

*A Beginners Guide to the Dragonflies  
and Damselflies  
from Bay and Surrounding Counties, Florida.*



**Carolina Saddlebags (*Tramea carolina*). Photo by E. Keppner**

**Edwin J. Keppner and Lisa A. Keppner**

**For**

**Lake Sands District, Boy Scouts of America**

**September 2009**

## Acknowledgements

We thank the Northwest Florida Water Management District for providing access to various areas to collect odonates. We express our sincere appreciation to the St. Joe Foundation for the grant in 2004 that provided the means to continue our collecting, identifying, and storing the voucher specimens of the dragonflies and damselflies from our area. We also thank Mr. Jerrell Daigle of the Dragonfly Society of the Americas for confirming and correcting identifications. We thank Dr. Marion Dobbs for the photographs of odonates taken during a field trip to Bay County.

## Table of Contents

Purpose .....	1
Introduction .....	1
Suggestions for Beginners .....	2
The Nature of the Odonata .....	2
Classification .....	2
Basic Anatomy .....	3
Wings .....	4
Colors .....	4
Life Cycle Summary .....	5
Dragonfly Larvae .....	6
Damselfly Larvae .....	7
Juvenile Adults .....	7
Annual Migration .....	7
Predator and Prey .....	7
Helpful Websites .....	8
Habitats or Where to Find Odonates .....	8
Flowing Water .....	8
Standing Water .....	8
Northwest Florida Water Management District .....	9

The Checklists .....	9
Arrangement of the Lists and Number of Species .....	10
Rare Dragonflies and Damselflies .....	10
The Dragonfly Checklist .....	12
The Damselfly Checklist .....	16
Literature Cited .....	18

## **Purpose**

The purpose of this guide and checklist is to provide basic information regarding the watching of dragonflies and damselflies in our area. A checklist of the dragonflies and damselflies or odonates (Class Insecta & Order Odonata) reported from or possibly occurring in Bay and adjacent counties, Florida is provided for those individuals interested in observing these remarkable insects as youth science projects or in the same manner as bird-watchers observe birds. The guide provides a very basic beginning point for odonate-watching for those people who enjoy getting out-of-doors to observe nature and are inclined toward expanding their experience to other groups of organisms in addition to birds, butterflies, plants, and other groups of organisms.

## **Introduction**

Observing, and photographing animals and plants appeals to many people as a means of spending time out-of-doors in natural to semi-natural surroundings at all seasons of the year in our area of Florida. Ecotourism is based on the desire of many people visiting an area to observe nature in a passive way without harming any species in the process. Bird-watching is a classical example of appreciating the species diversity of a group of animals in an area without damaging the species or their habitats. Bird-watching is as simple as observing those birds in your backyard or neighborhood or as complex as traveling to distant places to observe the birds present in other states or countries and maintaining a life list of birds observed. All one requires for bird-watching is good binoculars, a few guide books to birds, a notebook or checklist, and the desire to learn. Bird-watching is accomplished without the necessity of having the bird in hand, and the same is true for the watching of other interesting animals.

Dragonfly and damselfly watching has attracted people who wish to expand their experience with nature. It can be combined with bird-watching, butterfly watching, plant-watching or exist on its own. Like birds and butterflies, dragonflies and damselflies are active during the day during their flight seasons. Some have limited flight seasons, and others may be present during all seasons of the year. Each trip to the same place may have different or additional species than those observed during previous trips. A few species fly over water only at dusk. These are the difficult species to observe.

Common names of dragonflies and damselflies are standardized to about the same degree as those for birds and guidebooks are available for watching dragonflies and damselflies that are arranged much the same as bird-watching guides. Sidney Dunkle prepared "Dragonflies through Binoculars. A Field Guide to the Dragonflies of North America" in 2000. It contains all the species from our area as well as those species found in remainder of the United States but does not include damselflies. Giff Beaton prepared "Dragonflies and Damselflies of Georgia and the Southeast" in 2007 that contains almost, but not all, of the species of dragonflies and damselflies that may be encountered in our area. Lam prepared "Damselflies of the Northeast" in 2004. This is a beautiful book that contains a number of the species found in our area but certainly not all of the species. The books are very reasonably priced and are available from the internet or book stores. With the guidebooks in hand and binoculars that focus close up (the closer the better), one can begin the process of identifying these insects in the same manner as bird-watchers identify birds or butterfly watchers identify butterflies.

One advantage to being a dragonfly-damselfly watcher is that one can obtain a specimen in hand if necessary for identification. This requires that an insect net be carried. One must also have the dexterity to catch them in the net, but this can be learned through experience. Beaton's book provides tips on removing these insects from a net, handling them to prevent damage, and releasing them unharmed if handled correctly. As for photographing these animals, the two guide books provide pointers on obtaining photographs in the wild. Patience is required. This guide provides the beginning dragonfly-damselfly watcher in our area with a list of the species of dragonflies and damselflies that have been reported to occur or may possibly occur in Bay County, Calhoun County, Gulf County, Jackson County, Washington County, and Walton County. A part of each county is located in our St. Andrew Bay ecosystem or watershed. The guide can serve to reduce the number of choices when one is in the field and provide for a more rapid identification. The writers have collected specimens of a number of the species of both groups as voucher specimens for our area. Although these animals are fairly hardy, should one obtain a damaged or dead specimen, they can be placed in a sandwich-sized zip-lock plastic bag and held in the refrigerator. The writers will accept any such specimen for inclusion in the collection with the appropriate collection data. The photographs in this guide were taken by the authors from recently collected specimens and live photographs from the field.

### **Suggestions for Beginners**

The interested person can download this guide from the Lake Sands District website as a pdf file and print it. With binoculars, checklist, and guide books in hand take a trip to the Lynn Haven Recreation Complex located between East Avenue and Transmitter Road and south of Highway 390 in Lynn Haven. There is a pond with a paved walkway around it that allows unobstructed observation of the entire pond. There is also a swamp with a boardwalk through it. From April through October, there are usually a number of species of pond dragonflies and damselflies present. Depending on the month, one can see dragonflies such as Common Whitetails, Blue Dashers, Eastern Pondhawks, Four-spotted Pennants, Halloween Pennants, Common Green Darners, Comet Darners, Roseate Skimmers, Carolina Saddlebags, Black Saddlebags, Eastern Amberwings, Great Blue Skimmers and others. There are usually a large number of pond damselflies of a few species such as Rambur's Forktail and Citrine Forktail present.

If one's interest is peaked, the next place that we suggest is any of the ponds or lakes on Northwest Florida Water Management District property. Rattlesnake Lake and Porter Pond are good places to begin. Then branch out to streams such as Econfina Creek, cypress ponds, stormwater ponds, etc. If one does not see many damselflies lurking or flitting along the edges of the ponds or streams, try sweeping a net through the vegetation along the edge of the water. One can often obtain a number of species for examination and release by doing this. Sweeping can yield Spreadings, Southern Sprites, and a number of Bluets and Forktails.

### **The Nature of the Odonata**

**Classification.** The Order Odonata is divided into two suborders – Zygoptera (equal wings) and Anisoptera (unequal wings). The Zygoptera are the damselflies and the Anisoptera are the dragonflies. The differences between the two are distinct in our area. The damselflies are smaller, with the front and hind pairs of wings of equal size and shape, and the wings are held folded over the body when at rest (Figure 2) with the exception of the large Spreadwings which

hold the wings at an angle to the body. Damselflies are not strong fliers. Many remain in vegetation or flit around the edge of ponds usually close to the water surface or bank.

Dragonflies generally are larger with the hind-wings broader at the base than the fore-wings, and they hold the wings horizontally when at rest. They are strong fliers. However, some are quite secretive or are at breeding areas only at certain times of the day. The commonly observed species are usually seen around ponds and lakes patrolling the shore or over the water. Adult male and female odonates can be similar in color, but most males and females differ in color to varying degrees. Juvenile males are often similar to females and change color as they mature.

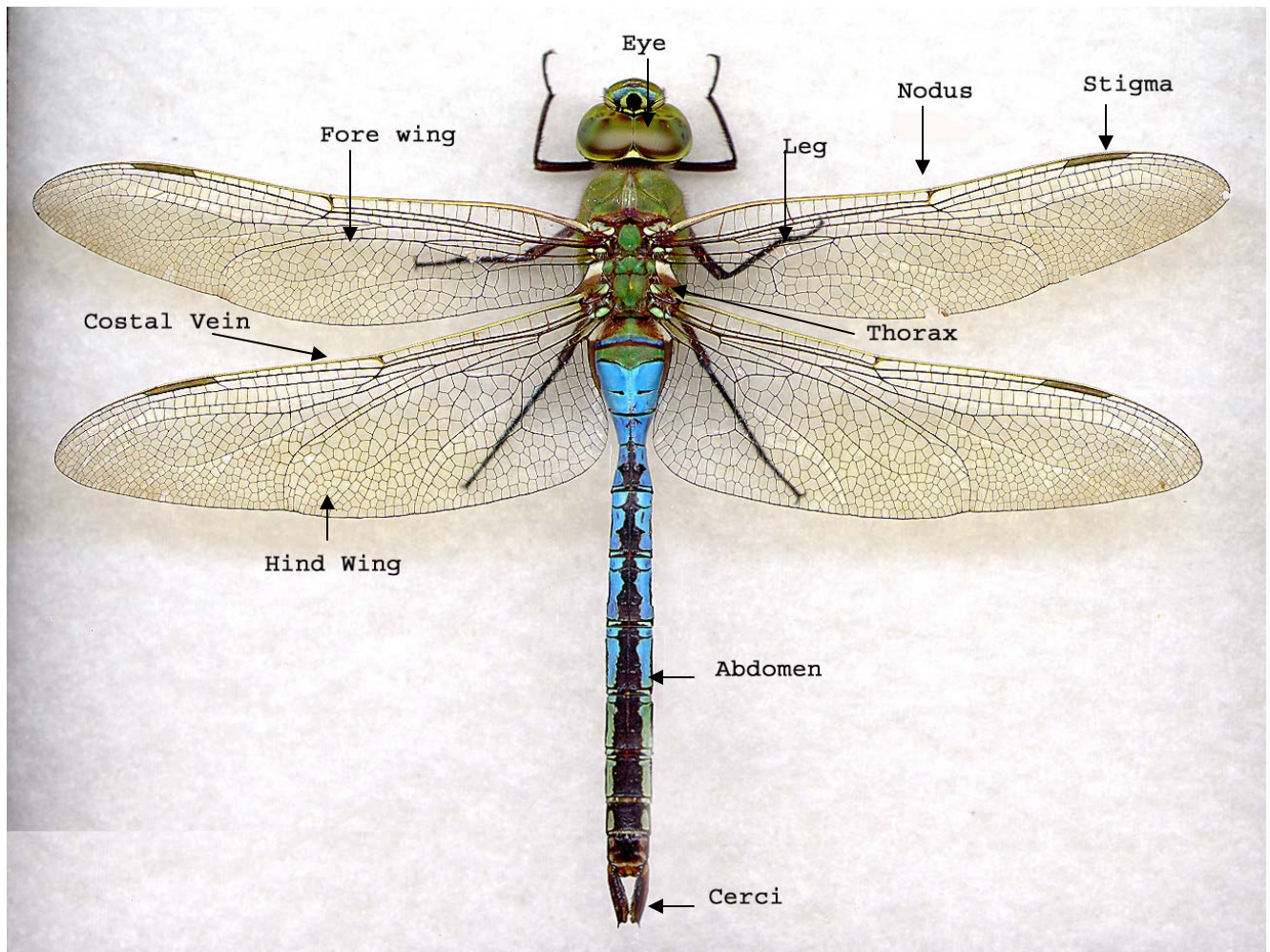


Figure 1. Common Green Darner (*Anax junius*). Photo by L. Keppner

**Basic Anatomy** (Figure 1). Paulson (2007) stated that; “The damselflies and dragonflies that form the order Odonata vary greatly in color, habitat, and behavior, yet they have one thing in common – they are all consummate predators. Every species of odonate eats other animals; there is not a vegetarian among them”. This is true of adults and larvae. Dragonflies and damselflies are insects (Class Insecta) that belong to the taxonomic Order Odonata and the term odonate is used to refer to all members of the Order. The name Odonata refers to the teeth on the mandibles of the adults. As insects, the odonates have a head, thorax, and abdomen. The head has a pair of large compound eyes, three simple eyes (ocelli), and a pair of short antennae. The thorax has 3 pairs of legs attached ventrally and two pairs of wings attached dorsally. The abdomen consists of 10 segments with the last segment (10) having reproductive structures. In males, there are

additional reproductive structures located on the ventral side of abdominal segment two that is visible as a small elevation in side view. Females lack this structure. The coloration of the head, face, eyes, thoracic markings, and abdominal markings are used in identification. The pattern of coloration in the wings, when present, is an important character. According to Beaton (2007), there are about 5000 species of dragonflies and damselflies world-wide and about 450 species in North America.

**Wings.** The wings of odonates consist of a double layer of stiff membrane supported by a network of longitudinally and vertically oriented veins. This network of veins divides the wings into cells. The thick, strong vein at the anterior of each wing is the costa. The veins and cells are named or numbered, but this is rarely a concern of the watcher. The stigma or pterostigma is an expanded cell or cells at the anterior margin of the wing toward the wing tip. The stigma is said to be a reservoir of blood, can be brightly colored, and is thought to stabilize the wing. It can be absent in a few damselflies. The color and shape of the stigma can be important in identification.



**Figure 2. Damselfly - Sparkling Jewell Wing (*Calopteryx dimidata*) male. Photo by L. Keppner**

**Colors.** Eye color, color and arrangement of thoracic and abdominal markings are all characters for identification. The guidebooks have sections devoted to more detailed descriptions of these useful characters. Damselflies are much smaller than dragonflies and less apparent to most casual observers than are the dragonflies. However, the damselflies can be brilliantly colored with metallic sheens.

Technical details of anatomy and taxonomy of damselflies are provided in Westfall and May (1996), and technical details of anatomy and taxonomy of dragonflies are provided in Needham et al. (2000). Both books contain keys to the species that are based on wing venation and other anatomical characteristics rather than color, although the color of certain areas of the body is used in the keys. These books are expensive and are for those with a serious interest in odonates.

### **Life Cycle Summary**

A brief summary of the life cycle of odonates can provide a basic understanding of their way of life. For detailed accounts of the life cycle, one can read the appropriate sections in the guide books. The life cycle of odonates consists of the adult males and females, eggs, and larvae (nymphs or naiads) that molt the exoskeleton or outer covering of the body as they grow. The mating event is somewhat complex and is described in the guide books mentioned above and in the more detailed scientific works cited. Figure 3 shows a male and female Everglades Sprite in the wheel position with the male grasping the female behind the head and the female bending the abdomen to the male reproductive structures on the male second abdominal segment.

The laying of the egg varies within the Odonata. Eggs can be laid in the tissue of aquatic or wetland plants, in the water directly, or in wet vegetation near water in a few others. The Gray Petaltail dragonfly lays its eggs in wooded hillside seeps, and the larvae are thought to be non-aquatic. However, all other odonates in our area have aquatic larvae.



**Figure 3. Everglades Sprite in the Wheel Formation (Photo by Dr. Marion Dobbs)**

**Dragonfly Larvae.** The larvae of dragonflies are of various shapes depending on their habitat and hunting method. They are all predators and have a unique method of capturing prey. Their eyes are well-developed (Figure 5 black arrow). Some are burrowers such as some Clubtail larvae (Figure 4) and ambush their prey. Others crawl among the vegetation hunting prey (Figure 5). Others lie hidden among leaves on the bottom of the water and ambush their prey such as the unique Dragonhunter larvae (Figures 6 & 7). The lower lip (labium) of the larva is elongate, hinged (Figure 6 blue arrow), and lies flat on the ventral surface when at rest. The labium can be thrust forward (indicated as red arrows on the figures) at exceptional speed to capture prey in the hooks and spines present at the tip and on the inner surface. The prey is drawn back to the strong mandibles where it is chewed and swallowed. The larvae feed, grow, molt a number of times, and emerge from the water at maturity. They cling to plants, sticks, etc. above the surface of the water. Here the adult emerges by splitting the larval exoskeleton along the dorsal side of the thorax and withdrawing the adult body (Figures 8 & 9). The wings are crumpled but soon they are pumped full of blood along the veins, expand, and dry.

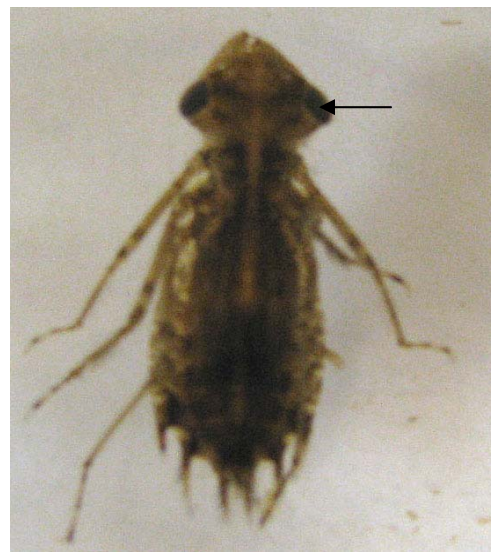


Figure 4. Burrowing-type larva dorsal view. Figure 5. Crawling-type larva dorsal view. (Photos by E. Keppner)

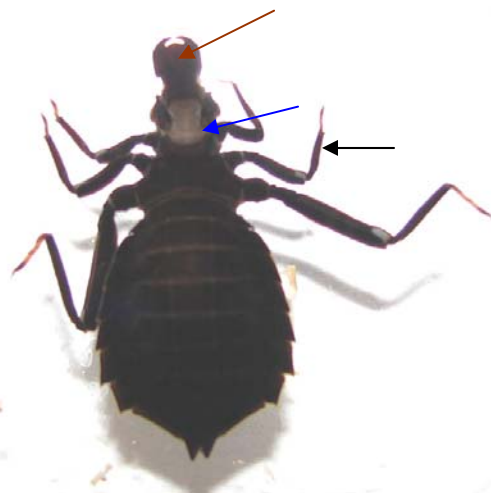


Figure 6. Dragonhunter larva dorsal view. (Photos by E. Keppner)

Figure 7. Dragonhunter larva ventral view. (Photos by E. Keppner)

Larvae can be identified using keys to the species, but it is best to have larvae that are approaching emergence.

**Damselfly larvae.** Damselfly larvae are similar to dragonfly larvae but have a more elongate, slender body with three long gills at the posterior end. The labium is used to capture prey in the same manner as dragonflies. Damselfly larvae are more difficult to identify than dragonfly larvae, but there are keys available.

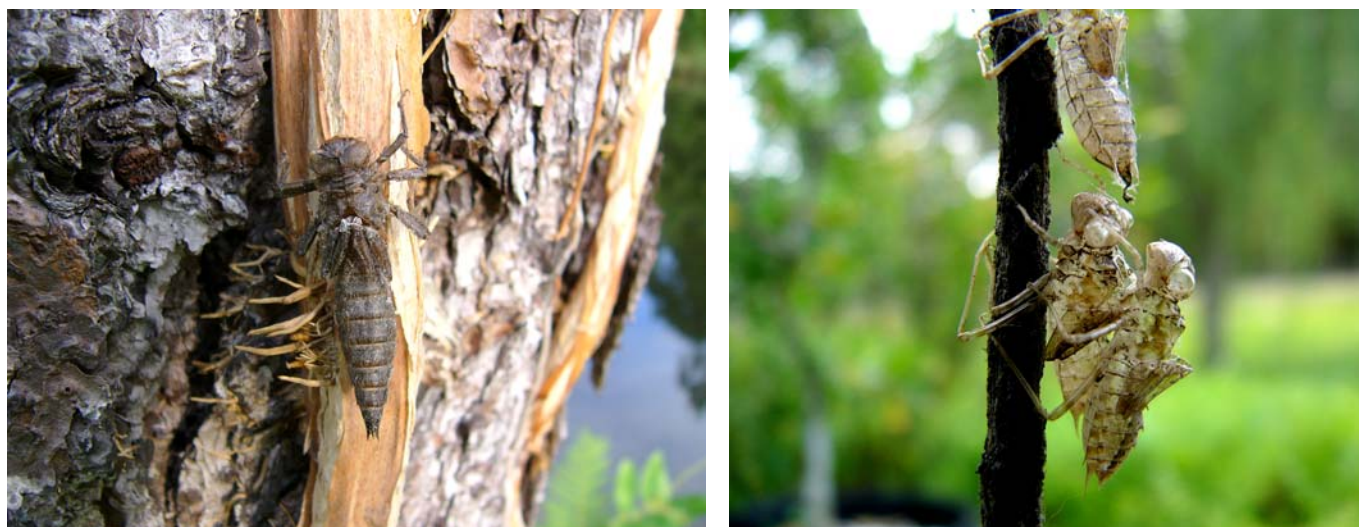


Figure 8 & 9. Larval exoskeletons (exuviae) from which adult dragonflies emerged. Photos by E. Keppner

**Juvenile Adults.** The recently emerged odonate is referred to as a juvenile and does not have an abundance of stored energy. They begin feeding immediately after they are able to fly and begin the process of becoming reproductively competent. They often fly an appreciable distance from the breeding habitat to feed. One can see them flying along forest roads, paved streets, and fields in search of food. During the juvenile stages of the adults of some species the males and females are quite similar in color, and the color differentiation of the adults develops as they age. In some species, particularly damselflies, the females may exist in a variety of color patterns as they age. This can be confusing, but the guides show each color pattern. Pruinescence occurs in some odonates. Various parts of the body can become covered with this waxy white or pale blue powder-like substance as adults. Odonates can be parasitized by mites that are visibly attached to the body as red or other colored circular objects. Do not be confused if you observe an odonate with the colored clumps or individual mites attached to the body.

**Annual Migration.** Some dragonflies migrate south in the fall in response to unknown environmental factors and most fail to establish viable populations. A few species such as the Wandering Glider and Variegated Meadowhawk migrate south during the fall and some return north the next spring. The fall in our area is a good time to find dragonflies near the coast.

### Predator and Prey

Adult odonates are predators on other insects. Some odonate species catch their prey on the wing while patrolling good feeding areas such as pastures and open areas where there is an abundance of a variety of insect prey species. Along pond and lake shores these same species and others grab other dragonflies, damselflies, and other insects that are flying. There are many tales to tell of observing this activity. One is our attempt to collect a specimen of a Comet Darner. We were at a pond with several Comet Darners patrolling just out of reach when a male Comet Darner grabbed a Roseate Skimmer out of the air and fell to the ground between us. The net was deftly applied and the specimen was taken. The Roseate Skimmer was unmarked but

dead, so we added him to the collection. Some species such as the Eastern Pondhawk and Blue Dasher follow a person as they walk through an area and grab prey as it is disturbed into movement. Other species wait for prey to pass and fly up to capture it. Some damselflies fly along among the vegetations and capture prey off of the vegetation.

Odonates serve as prey for other odonates, and Gallucci and Freeman (2007) provide some examples of predation off odonates by birds. According to them, Purple Martins appear to take a number of dragonflies during the bird's nesting season. They also mention other species of birds that have been observed feeding on dragonflies. Larval odonates prey on aquatic insects and other aquatic organisms, and serve as prey for fish and larger invertebrates.

### **Helpful Websites**

Of course, there are a number of internet websites that address odonates. Good places to begin include [www.giffbeaton.com](http://www.giffbeaton.com), [www.ups.edu/biology/museum/NAdragons.html](http://www.ups.edu/biology/museum/NAdragons.html), <http://odonatecentral.bfl.utexas.edu/dsal/directory.asp>, [www.npwrc.usgs.gov/resource/distr/insects/dfly/fl/toc.htm](http://www.npwrc.usgs.gov/resource/distr/insects/dfly/fl/toc.htm), [www.afn.org](http://www.afn.org), [www.iodonata.net](http://www.iodonata.net), and [ww.dragonflies.org](http://ww.dragonflies.org). The sites include lists of species for states and counties, many photographs of a variety of species, and links to other websites.

### **Habitats or Where to Find Odonates.**

Odonates are ultimately tied to their aquatic breeding areas, but adults can be found feeding some distance from the breeding area at times. This is true more for dragonflies than damselflies, and dragonflies can be observed almost anywhere at some time or other. However, they all must return to the aquatic habitat to which they are adapted to lay eggs and the breeding areas are the best places to observe them. Dragonflies and damselflies can be found at flowing and still water areas. Only a very few species are adapted to breed in seawater or brackish water. In our area, the Seaside Dragonlet is often abundant in the salt marshes of St. Andrew Bay. The freshwater habitats occupied by odonates have been classified by Dunkle (2000) and are discussed by Beaton (2007).

**Flowing Water.** Bay County and the portions of the surrounding counties that are included in the St. Andrew Bay ecosystem do not have large flowing rivers such as the Chipola River or the Choctawhatchee River. The largest flowing water body in our ecosystem is Econfina Creek and its tributaries. The Econfina Creek subdrainage basin contains a variety of flowing water habitats including seeps, trickles, rivulets, and spring runs. Any place that one can obtain access to Econfina Creek or its tributaries will be a good place to observe odonates.

The upper portions of Burnt Mill Creek, Crooked Creek, Sandy Creek, and Callaway Creek above the limit of tidal influence are also good areas for observing odonates provided that one has permission to enter those areas. We have observed odonates at rivulets small enough to step across and in various seepage areas in the ecosystem.

**Standing Water.** Any permanently standing water or in some instances temporary ponds normally support odonates. This ranges from roadside ditches and man-made ponds to the cypress ponds and other more natural ponded areas and lakes in our area. Deer Point Reservoir is a large body of freshwater of high quality with many aquatic and wetland habitats that support

a large variety and densities of odonates. The sandhill ponds and lakes of northern Bay and southern Washington Counties are also interesting places to observe odonates.

### **Northwest Florida Water Management District (NFWWMD)**

Most of our observations have been made on NFWWMD property because of the easy access to all types of freshwater habitats. The NFWWMD owns and manages many thousands of acres of land in our ecosystem and in adjacent watersheds. The District's primary purpose, relative to Bay County, is to protect our drinking water supplies. The District also restores natural habitats, and provides for recreational uses of the land that does not negatively impact the quality of the drinking water supply or habitat. Of course, Econfina Creek and the underlying Floridan Aquifer are the sources of the water to our drinking water supply, Deer Point Reservoir.

The District lands include many of the sandhill ponds and lakes, most of the Econfina Creek corridor, and some areas along Deer Point Reservoir. Access for the public is available at a number of locations along Econfina Creek and the ponds and lakes. The District owns large tracts of land and water along the Choctawhatchee River and other large river systems in the surrounding counties. These are also places to explore for odonates. Pine Log State Forest is another place to explore particularly at the two ponds by the camp ground area. A walk along the nature trails may be a good place to begin. However, permits to actually collect species and prepare specimens may be required by the NFWWMD or the Florida Division of Forestry.

### **The Checklists**

The lists of species of dragonflies and damselflies that are known to occur in Bay County and surrounding counties are from Dunkle (1992), and the OdonataCentral website that lists the odonates by state and county. Additional species that may occur were added to the lists from Beaton (2007), because his range maps are at a scale that provides a closer examination of whether or not the species may occur in Bay County or adjacent counties. The maps in Dunkle (2000) are nationwide and the ranges are at a broad scale, but species were included from these maps if the species occupied the entire Panhandle or State of Florida. Some of the species listed for the surrounding counties probably do not occur on our ecosystem or Bay County due to the absence of the appropriate habitats. We do not have a large riverine system with associated floodplain swamps such as the Chipola River or the Choctawhatchee River. One should be aware that any of these species may occur in our area.

For example, we have collected Phantom Darners (*Triacanthagyna trifida*) in our back yard. This appears to be a range extension westward from the known range east of the Apalachicola River. We have added new records for other species in Bay County, such as the Everglades Sprite (*Nehalania pallidula*) from NFWWMD land along Deer Point Reservoir (Keppner et al. 2007) and collected a Twelve-spotted Skimmer (*Libellula pulchella*) from Bay County (Keppner in press). Also, we were present when Neil Lamb captured a Variegated Meadowhawk (*Sympetrum corruptum*) just east of our ecosystem boundary in Gulf County. According to Beaton (2007) and Dunkle (2000), this species is migratory with a primary range west of us, but with scattered records from the northern peninsula of Florida and east of the Apalachicola River. One should be aware of these possible unusual sightings. Also, some of the adult dragonflies are quite secretive and are difficult to find in their wooded habitats such as Laura's Clubtail. Others fly only near dusk for a short period of time such as the Shadowdragons. Many forage away

from the breeding habitat and are present near water only at certain times of the day while others are present near their breeding habitat most, if not, all of the day.

The damselflies are more difficult to find due to their generally smaller size, secretiveness in some, and their habits. However, the Spreadwing damselflies are about as long as small dragonflies but their abdomens are narrower, they hold their wings at an angle rather than horizontally, and their eyes set wide apart. Most damselflies remain near their breeding habitat where they fly along the shore or perch on vegetation in the water or at or near the shore line. Some species are difficult to find, because they perch low in dense vegetation. We have collected Southern Sprite and other species by sweeping a net through grasses and sedges along the shore and away from the shore of ponds and streams. Some species roam from the water such as the Vesper Bluet (*Enallagma vesparum*) and the Variable Dancer (*Argia fumipennis*). Damselflies though small do sit still longer than most dragonflies and are more easily approachable. A number of damselflies are easily observed flitting along the edge of their aquatic habitats. Those that tend to remain in vegetation can be obtained for observation by sweeping the grasses and sedges with a net. Damselflies are more delicate than dragonflies so handling them should be gentler when removing them from a net.

### **Arrangement of the Lists and Number of Species**

The lists provide a column to check the species observed. The next column is the common name, the next the scientific name, the next is the counties with portions in our ecosystem, followed by a habitat summary (Beaton 2007 & Dunkle 2000). There are 90 species on the list of dragonflies and 51 of those species are in the writers' collection. There are 39 species on the list of damselflies and 28 are in our collection.

The counties of record in the checklists are provided. "Possible" means that Beaton (2007) or Dunkle (2000) included the species on their range maps. A "yes" in the county column means that the specimens were collected in Bay County and/or our ecosystem and are possibly new records for our area. Examples are the Phantom Darner, Swamp Darner, Gray Petaltail, etc. The same applies to the checklist of damselflies. Keppner and Keppner (2007) have provided a list of the odonates from Bay County only that are in their collection.

According to Abbott (2007) there are 123 species of dragonflies reported from Florida. The 90 species on the list is 73% of the dragonflies reported from Florida. There are about 57 % of the dragonflies reported or possibly occurring in the ecosystem on the list in the writers' collection and 41 % of the dragonfly species reported from Florida in the collection.

Also according to Abbott (2007) there are 44 species of damselflies reported from Florida. There are 40 species on the list of damselflies from our area and 29 species are in the writers' collection leaving 11 species still in need of documentation. The writer's collection contains about 73% of the damselflies that occur or may possibly occur in the ecosystem, and the total number of species on the list contains about 90% of the species reported from Florida.

### **Rare Dragonflies and Damselflies**

The Florida Fish and Wildlife Conservation Commission and the U.S. Fish and Wildlife Service do not list any species of odonate as protected under the appropriate State and Federal Statutes.

The Florida Natural Areas Inventory (FNAI) tracks rare and imperiled species of plants and animals in Florida in accordance with their definitions of rare and imperiled. FNAI designations are not regulatory. Only one damselfly is tracked by FNAI - Elegant Spreadwing (*Lestes inaequalis*) with a status of S2. There are a number of Florida dragonflies that are tracked by FNAI. The following table lists those species and their FNAI designations that are known from or possibly occur in our area.

#### Dragonflies Tracked by FNAI

Common Name	Genus & species	FNAI	Presence Confirmed
Say's Spiketail	<i>Cordulagaster sayi</i>	S2	
Florida River Cruiser	<i>Didymops floridensis</i>	S4	yes
Southeastern Spinyleg	<i>Dromogomphus armatus</i>	S4	yes
Robust Baskettail	<i>Epitheca spinosa</i>	S2	
Eastern Ringtail	<i>Erpetogomphus designatus</i>	S1	
Taper-tailed Darner	<i>Gomphaeschna antilope</i>	S4	
Sandhill Clubtail	<i>Gomphus cavillaris</i>	S4	yes
Twin-striped Clubtail	<i>Gomphus geminatus</i>	S3	yes
Hodge's Clubtail	<i>Gomphus hodgei</i>	S3	
Cocoa Clubtail	<i>Gomphus hybridus</i>	SX	
Westfall's Clubtail	<i>Gomphus westfalli</i>	S1S2	
Sely's Sundragon	<i>Helocordulia selysii</i>	S4	yes
Purple Skimmer	<i>Libellula jesseana</i>	S1	yes
Smoky Shadowdragon	<i>Neurocordulia molesta</i>	S1	
Belle's Sanddragon	<i>Progomphus bellei</i>	S3	yes
Calvert's Emerald	<i>Somatochlora calverti</i>	S3	
Coppery Emerald	<i>Somatochlora georgiana</i>	S2	
Treetop Emerald	<i>Somatochlora provocans</i>	S3	
Laura's Clubtail	<i>Stylurus laurae</i>	S3	yes
Yellow-sided Clubtail	<i>Stylurus potulentus</i>	S2	
Gray Petaltail	<i>Tachopteryx thoreyi</i>	S4	yes

S1 = critically imperiled. S2 = imperiled. S3 = very rare or local throughout range. S4 = apparently secure (may be rare in parts of range). SX = Believed to be extirpated from Florida. SX – undetermined status



Common Green Darner, Male. (Photo by E. Keppner)

## The Dragonfly Checklist



Yellow-sided Skimmer (*Libellula flavida*). Photo by E. Keppner



Roseate Skimmer (*Orthemis ferruginea*). Photo by E. Keppner

## Dragonflies from Bay and Surrounding Counties

T	Common Name	Genus and Species	Counties	Bay Co.	Habitat
	<b>Darners</b>				
	Common Green Darner	<i>Anax junius</i>	Bay, Cal., Jack.	yes	Still, marshy water
	Comet Darner	<i>Anax longipes</i>	Cal., Bay	yes	Semiperm., grassy ponds. Absent fish
	Springtime Darner	<i>Basiaeschna janata</i>	Cal., Gulf, Walt., Wash.		Rivers & streams w gentle currents
	Fawn Darner	<i>Boyeria vinosa</i>	Cal., Jack., Wash.		Forested rivulets, streams, & rivers
	Regal Darner	<i>Coryphaeschnia ingens</i>	Bay, Calhoun, Jackson		Dens veg. lakes, slow streams, ditches
	Swamp Darner	<i>Epiaeschna heros</i>	Cal., Gulf	yes	Woodland ponds, slow streams, swamps
	Tapered-tailed Darner	<i>Gomphaeschna antilope</i>	Cal., Gulf		Swamps & bogs
	Harlequin Darner	<i>Gomphaeschna furcillata</i>	possible		Swamps, marshy swamp edges
	Twilight Darner	<i>Gynacantha nervosa</i>	possible		Temporary woodland ponds
	Cyrano Darner	<i>Nasiaeschna pentacantha</i>	Cal., Gulf	yes	Swampy streams, lakes, & ponds
	Phantom Darner	<i>Triacanthagyna trifida</i>	Bay	yes	Temporary forest pools
	<b>Spiketails</b>				
	Arrowhead Spiketail	<i>Cordulagaster obliqua</i>	Cal.		Spring-fed, muck bottom forest rivulets
	Twin-spotted Spiketail	<i>Cordulagaster maculata</i>	possible		Small to large streams
	Say's Spiketail	<i>Cordulagaster sayi</i>	possible		Mucky seeps in HW forest near sandhills
	<b>Baskettails</b>				
	Stripe-winged Baskettail	<i>Epitheca costalis</i>	Gulf, Walt., Wash.	yes	Sand bottom lakes
	Common Baskettail	<i>Epitheca cynosura</i>	Area counties	yes	Lakes, ponds, marshes, swamps
	Prince Baskettail	<i>Epitheca princeps</i>	Bay	yes	FW ponds, lakes
	Sepia Baskettail	<i>Epitheca sepia</i>	Gulf		Lakes and slow streams
	Robust Baskettail	<i>Epitheca spinosa</i>	Gulf		Swamps, bog ponds
	<b>Sundragon</b>				
	Selys' Sundragon	<i>Helocordulia selysii</i>	Gulf, Walt.	yes	Clean sand bottom forested streams
	<b>Shadowdragon</b>				
	Alabama Shadowdragon	<i>Neurocordulia alabamensis</i>	Cal.		Slow flowing sand bottom forest streams
	Smoky Shadowdragon	<i>Neurocordulia molesta</i>	Cal.		Clean rivers and large streams
	Cinnamon Shadowdragon	<i>Neurocordulia virginensis</i>	Gulf., Jack.		Clean rock-bottom rivers w riffles
	<b>Emeralds</b>				
	Calvert's Clubtail	<i>Somatochlora calverti</i>			
	Fine-lined Emerald	<i>Somatochlora filosa</i>	Cal., Gulf, Jack.		unknown
	Mocha Emerald	<i>Somatochlora linearis</i>	Gulf		Small forest streams, can be temporary
	Treetop Emerald	<i>Somatochlora provocans</i>	possible		Forest seeps and trickles
	Coppery Emerald	<i>Somatochlora georgiana</i>	possible		
	Clamp-tipped Emerald	<i>Somatochlora tenebrosa</i>	possible		
	<b>Forceptail</b>				
	Two-striped Forceptail	<i>Aphylla williamsoni</i>	Gulf, Jackson	yes	Muck bottom lakes, ponds, slow streams
	<b>Spinyleg &amp; Ringtail</b>				
	Southeastern Spinyleg	<i>Dromogomphus armatus</i>	Cal., Walt.	yes	Small spring-fed streams
	Black-shouldered Spinyleg	<i>Dromogomphus spinosus</i>	Cal., Wash.		Clear to muddy streams & rivers
	Eastern Ringtail	<i>Erpetogomphus designatus</i>	possible		Rivers & large streams
	<b>Clubtails</b>				
	Clearlake Clubtail	<i>Gomphus australis</i>	Gulf, Jack.		Sand bottom lakes
	Sandhill Clubtail	<i>Gomphus cavillaris</i>	Walt.	yes	Sand bottom lakes
	Blackwater Clubtail	<i>Gomphus dilatatus</i>	Bay, Cal., Walt.	yes	Blackwater rivers & streams
	Gray-green Clubtail	<i>Arigomphus pallidus</i>	Cal., Gulf	yes	Perm. fertile ponds, lakes w muck bottom

	Lancet Clubtail	<i>Gomphus exilis</i>	Wash.		Streams, marsh bordered lakes & ponds
	Twin-striped Clubtail	<i>Gomphus geminatus</i>	Cal., Walt.	yes	Clean sand bottom streams & rivers
	Hodges' Clubtail	<i>Gomphus hodgesi</i>	Cal., Gulf, Walt.		Clean sand bottom streams & rivers
	Cocoa Clubtail	<i>Gomphus hybridus</i>	possible		Rivers and large streams
	Ashy Clubtail	<i>Gomphus lividus</i>	Cal., Jack, Walt.	yes	Gently flowing water
	Cypress Clubtail	<i>Gomphus minutus</i>	Cal., Gulf, Walt.	yes	Streams & rivers, occas. lakes & ponds
	Cobra Clubtail	<i>Gomphus vastus</i>	possible		Rivers and large streams
	Westfall's Clubtail	<i>Gomphus westfalli</i>	Possible		Boggy streams & seepages, muck bottom
	Dragonhunter	<i>Hagenius brevistylus</i>	Cal.	yes	Forested streams & rivers
	Shining Clubtail	<i>Stylurus ivae</i>	Walt.	yes	Clean sand bottom streams & rivers
	Laura's Clubtail	<i>Stylurus laurae</i>	Walt.	yes	Clean sand-mud bottom streams
	Russet-tipped Clubtail	<i>Stylurus plagiatus</i>	Cal., Jack., Gulf	yes	Rivers, streams, lakes w silty bottoms
	Yellow-sided Clubtail	<i>Stylurus potulentus</i>	Cal.		Sand bottom forest streams & rivers
	<b>Sanddragon</b>				
	Belle's Sanddragon	<i>Progomphus bellei</i>	Cal., Gulf	yes	Sand bottom lakes, open sandy trickles
	Common Sanddragon	<i>Progomphus obscurus</i>	Bay, Cal., Jack., Walt.		Sand bottom streams, rivers, & lakes
	<b>Pennants</b>				
	Four-spotted Pennant	<i>Brachymesia gravida</i>	Bay	yes	Ponds & lakes
	Amanda's Pennant	<i>Celithemis amanda</i>	Area counties	yes	Ponds, lakes with emergent veg.
	Red-veined Pennant	<i>Celithemis bertha</i>	Bay, Jack., Wash.	yes	Sand bottom lakes & ponds, emergent veg.
	Banded Pennant	<i>Celithemis fasciata</i>	Cal., Gulf, Wash.	yes	Sand bottom lakes
	Calico Pennant	<i>Celithemis elisa</i>	Cal., Jack., Wash.	yes	Ponds, lakes, w emergent veg.
	Halloween Pennant	<i>Celithemis eponina</i>	Bay, Cal., Gulf, Jack.	yes	Ponds, lakes, marshes
	Faded Pennant	<i>Celithemis ornata</i>	Bay, Cal., Gulf, Wash.	yes	Ponds, lakes, w emergent veg.
	Double-ringed Pennant	<i>Celithemis verna</i>	Walt.		Ponds, lakes, w emergent veg.
	<b>Pondhawk &amp; Dragonlets</b>				
	Eastern Pondhawk	<i>Erythemis simplicicollis</i>	Bay & all counties	yes	Most calm water
	Seaside Dragonlet	<i>Erythrodiplax berenice</i>	Bay	yes	Salt marshes
	Little Blue Dragonlet	<i>Erythrodiplax minuscule</i>	Area counties	yes	Marshy ponds & lakes
	<b>Skimmers</b>				
	Golden-winged Skimmer	<i>Libellula aurpennis</i>	Bay	yes	Ponds & lakes, ditches & streams
	Bar-winged Skimmer	<i>Libellula axilena</i>	Bay, Cal., Gulf, Jack., Wash.	yes	Forest pools, ditches, sedgy woody bogs
	Blue Corporal	<i>Libellula deplanata</i>	Cal., Gulf, Walt., Wash.	yes	Ponds, lakes, occasional streams
	Yellow-sided Skimmer	<i>Libellula flavida</i>	Bay, Cal., Walt.	yes	Mucky or boggy seepages
	Slaty Skimmer	<i>Libellula incesta</i>	Area counties	yes	Still water with muck bottom
	Purple Skimmer	<i>Libellula jesseana</i>	Bay, Wash.	yes	Clear sand bottom lakes & ponds
	Common Whitetail	<i>Libellula lydia</i>	Cal., Jack., Walt.	yes	Still or slow moving shallow water
	Needham's Skimmer	<i>Libellula needhami</i>	Bay, possible others	yes	FW Ponds and lakes - mostly coastal
	Twelve-spotted Skimmer	<i>Libellula pulchella</i>	Bay	yes	Rare migrant -FW ponds & lakes
	Painted Skimmer	<i>Libellula semifasciata</i>	Cal., Jack., Walt.	yes	Marshy forest ponds, slow streams
	Great Blue Skimmer	<i>Libellula vibrans</i>	Area counties	yes	Swamp pools, forest streams, ponds
	Elfin Skimmer	<i>Nannothemithis bellae</i>	Cal., Walt.		Bogs, calcareous fens w sedge meadows
	Roseate Skimmer	<i>Orthemis ferruginea</i>	Jackson	yes	lakes, ponds, ditches, slow streams
	Blue Dasher	<i>Pachydiplax longipennis</i>	Bay & all counties	yes	Most still water
	<b>Gliders</b>				
	Hyacinth Glider	<i>Miathyria Marcella</i>	All counties		Lakes, ponds, etc. with water hyacinths
	Wandering Glider	<i>Pantala flavescens</i>	Bay, Cal., Gulf, Jack.	yes	Temporary ponds & pools
	Spot-winged Glider	<i>Pantala hymenaea</i>	Bay	yes	Temporary ponds & pools
	<b>Amberwing</b>				
	Eastern Amberwing	<i>Perithemus tenera</i>	Area counties	yes	most still or slow moving waters

	<b>Meadowhaks</b>				
	Blue-faced Meadowhawk	<i>Sympetrum ambiguum</i>	Bay, Calhoun		Semi-shaded pools, floodplains, swamps
	Yellow-legged Meadowhawk	<i>Sympetrum vicinum</i>	Walt., Wash.		Marshes, ponds, lakes, wooded streams
	<b>Saddlebags</b>				
	Carolina Saddlebags	<i>Tramea carolina</i>	Bay & all counties	yes	Ponds, lakes, swamps, slow streams
	Black Saddlebags	<i>Tramea lacerata</i>	Bay, Cal.	yes	Ponds, lakes, ditches without fish
	<b>Cruisers</b>				
	Florida Cruiser	<i>Didymops floridensis</i>	Jackson	yes	Sand-bottomed lakes w grasses , cypress
	Stream Cruiser	<i>Didymops transversa</i>	Cal., Gulf, Jack., Walt.	yes	Streams, rivers, occasionally lakes
	Georgia River Cruiser	<i>Macromia (i.) georgina</i>	Bay, Cal.	yes	Streams & rivers
	Royal River Cruiser	<i>Macromia taeniolata</i>	Bay, Cal., Gulf, Walt.	yes	Clean rivers, streams, & lakes
	<b>Petaltail</b>				
	Gray Petaltail	<i>Tachopteryx thoreyi</i>	Possible new record	yes	Hillside seepages in deciduous forest



Gray Petaltail (*Tachopteryx thoreyi*) on a pine tree. Photo by L. Keppner

## The Damselfly Checklist



**Rambur's Forktail (*Ischnura ramburii*). Photo by E. Keppner**



**Vesper Bluet (*Enallagma vesparum*). Photo by E. Keppner**

## Damselflies from Bay and Surrounding Counties

T	Common Name	Genus and Species	Counties	Bay Co.	Habitat
	<b>Broad-winged Damselflies</b>				
	Sparkling Jewelwing	<i>Calopteryx dimidiata</i>	Cal., Gulf, Jack., Walt.	yes	Sand bottom streams w emerg. & submerg. veg.
	Ebony Jewelwing	<i>Calopteryx maculata</i>	Cal., Gulf, Jack., Walt., Wash.	yes	Streams & rivers, wanders into adjacent trees
	American Rubyspot	<i>Hetaerina americana</i>	Cal., Jack.		Rivers & sunny wide streams in the open
	Smokey Rubyspot	<i>Hetaerina titia</i>	Cal., Gulf, Jack.	yes	Rivers & streams with permanent current
	<b>Pond Damselflies - Dancers</b>				
	Blue-fronted Dancer	<i>Argia apicalis</i>	Cal., Jack., Wash.	yes	Rivers, streams, lakes & ponds
	Seepage Dancer	<i>Argia bipunctulata</i>	Bay, Cal., Walt.	yes	Small lakes, ponds, streams, seepage areas
	Variable Dancer	<i>Argia fumipennis</i>	Bay, Cal., Gulf, Jack., Walt., Wash.	yes	Small lakes, ponds, streams, seepage areas
	Powdered Dancer	<i>Argia moesta</i>	Cal., Jack., Walt.	yes	Rivers & streams with permanent current
	Blue-ringed Dancer	<i>Argia sedula</i>	Cal., Jack., Gulf	yes	Lakes, ponds, ditches, streams w gentle current
	Blue-tipped Dancer	<i>Argia tibialis</i>	Bay, Cal., Gulf, Jack., Walt., Wash.	yes	Swift creeks to slow streams, swamps, & ponds
	<b>Pond Damselflies - Bluets</b>				
	Familiar Bluet	<i>Enallagma civile</i>	Jack., Walt.	yes	Ponds & sometimes slow streams
	Purple Bluet	<i>Enallagma coecum</i>	Cal., Jack.	yes	Streams
	Cherry Bluet	<i>Enallagma concisum</i>	Bay, Cal., Gulf	yes	Lakes & ponds in sandhills & flatwoods
	Double-striped Bluet	<i>Enallagma basidens</i>	possible		
	Attenuated Bluet	<i>Enallagma daeckii</i>	Cal., Walt.	yes	Swamps & densely veg. lake & pond margins
	Sandhill Bluet	<i>Enallagma davisii</i>	Gulf	yes	Sandhill Lakes of Southeast
	Turquoise Bluet	<i>Enallagma divagans</i>	Cal., Gulf., Jack., Wash.	yes	Slow streams, sloughs, & lakes
	Atlantic Bluet	<i>Enallagma doubledayi</i>	Gulf., Jack., Wash.	yes	Sand bottom ponds, newly created ponds
	Burgundy Bluet	<i>Enallagma dubium</i>	Cal., Gulf		Weedy lakes & small weedy streams, lily pads
	Big Bluet	<i>Enallagma durum</i>	possible		
	Skimming Bluet	<i>Enallagma geminatum</i>	Cal., Gulf, Jack.	yes	Slow clear streams, ponds & lakes w floating veg.
	Pale Bluet	<i>Enallagma pallidum</i>	Gulf	yes	Lakes & ponds w swampy margins
	Florida Bluet	<i>Enallagma pollutum</i>	Gulf	yes	Lakes & ponds w ample emergent veg.
	Orange Bluet	<i>Enallagma signatum</i>	Cal., Gulf, Jack.	yes	Primarily slow streams & lakes
	Vesper Bluet	<i>Enallagma vesparum</i>	Gulf	yes	Small lakes, & slow streams w dense emerg. veg.
	Blackwater Bluet	<i>Enallagma weewa</i>	Cal., Gulf., Walt., Wash.		Slow blackwater streams
	<b>Pond Damselflies - Forktails</b>				
	Citrine Forktail	<i>Ischnura hastata</i>	Cal., Gulf., Walt.	yes	Ponds, lakes, slow streams w dense emerg. veg.
	Lily pad Forktail	<i>Ischnura kellicotti</i>	Jack.	yes	Entire life cycle associated with lily pads
	Fragile Forktail	<i>Ischnura posita</i>	Gulf., Jack., Walt.	yes	Ponds, marshes, slow streams, dense veg.
	Furtive Forktail	<i>Ischnura prognata</i>	Cal.	yes	Shaded swampy ponds or ditches
	Rambur's Forktail	<i>Ischnura ramburii</i>	All except Walt. & Wash.	yes	Lakes, ponds, & marshes w emergent veg.
	<b>Pond Damselflies - Sprites</b>				
	Sphagnum Sprite	<i>Nehalennia gracilis</i>	possible		
	Southern Sprite	<i>Nehalennia integricollis</i>	Cal., Jack., Walt.	yes	Margins of sandhill lakes in Florida
	Everglades Sprite	<i>Nehalennia palidula</i>			
	<b>Pond Damselflies - Firetails</b>				
	Duckweed Firetail	<i>Telebasis beyersi</i>	possible		
	<b>Spreadwings</b>				
	Common Spreadwing	<i>Lestes australis</i>	Cal., Gulf, Jack, Walt.	yes	Ponds, lakes, slow streams, w emerg. veg.
	Carolina Spreadwing	<i>Lestes vidua</i>	Jack.	yes	Temp. or perm. ponds & ditches, sparse veg.

Swamp Spreadwing	<i>Lestes vigilax</i>	Cal., Gulf, Walt., Wash.	yes	Boggy ponds, lakes, swamps, blackwater streams
Elegant Spreadwing	<i>Lestes inaequalis</i>	possible		Marshes, marshy edges of ponds and lakes
Slender Spreadwing	<i>Lestes rectangularis</i>	possible		Marshes, edges of ponds and lakes

## Literature Cited

Abbott, J.C. 2007. OdonataCentral: An online resource for the distribution and identification of Odonata. Texas Natural Science Center, The University of Texas at Austin. Available at <http://www.odonatacentral.org>.

Beaton, G. 2007. Dragonflies and Damselflies of Georgia and the Southeast. University of Georgia Press, Athens, GA. 355 pp.

Dunkle, S.W. 1992. Distribution of Dragonflies and Damselflies (Odonata) in Florida. Bulletin of American Odonatology. 1(2):29-50.

Dunkle, S.W. 2000. Dragonflies through Binoculars. A Guide to Dragonflies of North America. Oxford University Press, NY, NY. 266 pp.

Epler, J. 2003. Dragonflies and Damselflies of Florida (Order Odonata). (updated 6/14/07). [www.iodonata.net](http://www.iodonata.net).

Gallucci, J.C. and Freeman, B. 2007. Notes on Avian Predators of Odonata. Argia 19(2):21-23.

Keppner, E.J. in press. Occurrence of *Libellula pulchella* in Bay County, Florida. Argia.

Keppner, E.J. and Keppner, L.A. 2007. Odonata Survey of Bay County, Florida. Argia 19(4):15-16.

Keppner, E.J., Keppner, L.A., and Daigle, J.J. 2007. Note on the Occurrence of *Nehalennia pallidula* Calvert (Everglades Sprite) in Bay County, Florida. Argia(19):28-29.

Lam, E. 2004. Damselflies of the Northeast. A guide to the Species of Eastern Canada and Northeastern United States. Biodiversity Books, Forest Hills, NY. 96 pp.

Needham, J.G., Westfall, M.J., and May, M.L. 2000. Dragonflies of North America. Scientific Publishers, Gainesville, FL. 939 ppp.

Paulson, D. 2007. Dragonflies and Damselflies: Bugs of Prey. Wings: the Xerces Society. Portland, OR. Spring 2007:39-43.

Westfall, M.J. and May, M.L. 1996. Damselflies of North America. Scientific Publishers, Gainesville, Florida. 649 pp.