for 2017 = 55

Vetted in 2017: Lee

High counts of:
245 - Scotland - 2017-05-27
131 - Wake - 2013-09-14
75 - Richmond; C - 2017-05-05

Earliest date: Carteret 2017-02-24
Latest date: New Hanover 2016-12-18

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

DISTRIBUTION: Occupies the eastern half of the state, with scattered records in the western Piedmont; only one county record (Avery) for the mountains. Thus, it is unclear if it occurs statewide, though it certainly is very scarce in the western third of the state.

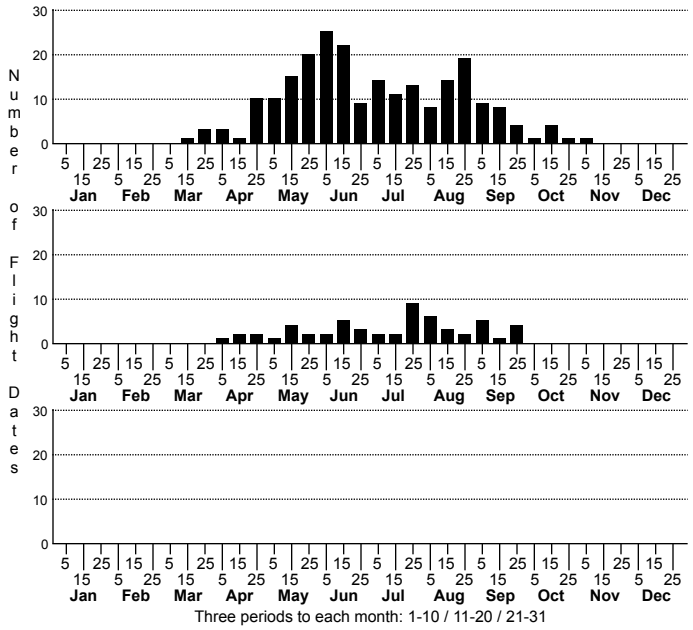
ABUNDANCE: Common to very common in the lower Coastal Plain, particularly around brackish pools along the coast. Generally common elsewhere in the Coastal Plain. Uncommon to locally common in the eastern and southeastern Piedmont, rare in the central Piedmont, and very rare farther westward.

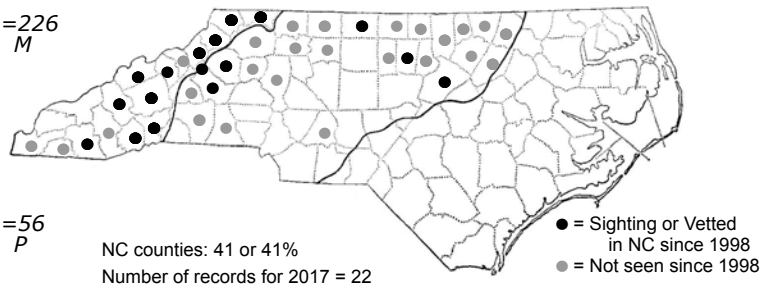
FLIGHT: The flight is from mid-March into late November, at least in the Coastal Plain, sparingly to mid-December. In the Piedmont, the flight begins in early May (if not earlier), and ends by late October. The sole mountain flight date is in mid-June.

HABITAT: Bay lakes, haline pools and shores, and heavily vegetated ponds.

COMMENTS: This is one of the few damselflies that is quite common along and near the immediate coast. The range in the western half of the state still needs much elucidation, especially as there are no recent records west of Orange and Mecklenburg counties.

Ischnura verticalis Eastern Forktail





NC counties: 41 or 41%
Number of records for 2017 = 22

High counts of:
33 - Wake - 2009-08-13
27 - Henderson - 1941-08-11
20 - Henderson - 1941-06-17

Earliest date: Buncombe 2012-03-19
Latest date: Buncombe 2011-11-01

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

DISTRIBUTION: Throughout the mountains and the northern half of the Piedmont, including most of the foothills counties. Ranges southeast to Halifax, Nash, and Wake counties. The only record for the southeastern Piedmont is for Stanly County. Interestingly, it is reported in many Coastal Plain counties in SC, though Paulson (2011) states "occurrence in coastal South Carolina is in question", as there are no Coastal Plain records for NC or for GA.

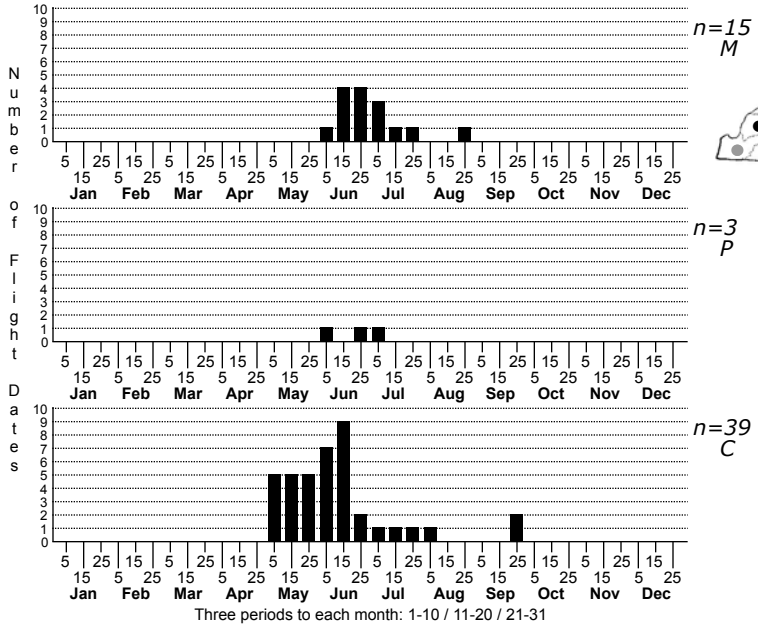
ABUNDANCE: Common to very common over most or all of the mountains; uncommon to locally fairly common in the Piedmont portion of the range. Whether it is truly absent in the southeastern Piedmont is uncertain.

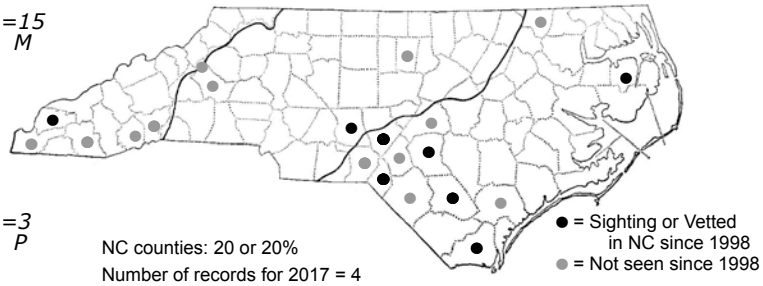
FLIGHT: In the mountains, it occurs from mid-March to early November. The Piedmont flight is from early April to late September, but it likely occurs in late March and well into October or early November (as it does so in the cooler mountains).

HABITAT: Lakes, ponds, and slower streams, where there is vegetation along the margins.

COMMENTS: This is one of the relatively few damselflies that is clearly more common in the mountains than downstate. In fact, we lack records for just two of the 17 counties wholly within the mountain province.

Nehalennia gracilis Sphagnum Sprite





NC counties: 20 or 20%
Number of records for 2017 = 4

High counts of:
41 - Henderson - 1941-06-17
30 - Moore; C - 2013-06-12
20 - Moore; C - 2014-06-04

Earliest date: Scotland 2017-05-07
Latest date: Pender 1976-09-24

Status		Rank	
NC	US	NC	Global
-	-	S3S4	G5

DISTRIBUTION: Primarily the southern Coastal Plain, including the Sandhills region, as well as the southern mountains. Otherwise, widely scattered over the state, though mainly in the southern part of the state. There are no records yet for the central and northern mountains, nearly all of the Piedmont, and nearly all of the northern Coastal Plain. A photo from Tyrrell County in 2014 filled in a large gap in the range in the eastern part of the state.

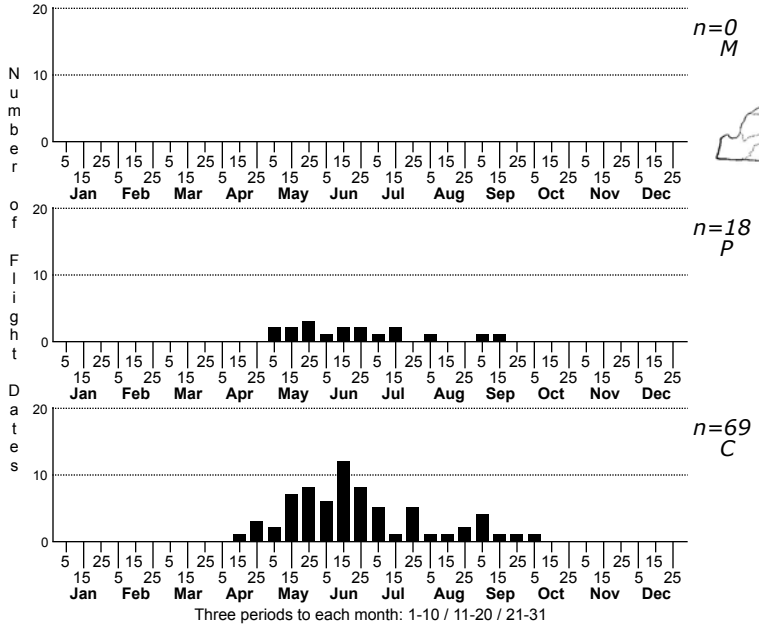
ABUNDANCE: Oddly geographically bimodal, being more numerous in the Coastal Plain and the southern mountains than in the Piedmont. Uncommon to fairly common (at least locally) in the Sandhills and in the southern mountains. Very rare to rare elsewhere, mainly in the southern Coastal Plain east of the Sandhills.

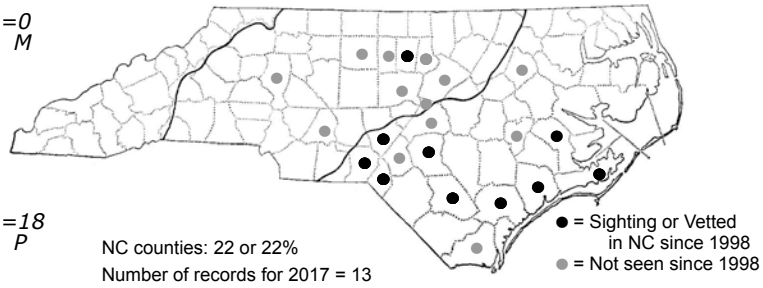
FLIGHT: The Coastal Plain records fall from early May to late September, whereas those from the mountains are from early June to late August. The very few (three) records from the Piedmont are confined from early June to early July, though certainly the flight is much wider than this. Most of the flight is finished by the end of July.

HABITAT: Typically where sphagnum moss is present around seeps and other boggy spots, such as some pond margins.

COMMENTS: Because of the sparse array of county records across much of the state, range maps in reference books tend to incorrectly show all of NC within the range of the species, which is more common in states to our north than to our south. Though not one of our rarest damselflies, it is one of our rarest away from its Sandhills stronghold.

Nehalennia integricollis Southern Sprite





NC counties: 22 or 22%
Number of records for 2017 = 13

High counts of:
30 - Bladen - 2017-05-26
20 - Bladen - 2017-05-07
15 - Carteret - 2017-05-19

Earliest date: Bladen 2017-04-17
Latest date: Richmond; C 2017-10-01

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

DISTRIBUTION: Most of the Coastal Plain and the Piedmont; absent from the mountains. Possibly absent from the northeastern Coastal Plain, and likely absent from the Piedmont foothills. However, as it ranges far up the Coastal Plain of the eastern US, the species is likely not absent in the state's Tidewater area.

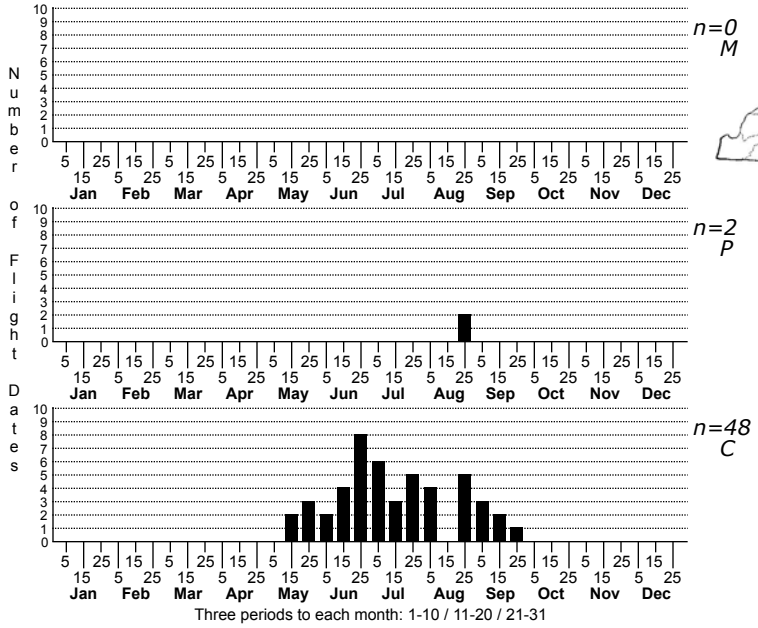
ABUNDANCE: Uncommon or easily overlooked in the southern half of the Coastal Plain, north to Craven and Moore counties. Rare to locally uncommon in the Piedmont portion of the range, and very rare to absent in the northern half of the Coastal Plain, where recorded only from Edgecombe County. Seemingly very rare to absent in the Tidewater region (north of Pamlico Sound).

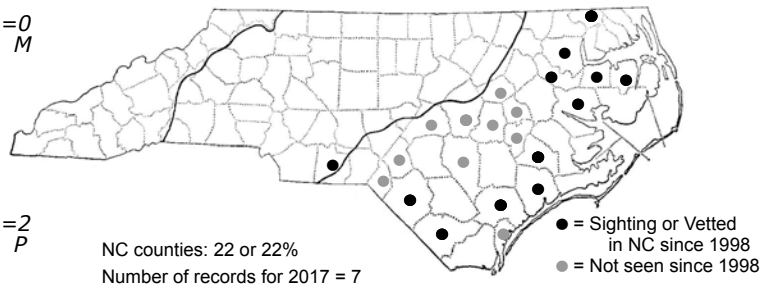
FLIGHT: In the Coastal Plain, it flies from mid-April to early October. The Piedmont flight appears to be from early May to mid-September.

HABITAT: Ponds or lakes, but where there is dense grassy vegetation along the margins, where it can easily hide.

COMMENTS: This species is so small that it is easily overlooked amid its dense grassy habitats. In fact, Paulson (2011) says that it "Can be very common in dense vegetation". "Very common" is certainly not appropriate for its abundance in NC, except perhaps very locally, as our highest single-day count is 30 individuals.

Telebasis byersi Duckweed Firetail





NC counties: 22 or 22%
Number of records for 2017 = 7

High counts of:
45 - Martin - 2007-06-23
9 - Beaufort - 2017-08-04
8 - Washington - 2007-06-26

Earliest date: Columbus 1990-05-16
Latest date: Pender 1976-09-24

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

DISTRIBUTION: Throughout the Coastal Plain, but apparently absent from the adjacent Piedmont, except in the extreme southeastern portion (i.e., a recent record from Anson County). Absent from the mountains. Possibly absent in some coastal counties in the northeastern Coastal Plain.

ABUNDANCE: Seemingly local. Apparently rare over much of the Coastal Plain, but can be fairly common in a few places, as witnessed by a one-day count of 45; several other one-day counts are of 8-9 individuals. Very rare in the Piedmont portion of the range.

FLIGHT: The records fall between mid-May to late September.

HABITAT: As the name implies, found mostly at ponds or swampy pools where there are dense stands of duckweeds.

COMMENTS: The male is so bright red that, where present, it should be obvious. The scarcity of recent records from the inner half of the Coastal Plain, including the Sandhills, is surprising if not disturbing. There has been some effort in sampling Sandhills lakes and ponds in recent years, and this striking species is not being reported there.

Northern Pygmy Clubtail - *Lanthus parvulus*

Though this species appeared on some earlier lists of odonates for the state, we were unable to locate specimen records or other documentation for it. In 2012 we received a file of all 17,900 NC specimen records housed at the University of Florida, most of which were contributed by Duncan Cuyler. There were four or five records (from Avery County) for this species listed on this file. However, Bill Mauffray at the Museum photographed these specimens, at our request, sending the photos to others for review. His conclusion, supported by the other reviewers, was that most or all appeared to be Southern Pygmy Clubtails, which also occurs in the general area, though one specimen could possibly be a Northern. The specimens are over 40 years old, and fungus on them has made it difficult to see the crucial lateral stripe pattern on the thorax that might separate the two species. Thus, the species needs to remain on the "reported but lacking confirmation" list (Appendix A), though, of course, at least one specimen might have been correctly identified. Observers should look for the species in the northern mountains in May and June.

Elusive Clubtail - *Stylurus notatus*

This northern/midwestern species has been attributed to NC by one or more references (including Bick and Mauffray [1997-2004]), and supposedly there is a sight record for Wake County. Cuyler has no record for NC, however. The range certainly approaches NC to the north (VA) and west (TN and n.w. GA), so it is certainly possible that the species occurs in the state. The species is very difficult to study; adults are notoriously difficult to net, as they perch high in treetops and make wide foraging bouts over water, usually far from shore.

Frosted Whiteface - *Leucorrhinia frigida*

A nymph of this species was reported from a Sandhills site (creek), but the normal range is from northern VA northward. The NC Natural Heritage Program thinks this is a misidentification. The species is not listed for NC in any references, nor does Cuyler have any records.

Four-spotted Skimmer - *Libellula quadrimaculata*

This is a northern species, occurring in the East southward only to NJ, PA, and OH. It is considered to be abundant, and one reference calls it the most common dragonfly in Canada. It is reported from NC in one or more references -- including Bick and Mauffray (1997-2004), but no data are available, and there are no specimen records from Cuyler.

Vermilion Saddlebags - *Tramea abdominalis*

This species' range is the West Indies and southern Florida. It strays rarely to eastern states north of FL. At least one reference lists a record for NC, but Cuyler's database contains no NC records. Bick and Mauffray (1997-2004) does not list NC for this species.

Sedge Sprite - *Nehalennia irene*

This is a northern species, ranging south in the eastern states to VA, WV, and KY. Cuyler has no records, nor are any others known for NC. However, the species is listed for NC in Westfall and May (1996) and Mauffray (2005). The OdonataCentral map shows records in SC for Greenville and Pickens counties, but with no data, even though the records have been confirmed by a reviewer. However, the nearest records on the map are in central VA and southeastern WV. If the SC records are legitimate, and Paulson (2011) includes these records on the range map in his book, then the species should occur in NC.

Listing of NC Odonates
by number of species (out of 187) per county

Sorted Alpha

Alamance - 75
Alexander - 57
Alleghany - 80
Anson - 89
Ashe - 88
Avery - 71
Beaufort - 72
Bertie - 73
Bladen - 114
Brunswick - 96
Brunswick; BHI - 22
Buncombe - 97
Burke; M - 53
Burke; P - 91
Cabarrus - 66
Caldwell - 82
Camden - 60
Carteret - 68
Caswell - 92
Catawba - 65
Chatham - 104
Cherokee - 63
Chowan - 56
Clay - 53
Cleveland - 71
Columbus - 89
Craven - 78
Cumberland - 114
Currituck - 41
Dare; Mainland - 38
Dare; OBL - 18
Dare; OBM - 16
Dare; OBU - 21
Davidson - 71
Davie - 77
Duplin - 81
Durham - 113
Edgecombe - 97
Forsyth - 78
Franklin - 93
Gaston - 70
Gates - 80
Graham - 63
Granville - 82
Greene - 73
Guilford - 77
Halifax; C - 57
Halifax; P - 91
Harnett; C - 96
Harnett; P - 86
Haywood - 74
Henderson - 80
Hertford - 75
Hoke - 97
Hyde - 52
Iredell - 64
Jackson - 53
Johnston; C - 94
Johnston; P - 41
Jones - 84
Lee - 91
Lenoir - 87
Lincoln - 62
Macon - 89
Madison - 79
Martin - 77
McDowell; M - 18
McDowell; P - 66
Mecklenburg - 81
Mitchell - 46
Montgomery - 96
Moore; C - 108
Moore; P - 45
Nash - 87
New Hanover - 75
Northampton - 84
Onslow - 92
Orange - 104
Pamlico - 46
Pasquotank - 57
Pender - 103
Perquimans - 48
Person - 75
Pitt - 84
Polk; M - 10
Polk; P - 69
Randolph - 73
Richmond; C - 102
Richmond; P - 55
Robeson - 94
Rockingham - 93
Rowan - 68
Rutherford; M - 9
Rutherford; P - 71
Sampson - 97
Scotland - 104
Stanly - 78
Stokes - 78
Surry - 75
Swain - 56
Transylvania - 82
Tyrrell - 61
Union - 77
Vance - 73
Wake - 116
Warren - 82
Washington - 66
Watauga - 83
Wayne - 84
Wilkes; M - 33
Wilkes; P - 86
Wilson - 84
Yadkin - 82
Yancey - 72

County splits respected.

Legend:

M = Mountain

P = Piedmont

C = Coastal Plain

BHI = Bald Head Island

OBU = Outer Banks Upper (includes Roanoke Island)

OBM = Outer Banks Middle

OBL = Outer Banks Lower

Sorted Numeric

Wake - 116
Bladen - 114
Cumberland - 114
Moore - 114
Durham - 113
Richmond - 113
Harnett - 109
Orange - 104
Chatham - 104
Scotland - 104
Pender - 103
Burke - 100
Sampson - 97
Buncombe - 97
Hoke - 97
Edgecombe - 97
Montgomery - 96
Brunswick - 96
Johnston - 95
Robeson - 94
Franklin - 93
Rockingham - 93
Caswell - 92
Onslow - 92
Halifax - 92
Lee - 91
Anson - 89
Macon - 89
Wilkes - 89
Columbus - 89
Ashe - 88
Lenoir - 87
Nash - 87
Northampton - 84
Pitt - 84
Jones - 84
Wilson - 84
Wayne - 84
Watauga - 83
Transylvania - 82
Caldwell - 82
Yadkin - 82
Warren - 82
Granville - 82
Mecklenburg - 81
Duplin - 81
Henderson - 80
Gates - 80
Alleghany - 80
Madison - 79
Stanly - 78
Stokes - 78
Craven - 78
Forsyth - 78
Martin - 77
Guilford - 77
Union - 77
Davie - 77
New Hanover - 75
Person - 75
Surry - 75
Hertford - 75
Alamance - 75
Haywood - 74
Greene - 73
Randolph - 73
Bertie - 73
Vance - 73
Beaufort - 72
Yancey - 72
Avery - 71
Cleveland - 71
Rutherford - 71
Davidson - 71
Gaston - 70
Polk - 70
McDowell - 69
Rowan - 68
Carteret - 68
Washington - 66
Cabarrus - 66
Catawba - 65
Iredell - 64
Cherokee - 63
Graham - 63
Lincoln - 62
Tyrrell - 61
Camden - 60
Pasquotank - 57
Alexander - 57
Chowan - 56
Swain - 56
Jackson - 53
Clay - 53
Hyde - 52
Perquimans - 48
Mitchell - 46
Pamlico - 46
Dare - 44
Currituck - 41

County splits ignored.

Number of Counties = 100

Listing of NC Odonates
by number of counties (out of 100) in which found

100 - Common Green Darner
100 - Halloween Pennant
100 - Eastern Pondhawk
100 - Slaty Skimmer
100 - Blue Dasher
100 - Common Whitetail
100 - Citrine Forktail
100 - Fragile Forktail
99 - Common Baskettail
98 - Widow Skimmer
98 - Great Blue Skimmer
98 - Eastern Amberwing
98 - Orange Bluet
97 - Carolina Saddlebags
97 - Black Saddlebags
96 - Wandering Glider
96 - Autumn Meadowhawk
96 - Ebony Jewelwing
96 - Variable Dancer
95 - Calico Pennant
95 - Painted Skimmer
95 - Blue-fronted Dancer
94 - Banded Pennant
93 - Swamp Darner
93 - Spangled Skimmer
93 - Familiar Bluet
92 - Lancet Clubtail
92 - Prince Baskettail
92 - Blue-tipped Dancer
91 - Fawn Darner
90 - Blue Corporal
90 - Southern Spreadwing
88 - Double-striped Bluet
87 - Ashy Clubtail
87 - Stream Cruiser
87 - Spot-winged Glider
87 - Swamp Spreadwing
85 - Turquoise Bluet
84 - Swift River Cruiser
84 - Skimming Bluet
83 - Springtime Darner
82 - Little Blue Dragonlet
81 - Black-shouldered Spinyleg
80 - Slender Spreadwing
79 - Powdered Dancer
79 - Slender Bluet
78 - Blue-ringed Dancer
77 - Dragonhunter
74 - Common Sanddragon
74 - Golden-winged Skimmer
74 - Yellow-sided Skimmer
74 - Blue-faced Meadowhawk
72 - Sparkling Jewelwing
70 - Bar-winged Skimmer
70 - Twelve-spotted Skimmer
66 - Twin-spotted Spiketail
65 - Mocha Emerald
64 - Russet-tipped Clubtail
64 - Smoky Rubyspot
63 - Comet Darner
61 - Shadow Darner
61 - Stream Bluet
61 - Rambur's Forktail
60 - Cyrano Darner
60 - Azure Bluet
59 - Harlequin Darner
58 - Dusky Dancer
56 - Clamp-tipped Emerald
55 - Umber Shadowdragon
54 - Selys's Sundragon
52 - Royal River Cruiser
50 - Elegant Spreadwing
46 - American Rubyspot
46 - Seepage Dancer
45 - Gray Petaltail
44 - Swift Setwing
43 - Brown Spiketail
43 - Fine-lined Emerald
43 - Attenuated Bluet
43 - Blackwater Bluet
41 - Slender Baskettail
41 - Eastern Forktail
40 - Taper-tailed Darner
40 - Double-ringed Pennant
40 - Atlantic Bluet
38 - Allegheny River Cruiser
37 - Eastern Least Clubtail
37 - Red-veined Pennant
37 - Eastern Red Damsel
36 - Laura's Clubtail
35 - Aurora Damsel
33 - Lilypad Forktail
32 - Mantled Baskettail
32 - Robust Baskettail
31 - Ruby Meadowhawk
31 - Great Spreadwing
31 - Vesper Bluet
30 - Ornate Pennant
30 - Pale Bluet
29 - Two-striped Forceptail
29 - Coppery Emerald
28 - Burgundy Bluet
26 - Four-spotted Pennant
25 - Tiger Spiketail
25 - Appalachian Jewelwing
24 - Unicorn Clubtail
24 - Appalachian Snaketail
24 - Amanda's Pennant
24 - Needham's Skimmer
24 - Furtive Forktail
22 - Eastern Ringtail
22 - Uhler's Sundragon
22 - Southern Sprite
22 - Duckweed Firetail
21 - Blackwater Clubtail
21 - Treetop Emerald
21 - Big Bluet
20 - Piedmont Clubtail
20 - Roseate Skimmer
20 - Sphagnum Sprite
19 - Cobra Clubtail
19 - Southern Pygmy Clubtail
19 - Arrow Clubtail
19 - Amber-winged Spreadwing
18 - Riverine Clubtail
18 - Alabama Shadowdragon
17 - Septima's Clubtail
17 - Banner Clubtail
17 - Band-winged Meadowhawk
16 - Arrowhead Spiketail
15 - Spine-crowned Clubtail
14 - Regal Darner
13 - Seaside Dragonlet
13 - Red Saddlebags
12 - Cocoa Clubtail
11 - Maine Snaketail
11 - Sable Clubtail
11 - Cherry Bluet
11 - Hagen's Bluet
10 - Shining Clubtail
10 - Mountain River Cruiser
10 - Smoky Shadowdragon
10 - Superb Jewelwing
10 - Sandhill Bluet
9 - Ocellated Darner
9 - Elfin Skimmer
9 - Carolina Spreadwing
8 - Southeastern Spinyleg
8 - Mustached Clubtail
8 - Diminutive Clubtail
8 - Ski-tipped Emerald
8 - Sweetflag Spreadwing
7 - Splendid Clubtail
7 - Clearlake Clubtail
7 - Zebra Clubtail
7 - Cinnamon Shadowdragon
7 - Marl Pennant
6 - Rapids Clubtail
5 - Green-faced Clubtail
5 - Stygian Shadowdragon
4 - Black-tipped Darner
4 - Phantom Darner
4 - Gray-green Clubtail
4 - Skillet Clubtail
4 - Edmund's Snaketail
4 - Striped Saddlebags
3 - Brook Snaketail
3 - Pygmy Snaketail
3 - Harpoon Clubtail
3 - White-faced Meadowhawk
2 - Green-striped Darner
2 - Midland Clubtail
2 - Sandhill Clubtail
2 - Cherokee Clubtail
2 - Townes's Clubtail
2 - Spotted Spreadwing
1 - Flag-tailed Spinyleg
1 - Rusty Snaketail
1 - Beaverpond Clubtail
1 - Belle's Sanddragon
1 - Northern Pygmy Clubtail
1 - Interior Least Clubtail
1 - American Emerald
1 - Chalk-fronted Corporal
1 - Variegated Meadowhawk
1 - Cherry-faced Meadowhawk
1 - Little Bluet
1 - Golden Bluet

NORTH CAROLINA ODONATES BY PROVINCE

Mountain	Piedmont	Coastal Plain
130 species	150 species	145 species
DRAGONFLIES - 88	DRAGONFLIES - 104	DRAGONFLIES - 98
Gray Petaltail	Gray Petaltail	Gray Petaltail
Black-tipped Darner	Shadow Darner	Shadow Darner
Shadow Darner	Common Green Darner	Common Green Darner
Green-striped Darner	Comet Darner	Comet Darner
Common Green Darner	Springtime Darner	Springtime Darner
Comet Darner	Ocellated Darner	Fawn Darner
Springtime Darner	Fawn Darner	Regal Darner
Ocellated Darner	Regal Darner	Swamp Darner
Fawn Darner	Swamp Darner	Taper-tailed Darner
Swamp Darner	Taper-tailed Darner	Harlequin Darner
Unicorn Clubtail	Harlequin Darner	Cyrano Darner
Black-shouldered Spinyleg	Cyrano Darner	Phantom Darner
Eastern Ringtail	Two-striped Forceptail	Two-striped Forceptail
Splendid Clubtail	Unicorn Clubtail	Gray-green Clubtail
Cobra Clubtail	Black-shouldered Spinyleg	Unicorn Clubtail
Dragonhunter	Eastern Ringtail	Southeastern Spinyleg
Mustached Clubtail	Blackwater Clubtail	Black-shouldered Spinyleg
Piedmont Clubtail	Midland Clubtail	Eastern Ringtail
Green-faced Clubtail	Cocoa Clubtail	Blackwater Clubtail
Southern Pygmy Clubtail	Splendid Clubtail	Cocoa Clubtail
Brook Snaketail	Septima's Clubtail	Septima's Clubtail
Pygmy Snaketail	Cobra Clubtail	Cobra Clubtail
Appalachian Snaketail	Skillet Clubtail	Dragonhunter
Maine Snaketail	Dragonhunter	Spine-crowned Clubtail
Rusty Snaketail	Spine-crowned Clubtail	Banner Clubtail
Beaverpond Clubtail	Banner Clubtail	Piedmont Clubtail
Harpoon Clubtail	Piedmont Clubtail	Clearlake Clubtail
Lancet Clubtail	Southern Pygmy Clubtail	Sandhill Clubtail
Ashy Clubtail	Edmund's Snaketail	Diminutive Clubtail
Rapids Clubtail	Appalachian Snaketail	Lancet Clubtail
Common Sanddragon	Maine Snaketail	Ashy Clubtail
Sable Clubtail	Diminutive Clubtail	Belle's Sanddragon
Eastern Least Clubtail	Lancet Clubtail	Common Sanddragon
Riverine Clubtail	Ashy Clubtail	Eastern Least Clubtail
Laura's Clubtail	Rapids Clubtail	Riverine Clubtail
Russet-tipped Clubtail	Common Sanddragon	Shining Clubtail
Zebra Clubtail	Cherokee Clubtail	Laura's Clubtail
Arrow Clubtail	Sable Clubtail	Russet-tipped Clubtail
Brown Spiketail	Eastern Least Clubtail	Townes's Clubtail
Tiger Spiketail	Riverine Clubtail	Brown Spiketail
Twin-spotted Spiketail	Laura's Clubtail	Twin-spotted Spiketail
Stream Cruiser	Russet-tipped Clubtail	Arrowhead Spiketail
Allegheny River Cruiser	Zebra Clubtail	Stream Cruiser
Swift River Cruiser	Arrow Clubtail	Allegheny River Cruiser
Mountain River Cruiser	Brown Spiketail	Swift River Cruiser
American Emerald	Tiger Spiketail	Royal River Cruiser
Slender Baskettail	Twin-spotted Spiketail	Slender Baskettail
Common Baskettail	Arrowhead Spiketail	Common Baskettail
Prince Baskettail	Stream Cruiser	Prince Baskettail
Uhler's Sundragon	Allegheny River Cruiser	Mantled Baskettail
Stygian Shadowdragon	Swift River Cruiser	Robust Baskettail
Ski-tipped Emerald	Mountain River Cruiser	Selys's Sundragon
Fine-lined Emerald	Royal River Cruiser	Uhler's Sundragon
Clamp-tipped Emerald	Slender Baskettail	Alabama Shadowdragon
Red-veined Pennant	Common Baskettail	Smoky Shadowdragon

Mountain

Calico Pennant
Halloween Pennant
Banded Pennant
Ornate Pennant
Double-ringed Pennant
Swift Setwing
Eastern Pondhawk
Little Blue Dragonlet
Blue Corporal
Chalk-fronted Corporal
Golden-winged Skimmer
Bar-winged Skimmer
Spangled Skimmer
Yellow-sided Skimmer
Slaty Skimmer
Widow Skimmer
Twelve-spotted Skimmer
Painted Skimmer
Great Blue Skimmer
Roseate Skimmer
Blue Dasher
Wandering Glider
Spot-winged Glider
Eastern Amberwing
Common Whitetail
Blue-faced Meadowhawk
Cherry-faced Meadowhawk
White-faced Meadowhawk
Ruby Meadowhawk
Band-winged Meadowhawk
Autumn Meadowhawk
Carolina Saddlebags
Black Saddlebags
Red Saddlebags

DAMSELFLIES - 42 species
Superb Jewelwing
Appalachian Jewelwing
Sparkling Jewelwing
Ebony Jewelwing
American Rubyspot
Smoky Rubyspot
Great Spreadwing
Southern Spreadwing
Spotted Spreadwing
Amber-winged Spreadwing
Sweetflag Spreadwing
Elegant Spreadwing
Slender Spreadwing
Swamp Spreadwing
Eastern Red Damsel
Blue-fronted Dancer
Seepage Dancer
Variable Dancer
Powdered Dancer
Blue-ringed Dancer
Blue-tipped Dancer
Dusky Dancer

Piedmont

Prince Baskettail
Mantled Baskettail
Robust Baskettail
Selys's Sundragon
Uhler's Sundragon
Alabama Shadowdragon
Smoky Shadowdragon
Umber Shadowdragon
Cinnamon Shadowdragon
Fine-lined Emerald
Coppery Emerald
Mocha Emerald
Treetop Emerald
Clamp-tipped Emerald
Amanda's Pennant
Red-veined Pennant
Calico Pennant
Halloween Pennant
Banded Pennant
Ornate Pennant
Double-ringed Pennant
Swift Setwing
Eastern Pondhawk
Little Blue Dragonlet
Blue Corporal
Golden-winged Skimmer
Bar-winged Skimmer
Spangled Skimmer
Yellow-sided Skimmer
Slaty Skimmer
Widow Skimmer
Needham's Skimmer
Twelve-spotted Skimmer
Painted Skimmer
Great Blue Skimmer
Elfin Skimmer
Roseate Skimmer
Blue Dasher
Wandering Glider
Spot-winged Glider
Eastern Amberwing
Common Whitetail
Blue-faced Meadowhawk
Ruby Meadowhawk
Band-winged Meadowhawk
Autumn Meadowhawk
Striped Saddlebags
Carolina Saddlebags
Black Saddlebags
Red Saddlebags

DAMSELFLIES - 46 species
Appalachian Jewelwing
Sparkling Jewelwing
Ebony Jewelwing
American Rubyspot
Smoky Rubyspot
Great Spreadwing

Coastal Plain

Umber Shadowdragon
Fine-lined Emerald
Coppery Emerald
Mocha Emerald
Treetop Emerald
Clamp-tipped Emerald
Four-spotted Pennant
Amanda's Pennant
Red-veined Pennant
Calico Pennant
Halloween Pennant
Banded Pennant
Ornate Pennant
Double-ringed Pennant
Swift Setwing
Eastern Pondhawk
Seaside Dragonlet
Little Blue Dragonlet
Blue Corporal
Golden-winged Skimmer
Bar-winged Skimmer
Spangled Skimmer
Yellow-sided Skimmer
Slaty Skimmer
Widow Skimmer
Needham's Skimmer
Twelve-spotted Skimmer
Painted Skimmer
Great Blue Skimmer
Marl Pennant
Elfin Skimmer
Roseate Skimmer
Blue Dasher
Wandering Glider
Spot-winged Glider
Eastern Amberwing
Common Whitetail
Blue-faced Meadowhawk
Variegated Meadowhawk
Autumn Meadowhawk
Striped Saddlebags
Carolina Saddlebags
Black Saddlebags
Red Saddlebags

DAMSELFLIES - 47 species
Appalachian Jewelwing
Sparkling Jewelwing
Ebony Jewelwing
American Rubyspot
Smoky Rubyspot
Southern Spreadwing
Sweetflag Spreadwing
Elegant Spreadwing
Slender Spreadwing
Carolina Spreadwing
Swamp Spreadwing
Eastern Red Damsel

NORTH CAROLINA ODONATES BY PROVINCE

Mountain	Piedmont	Coastal Plain
Aurora Damsel	Southern Spreadwing	Blue-fronted Dancer
Azure Bluet	Amber-winged Spreadwing	Seepage Dancer
Double-striped Bluet	Sweetflag Spreadwing	Variable Dancer
Familiar Bluet	Elegant Spreadwing	Powdered Dancer
Attenuated Bluet	Slender Spreadwing	Blue-ringed Dancer
Turquoise Bluet	Swamp Spreadwing	Blue-tipped Dancer
Atlantic Bluet	Eastern Red Damsel	Dusky Dancer
Stream Bluet	Blue-fronted Dancer	Azure Bluet
Skimming Bluet	Seepage Dancer	Double-striped Bluet
Hagen's Bluet	Variable Dancer	Familiar Bluet
Orange Bluet	Powdered Dancer	Cherry Bluet
Slender Bluet	Blue-ringed Dancer	Attenuated Bluet
Vesper Bluet	Blue-tipped Dancer	Sandhill Bluet
Citrine Forktail	Dusky Dancer	Turquoise Bluet
Lilypad Forktail	Aurora Damsel	Atlantic Bluet
Fragile Forktail	Azure Bluet	Burgundy Bluet
Rambur's Forktail	Double-striped Bluet	Big Bluet
Eastern Forktail	Familiar Bluet	Stream Bluet
Sphagnum Sprite	Attenuated Bluet	Skimming Bluet
	Turquoise Bluet	Little Bluet
	Atlantic Bluet	Pale Bluet
	Burgundy Bluet	Orange Bluet
	Big Bluet	Golden Bluet
	Stream Bluet	Slender Bluet
	Skimming Bluet	Vesper Bluet
	Hagen's Bluet	Blackwater Bluet
	Pale Bluet	Citrine Forktail
	Orange Bluet	Lilypad Forktail
	Slender Bluet	Fragile Forktail
	Vesper Bluet	Furtive Forktail
	Blackwater Bluet	Rambur's Forktail
	Citrine Forktail	Sphagnum Sprite
	Lilypad Forktail	Southern Sprite
	Fragile Forktail	Duckweed Firetail
	Furtive Forktail	
	Rambur's Forktail	
	Eastern Forktail	
	Sphagnum Sprite	
	Southern Sprite	

Checklist of North Carolina Odonates sorted by State Rank

Species with NC Rank = S1

AESHNIDAE
___ Black-tipped Darner S1
___ Green-striped Darner S1
___ Phantom Darner S1?

GOMPHIDAE
___ Gray-green Clubtail S1
___ Flag-tailed Spinyleg S1
___ Midland Clubtail S1
___ Skillet Clubtail S1S2
___ Mustached Clubtail S1S2
___ Green-faced Clubtail S1
___ Brook Snaketail S1
___ Edmund's Snaketail S1
___ Pygmy Snaketail S1
___ Rusty Snaketail S1
___ Clearlake Clubtail S1
___ Sandhill Clubtail S1
___ Harpoon Clubtail S1
___ Rapids Clubtail S1?
___ Belle's Sanddragon S1
___ Cherokee Clubtail S1?

CORDULIIDAE
___ American Emerald S1
___ Stygian Shadowdragon S1?

LIBELLULIDAE
___ Chalk-fronted Corporal S1
___ White-faced Meadowhawk S1

CALOPTERYGIDAE
___ Superb Jewelwing S1S2

LESTIDAE
___ Spotted Spreadwing S1

Species with NC Rank = S2

AESHNIDAE
___ Ocellated Darner S2?
___ Regal Darner S2?

GOMPHIDAE
___ Splendid Clubtail S2
___ Septima's Clubtail S2
___ Maine Snaketail S2S3
___ Sable Clubtail S2S3
___ Shining Clubtail S2S3
___ Zebra Clubtail S2?

MACROMIIDAE
___ Mountain River Cruiser S2?

CORDULIIDAE
___ Ski-tipped Emerald S2S3
___ Coppery Emerald S2?

LIBELLULIDAE
___ Marl Pennant S2S3

Species with NC Rank = S2

LESTIDAE
___ Sweetflag Spreadwing S2S3
___ Carolina Spreadwing S2?

Species with NC Rank = S3

GOMPHIDAE
___ Two-striped Forceptail S3
___ Unicorn Clubtail S3
___ Southeastern Spinyleg S3
___ Eastern Ringtail S3S4
___ Blackwater Clubtail S3?
___ Cocoa Clubtail S3
___ Cobra Clubtail S3S4
___ Spine-crowned Clubtail S3
___ Banner Clubtail S3?
___ Piedmont Clubtail S3?
___ Appalachian Snaketail S3
___ Diminutive Clubtail S3S4
___ Eastern Least Clubtail S3S4
___ Riverine Clubtail S3
___ Laura's Clubtail S3
___ Arrow Clubtail S3S4

CORDULEGASTRIDAE
___ Tiger Spiketail S3S4
___ Arrowhead Spiketail S3

CORDULIIDAE
___ Robust Baskettail S3?
___ Uhler's Sundragon S3S4
___ Alabama Shadowdragon S3?
___ Smoky Shadowdragon S3?
___ Cinnamon Shadowdragon S3?
___ Treetop Emerald S3?

LIBELLULIDAE
___ Elfin Skimmer S3S4
___ Roseate Skimmer S3S4
___ Band-winged Meadowhawk S3S4

CALOPTERYGIDAE
___ Appalachian Jewelwing S3S4

LESTIDAE
___ Great Spreadwing S3S4
___ Amber-winged Spreadwing S3

COENAGRIONIDAE
___ Cherry Bluet S3?
___ Sandhill Bluet S3?
___ Hagen's Bluet S3?
___ Vesper Bluet S3S4
___ Lilypad Forktail S3S4
___ Furtive Forktail S3S4
___ Sphagnum Sprite S3S4
___ Southern Sprite S3S4
___ Duckweed Firetail S3S4

Checklist of North Carolina Odonates sorted by State Rank

Species with NC Rank = S4

PETALURIDAE
___ Gray Petaltail S4

AESHNIDAE
___ Comet Darner S4
___ Taper-tailed Darner S4
___ Harlequin Darner S4S5
___ Cyrano Darner S4S5

GOMPHIDAE
___ Southern Pygmy Clubtail S4
___ Russet-tipped Clubtail S4S5

CORDULEGASTRIDAE
___ Brown Spiketail S4

MACROMIIDAE
___ Allegheny River Cruiser S4
___ Royal River Cruiser S4

CORDULIIDAE
___ Slender Baskettail S4
___ Selys's Sundragon S4
___ Umber Shadowdragon S4
___ Fine-lined Emerald S4
___ Clamp-tipped Emerald S4S5

LIBELLULIDAE
___ Red-veined Pennant S4
___ Double-ringed Pennant S4
___ Swift Setwing S4S5
___ Yellow-sided Skimmer S4S5
___ Twelve-spotted Skimmer S4
___ Ruby Meadowhawk S4

COENAGRIONIDAE
___ Eastern Red Damsel S4?
___ Seepage Dancer S4
___ Aurora Damsel S4?
___ Attenuated Bluet S4
___ Burgundy Bluet S4S5
___ Big Bluet S4S5
___ Pale Bluet S4?
___ Eastern Forktail S4S5

Species with NC Rank = S5

AESHNIDAE
___ Shadow Darner S5
___ Common Green Darner S5
___ Springtime Darner S5
___ Fawn Darner S5
___ Swamp Darner S5

GOMPHIDAE
___ Black-shouldered Spinyleg S5
___ Dragonhunter S5
___ Lancet Clubtail S5
___ Ashy Clubtail S5
___ Common Sanddragon S5

CORDULEGASTRIDAE
___ Twin-spotted Spiketail S5

MACROMIIDAE
___ Stream Cruiser S5
___ Swift River Cruiser S5

CORDULIIDAE
___ Common Baskettail S5
___ Prince Baskettail S5
___ Mantled Baskettail S5
___ Mocha Emerald S5

LIBELLULIDAE
___ Four-spotted Pennant S5
___ Amanda's Pennant S5
___ Calico Pennant S5
___ Halloween Pennant S5
___ Banded Pennant S5
___ Ornate Pennant S5
___ Eastern Pondhawk S5
___ Seaside Dragonlet S5
___ Little Blue Dragonlet S5
___ Blue Corporal S5
___ Golden-winged Skimmer S5
___ Bar-winged Skimmer S5
___ Spangled Skimmer S5
___ Slaty Skimmer S5
___ Widow Skimmer S5
___ Needham's Skimmer S5
___ Painted Skimmer S5
___ Great Blue Skimmer S5
___ Blue Dasher S5
___ Wandering Glider S5
___ Spot-winged Glider S5
___ Eastern Amberwing S5
___ Common Whitetail S5
___ Blue-faced Meadowhawk S5
___ Autumn Meadowhawk S5
___ Carolina Saddlebags S5
___ Black Saddlebags S5

CALOPTERYGIDAE
___ Sparkling Jewelwing S5

Checklist of North Carolina Odonates sorted by State Rank

Species with NC Rank = S5

CALOPTERYGIDAE

___ Ebony Jewelwing S5
___ American Rubyspot S5
___ Smoky Rubyspot S5

LESTIDAE

___ Southern Spreadwing S5
___ Elegant Spreadwing S5
___ Slender Spreadwing S5
___ Swamp Spreadwing S5

COENAGRIONIDAE

___ Blue-fronted Dancer S5
___ Variable Dancer S5
___ Powdered Dancer S5
___ Blue-ringed Dancer S5
___ Blue-tipped Dancer S5
___ Dusky Dancer S5
___ Azure Bluet S5
___ Double-striped Bluet S5
___ Familiar Bluet S5
___ Turquoise Bluet S5
___ Atlantic Bluet S5
___ Stream Bluet S5
___ Skimming Bluet S5
___ Orange Bluet S5
___ Slender Bluet S5
___ Blackwater Bluet S5
___ Citrine Forktail S5
___ Fragile Forktail S5
___ Rambur's Forktail S5

Species with NC Rank = SA

LIBELLULIDAE

___ Variegated Meadowhawk SA
___ Striped Saddlebags SA
___ Red Saddlebags SA

Species with NC Rank = SH

GOMPHIDAE

___ Beaverpond Clubtail SH
___ Interior Least Clubtail SH
___ Townes's Clubtail SH

Species with NC Rank = SU

LIBELLULIDAE

___ Cherry-faced Meadowhawk SU

COENAGRIONIDAE

___ Golden Bluet SU

Species with NC Rank = SE

COENAGRIONIDAE

___ Little Bluet SE?

See Page vi of the Table of Contents for explanation of codes.