

Dragonflies and Damselflies

(Order: Odonata)

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INTRODUCTION

The order Odonata, comprising the large and conspicuous dragonflies and the colorful damselflies, are—along with butterflies—among the most likely insects to be noticed and appreciated by the public. In the past decade, with the publication of non-technical field guides allowing identification of most species without capture, an increasing number of people seek out dragonflies for study and recreation. For example, the annual meeting of the Dragonfly Society of the Americas is drew 60-100 people to Florence, South Carolina in the Spring of 2012, partly for the chance to view scarce taxa endemic to this region.

Dragonflies are closely tied to aquatic environments. An individual odonate, depending on species, may spend months to years in the aquatic larval, or nymph, stage, and only weeks to a month or two as a flying adult. Dragonflies as a whole have broader tolerances for aquatic conditions than such taxa as Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies), and fish. Nonetheless, many of the 154 species of dragonflies found in South Carolina have exacting habitat requirements, and changes in the condition of rivers, streams, ponds and swamps will likely be reflected in the assemblage of dragonflies. In that way dragonflies can indicate the integrity of freshwater habitats.

Provided with this document is a list of global conservation status ranks and draft state conservation status ranks (for background see Natureserve; <http://www.natureserve.org/>) for South Carolina Odonata, the state codes proposed here for the first time. The history of study of the odonata in South Carolina is intermittent, with a burst in the 1930s, some work in the mid 1960s and from 1977-1985, and finally a current burst from around 2005 to the present. Most efforts have been local rather than statewide. Because of the spotty distribution of records in time and space, the draft list rarely makes use of the status SH, which indicates “Possibly Extirpated (Historical)”. Long gaps in the record may simply indicate lack of recent surveys in appropriate habitat, and a priority in any survey should be to relocate taxa not recorded for several decades. In some cases, habitats have changed profoundly since the 1930s, and some species may in fact have been locally extirpated. The draft state ranks were created based on a database of approximately 2000 documented records archived at Odonata Central (<http://www.odonatacentral.org/>), augmented by records and fieldwork in the state by Chris Hill, Marion Dobbs, Giff Beaton, R. Stephen Krotzer, and Dennis Paulson. GB and RSK, with extensive expertise in Southeastern odonates, reviewed the proposed ranks and offered feedback, which was incorporated into the final ranks.

Worthy of mention is the special status for Odonata of one water body in South Carolina, the Chattooga River. No other site has so many species found nowhere else in the State. The Chattooga supports a healthy population of the globally threatened Edmund’s Snaketail (*Ophiogomphus edmundo*), probably supports Pygmy Snaketails (*O. howei*, a recent discovery and a range extension of several hundred kilometers), has the only Green-faced Clubtails

(*Gomphus viridifrons*) and Ocellated Darners (*Boyeria grafiana*) found in the state so far, and probably more discoveries await there. The Chattooga, as a National Wild and Scenic River, has a protected river corridor. It is clean, cold, rocky, and free-flowing. Possible threats to the Chattooga ecosystem and its unique fauna could come from development in the upper reaches of the watershed, leading to more surface runoff into the river, more siltation, and lower water quality.

Below is a listing of South Carolina Odonata species (158) and a first attempt to assign S-ranks to them. If the species is present in 12 or more counties, it received an S5 rank.

| Species | Common Name | SC rank | Global rank |
|---------------------------------|-------------------------|---------|-------------|
| <i>Calopteryx angustipennis</i> | Appalachian Jewelwing | S2/S3 | G4 |
| <i>Calopteryx dimidiata</i> | Sparkling Jewelwing | S5 | G5 |
| <i>Calopteryx maculata</i> | Ebony Jewelwing | S5 | G5 |
| <i>Hetaerina americana</i> | American Rubyspot | S5 | G5 |
| <i>Hetaerina titia</i> | Smoky Rubyspot | S5 | G5 |
| <i>Archilestes grandis</i> | Great Spreadwing | S2 | G5 |
| <i>Lestes australis</i> | Southern Spreadwing | S5 | G5 |
| <i>Lestes eurinus</i> | Amber-winged Spreadwing | S1? | G4 |
| <i>Lestes inaequalis</i> | Elegant Spreadwing | S4 | G5 |
| <i>Lestes rectangularis</i> | Slender Spreadwing | S4 | G5 |
| <i>Lestes vidua</i> | Carolina Spreadwing | S3/S4 | G5 |
| <i>Lestes vigilax</i> | Swamp Spreadwing | S5 | G5 |
| <i>Amphiagrion saucium</i> | Eastern Red Damsel | S3/S4 | G5 |
| <i>Argia apicalis</i> | Blue-fronted Dancer | S5 | G5 |
| <i>Argia bipunctulata</i> | Seepage Dancer | S5 | G4 |
| <i>Argia fumipennis</i> | Variable Dancer | S5 | G5 |
| <i>Argia moesta</i> | Powdered Dancer | S5 | G5 |
| <i>Argia sedula</i> | Blue-ringed Dancer | S5 | G5 |
| <i>Argia tibialis</i> | Blue-tipped Dancer | S5 | G5 |
| <i>Argia translata</i> | Dusky Dancer | S4 | G5 |
| <i>Chromagrion conditum</i> | Aurora Damsel | S3? | G5 |
| <i>Enallagma aspersum</i> | Azure Bluet | S3 | G5 |
| <i>Enallagma basidens</i> | Double-striped Bluet | S5 | G5 |
| <i>Enallagma civile</i> | Familiar Bluet | S5 | G5 |
| <i>Enallagma concisum</i> | Cherry Bluet | S3? | G4 |
| <i>Enallagma daeckii</i> | Attenuated Bluet | S4 | G4 |
| <i>Enallagma davisi</i> | Sandhill Bluet | S3 | G5 |
| <i>Enallagma divagans</i> | Turquoise Bluet | S5 | G5 |
| <i>Enallagma doubledayi</i> | Atlantic Bluet | S4 | G5 |
| <i>Enallagma dubium</i> | Burgundy Bluet | S4 | G5 |

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|---------------------------------|---------------------------|-------|------|
| <i>Enallagma exsulans</i> | Stream Bluet | S4? | G5 |
| <i>Enallagma geminatum</i> | Skimming Bluet | S5 | G5 |
| <i>Enallagma pallidum</i> | Pale Bluet | S3 | G4 |
| <i>Enallagma signatum</i> | Orange Bluet | S5 | G5 |
| <i>Enallagma traviatum</i> | Slender Bluet | S4/S5 | G5 |
| <i>Enallagma vesperum</i> | Vesper Bluet | S4/S5 | G5 |
| <i>Enallagma weewa</i> | Blackwater Bluet | S5 | G5 |
| <i>Ischnura hastata</i> | Citrine Forktail | S5 | G5 |
| <i>Ischnura kellicotti</i> | Lilypad Forktail | S4 | G5 |
| <i>Ischnura posita</i> | Fragile Forktail | S5 | G5 |
| <i>Ischnura prognata</i> | Furtive Forktail | S3/S4 | G4 |
| <i>Ischnura ramburii</i> | Rambur's Forktail | S5 | G5 |
| <i>Ischnura verticalis</i> | Eastern Forktail | S4 | G5 |
| <i>Nehalennia gracilis</i> | Sphagnum Sprite | S3 | G5 |
| <i>Nehalennia integricollis</i> | Southern Sprite | S5 | G5 |
| <i>Nehalennia irene</i> | Sedge Sprite | SU | G5 |
| <i>Telebasis byersi</i> | Duckweed Firetail | S4? | G5 |
| <i>Tachopteryx thoreyi</i> | Gray Petaltail | S4 | G4 |
| <i>Aeshna umbrosa</i> | Shadow Darner | S4 | G5 |
| <i>Anax junius</i> | Common Green Darner | S5 | G5 |
| <i>Anax longipes</i> | Comet Darner | S4 | G5 |
| <i>Basiaeschna janata</i> | Springtime Darner | S5 | G5 |
| <i>Boyeria grafiana</i> | Ocellated Darner | S1/S2 | G5 |
| <i>Boyeria vinosa</i> | Fawn Darner | S5 | G5 |
| <i>Coryphaeschna ingens</i> | Regal Darner | S3 | G5 |
| <i>Epiaeschna heros</i> | Swamp Darner | S5 | G5 |
| <i>Gomphaeschna antilope</i> | Taper-tailed Darner | S4 | G4 |
| <i>Gomphaeschna furcillata</i> | Harlequin Darner | S5 | G5 |
| <i>Nasiaeschna pentacantha</i> | Cyrano Darner | S5 | G5 |
| <i>Triacanthagyna trifida</i> | Phantom Darner | S2? | G5 |
| <i>Aphylla williamsoni</i> | Two-striped Forceptail | S4 | G5 |
| <i>Arigomphus pallidus</i> | Gray-green Clubtail | S4 | G5 |
| <i>Arigomphus villosipes</i> | Unicorn Clubtail | S2 | G5 |
| <i>Dromogomphus armatus</i> | Southeastern Spinyleg | S2/S3 | G4 |
| <i>Dromogomphus spinosus</i> | Black-shouldered Spinyleg | S5 | G5 |
| <i>Erpetogomphus designatus</i> | Eastern Ringtail | S4 | G5 |
| <i>Gomphus abbreviatus</i> | Spine-crowned Clubtail | SH | G3G4 |
| <i>Gomphus apomyius</i> | Banner Clubtail | S3? | G3G4 |
| <i>Gomphus australis</i> | Clearlake Clubtail | S2 | G4 |
| <i>Gomphus dilatatus</i> | Blackwater Clubtail | S5 | G5 |
| <i>Gomphus diminutus</i> | Diminutive Clubtail | S2 | G3 |

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|----------------------------------|-------------------------|-------|------|
| <i>Gomphus exilis</i> | Lancet Clubtail | S5 | G5 |
| <i>Gomphus hybridus</i> | Cocoa Clubtail | S4 | G4 |
| <i>Gomphus lividus</i> | Ashy Clubtail | S5 | G5 |
| <i>Gomphus minutus</i> | Cypress Clubtail | S2 | G5 |
| <i>Gomphus parvidens</i> | Piedmont Clubtail | S3? | G4 |
| <i>Gomphus rogersi</i> | Sable Clubtail | S3 | G4 |
| <i>Gomphus septima</i> | Septima's Clubtail | S1? | G2 |
| <i>Gomphus vastus</i> | Cobra Clubtail | S4 | G5 |
| <i>Gomphus viridifrons</i> | Green-faced Clubtail | S1/S2 | G3G4 |
| <i>Hagenius brevistylus</i> | Dragonhunter | S5 | G5 |
| <i>Lanthus vernalis</i> | Southern Pygmy Clubtail | S3 | G4 |
| <i>Ophiogomphus edundo</i> | Edmund's Snaketail | S1/S2 | G1G2 |
| <i>Ophiogomphus incurvatus</i> | Appalachian Snaketail | S2 | G3 |
| <i>Progomphus obscurus</i> | Common Sanddragon | S5 | G5 |
| <i>Stylogomphus albistylus</i> | Eastern Least Clubtail | S3/S4 | G5 |
| <i>Stylurus ivae</i> | Shining Clubtail | S3? | G4 |
| <i>Stylurus laurae</i> | Laura's Clubtail | S4? | G4 |
| <i>Stylurus plagiatus</i> | Russet-tipped Clubtail | S5 | G5 |
| <i>Stylurus scudderi</i> | Zebra Clubtail | SH | G4 |
| <i>Stylurus spiniceps</i> | Arrow Clubtail | SH | G5 |
| <i>Stylurus townesi</i> | Townes' Clubtail | SH | G3 |
| <i>Cordulegaster bilineata</i> | Brown Spiketail | S3? | G5 |
| <i>Cordulegaster erronea</i> | Tiger Spiketail | S2? | G4 |
| <i>Cordulegaster maculata</i> | Twin-spotted Spiketail | S5 | G5 |
| <i>Cordulegaster obliqua</i> | Arrowhead Spiketail | S3 | G4 |
| <i>Didymops transversa</i> | Stream Cruiser | S5 | G5 |
| <i>Macromia alleghaniensis</i> | Allegheny River Cruiser | S3 | G4 |
| <i>Macromia illinoensis</i> | Swift River Cruiser | S5 | G5 |
| <i>Macromia margarita</i> | Mountain River Cruiser | S2 | G3 |
| <i>Macromia taeniolata</i> | Royal River Cruiser | S5 | G4 |
| <i>Epitheca costalis</i> | Slender Baskettail | S4 | G5 |
| <i>Epitheca cynosura</i> | Common Baskettail | S5 | G5 |
| <i>Epitheca princeps</i> | Prince Baskettail | S5 | G5 |
| <i>Epitheca semiaquea</i> | Mantled Baskettail | S4 | G5 |
| <i>Epitheca spinosa</i> | Robust Baskettail | S2? | G4 |
| <i>Helocordulia selysii</i> | Selys' Sundragon | S4 | G4 |
| <i>Neurocordulia alabamensis</i> | Alabama Shadowdragon | S3? | G5 |
| <i>Neurocordulia molesta</i> | Smoky Shadowdragon | S4 | G4 |
| <i>Neurocordulia obsoleta</i> | Umber Shadowdragon | S4? | G5 |
| <i>Neurocordulia virginensis</i> | Cinnamon Shadowdragon | S3? | G4? |
| <i>Somatochlora calverti</i> | Calvert's Emerald | SU | G3 |

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|---------------------------------|------------------------|-----|------|
| <i>Somatochlora filosa</i> | Fine-lined Emerald | S4 | G5 |
| <i>Somatochlora georgiana</i> | Coppery Emerald | S2? | G3G4 |
| <i>Somatochlora linearis</i> | Mocha Emerald | S5 | G5 |
| <i>Somatochlora provocans</i> | Treetop Emerald | S2 | G4 |
| <i>Somatochlora tenebrosa</i> | Clamp-tipped Emerald | S4 | G5 |
| <i>Brachymesia gravida</i> | Four-spotted Pennant | S5 | G5 |
| <i>Celithemis amanda</i> | Amanda's Pennant | S5 | G5 |
| <i>Celithemis bertha</i> | Red-veined Pennant | S4 | G5 |
| <i>Celithemis elisa</i> | Calico Pennant | S5 | G5 |
| <i>Celithemis eponina</i> | Halloween Pennant | S5 | G5 |
| <i>Celithemis fasciata</i> | Banded Pennant | S5 | G5 |
| <i>Celithemis ornata</i> | Ornate Pennant | S5 | G5 |
| <i>Celithemis verna</i> | Double-ringed Pennant | S4 | G5 |
| <i>Dythemis velox</i> | Swift Setwing | S5 | G5 |
| <i>Erythemis simplicicollis</i> | Eastern Pondhawk | S5 | G5 |
| <i>Erythrodiplax berenice</i> | Seaside Dragonlet | S4 | G5 |
| <i>Erythrodiplax minuscula</i> | Little Blue Dragonlet | S5 | G5 |
| <i>Ladona deplanata</i> | Blue Corporal | S5 | G5 |
| <i>Libellula auripennis</i> | Golden-winged Skimmer | S5 | G5 |
| <i>Libellula axilena</i> | Bar-winged Skimmer | S5 | G5 |
| <i>Libellula cyanea</i> | Spangled Skimmer | S5 | G5 |
| <i>Libellula flavida</i> | Yellow-sided Skimmer | S5 | G5 |
| <i>Libellula incesta</i> | Slaty Skimmer | S5 | G5 |
| <i>Libellula luctuosa</i> | Widow Skimmer | S5 | G5 |
| <i>Libellula needhami</i> | Needham's Skimmer | S5 | G5 |
| <i>Libellula pulchella</i> | Twelve-spotted Skimmer | S5 | G5 |
| <i>Libellula semifasciata</i> | Painted Skimmer | S5 | G5 |
| <i>Libellula vibrans</i> | Great Blue Skimmer | S5 | G5 |
| <i>Macrodiplax balteata</i> | Marl Pennant | S3? | G5 |
| <i>Miathyria marcella</i> | Hyacinth Glider | S3? | G5 |
| <i>Nannothemis bella</i> | Elfin Skimmer | S3 | G4 |
| <i>Orthemis ferruginea</i> | Roseate Skimmer | S5 | G5 |
| <i>Pachydiplax longipennis</i> | Blue Dasher | S5 | G5 |
| <i>Pantala flavescens</i> | Wandering Glider | S5 | G5 |
| <i>Pantala hymenaea</i> | Spot-winged Glider | S5 | G5 |
| <i>Perithemis tenera</i> | Eastern Amberwing | S5 | G5 |
| <i>Plathemis lydia</i> | Common Whitetail | S5 | G5 |
| <i>Sympetrum ambiguum</i> | Blue-faced Meadowhawk | S5 | G5 |
| <i>Sympetrum corruptum</i> | Variiegated Meadowhawk | SNA | G5 |
| <i>Sympetrum rubicundulum</i> | Ruby Meadowhawk | S2? | G5 |
| <i>Sympetrum vicinum</i> | Autumn Meadowhawk | S5 | G5 |

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|------------------------|---------------------|-----|----|
| <i>Tramea calverti</i> | Striped Saddlebags | SNA | G5 |
| <i>Tramea carolina</i> | Carolina Saddlebags | S5 | G5 |
| <i>Tramea lacerata</i> | Black Saddlebags | S5 | G5 |
| <i>Tramea onusta</i> | Red Saddlebags | SNA | G5 |