GUIDE TO THE

MAYFLY (EPHEMEROPTERA) NYMPHS

OF FLORIDA

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Division of Water Resource Management
Tallahassee

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by

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INTRODUCTION

Mayflies (Ephemeroptera) are a fascinating group of insects, with approximately 2,700 species grouped into 320 genera and 28 families world wide. They are considered the most primitive of the extant winged insects, with fossil records dating back to the Carboniferous (280 m.y.) and Permian periods (240 m.y.). Having two winged adult stages makes the group unique among the insects. The non-feeding adults are short lived (1-2 hours to a maximum of 14 days) and have three main functions in life which are mating, dispersal, and oviposition. Mayflies are found in almost all types of freshwater habitats and a few species have been found in brackish waters. Their highest diversity occurs in lotic systems in temperate regions, where they are important members of the benthic community (Brittain, 1982; Williams and Feltmate, 1992). The ecological value of mayflies in freshwater ecosystems has been well documented (Needham et al., 1935; Edmunds et al., 1976; Brittain 1982; Berner and Pescador, 1988; Edmunds and Waltz, 1996), and their use as biological indicators of water quality is well known (Resh and Jackson, 1993; Barbour et al., 1996; Lenat and Penrose, 1996; Mauger,1997; Morse et al., 1997). Ephemeroptera are an integral component of the popular and widely used EPT (acronym for Ephemeroptera, Plecoptera, and Trichoptera) taxa metric for bioassessment of water quality.

The mayfly fauna of Florida has been comprehensively discussed by Berner and Pescador (1988). Most recently, Pescador et al. (1995, 2000) have conducted extensive studies of the taxonomy and spatial distributions of the caddisflies (Trichoptera) and stoneflies (Plecoptera) of the state and observed that their distribution patterns are similar to those of mayflies. The majority of species occur in the panhandle and northeast bioregions which geographically represent North Florida. The significantly high species richness of the EPT group in this region of the state appears to be related to habitat diversity, current velocity, temperature, and proximity to major rivers draining the Southeastern Highlands and Coastal Plain.

When *The Mayflies of Florida: Revised Edition* was published by Berner and Pescador (1988), both authors indicated at that time that it was possible to say that one of the best known orders of insects in the state was the Ephemeroptera. This may still be the case today. However, recent papers on the higher classification: McCafferty (1991), McCafferty and Wang (2000), and taxonomic revisions of several taxa [e.g., *Caenis* (Provonsha, 1990); *Eurylophella* (Funk and Sweeney, 1994); *Timpanoga* (McCafferty and Wang, 1994); Leptophyphidae (Wiersema and McCafferty, 2000); Baetidae [Waltz and McCafferty (1987a), McCafferty and Waltz (1990), Lugo-Ortiz and McCafferty (1998), Lugo-Ortiz et al. (1999)]; *Leptophlebia* (Burian, 2001)] have changed the taxonomic composition of the mayfly fauna of the state. Additionally, for the past several years we have conducted extensive collecting in various areas of the state, especially North Florida, and mayfly collections from various agencies [e.g., Florida Department of Environmental Protection (FDEP), Water Management Districts, The Nature Conservancy] including those from the peninsula region of the state were made available to us for study. Based upon these collections, we have found specimens which represent taxa that are either rare, new state records, or new to science. A need for an update of the taxonomy of the state's mayfly fauna is necessary. This guide, however, does not entirely supersede the book, *The Mayflies of Florida: Revised Edition*, for the following reasons: 1) this study was primarily focused on the taxonomy of mayfly nymphs and 2) the literature cited here includes only those papers published after the publication of the book, except for a few earlier papers that are either relevant to the present

study or were inadvertently overlooked and not cited in the revised edition. We suggest that when using this guide, a copy of the *The Mayflies of Florida: Revised Edition* should be on hand for reference and more comprehensive discussions of the biology, ecology, and taxonomy of most Florida species. The present study provides an update of the taxonomic keys to the nymphs of species occurring in the state. Additionally, we present a species checklist (Appendix A) and a representative database of collection records for specimens that have been collected in Florida (Appendix B).

HOW TO USE THIS GUIDE

Area covered: This guide was prepared to aid aquatic biologists in the identification of the mayfly nymphs of Florida. As previously mentioned, the guide provides nymphal keys to families, genera, and species. In cases where the family is represented by a single genus or species, the genus and species names are included in the key to families (e.g., Baetiscidae, Behningiidae, Isonychiidae, Metretopodidae, Neoephemeridae, Oligoneuriidae, and Pseudironidae). Similarly, in the key to genera of a particular family, where a genus is represented by one species in the state (e.g., *Acerpenna*, *Centroptilum*, *Pseudocentroptiloides*, *Dolania*, *Cercobrachys*, *Attenella*, *Dannella, Serratella*, *Pentagenia*, *Heptagenia*, *Macdunnoa, Asioplax*, *Tricorythodes*, *Choroterpes*, *Habrophlebia*, *Habrophlebiodes*, *Paraleptophlebia*, *Homoeoneuria*, *Ephoron* and *Tortopus*), then either the species name or an indication that it is an undescribed species new to science (i.e., n. sp.) is indicated. The sources of information from which the keys are adapted or modified is given at the beginning of each key.

Specimens examined: Specimens that were used for this study include the collections of Florida A&M University (FAMU), Florida Department of Environmental Protection (FDEP), and Suwannee River Water Management District (SRWMD). For more information on specimens examined during this study of Florida mayflies consult Appendix B.

Illustrations: The figures in this guide are a combination of original illustrations from Berner (1950) and Berner and Pescador (1988) based on Florida specimens and illustrations borrowed from other sources. When illustrations borrowed or modified from other publications are used, the source of each figure is cited in the figure legend. Diagnostic characters in the keys that non-mayfly specialists may have difficulty locating are indicated by arrows in the figures.

Cover Photograph: *Pseudiron centralis*, Blackwater River specimen on sand from the Yellow River. Florida: Okaloosa Co., Blackwater River, J. G. Peters.

Classification: The current higher classification of mayflies presented here is a modified version of that presented by McCafferty (1991) which includes the suborders Carapacea, Furcatergalia, Pisciforma, and Setisura. The North American family groups within those suborders are as follows: Carapacea contains the Baetiscidae; Furcatergalia contains the Leptophlebiidae (Infraorder Lanceolata), Behningiidae (Infraorder Palpotarsa), Potamanthidae, Polymitarcyidae, Ephemeridae (all in Infraorder Scapphodonta), and Caenidae, Neoephemeridae, Ephemerellidae, Leptohyphidae (all in Infraorder Pannota); Pisciforma contains the Acanthametropodidae,

Ameletidae, Ametropodidae, Baetidae, Metretopodidae, and Siphlonuridae; and Setisura contains Isonychiidae, Oligoneuriidae, Pseudironidae, Arthropleidae, and the Heptageniidae. Of the 21 mayfly families listed, the following six are not known to occur in Florida: Potamanthidae, Acanthametropodidae, Ameletidae, Ametropodidae, Siphlonuridae, and Arthropleidae. Florida has 15 families, 41 genera, and 76 species of mayflies. Appendix A presents a checklist of Florida mayflies following the scheme of classification presented above.

Text Layout: The text for each family summarizes the genera represented in the state and provides a short diagnosis of the nymph and general habitat and life history information. This is followed by a key to nymphs of the Florida genera. The text of each genus gives a brief morphological DIAGNOSIS and NOTES of general information on the morphology, life history, ecology, and spatial distribution of the various species represented in the state. After identifying a mayfly, it is critical that the worker also refer to the diagnosis, as well as any other species descriptions that may be available, before making a final determination. The ADDITIONAL REFERENCES section lists additional sources of information published after 1987 for each genus.

ACKNOWLEDGEMENTS

This guide is a product of the collective efforts of friends and colleagues. Our sincere thanks to R. W. Flowers, M. D. Hubbard, J. Jones, J. G. Peters, the late W. L. Peters, and A. K. Rasmussen for their encouragement and contributions to the mayfly collections at Florida A&M University (FAMU).

We wish to acknowledge the late Dr. Lewis Berner for the tremendous contributions he made to the study of Florida mayflies.

In addition to the FAMU mayfly collection, this study was enhanced by the generous loan of specimens from the following biologists: R. Mattson (Suwannee River Water Management District), D. Denson (FDEP, Orlando), D. Ray (FDEP, Pensacola), R. Rutter (FDEP, Punta Gorda), and T. Thom (U. Georgia).

We thank N. A. Wiersema for allowing us to use a modified version of his unpublished key to the Baetidae of North America. We also thank M. Haseeb (FAMU) for assistance in photographing specimens. We also express our appreciation to S. K. Burian (Southern Conn. State U.), R. W. Flowers, P. M. Grant (Southwestern Okla. State U.), J. G. Peters, and the FDEP district biologists for their helpful reviews of the first draft of this guide.

Our sincere thanks to Dr. Sunil K. Pancholy, Associate Dean for Research (FAMU) for his encouragement and support of our research. Last but not least, we thank Ellen McCarron and Karen Savage, Division of Water Resource Management (FDEP), for their assistance with this project.

WORKING WITH SPECIMENS

Preservation and Storage: The external morphological structures that are used to identify mayfly nymphs generally preserve well as long as proper preserving procedures are followed. To maintain and preserve the integrity of the insect structures and tissues, newly collected benthic samples should be preserved in 85-95% ethyl alcohol and replaced with the same concentration within 24 hours if the samples are not processed or sorted immediately. Once the specimens are sorted, they should be stored in 80% ethyl alcohol and appropriately labeled.

Rearing: For many mayfly taxa, identification of nymphs is possible only to the genus level. By rearing nymphs to the adult stage, the nymph can be associated with the adult and then both the shed nymphal exuviae and the adult insect can be used for identification. Rearing mayflies is relatively easy and can be accomplished with a simple aquarium setup. We use the following method and have obtained good results. Mayfly nymphs collected in the field are placed in 12 oz. plastic cups, which have side sections cut away and covered with plastic mesh glued to the sides of the cup. This allows for fresh water to flow freely through the rearing cup. For transport back to the laboratory, cups are placed in a styrofoam cooler partially filled with stream water. To hold cups in place and keep the top of the cup above the water level, they are placed within holes cut out of a piece of styrofoam which fits snugly in the cooler. Each rearing cup is provisioned with leaf litter for cover, and a small stick that breaks the water surface, to serve as an attachment substrate for nymphs, and also for adults after emergence. The water in the cooler is oxygenated with a battery operated aerator while transporting the mayflies. The rearing cups are covered with a cloth mesh to prevent adults from escaping and placed in an aerated aquarium filled with stream water. Water temperature is a critical factor in rearing success. In general, if the water temperature in the aquarium is above 75^{o}F, nymphs will either cease development or die. Mature nymphs are checked on a daily basis for emergence. The newly emerged subimago is allowed time to complete the process of molting to the imago before preserving the imago, its nymphal, and subimaginal exuviae in 80% ethyl alcohol.

Dissection: Nymphs coated with silt or minute debris can be cleaned by ultrasonic cleaner for 3-6 minutes for better viewing of structures and color patterns. Jewelers forceps, microdissecting scissors, dissecting dishes, and dissecting needles work well in preparing specimens and associated structures for examination. Dissected specimens and their associated body parts should be placed together in microvials and separated from the rest of the specimens in the main container.

Mounting of Specimens on Slides: It is often necessary to make slide mounts of various parts of specimens in order to examine taxonomic characters. Temporary slide mounts made with glycerin are often all that is necessary to see many characters. Sometimes it is preferable to make permanent slide mounts using CMC10 or Canada balsam. CMC10 is convenient in that it is water soluble and parts can be mounted directly from alcohol or water. If necessary, parts can be remounted after soaking a slide in water to loosen the coverslip, which can then be removed to allow for repositioning of parts. CMC10 also provides some clearing of parts which can aid in the viewing of certain structures.

Microscopes: Most of the external morphological characters that are involved in identifying mayflies can be seen under a dissecting microscope that is equipped with 40-50X magnification and an illuminated base. Most taxonomists also employ fiber optic lighting for additional lighting from above or to the side of specimens. A compound microscope with 100-400X magnification is needed for viewing certain mayfly structures and this is noted in the keys where we have found high magnification to be necessary or useful.

MORPHOLOGY

Knowledge of the external morphology of the mayfly nymph is fundamentally important for users of this guide in order to key the various mayfly taxa.

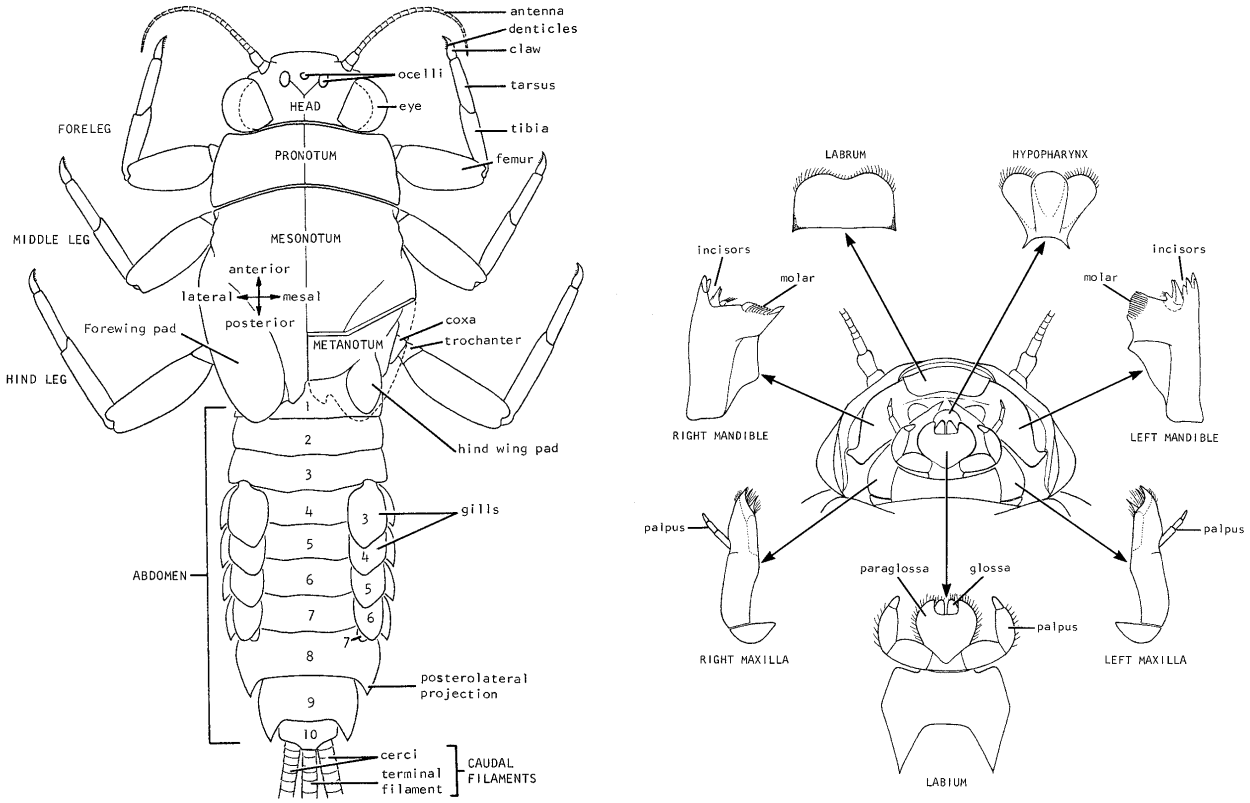
NYMPH: (Refer to Fig. 1)

Head: The shape of the head is variable and usually has a variety of projections, processes, and armature. The two compound eyes are located dorsally or laterally near the posterolateral corners. Three ocelli are present with the median ocellus usually smaller than the two lateral ocelli. The filiform antennae vary in length and are usually set anterior or ventral to the compound eyes. Depending on the orientation of the head, the fully functional mouthparts are either directed ventrally or anteriorly. In the hypognathous head the mouthparts are ventrally directed, while in the prognathous head the mouthparts are anteriorly oriented. The mouthparts consist of the labrum, a pair of heavily sclerotized mandibles, a pair of maxillae, a membranous tongue-like hypopharynx, and the labium.

Thorax: The thorax consists of three segments: the prothorax, mesothorax, and metathorax. Like the adult, the nymphal meso- and metathorax are fused. The thoracic nota are heavily sclerotized and usually with a prominent median longitudinal line. Wingpads are located on the meso- and metathorax (sometimes referred to as the pterothorax or wing-bearing segments), although wingpads may be absent from the metathorax of some species. The thoracic segments each have a pair of legs. The externally visible segments of the legs include the coxa, trochanter, femur, tibia and tarsus. Most segments usually have spines, setae, and fringes of hairs, and each tarsus has a single claw. Modifications of the legs of some genera are functionally driven, such as for burrowing, filtering food, and gill protection.

Abdomen: The abdomen consists of ten distinct segments. Some segments may be concealed beneath the mesonotum as in *Baetisca*. The abdominal terga may possess spines and/or tubercles, and some segments may have posterolateral spines while the abdominal sterna are usually smooth. Pigmentation patterns of the abdominal terga and sterna often provide good taxonomic characters. All mayfly nymphs have abdominal gills except for the South American mayfly genus *Murphyella*. Gills vary in shape and structure and provide a good source of taxonomic characters. In addition to abdominal gills, a few species have accessory gills at the base of the coxae (e.g., *Isonychia*) or at the base of the maxillae (e.g., *Homoeoneuria, Isonychia*). Most mayflies have the gills dorsally or laterally attached to the abdomen, but some species (e.g., *Dolania*), have the gills attached ventrally. Some species have the first gills ventral and the rest of the gills either

dorsal or lateral (e.g., *Homoeoneuria*). Most nymphs have gills on abdominal segments I-VII, although some taxa have the gills on segments II-VII (e.g., *Diphetor),* III-VII (e.g., *Ephemerella*, *Serratella*), or segments IV-VII (e.g., *Attenella, Dannella, Eurylophella*). Most mayfly nymphs have three caudal filaments consisting of a pair of cerci and a median (terminal) filament, although some species have the median filament greatly reduced.



A. **B.**

Fig. 1 Morphology of the mayfly nymph, *Ephemerella* sp.- **A.** dorsal view; **B.** ventral view of head with mouthparts enlarged [from Edmunds, Jensen, and Berner (1976)]

KEY TO FAMILIES FOR MATURE NYMPHS OF THE MAYFLIES (EPHEMEROPTERA) OF FLORIDA

[modified from Berner and Pescador (1988)]

1. Thorax with well developed mesonotal shield extended to abdominal segment VI; gills enclosed beneath shield (Fig. 2) . . . . . **BAETISCIDAE** (p. 36)*, Baetisca*

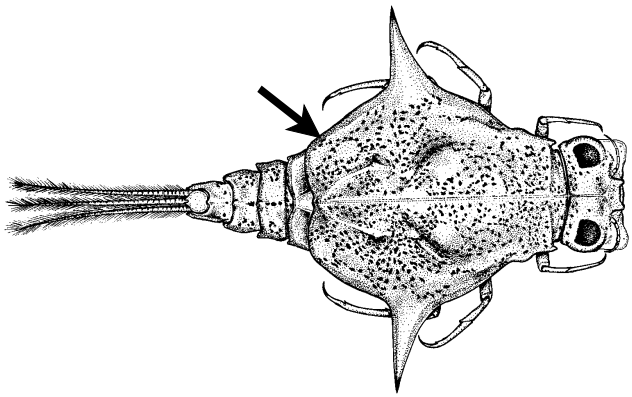


Fig. 2 [from Pescador & Berner (1981)]

Thorax not as above; at least anterior abdominal gills exposed 2

2(1) Gills on abdominal segments II-VII forked and elongate-lanceolate, with margins fringed (Fig. 3); most with mandibular tusks projected forward and visible from above head (Fig. 4); if tusks absent, head and thorax with pads of long spines (Fig. 5) 3

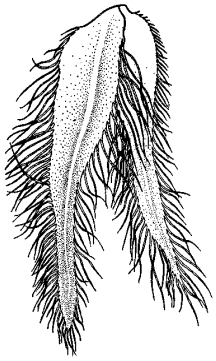


Fig. 3 [from Burks (1953)]

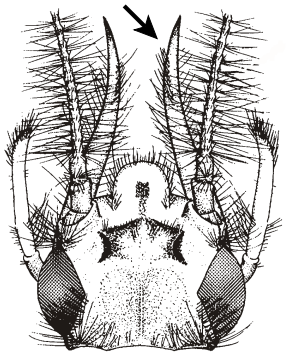


Fig. 4 [from Edmunds, Jensen, & Berner (1976)]

Gills on abdominal segments II-VII variable; if gills forked and elongate-lanceolate, margins not fringed; mandibular tusks absent 5

3(2) Head and prothorax with dorsal pads of long spines on each side; mandibular tusks absent; gills ventral (Fig. 5) . . . . . **BEHNINGIIDAE** (p. 40), *Dolania, D. americana* Edmunds and Traver

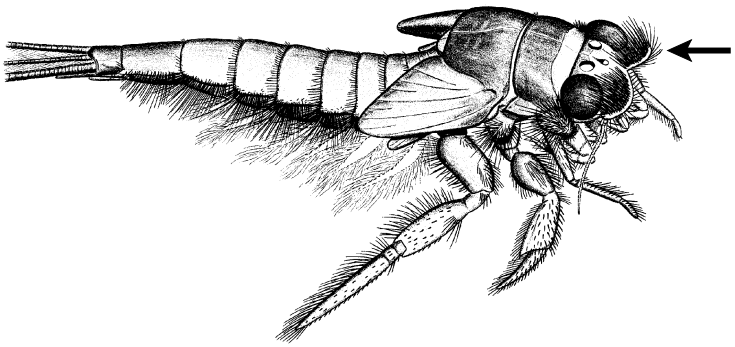


Fig. 5 [from McCafferty (1975)]

Head and prothorax without pads of spines; mandibular tusks present; gills lateral or dorsal (Fig. 6) 4

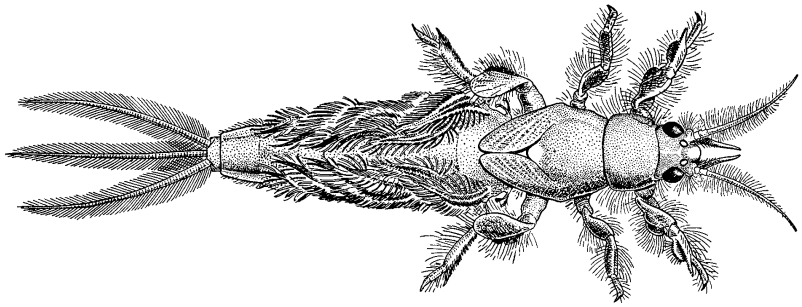


Fig. 6 [from Burks (1953)]

4(3) Mandibular tusks curved upward apically as viewed laterally (Fig.7); ventral apex of hind tibiae projected into distinct acute process (Fig. 8) . . . . . **EPHEMERIDAE** (p. 64)

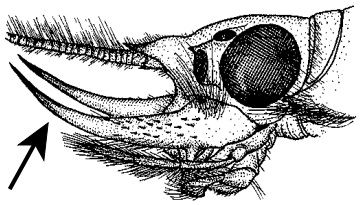


Fig. 7 [from Edmunds, Jensen, & Berner (1976)]

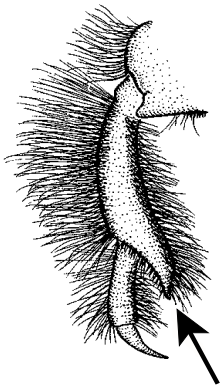


Fig. 8 [from Edmunds, Jensen, & Berner (1976)]

Mandibular tusks not curved upward apically as viewed laterally (Fig. 9); ventral apex of hind tibiae rounded (Fig. 10) . . . . . **POLYMITARCYIDAE** (p. 99)

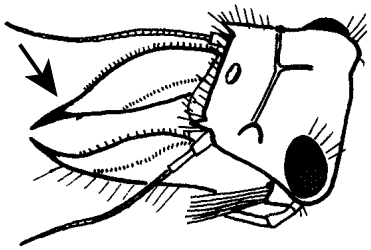


Fig. 9 [from Unzicker & Carlson (1982)]

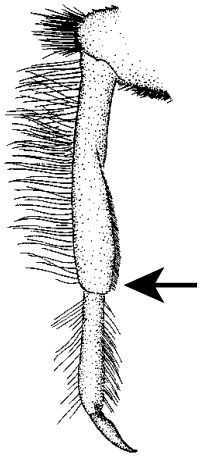


Fig. 10 [from Edmunds, Jensen, & Berner (1976)]

5(2) A double row of long setae on inner margins of femora & tibiae of forelegs (Fig. 11) . . . 6

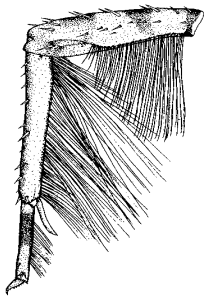


Fig. 11 [from Kondratieff & Voshell (1984)]

Long setae absent on forelegs, or not arranged as above 7

6(5) Gills ventral on abdominal segment I (Fig. 12); forecoxae without gills; foretarsi reduced and papilla-like (Fig. 12); meso- and metatarsal claws non-denticulate; abdominal sternum I with finger-like posteromedian process (Fig. 13) . . . . . **OLIGONEURIIDAE** (p. 98), *Homoeoneuria, H. dolani* Edmunds, Berner, and Traver

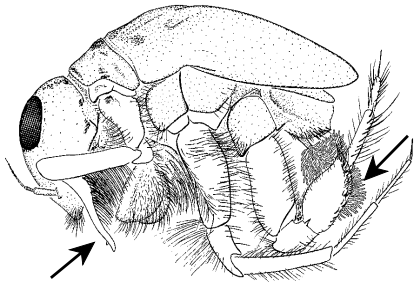


Fig. 12 [from Pescador & Peters (1980)]

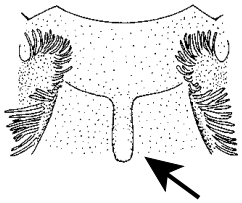


Fig. 13 [from Pescador & Peters (1980)]

Gills dorsal on abdominal segment I; forecoxae with gills, either tufts (Fig. 14) or a single robust finger-like filament; meso- and metatarsal claws denticulate; abdominal sternum I without finger-like process . . . . . **ISONYCHIIDAE** (p. 77), *Isonychia*

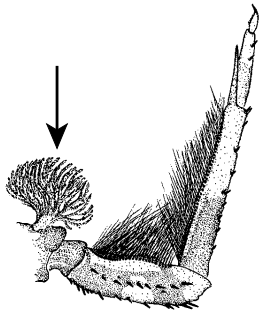


Fig. 14 [from Edmunds, Jensen, & Berner (1976)]

7(5) Gills on abdominal segment II operculate or semioperculate (Figs. 15, 16, 17) covering succeeding pairs of gills 8

Gills on abdominal segment II neither operculate nor semioperculate, either similar to those on succeeding segments or absent. 10

8(7) Gills on abdominal segment II triangular, subtriangular, or oval, not meeting medially (Fig. 15); margin of gill lamellae 3-6 simple or bilobed, not fringed . . . . . **LEPTOHYPHIDAE** (p. 81)

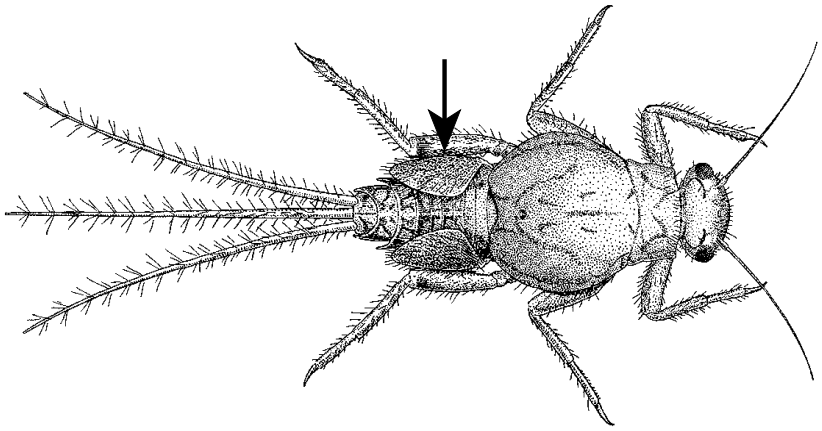


Fig. 15 [from Burks (1953)]

Gills on abdominal segment II quadrate, meeting (Fig. 16), or almost meeting medially (Fig. 17); margin of gill lamellae 3-6 fringed 9

9(8) Mesonotum with distinct anterolateral lobes (Fig. 16); operculate gills fused medially (Fig. 16); hind wingpads present . . . . . **NEOEPHEMERIDAE** (p. 96), *Neoephemera*

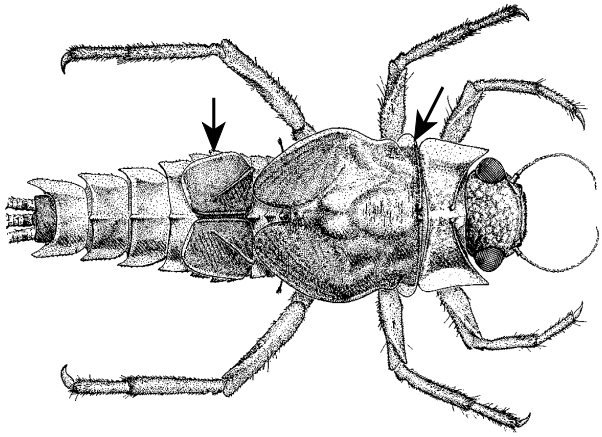


Fig. 16 [from Edmunds, Allen, & Peters (1963)]

Mesonotum without anterolateral lobes (Fig. 17); operculate gills not fused medially (Fig. 17); hind wingpads absent . . . . . **CAENIDAE** (p. 41)

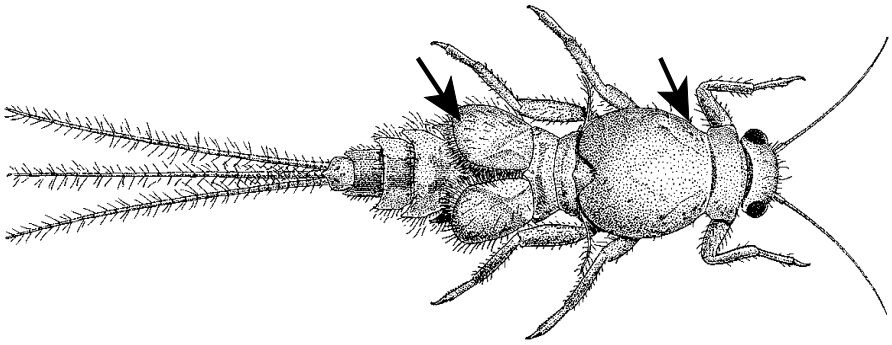


Fig. 17 [from Burks (1953)]

10(7) Gills absent on abdominal segment II, rudimentary or absent on segment I, and present or absent on segment III; gills on segments III-VII or IV-VII consist of anterior dorsal oval lamellae and posterior (ventral) lamellae with numerous lobes (Fig. 18); paired tubercles often present on abdominal terga (Fig. 18) . . . . . **EPHEMERELLIDAE** (p. 52)

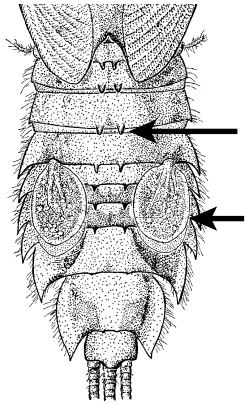


Fig. 18 [modified from Allen & Edmunds (1963)]

Gills present on abdominal segments I-V, I-VII, or II-VII; paired tubercles rarely present on abdominal terga 11

11(10) Body distinctly flattened; head flattened; eyes and antennae dorsal; mandibles not visible in dorsal view (Fig. 19) 12

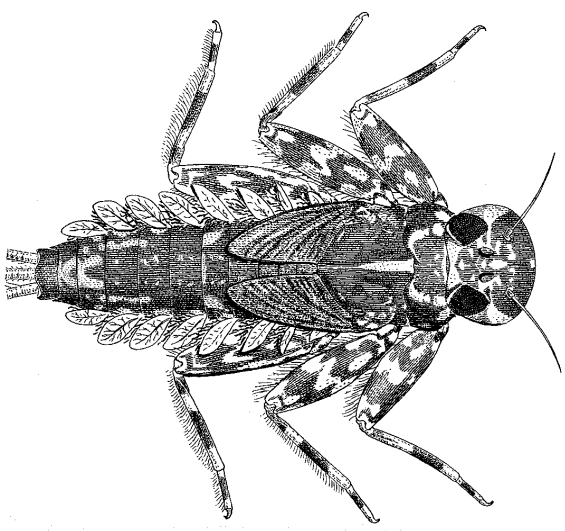


Fig. 19 [from Unzicker & Carlson (1982)]

Body not flattened or if flattened, mandibles visible and forming part of flattened surface of head 13

12(11) Claws as long as or longer than tarsi; tibiae and tarsi bowed (Fig. 20); maxillary palpi four-segmented (Fig. 21); abdominal gills with finger-like branch arising near middle (Fig. 22) . . . . . **PSEUDIRONIDAE** (p. 101), *Pseudiron, P. centralis* McDunnough

Fig. 20 [from Berner & Pescador (1988)]

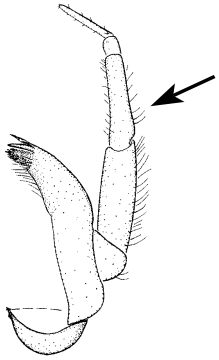


Fig. 21 [from Pescador (1985)]

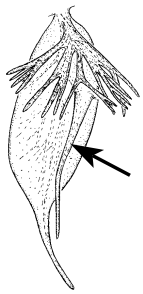


Fig. 22 [from Pescador (1985)]

Claws much shorter than tarsi; tibiae and tarsi straight; maxillary palpi two-segmented (Fig. 23); abdominal gills variable, not as above . . . . . **HEPTAGENIIDAE** (p. 69)

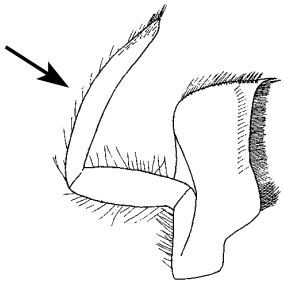


Fig. 23 [from Berner (1950)]

13(11) Claws of forelegs bifid (Fig. 24), claws of middle and hind legs long and slender, about as long as tibiae . . . . . **METRETOPODIDAE** (p. 95), *Siphloplecton*

Fig. 24 [from Berner (1950)]

Claws of all legs similar in structure, usually sharply pointed; claws variable in length, if those of middle and hind legs long and slender, then usually shorter than tibiae 14

14(13) Abdominal gills on segments II-VII either forked (Fig. 25), in tufts (Fig. 26), or with double lamellae terminated in filaments or points (Fig. 27); maxillae with a dense brush of hairs on distal margin (Fig. 28) . . . . . **LEPTOPHLEBIIDAE** (p. 84)

Fig. 25 [from Berner (1950)]

Fig. 26 [from Berner (1950)]

Fig. 27 [from Berner (1950)]

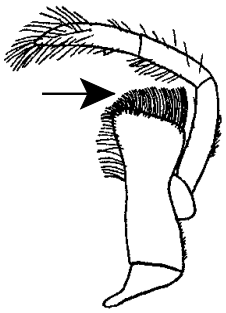


Fig. 28 [from Needham, Traver & Hsu (1935)]

Abdominal gills not as above; gills either more or less ovate (broad at base), obovate (narrowed at base); lamellae either single (Fig. 29), double (Fig. 30), or triple (Fig. 31); fringe on distal margin of maxillae variable, never with dense brush of hairs . . . . . **BAETIDAE** (p. 16)

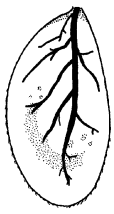


Fig. 29 [from Berner (1950)]

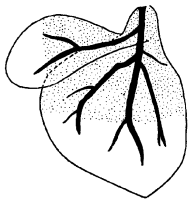


Fig. 30 [from Berner (1950)]

Fig. 31 [from Spieth (1933)]

FAMILY BAETIDAE

The family Baetidae is the most speciose family in the world with at least 90 described genera and more than 600 species. Baetid mayflies are found on all continents excluding Antarctica and many islands, but do not occur in New Zealand. There are 23 genera and 159 species represented in North America. The family has undergone extensive revision in recent years with the establishment of many new genera and new combinations for many species (Waltz et al., 1985, 1994; Waltz and McCafferty, 1987a, b; 1989; McCafferty and Waltz, 1990, 1995). The following 10 genera are currently found in Florida: *Acentrella, Acerpenna, Baetis, Callibaetis, Centroptilum*, *Diphetor, Plauditus, Procloeon, Pseudocentroptiloides,* and *Pseudocloeon*. Baetids are among the smallest of mayflies with size ranging from 3-10 mm. Baetid nymphs can be distinguished from those of other families by the following combination of characters: body streamlined; head hypognathous; antennae long, usually twice as long as the width of the head; labium with glossae and paraglossae long and narrow; gills on abdominal segments 1-7, 2-7, or 1-5; and abdominal segments without pronounced posterolateral projections.

Nymphs are found in both lentic and lotic habitats and all possible microhabitats. Nymphs are generally clinger/swimmers and feed as collector-gatherers with some being scrapers. Baetids can have univoltine or multivoltine life cycles depending on geographic distribution and species.

In some of the keys to species of Florida genera of Baetidae reference will be made to the abdominal color patterns of male nymphs. In the Baetidae males often have distinct color patterns, especially of the abdomen, whereas females tend to be unicolorous. Male nymphs can be distinguished from females by the possession of the developing divided turbinate eyes of the male adult shown in Fig. 32 below. Females do not have divided eyes.

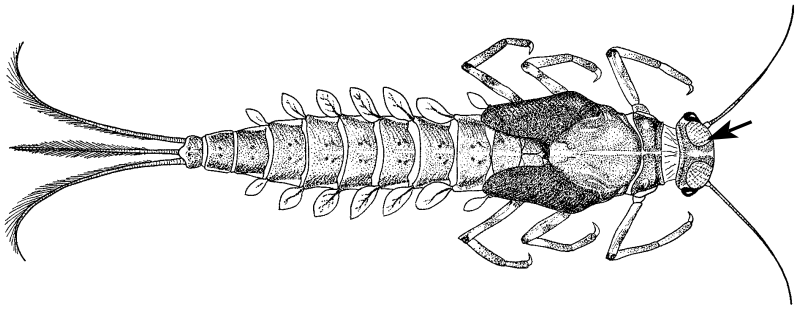


Fig. 32 [from Leonard (1950)]

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDA BAETIDAE
[adapted from Edmunds and Waltz (1996) and an unpublished key by Wiersema]

1. Median caudal filament highly reduced, 1/4 length of cerci or less (Fig. 33); femoral villopore present (distinct patch of simple setae on ventral surface of femora near base) (Fig. 34) 9

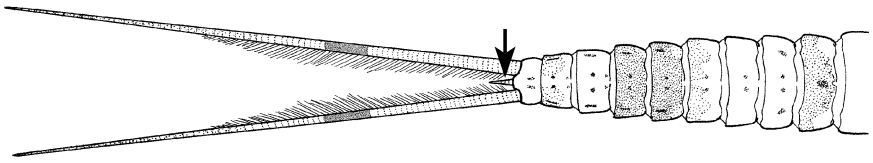


Fig. 33 [modified from Berner (1950)]

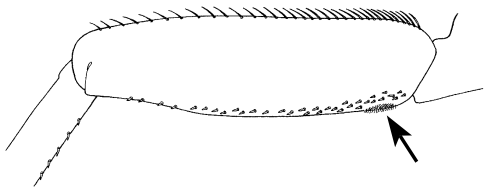


Fig. 34 [from Waltz & McCafferty (1987b)]

Median caudal filament 1/2 length of cerci or greater (Fig. 35); femoral villopore present or absent 2

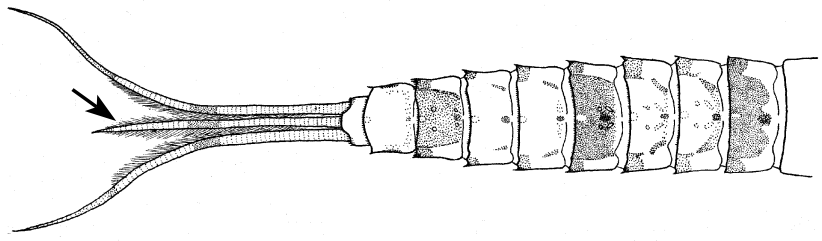


Fig. 35 [from Berner (1950)]

2(1) Labial palp segment 3 simple and truncate (Figs. 36, 37); gills simple or with single recurved dorsal flap on some or all gills (Figs. 38, 39) 3

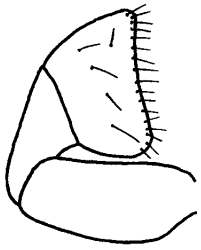


Fig. 36 [from Berner (1950)]

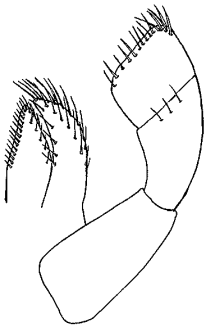


Fig. 37 [from Wiersema (1999a)]

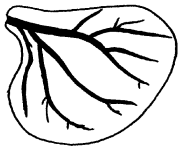


Fig. 38 [from Berner (1950)]

Fig. 39 [from Berner (1950)]

Labial palpi not as above (Figs. 40, 41); gills either simple (Fig. 42) or compound with 1-3 ventral lamellae (Fig. 43) 5

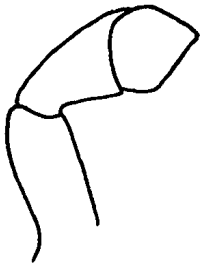


Fig. 40 [from Berner (1950)]

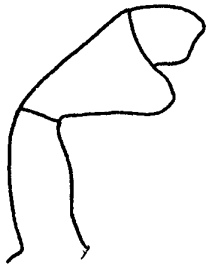


Fig. 41 [from Berner (1950)]

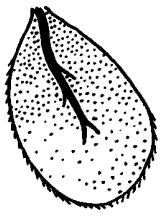


Fig. 42 [from Berner (1950)]

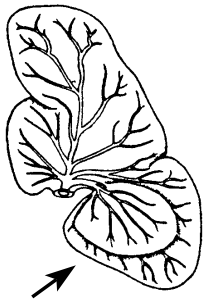


Fig. 43 [from Berner (1950)]

3(2) Labrum with a deep triangular notch anteriorly (Fig. 44); tarsal claws subequal in length to tarsi; labium with glossae broad, rounded, and shorter than paraglossae (Fig. 45); gills simple; with hind wingpads . . . . . *Pseudocentroptiloides* (p. 33); *P. usa* Waltz and McCafferty

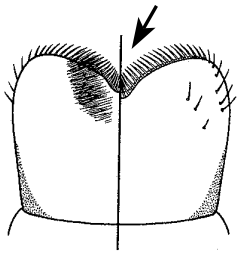


Fig. 44 [from Waltz & McCafferty (1989)]

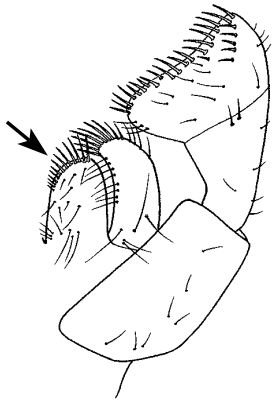


Fig. 45 [from Waltz & McCafferty (1989)]

Labrum not as above, with a small median notch anteriorly (Fig. 46); tarsal claws shorter than tarsi; labium with glossae slender, pointed, and subequal to paraglossae (Fig. 47); gills either simple or with recurved dorsal flap (Fig. 48); with or without hind wingpads 4

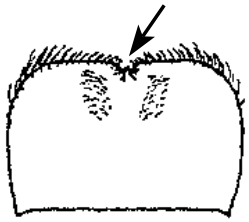


Fig. 46 [from McDunnough (1930)]

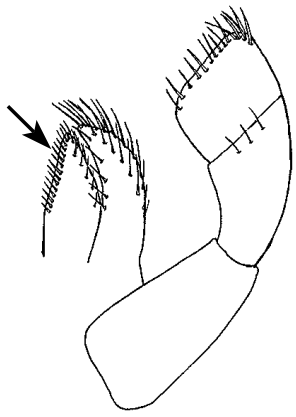


Fig. 47 [from Wiersema (1999a)]

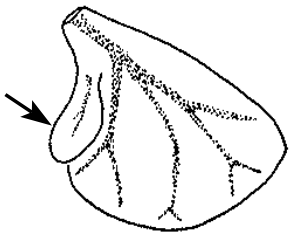


Fig. 48 [from Wiersema (1999a)]

4(3) Mandibular incisors separated to the base or fused at half the length or less (Fig. 49); labrum quadrate in shape and with a narrow, shallow median notch anteriorly (Fig. 46); labial palp segment 3 widely expanded and truncate with concave margin (Fig. 36); gills simple; without hind wingpads . . . *Centroptilum* (p. 29); *C. triangulifer* (McDunnough)

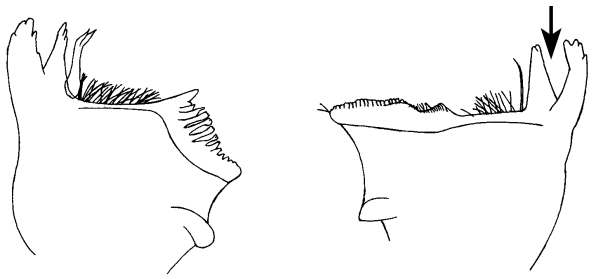


Fig. 49 [from Lowen & Flannagan (1991)]

Mandibular incisors rarely separated to the base, usually fused at half the length or more (Fig. 50); if separated beyond half the length, then only on right mandible; labrum rounded with relatively wide and deep median notch anteriorly (Fig. 51); labial palpi variable (Figs. 36, 37); gills either simple or with single recurved dorsal flap on first gill (Fig. 52) . . . . . *Procloeon* (p. 32)

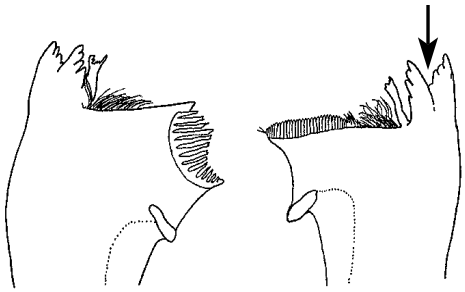


Fig. 50 [from Wiersema (1999a)]

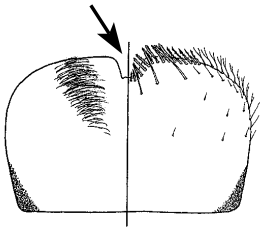


Fig. 51 [from Wiersema (1999a)]

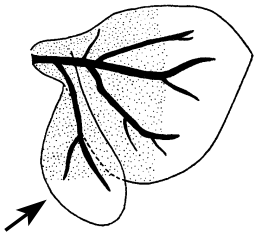


Fig. 52 [from Berner (1950)]

5(2) Gills on abdominal segments I-VI with 1-3 ventral lamellae (Fig. 43); labial palpi narrow and elongate (Fig. 53); tarsal claws long and narrow with 2 rows of long teeth (Fig. 54); hind wingpads present . . . . . *Callibaetis* (p. 27)

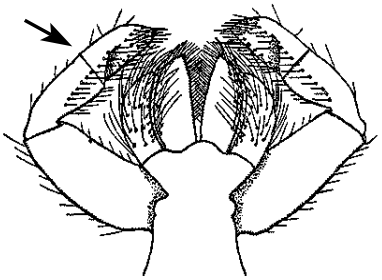


Fig. 53 [from Spieth (1933)]

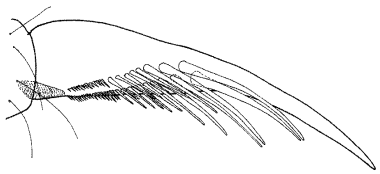


Fig. 54 [from Hofmann, Sartori, & Thomas (1999)]

Gills simple without additional lamellae (Fig. 42); labial palpi not narrow and elongate; tarsal claws short and broad with single row of teeth (Fig. 55); hind wingpads present or absent 6

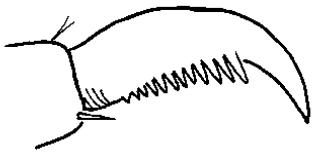


Fig. 55 [from Wiersema (2000)]

6(5) Maxillary palpi with subapical excavation (Fig. 56); antennal scape with digitate lobe (Fig. 57); labial palp segment 2 broadly expanded medially (Fig. 58) . . . . . *Pseudocloeon* (p. 34)

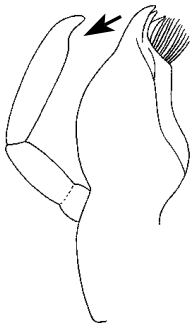


Fig. 56 [from McCafferty & Waltz (1995)]

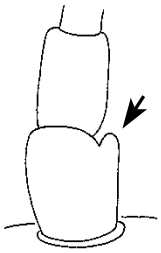


Fig. 57 [from McCafferty & Waltz (1995)]

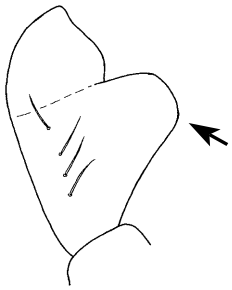


Fig. 58 [from Morihara & McCafferty (1979)]

Maxillary palpi without subapical excavation; antennal scape without digitate lobe; labial palp segment 2 not broadly expanded as above 7

7(6) Labial palp segment 2 with thumb-like median lobe (Fig. 59); gills on abdominal segments VI-VII or VII slender and apically pointed (Fig. 60) . . . . . *Acerpenna* (p. 27); *A. pygmaea* (Hagen)

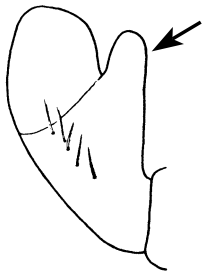


Fig. 59 [from Berner & Pescador (1988)]

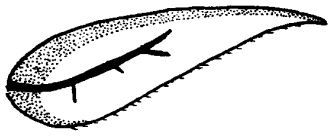


Fig. 60 [from Berner (1950)]

Labial palp segment 2 without thumb-like median lobe (Fig. 61); gills on abdominal segments VI-VII similar to those on preceding segments 8

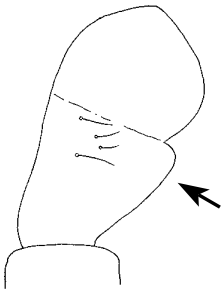


Fig. 61 [from Morihara & McCafferty (1979)]

8(7) Femoral villopore present (Fig. 34); gills present on abdominal segments I-VII; ventral row of fine setae absent on incisors of both mandibles (Fig. 62); abdomen with distinct color pattern, caudal filaments with distinct dark band of segments at middle (Fig. 63) . . . . . *Baetis* (p. 27); *B. intercalaris* McDunnough

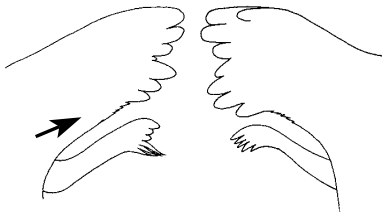


Fig. 62 [from Morihara & McCafferty (1979)]

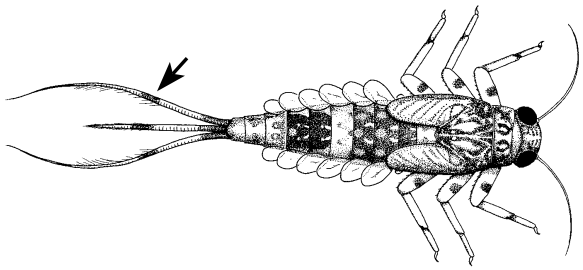


Fig. 63 [from Morihara & McCafferty (1979)]

Femoral villopore absent; gills absent on abdominal segment I, present on segments II-VII; ventral row of fine setae present on incisors of both mandibles, with very slender prostheca on right mandible (Fig. 64); abdominal color pattern distinct with segments I-IX dark and segment X light, caudal filaments without distinct dark band of segments at middle (Fig. 65) . . . . . *Diphetor* (p. 29); *D. hageni* (Eaton)

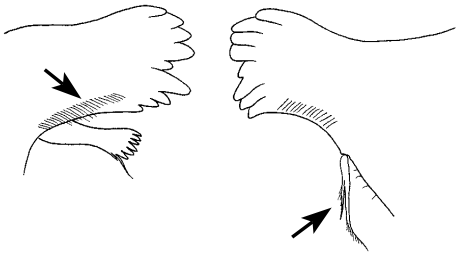


Fig. 64 [from Morihara & McCafferty (1979)]

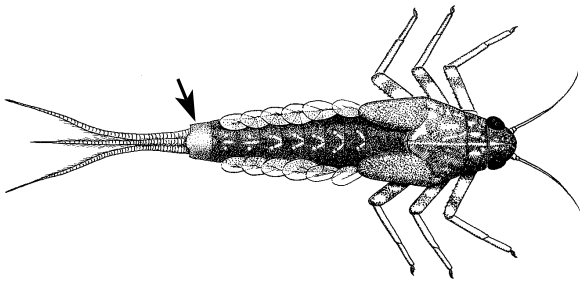


Fig. 65 [from Morihara & McCafferty (1979)]

9(1) Cerci banded with alternate light and dark annulations (Fig. 66); labium compact with shortened palpi, apices of labial palpi reaching apices of paraglossae (Fig. 67); mandibular incisors short and apically cleft (Fig. 68); minute hind wingpads present, visible only under high magnification (30-50X) . . . . . *Acentrella* (p. 25)

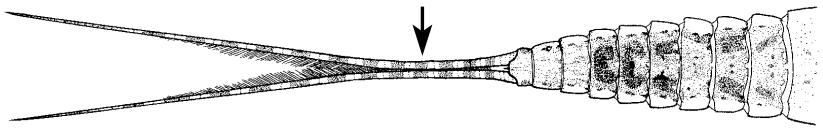


Fig. 66 [from Berner (1950)]

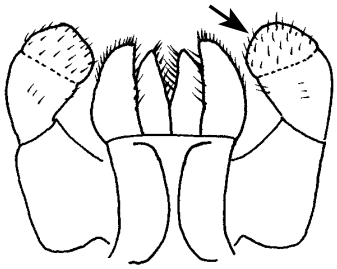


Fig. 67 [from Waltz & McCafferty (1987b)]

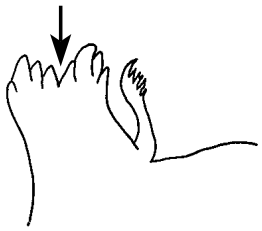


Fig. 68 [from Wiersema (2000)]

Cerci with distinct middle band of dark segments (Fig. 69); labium not compact, apices of labial palpi reaching beyond paraglossae (Fig. 70); mandibular incisors elongate, not cleft apically (Fig.71); hind wingpads absent . . . . . *Plauditus* (p. 30)

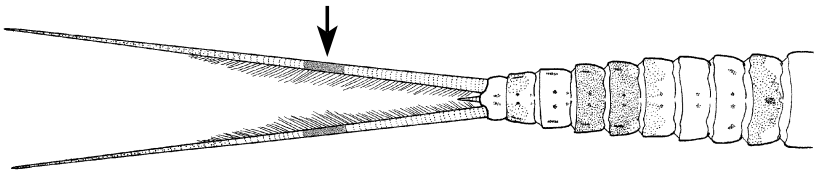


Fig. 69 [modified from Berner (1950)]

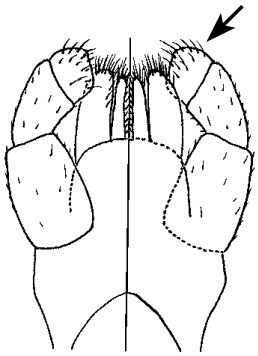


Fig. 70 [from Lugo-Ortiz & McCafferty (1998)]

Fig. 71 [from Wiersema (1999b)]

Genus ***Acentrella*** Bengtsson

DIAGNOSIS: These very small mayflies are distinguished from other baetid genera by the following combination of characters: median caudal filament highly reduced, 1/4 length of cerci or less (Fig. 33); femoral villopore present (Fig. 34); cerci banded with light and dark annulations (Fig. 66); labium compact with shortened palpi, apices of palpi reaching apices of paraglossae (Fig. 67); mandibular incisors short and apically cleft (Fig. 68); and with minute hind wingpads present.

NOTES: Of the 6 Nearctic species of *Acentrella*, *A. alachua* (Berner) and *A. parvula* (McDunnough) are known from Florida. The two species can be distinguished using the following key to species based on differences in gill pigmentation, banding of the cerci, and abdominal terga color pattern. Previously, the two species had been removed from *Pseudocloeon* and placed in the genus *Baetis* (McCafferty and Waltz, 1990) and were then moved to the new genus *Plauditus* (Lugo-Ortiz and McCafferty, 1998). Both species were most recently removed from the genus *Plauditus* and placed in *Acentrella* based on their possession of minute hind wingpads (Wiersema, 2000).

Acentrella alachua is known from the southeastern United States and *A. parvula* is widely distributed throughout central and eastern North America. In Florida, *A. alachua* is known from the peninsula and the eastern panhandle, while *A. parvula* has only been collected from the Santa Fe and Suwannee River Basins westward throughout the panhandle. Nymphs have been collected from small to large streams and rivers with good flow and are typically found clinging to solid substrates (rocks and snags) or among vegetation in swifter currents. *Acentrella* are collector-gatherers and likely feed on periphyton. Adults of both species emerge throughout the year in Florida. For further discussion of the ecology and life history of both species of *Acentrella* in Florida see Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *ACENTRELLA* [from Berner and Pescador (1988)]

1. Abdomen of male nymphs with distinct color pattern (Fig. 72); cerci prominently banded with alternate dark and light bands (Fig. 72); abdominal gills with gray pigmented area distally (Fig. 73) . . . . . *A. parvula* (McDunnough)

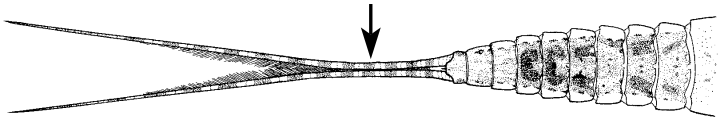


Fig. 72 [from Berner (1950)]

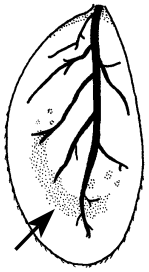


Fig. 73 [from Berner & Pescador (1988)]

Abdomen of male nymphs with distinct color pattern (Fig. 74); cerci only faintly banded with alternate dark and light bands; abdominal gills without gray pigmented area distally (Fig. 75) . . . . . *A. alachua* (Berner)

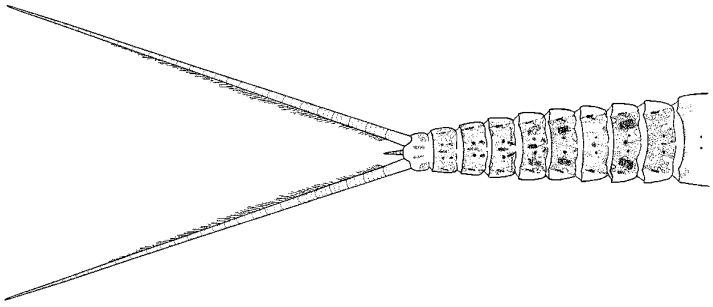


Fig. 74 [from Berner (1940)]

Fig. 75 [from Berner (1940)]

Genus ***Acerpenna*** Waltz and McCafferty

DIAGNOSIS: This genus is distinguished from other baetid genera by the following combination of characters: femoral villopore absent; labial palp segment 2 with thumb-like median lobe (Fig. 59); and gills on abdominal segments VI-VII or only VII slender and apically pointed (Fig. 60).

NOTES: Of the 5 Nearctic species of *Acerpenna*, *A. pygmaea* (Hagen) is known from Florida. *Acerpenna pygmaea* is easily distinguished by the lanceolate gills found on abdominal segment VII or sometimes on segments VI and VII. This species was previously placed in the genus *Baetis* and was moved to the genus *Acerpenna* by Waltz and McCafferty (1987a).

Acerpenna pygmaea has a widespread distribution in North America. In Florida, *A. pygmaea* has been collected throughout the state. They are typically found in small to medium size streams with moderate flow and commonly collected among vegetation and in root mats. *Acerpenna* are considered collector-gatherers. Adults emerge year round in Florida. See Berner and Pescador (1988) for more information on the ecology and life history of *Acerpenna* in Florida.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Baetis*** Leach

DIAGNOSIS: The genus *Baetis* is distinguished from other baetid genera by the following combination of characters: femoral villopore present (Fig. 34); simple gills on abdominal segments I-VII (Fig. 63); and tarsal claws broad and short with single row of teeth (Fig. 55).

NOTES: Of the 21 Nearctic species of *Baetis*, only *B. intercalaris* McDunnough is presently known from Florida. This species is widespread in North America.

Baetis intercalaris is found throughout Florida from the southern peninsula to the western panhandle. It is one of the most commonly encountered baetids in streams and rivers of the state. Nymphs are found among vegetation, on woody snags, and in leaf packs usually in areas of good flow. *Baetis* are collector-gatherers. *B. intercalaris* is multivoltine in Florida with adults emerging throughout the year. Berner and Pescador (1988) contains more information about the ecology and life history of this species in Florida.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Callibaetis*** Eaton

DIAGNOSIS: *Callibaetis* is distinguished from other baetid genera by the following combination of characters: femoral villopore absent; gills on abdominal segments I-VI with 1-3 ventral lamellae (Fig. 43); labial palpi narrow and elongate (Fig. 53); and tarsal claws long and narrow with 2 rows of long teeth (Fig. 54).

NOTES: *Callibaetis* is both a Nearctic and Neotropical genus. Of the 12 Nearctic species of *Callibaetis*, *C. floridanus* Banks and *C. pretiosus* Banks are known from Florida. *C. floridanus* is widespread in the U. S. while *C. pretiosus* has an eastern distribution. The two species can be distinguished using the following key to species.

In Florida both species have a wide distribution throughout the panhandle and peninsula. They are found in both lentic and lotic habitats including streams, rivers, lakes, ponds, roadside ditches, the Everglades, and even in brackish water among mangroves. *Callibaetis* are most often found among vegetation clinging to the stems and leaves of submerged plants. They are collector-gatherers feeding primarily on algae. They are multivoltine and adults emerge year round in Florida. See Berner and Pescador (1988) for additional information on ecology and life history. *Callibaetis pretiosus,* which is common in Florida, is considered to be a threatened species in the Appalachians (Morse et al., 1997).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *CALLIBAETIS* [from Berner and Pescador (1988)]

1. Abdominal gill 7 with small recurved flap (Fig. 77); maxillary palp shorter than body of maxilla, segment 2 of maxillary palp about half the length of segment 1 (Fig. 78) . . . . . *C. pretiosus* Banks

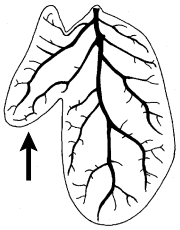


Fig. 77 [from Berner (1950)]

Fig. 78 [from Berner (1950)]

Abdominal gill 7 without recurved flap (Fig. 79); maxillary palp equal in length to body of maxilla, segment 2 of maxillary palp approximately equal in length to segment 1 (Fig. 80) . . . . . *C. floridanus* Banks

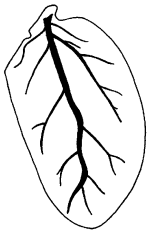


Fig. 79 [from Berner (1950)]

Fig. 80 [from Berner (1950)]

Genus ***Centroptilum*** Eaton

DIAGNOSIS: The genus *Centroptilum* is distinguished from other baetid genera by the following combination of characters: femoral villopore absent; labial palp segment 3 widely expanded and truncate with concave margin (Fig. 36); all gills simple (Fig. 38); labrum quadrate in shape, with a shallow median notch anteriorly (Fig. 46); mandibular incisors separated to the base or fused at half the length or less (Fig. 49); and hind wingpads absent.

NOTES: There are presently 15 Nearctic species of *Centroptilum*. The species *C. triangulifer* (McDunnough) is now recorded from Florida. The species is geographically widespread in North America. We now believe that Berner's *Cloeon* sp. A discussed in Berner and Pescador (1988) is very likely to have been *C. triangulifer* as currently defined. Unfortunately, the specimens of *Cloeon* sp. A appear to have been lost over the years and therefore we cannot verify their status. Specimens of *C. triangulifer* are now recorded from the Chipola River, Calhoun County and Burnt Mill Creek, Jefferson County. It is interesting to note that one of the places that Berner collected his *Cloeon* sp. A was from a tributary of the Chipola River. It is not known from what microhabitats our specimens of *C. triangulifer* were collected, but it is likely that they are associated with vegetation in slow moving acidic waters. *Centroptilum* are considered to be clinger/swimmers and collector-gatherers. Adults are unknown in Florida at this time.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Diphetor*** Waltz and McCafferty

DIAGNOSIS: This genus is distinguished from other baetid genera by the following combination of characters: femoral villopore absent; gills absent on abdominal segment I, simple gills present on abdominal segments II-VII (Fig. 65); labial palp segment without median projection (Fig. 61); and ventral row of fine setae present on incisors of both mandibles, with very slender prostheca on right mandible (Fig. 64).

NOTES: The single Nearctic species of *Diphetor*, *D. hageni* (Eaton) is now recorded from Florida. *Diphetor hageni* is considered to be geographically widespread in North America. In the southeastern United States the species appears to be concentrated in the Appalachians. Our recent collections of *D. hageni* have been from areas of the Florida panhandle that are considered to have been glacial refugia during the Pleistocene.

We have collected *D. hageni* in a tributary of Rock Creek in Torreya State Park, Liberty County, a tributary of Sweetwater Creek in Liberty County, and a tributary of Flat Creek in Gadsden County. In Florida, *D. hageni* seems to be confined to small ravine streams in the Apalachicola River drainage. Nymphs were collected from leaf packs and woody snags. *Diphetor* are considered to be clinger/swimmers with feeding habits unknown. Adults have been collected in the spring.

ADDITIONAL REFERENCES: Morihara and McCafferty (1979); Edmunds and Waltz (1996); Waltz and McCafferty (1987a).

Genus ***Plauditus*** Lugo-Ortiz and McCafferty

DIAGNOSIS: These small mayflies are distinguished from other baetid genera by the following combination of characters: median caudal filament highly reduced, 1/4 length of cerci or less (Fig. 33); femoral villopore present (Fig. 34); cerci with distinct middle band of dark segments (Fig. 69); labium not compact, apices of labial palpi reaching beyond paraglossae (Fig. 70); mandibular incisors elongate and not cleft apically (Fig. 71); and hind wingpads absent.

NOTES: Of the 13 Nearctic species of *Plauditus*, *P. bimaculatus* (Berner) which has a southeastern distribution and *P. punctiventris* (McDunnough) which is widespread in North America, are known from Florida. These species were previously placed in the genus *Pseudocloeon* and then moved to *Baetis* (McCafferty and Waltz, 1990) and subsequently placed in the genus *Plauditus* (Lugo-Ortiz and McCafferty, 1998) which is characterized primarily by its members lack of hind wings. The two species can be distinguished by the characters in the following key to species.

Plauditus bimaculatus has only been collected in the panhandle from the Apalachicola River basin westward. The distribution of *P. punctiventris* is unclear at this time. Nymphs are usually found among vegetation and/or leaf packs in streams with good flow. In spring fed streams of the western panhandle that have open canopies and abundant aquatic vegetation, nymphs of *P. bimaculatus* are often found in great numbers. Berner (1950) considered his specimens of *P. punctiventris* to be questionable as to their determination. We have yet to collect in the panhandle any specimens that meet the definition of the species. We do have recent collections from southern Alabama that key confidently to *P. punctiventris.* Berner's specimens of *P. punctiventris* will need to be reexamined to verify their status. *Plauditus* are clingers and collector-gatherers. Adults of *P. bimaculatus* have been collected in the spring and summer, while adults of *P. punctiventris* have not been collected in Florida. More information about the ecology and life history of these species can be found in Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *PLAUDITUS*
[from Berner and Pescador (1988)]

1. Abdominal gill 7 with reddish-brown pigmentation (Fig. 80); abdomen of male nymphs with distinct color pattern (Fig. 81); middle band of cerci of males and females dark brown (Fig. 81) . . . . . *P. bimaculatus* (Berner)

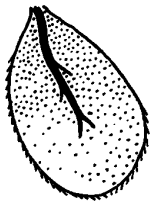


Fig. 80 [from Berner (1950)]

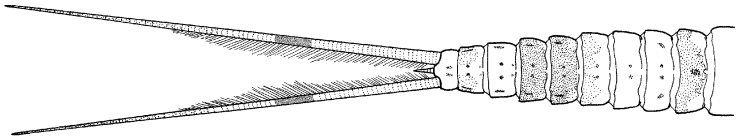


Fig. 81 [modified from Berner (1950)]

Abdominal gill 7 without reddish brown coloring (Fig. 82); abdomen of male nymphs with distinct color pattern with pale longitudinal stripe (Fig. 83); middle band of cerci of males and females light brown . . . . . *P. punctiventris* (McDunnough)

Fig. 82 [modified from Berner (1950)]

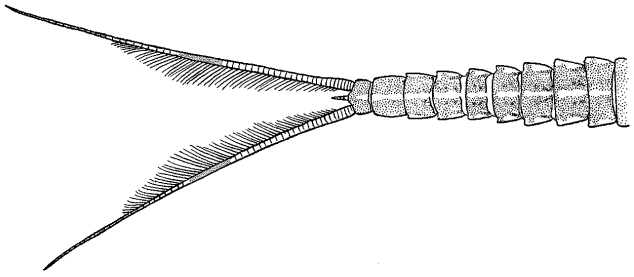


Fig. 83 [modified from Ide (1937)]

Genus ***Procloeon*** Bengtsson

DIAGNOSIS: This genus is distinguished from other baetid genera by the following combination of characters: femoral villopore absent; labial palp segment 3 simple and truncate (Figs. 36, 37); gills simple or with single recurved dorsal flap on some or all gills (Figs. 38, 39, 48, 52); labrum with relatively wide and deep median notch anteriorly (Fig. 51); and mandibular incisors rarely separated to base, if so then only right mandible (Fig. 50).

NOTES: Of the 25 Nearctic species of *Procloeon*, *P. hobbsi* (Berner), *P. rubropictum* (McDunnough), and *P. viridoculare* (Berner) are known from Florida. These three species were previously placed in *Cloeon* (*P. rubropictum*) and *Centroptilum* (*P. hobbsi* and *P. viridoculare*) and were moved to *Procloeon* by McCafferty and Waltz (1990). The three species can be separated using the following key to species.

Procloeon rubropictum is only known from the pandhandle, while *P. hobbsi* and *P. viridoculare* have been collected throughout the state. Nymphs are typically found among vegetation in slow flowing waters. Species of *Procloeon* are clinger/swimmers and are collector-gatherers of diatoms, other algae, and organic debris. Adults emerge year round in Florida. For additional information see Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *PROCLOEON* [modified from Berner and Pescador (1988)]

1. Hind wingpads absent; first abdominal gill with recurved dorsal flap (Fig. 84); with lateral spines present on abdominal segments IV-X . . . . *P. rubropictum* (McDunnough)

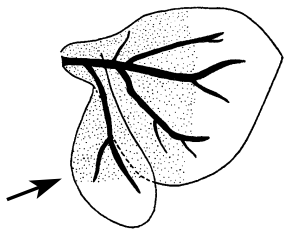


Fig. 84 [from Berner (1950)]

Hind wingpads present; first abdominal gill with or without recurved dorsal flap; lateral spines on abdominal segments variable 2

2(1) First abdominal gill with recurved dorsal flap (Fig. 85); with lateral spines present on abdominal segments VIII-X; with shortened tarsal claws, 1/2 length of tarsi or less (Fig. 86) . . . . . *P. hobbsi* (Berner)

Fig. 85 [from Berner (1950)]

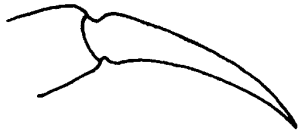


Fig. 86 [from Berner (1950)]

First abdominal gill simple, without recurved dorsal flap (Fig. 87); with lateral spines present on abdominal segments IV-X; with long slender tarsal claws, subequal in length to tarsi (Fig. 88) . . . . . *P. viridoculare* (Berner)

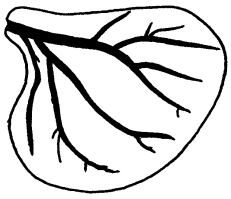


Fig. 87 [from Berner (1940)]

Fig. 88 [from Berner (1950)]

Genus ***Pseudocentroptiloides*** Jacob

DIAGNOSIS: These small mayflies are distinguished from other baetid genera by the following combination of characters: femoral villopore absent; labrum with a deep triangular notch anteriorly (Fig. 44); labial palp segment 3 widely expanded (Fig. 45); labium with glossae broad, rounded, and shorter than paraglossae (Fig. 45); tarsal claws subequal in length to tarsi; and gills simple.

NOTES: There are 2 Nearctic species of *Pseudocentroptiloides*. The species *P. usa* Waltz and McCafferty is now recorded from Florida. This genus was previously known only from Europe and Asia. Waltz and McCafferty (1989) noted its occurrence in North America and established the new species *P. usa.* The new Florida record was collected from Attapulgus Creek in Gadsden County.

Very little is known of the ecology and life history of *Pseudocentroptiloides*, but it is likely to be similar to that of its sister group *Centroptilum*. *Pseudocentroptiloides* nymphs are thought to be clinger/swimmers and collector-gatherers.

ADDITIONAL REFERENCES: Edmunds and Waltz (1996); Waltz and McCafferty (1989).

Genus ***Pseudocloeon*** Klapálek

DIAGNOSIS: These small mayflies are distinguished from other baetid genera by the following combination of characters: femoral villopore present; maxillary palpi with subapical excavation (Fig. 56); antennal scape with digitate lobe (Fig. 57); and labial palp segment 2 broadly expanded medially (Fig. 58).

NOTES: Of the 6 Nearctic species of *Pseudocloeon*, *P. ephippiatum* (Traver), *P. frondale* (McDunnough), and *P. propinquum* (Walsh) are known from Florida. These species were previously moved from *Baetis* to the new genus *Labiobaetis* (McCafferty and Waltz, 1995) and were recently placed in the genus *Pseudocloeon* (Lugo-Ortiz et al., 1999). They can be distinguished using the following key to species.

All three *Pseudocloeon* species are found throughout the state. *Pseudocloeon* are found in lotic habitats ranging from small streams to large rivers. They can be collected in nearly all microhabitats including leaf packs, woody snags, root mats, and in vegetation. *Pseudocloeon* are clinger/swimmers and collector-gatherers. Adults emerge throughout the year in Florida. Much additional information on the ecology and life history of the three species of *Pseudocloeon* is presented in Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *PSEUDOCLOEON* [modified from Berner and Pescador (1988)]

1. Labrum with submarginal setae slender and unbranched, few in number, and often paired (Fig. 89)*;* abdomen of male nymphs with distinct color pattern (Fig. 90); female nymphs with all segments of abdomen reddish-brown . . . . . *P. propinquum* (Walsh)

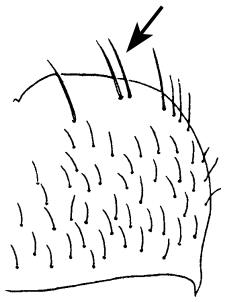


Fig. 89 [from Morihara & McCafferty (1979)]

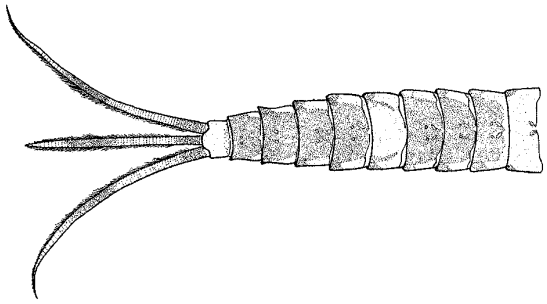


Fig. 90 [from Berner (1940)]

Labrum with submarginal setae either branched or spatulate; male nymphs with abdominal color pattern different from above 2

2(1) Labrum with row of branched submarginal setae (Fig. 91); gill VII reddish brown (Fig. 92); abdomen of male and female nymphs with distinct color pattern (Fig. 93) . . . . . *P. ephippiatum* (Traver)

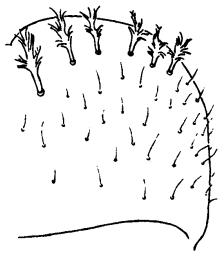


Fig. 91 [from Morihara & McCafferty (1979)]

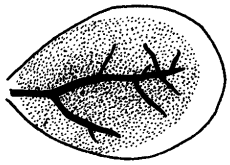


Fig. 92 [from Berner & Pescador (1988)]

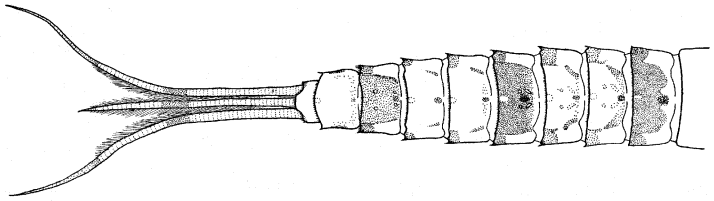


Fig. 93 [from Berner & Pescador (1988)]

Labrum with row of spatulate (club-shaped) submarginal setae (Fig. 94); gill VII not reddish brown; abdomen of male and female nymphs uniformly brown . . . . . *P. frondale* (McDunnough)

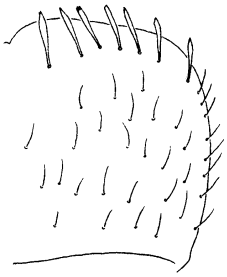


Fig. 94 [from Morihara & McCafferty (1979)]

FAMILY BAETISCIDAE

A recent description of a new genus and species of Baetiscidae from Baltic amber (Staniczek and Bechly, 2002) has changed the taxonomic composition and notably the geographic distribution of the family. No longer monogeneric and geographically confined to the Nearctic, the now Palearctic family currently consists of two genera, namely, the monotypic fossil genus *Balticobaetisca* Staniczek and the genus *Baetisca* Walsh. *Balticobaetisca veltini* Stanizcek is the first fossil record of Baetiscidae and the first Old World record for this family. Consequently, the recent discovery of the species, considered a stemgroup of Baetiscidae from the Old World could be interpreted as evidence for an origin of this family outside of the Nearctic (Staniczek and Bechly, 2002). The unique nymph of the family has the thorax with well-developed mesonotal shield, sometimes called the carapace, which extends to abdominal segment VI enclosing the gills underneath (Fig. 2).

Genus ***Baetisca*** Walsh

DIAGNOSIS: The nymphs are easily distinguished from other mayflies by the well-developed mesonotal shield which extends to abdominal segment VI (Fig. 2); and the abdominal gills are enclosed underneath the thoracic shield (Fig. 2).

NOTES: Since the revision of the Nearctic genus *Baetisca* by Pescador and Berner (1981) the species composition of the taxon remains the same with 12 species. The status of one species, *B. callosa*, however, is dubious. The geographic range of some of the species has increased, and become more widespread than previously known (Sarver and Kondratieff, 1997; Randolph and McCafferty, 1998; Webb and McCafferty, 2004).

The nymphs usually occur in small to moderate-sized streams and rivers. Depending on the species and stage of development, the nymphs live in a variety of habitats ranging from sand/silt, pebble/rocky riffles, snags, leaf packs, and submerged roots along the edge of streams. The mesonotal shield helps to protect the gills from both physical damage and from becoming clogged with particulate matter especially in those species that partially bury themselves in silt and sand. Prior to emergence, the nymphs crawl from the water to emerge as subimagos, and the mesonotal shield likely assists in conserving moisture within the gill chamber during this period, which usually takes 5-7 minutes, and may indirectly facilitate successful emergence by preventing dessication (Pescador and Peters, 1974; Notestine, 1993). Early instar nymphs are generally scrapers and as they mature become collector-gatherers. Analysis of gut contents of *B. rogersi* nymphs indicated mixtures of detritus, diatoms, mineral particles, and a few fragments of filamentous algae (Pescador and Peters, 1974). *Baetisca* typically has a univoltine life cycle. The adults generally emerge in the morning and rarely come to light.

Since the update of the mayfly fauna of Florida by Berner and Pescador (1988) there has been no change in the *Baetisca* fauna of the state, with six species (*B. becki* Schneider and Berner, *B. escambiensis* Berner, *B. gibbera* Berner, *B. laurentina* McDunnough, *B. obesa* (Say) and *B. rogersi* Berner) represented. The occurrence of *B. laurentina* in the state, however, is questionable. No other specimen of the species has been collected since Pescador and Berner (1981) reported a nymph from the Blackwater River, in spite of much collecting in the area over the years. We suspect that the vial containing the specimen may have the locality mislabeled.

Another interesting phenomenon that we have observed in our sampling is the apparent decline of some species populations. Increasingly fewer specimens have been collected, sometimes none from localities where the species were previously reported or known to commonly occur, notably *B. escambiensis* and *B. gibbera*. The former used to be a common and abundant species in the Blackwater-Escambia-Shoal-Yellow River drainages, but has become more scarce and difficult to collect (Don Ray, pers. comm.). Attempts were made to visit and collect *B. gibbera* from its type locality, Black Creek, Clay County, with no success. The last available record of the species was from the Escambia River, Escambia County in 1976. Furthermore, *Baetisca rogersi*, is rarely collected at Rocky Comfort Creek, where it was very common in the 1970's and 1980's when a comprehensive study of its life history and autecology was done (Pescador and Peters, 1974).

All six species of *Baetisca* that have been reported in the state are geographically confined to the streams and rivers of the panhandle. For information on details of the ecology, life history, seasonal distribution, and geographic range of the various species in the state, refer to the revised edition of the Mayflies of Florida (Berner and Pescador, 1988).

ADDITIONAL REFERENCES: Pescador and Berner (1981); Berner and Pescador (1988), Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *BAETISCA*
[modified from Pescador and Berner (1981)]

1. Genal spines present (Fig. 95); head and abdominal segments VI-IX with long, thick, lateral hairs; claws more than two-thirds the length of tibiae . . . *B. escambiensis* Berner

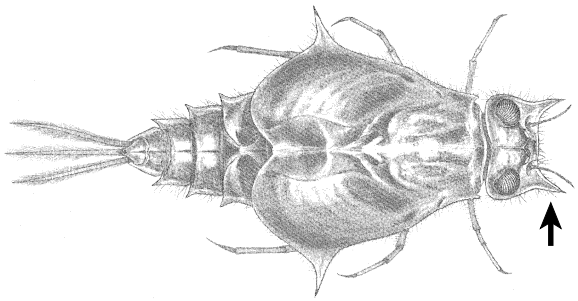


Fig. 95 [from Berner (1955)]

Genal spines absent; head and abdominal segments glabrous or with few minute hairs; tarsal claws less than two-thirds length of tibiae 2

2(1) Mesonotal shield not expanded laterally (Fig. 96); dorsal projection of mesonotal shield well-developed (Fig. 97) 3

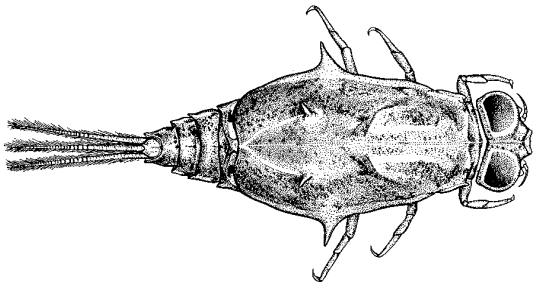


Fig. 96 [from Pescador & Berner (1981)]

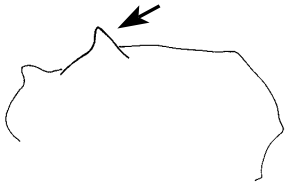


Fig. 97 [from Pescador & Berner (1981)]

Mesonotal shield broadly expanded laterally (Fig. 98); dorsal projection of mesonotal shield absent to slightly developed (Figs. 99, 100) 4

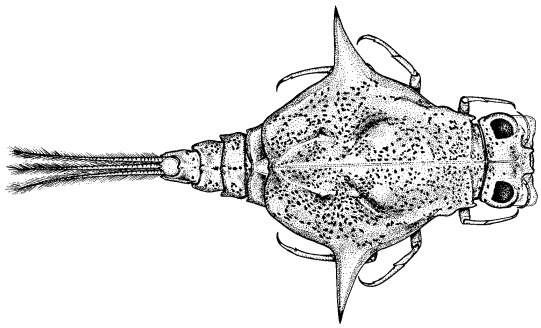


Fig. 98 [from Pescador & Berner (1981)]

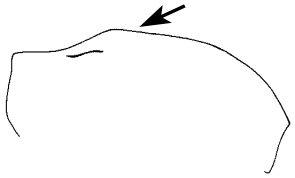


Fig. 99 [from Pescador & berner (1981)]

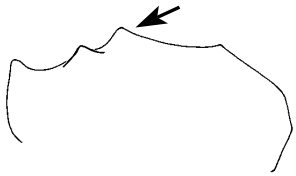


Fig. 100 [from Pescador & Berner (1981)]

3(2) Frontal projections of head well-developed, distinctly extended beyond anterior margin of head (Fig. 101); ventral margins of mesonotal shield without dark brown outline; abdominal sternites II-VI with prominent dark brown spots near lateral spines . . . . . *B. obesa* (Say)

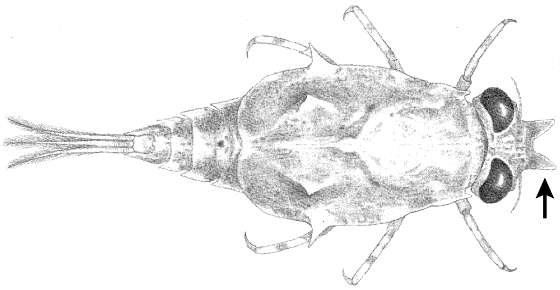


Fig. 101 [from Berner (1955)]

Frontal projections of head only slightly developed (Fig. 96); ventral margin of mesonotal shield with dark brown outline; abdominal sternites II-VI lack prominent dark brown sublateral spots but freckled with brown . . . . . *B. laurentina* McDunnough

4(2) Lateral spines of mesonotal shield short and blunt, no longer than maximum width at base (Fig. 102); lateral margins of mesonotal shield smooth . . . . . *B. gibbera* Berner

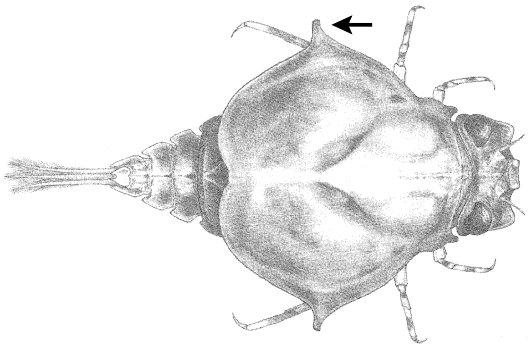


Fig. 102 [from Berner (1955)]

Lateral spines of mesonotal shield sharply pointed, distinctly longer than maximum width at base (Fig. 98); lateral margins of mesonotal shield crenulate 5

5(4) Lateral spines of mesonotal shield long and slender, length more than twice maximum width at base (Fig. 103); thoracic and abdominal sternal markings as in Fig. 104 . . . . . *B. becki* Schneider and Berner

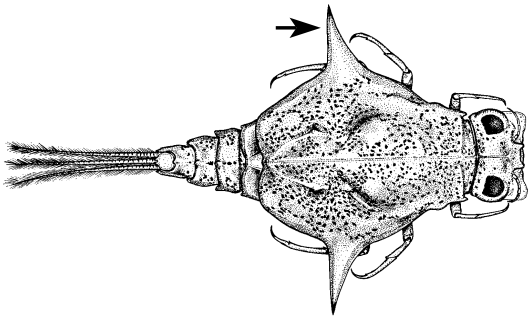


Fig. 103 [from Pescador & Berner (1981)]

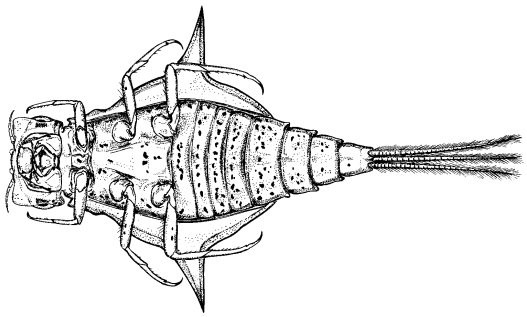


Fig. 104 [from Pescador & Berner (1981)]

Lateral spines relatively broad, length subequal to less than twice maximum width at base (Fig. 105); abdominal sternites VII-IX each with a pair of brownish black spots (Fig. 106) . . . . . *B. rogersi* Berner

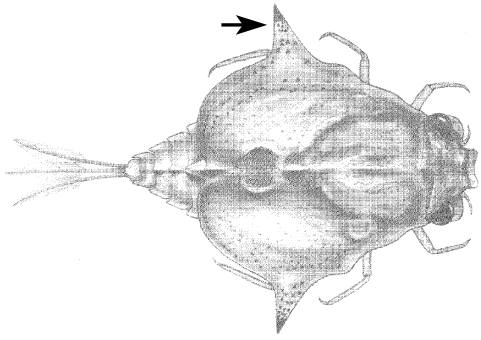


Fig. 105 [from Berner (1955)]

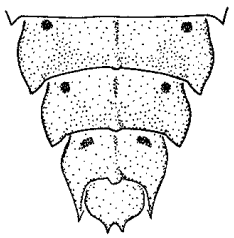


Fig. 106 [from Pescador & Berner (1981)]

FAMILY BEHNINGIIDAE

This small Holarctic family consists of three interesting, rare, and little known genera of mayflies. The only Nearctic representative of the family is the genus *Dolania* Edmunds and Traver. The Behningiidae can be distinguished from other mayfly families by the following combination of characters: head and prothorax with dorsal pads of long spines on each side, mandibular tusks absent, and the abdominal gills ventral (Fig. 5).The genus occurs from the northern United States south to Florida.

The sand-dwelling nymphs occur mainly in clean waters of moderate-sized to large rivers with loose shifting sand substrates. The nymphs actively burrow into the sand bottom a few inches deep and are voracious feeders of chironomid larvae. *Dolania* has a two year life cycle.

Genus ***Dolania*** Edmunds and Traver

DIAGNOSIS: The genus contains only one species, *Dolania americana* Edmunds and Traver. It is distinctive and easily recognized by the dorsal pads of long spines on the head and prothorax (Fig. 5); lack of mandibular tusks (Fig. 5); and ventral abdominal gills (Fig. 5).

NOTES: In Florida, the species occurs in a few sand-bottomed streams and rivers in the panhandle. The species is probably one of the most ecologically and biologically well-studied mayflies in North America. Berner and Pescador (1988) summarized all studies prior to 1988 which were mostly conducted and published by the late Dr. W.L. Peters and J. G. Peters. The non-molting female subimagos are polymorphic, with body color grading from pale to almost black. The males molt to imagos and show little color variation. Adult emergence is highly synchronous and usually occurs over a three week period from the end of April to the middle of May in Florida and early June in South Carolina. Post 1988 studies of the ecology and biology of the species include those of Fink et al. (1991) and Peters and Peters (1995). Fink et al. (1991) showed that oogenesis in *Dolania* is unique among mayflies, with one oocyte developing per ovariole, fecundity is 20 times less than in mayflies from other familes, and mature egg dry weight is approximately 32 times the values of non-Behningiidae mayflies. The reproductive strategy of *Dolania* and congener *Behningia* (a European genus), unlike that of other mayflies, is to produce large eggs, and thereby large predatory early-instar nymphs capable of exploiting a large range of prey. Basha and Pescador (1984) found differences in protein composition of the two female color forms and a more recent study by Ruffieux (1997) showed that the dark forms had a significantly higher level of lipids in the thorax, indicating more energy for flight muscles. Peters and Peters (1995) showed that the dark forms were capable of dispersal and lived much longer (up to two hours) than did the light forms. Only the dark forms were found flying after sunrise, away from the main river, and over bridges. Like other strictly sand-dwelling mayflies (e.g. *Pseudiron centralis*, *Homoeoneuria dolani*), *Dolania americana* is being threatened by sedimentation that is impacting some of the major sand-bottomed rivers in the panhandle (D. Ray, pers. comm.). Collections in recent years have indicated an increasing scarcity of this species in samples.

ADDITIONAL REFERENCES: Edmunds et al. (1976); Berner and Pescador (1988).

FAMILY CAENIDAE

The family Caenidae includes some of the smallest species of mayflies and is widely distributed throughout the world except Antarctica, New Zealand, and some oceanic islands. Of the 13 currently recognized genera of the family worldwide, four (*Amercaenis*, *Brachycercus*, *Caenis*, and *Cercobrachys*) occur in North America, with all but *Amercaenis* represented in Florida. The nymphs of the family can be distinguished by the following combination of characters: thoracic mesonotum without anterolateral lobes, operculate gills not fused medially (Fig. 17); margins of abdominal gills 3-6 fringed; and hind wingpads absent.

The nymphs live in a wide variety of habitats, including streams, rivers, lakes, ponds and also ditches and canals. When light trapping, caenid adults are usually the first mayflies to come to light. In spite of their small body-size, adult swarms are comparable in magnitude to the mating swarms of the large burrowing mayflies such as *Hexagenia, Ephoron,* and *Tortopus*.

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDAE CAENIDAE
[modified from Berner and Pescador (1988)]

1. Head with ocellar tubercles (Figs. 107, 108); maxillary and labial palpi two-segmented 2

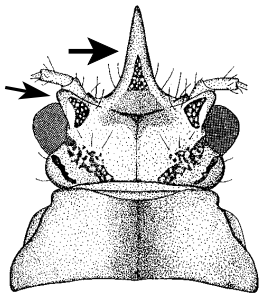


Fig. 107 [from Soldán (1986)]

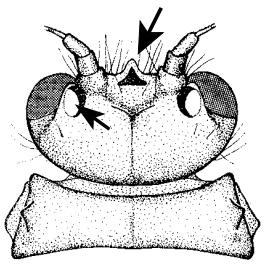


Fig. 108 (from Soldán (1986)]

Head without ocellar tubercles (Fig. 109); maxillary and labial palpi three-segmented . . . . . *Caenis* (p. 46)

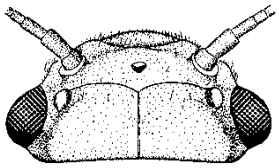


Fig. 109 [from Edmunds, Jensen, & Berner (1976)]

2(1) Abdominal segments VII-IX without posterolateral spines (Fig. 110); anterior margin of mesosternum with long setae; abdominal segment VI with spines strongly curved medially (Fig. 110); legs with setae as long as tibiae (Fig. 111) . . . . . *Cercobrachys* (p. 51); *C. etowah* Soldán

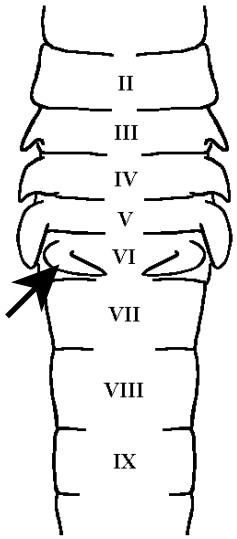


Fig. 110 [modified from Soldán (1986)]

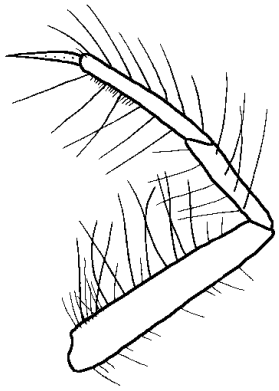


Fig. 111 [from Soldán (1986)]

Abdominal segments VII-IX with posterolateral spines (Fig. 112); anterior margin of mesosternum without setae; abdominal segment VI with spines not strongly curved medially (Fig. 112); legs with setae distinctly shorter than tibiae (Fig. 113) . . . . . *Brachycercus* (p. 43)

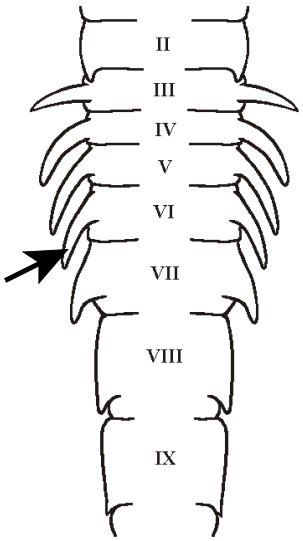


Fig. 112 [modified from Soldán (1986)]

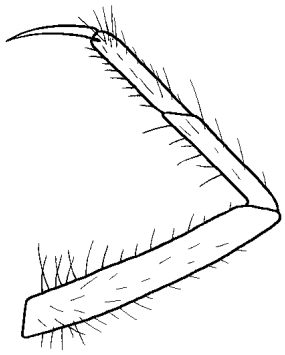


Fig. 113 [from Soldán (1986)]

Genus ***Brachycercus*** Curtis

DIAGNOSIS: The nymphs of *Brachycercus* can be distinguished from other caenid genera by the following combination of characters: head with ocellar tubercles (Figs. 107, 114, 115, 117); maxillary and labial palpi with two segments; abdominal segments VII-IX with posterolateral spines (Fig. 112); anterior margin of mesothoracic sternum without setae; spines of abdominal segment VI not strongly curved medially (Fig. 112); and legs with setae distinctly shorter than tibiae (Fig. 113).

NOTES: The genus is Holarctic and Neotropical, and is widely distributed across North America. Of the 10 North American species of *Brachycercus*, four including one which we presume new to science (*B. berneri* Soldán*, B. maculatus* Berner, *B. nasutus* Soldán, *Brachycercus* n. sp.) are represented in Florida. The key to species will allow identification of the *Brachycercus* fauna of the state. Berner and Pescador (1988) summarized the ecology and biology of the *Brachycercus* species of Florida. The nymph that we consider new to science was identified by L. Sun at Purdue University as part of a revision of the subfamily Brachycercinae and will be described elsewhere. The nymph of the new species was collected in Waddells Mill Creek., a tributary of the Chipola River in Jackson County.

Brachycercus nymphs live in small to moderate-sized streams and rivers, and are mostly collected in quiet reaches in sand mixed with silt and thin layers of organic debris. The nymphs are mostly sprawlers and feed as collector-gatherers. Knowledge of emergence of the various species in the state is limited. Adults of *B. berneri* were collected in February and June, which suggest a late winter to early summer emergence period. A similar emergence pattern has been observed in *B. maculatus,* with adult collection records in the months of February, April, and July. In the Northeast, Burian (1997) observed the emergence of this species in early July. We have yet to collect adults of *B. nasutus* and *Brachycercus* n. sp. Geographically, *B. maculatus* is the most widespread species in the state, occurring from the panhandle south to Lee County. The rest of the species are geographically restricted to the panhandle.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *BRACHYCERCUS*
[modified from Berner and Pescador (1988)]

1. Frontal ocellar tubercle long, 1 1/2 times longer than lateral ocelli and twice as long as eye width (Fig. 114) . . . . . *B. nasutus* Soldán

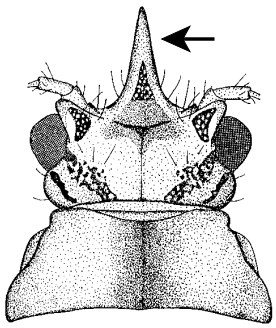


Fig. 114 [from Soldán (1986)]

Frontal ocellar tubercle short, almost as long as lateral ocelli and at most 1 1/2 times as long as eye width (Fig. 115) 2

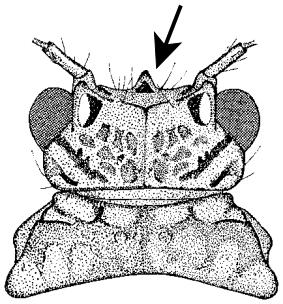


Fig. 115 [from Soldán (1986)]

2(1) Gill cover apically angulate (Fig. 116); pronotum with distinct anterolateral process (Fig. 117) . . . . . *B. berneri* Soldán

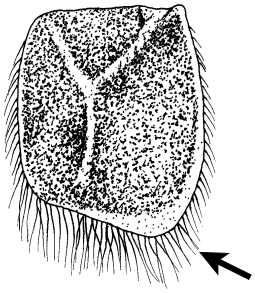


Fig. 116 [from Berner & Pescador (1988)]

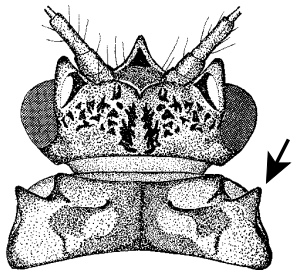


Fig. 117 [from Soldán (1986)]

Gill cover apically rounded (Fig. 118); pronotum without anterolateral process 3

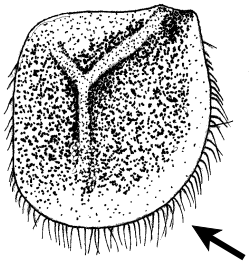


Fig. 118 [from Berner & Pescador (1988)]

3(2) Trailing edge of femora with distinct dark subapical spot . . . . . *Brachycercus* n. sp.

Trailing edge of femora without dark subapical spot . . . . . *B. maculatus* Berner

Genus ***Caenis*** Stephens

DIAGNOSIS: The nymphs of *Caenis* can be distinguished from other genera of the family by the following combination of characters: head without ocellar tubercles (Fig. 109); maxillary and labial palpi three-segmented; and outer margin of operculate gills fringed with long setae (Fig.17).

NOTES: A major revision of *Caenis* in North America by Provonsha (1990) has greatly changed the species composition and definition of the genus, and our understanding of the *Caenis* fauna of Florida. Of the 12 Nearctic species of *Caenis*, 5 species including *C. amica* Hagen, *C. diminuta* Walker, *C. hilaris* (Say), *C. macafferti* Provonsha, *C. punctata* McDunnough, and one which could possibly be new to science (Provonsha, pers. comm.), are represented in Florida. Berner and Pescador (1988) had two species (*C. diminuta* and *C. hilaris*) previously listed for the state. Provonsha (1990), after examining specimens from Florida concluded that the species *C. amica, C. macafferti,* and *C. punctata* were present in Florida along with *C. diminuta*. Specimens from a tributary of the Ochlockonee River (Liberty County), the Oklawaha River (Marion County), and the Blackwater River (Okaloosa County) were determined to be *C. amica.* Material from the Apalachicola and Chipola Rivers (Liberty and Calhoun Counties) was found to be *C. punctata.* Finally, specimens from the Chipola River (Calhoun County), Sweetwater Creek (Liberty County), and Nocatee Peace River (Desoto County) were determined to represent the new species *C. macafferti.* Provonsha did not list *C. hilaris* as occurring in Florida, but nymphs we have collected from Willacoochee and Telogia Creeks in Gadsden County fit the current definition of the species. The tentatively identified *Caenis* n. sp. are known only from adults and were collected from the western panhandle, at East Turkey Hen and Turkey Creeks on Eglin Air Force Base, Okaloosa County.

Due to the small body-size of *Caenis,* the group is one of the most difficult mayflies to identify to species. This often requires a compound microscope and the slide mounting of some structures in order to have an accurate view of certain characters. The key to species should enable accurate identification of Florida species of *Caenis.* The nymphs of *C. amica, C. punctata,* and *C. diminuta* are difficult to separate because of similarity in morphology and coloration. An examination of hind claw denticles and the fimbriate spurs of the tarsi is necessary to distinguish between the species and this must be done with a compound microscope. A slide mount of the hind leg of a specimen made using glycerin or CMC10 will allow viewing of the claw denticles and tarsal spurs at 200-400X magnification.

The habitats of *Caenis* species are generally similar. The nymphs usually live in slow moving waters although some occur in moderate to fast-moving streams. In streams, the nymphs can be found near the edge, dwelling close to the bases of vegetation in the silt and sand. They are also found in lakes and ponds, usually on the bottom in the zone of rooted vegetation or among accumulated leaf debris. The nymphs are generally clinger/sprawlers, and opportunistic feeders as collector-gatherers and scrapers. We have collected the nymphs of *C. hilaris* in Willacoochee and Telogia Creeks where the substrates consisted of mixtures of sand and silt with plenty of organic debris and scattered wood snags. The nymphs of *Caenis* n. sp. are unknown, but the streams where the adults were collected by light trap (East Turkey Hen and Turkey Creeks) are fairly pristine systems with wood snags, leaf packs, and other organic debris. Emergence of *Caenis* adults generally occurs throughout the warm months. In the south, adults of *C. amica* and *C. diminuta* emerged from March to November, *C. punctata* from May to August,

and *C. hilaris* early June to early November (Berner, 1977; Berner and Pescador, 1988; Provonsha, 1990). We collected the adults of *Caenis* n. sp. in April.

As a result of the revision of *Caenis* by Provonsha (1990), *C. diminuta* and *C. macafferti* are the most widespread species in Florida, occurring both in the panhandle and peninsula. *Caenis amica* and *C. punctata* have also been collected in the peninsula and panhandle, but less frequently than *C. diminuta* and *C. macafferti*. Records of *C. hilaris* and *Caenis* n. sp. are from the panhandle.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *CAENIS*
[modified from Provonsha (1990)]

1. Posterior margin of abdominal sternum IX notched (Figs. 119, 120); dorsal surface of fore femora with transverse row of of spatulate setae in apical 1/3 (Figs. 121, 122); abdominal terga IX-X without triads of black dots; abdominal sterna without black dots 2

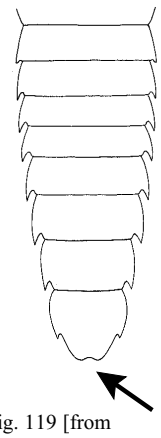


Fig. 119 [from Provonsha (1990)]

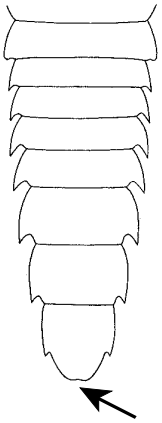


Fig. 120 [from Provonsha (1990)]

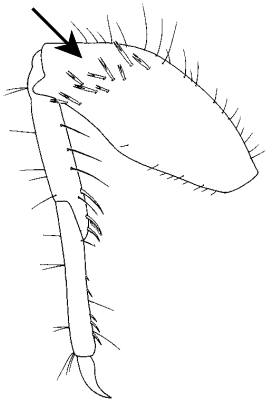


Fig. 121 [from Provonsha (1990)]

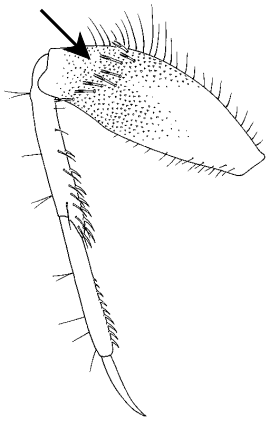


Fig. 122 [from Provonsha (1990)]

Posterior margin of abdominal sternum IX rounded (Fig. 123); dorsal surface of fore femora with scattered setae only (Fig. 124); abdominal terga IX-X usually with triads of black dots; abdominal sterna frequently with paired submedian dots 3

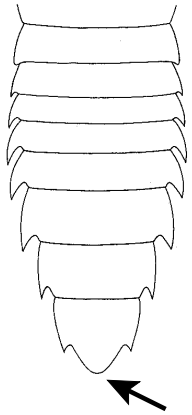


Fig. 123 [from Provonsha (1990)]

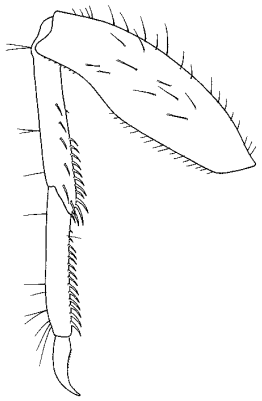


Fig. 124 [from Provonsha (1990)]

2(1) Abdominal terga VII-IX uniformly brown; posteromedian projection of abdominal tergum II (Fig. 125a), narrowly triangular in dorsal view, at least twice as long as wide (Fig. 125b) . . . . . *C. macafferti* Provonsha

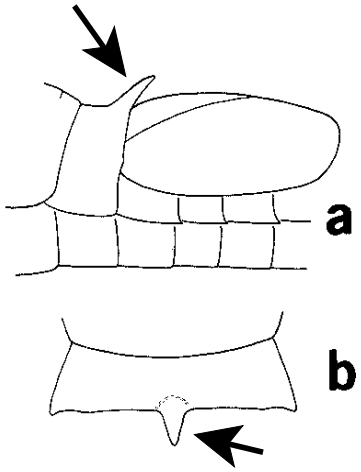


Fig. 125 [from Provonsha (1990)]

Abdominal terga VII-IX pale medially with brown longitudinal stripes or blotches laterally; posteromedian projection of abdominal tergum II (Fig. 126a), broadly triangular in dorsal view, approximately as long as wide (Fig. 126b) . . . . . *C. hilaris* (Say)

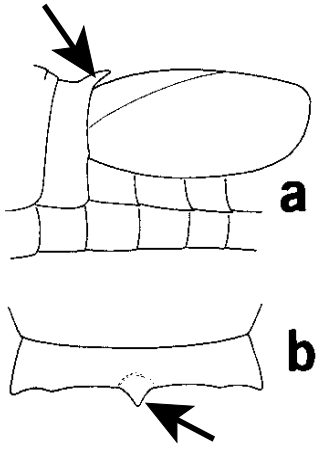


Fig. 126 [from Provonsha (1990)]

3(1) Hind tarsal claws with 9-11 denticles of nearly uniform size to progressively larger apically (Fig. 127) . . . . . *C. amica* Hagen

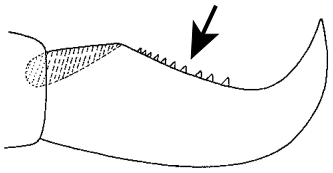


Fig. 127 [from Provonsha (1990)]

Hind tarsal claws with 16-20 denticles, basal 4-6 larger than the following apical denticles (Fig. 128) 4

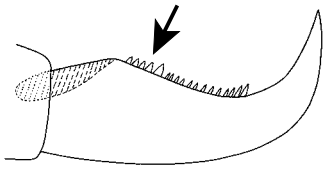


Fig. 128 [from Provonsha (1990)]

4(3) Hind tarsi with 9-11 fimbriate spurs on ventral surface (Fig. 129); scape and pedicel of antennae usually brown . . . . . *C. diminuta* Walker

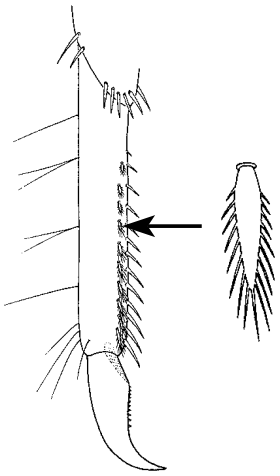


Fig. 129 [from Provonsha (1990)]

Hind tarsi with 6-8 fimbriate spurs on ventral surface; scape and pedicel of antennae pale . . . . . *C. punctata* McDunnough

Genus ***Cercobrachys*** Soldán

DIAGNOSIS: The nymphs of *Cercobrachys* can be distinguished from other Nearctic genera of Caenidae by the following combination of characters: head with three ocellar tubercles (Fig. 108); abdominal segments VII-IX lack posterolateral spines (Fig. 110); anterior margin of thoracic mesosternum with long setae; abdominal segment VI with spines strongly curved medially (Fig. 110); and legs with setae as long as tibiae (Fig. 111).

NOTES: This genus generally has a worldwide distribution. In the Nearctic, three species are recognized, one of which, *C. etowah* Soldán is represented in Florida. Since this is the only species of *Cercobrachys* that is known in Florida or the entire Southeast for that matter, it is easily recognized by the above generic description.

Knowledge of the ecology and biology of the species is limited. Berner and Pescador (1988) provided a brief discription of what we presently know of the habitat of a nymph that was collected from Ichawaynotchaway Creek, a fast-flowing tributary of the Flint River, in Baker County, Georgia. Nymphs have been collected from deadhead logs in deep water, in the Chipola and Yellow Rivers, by FDEP biologists. Specimens have also been collected from the Peace River in deep water with sand and silt substrate. Adults have been collected in May.

ADDITIONAL REFERENCES: Soldán (1986); Berner and Pescador (1988); Edmunds and Waltz (1996).

FAMILY EPHEMERELLIDAE

The Holarctic and Oriental Ephemerellidae represents the Laurasian element of the Superfamily Ephemerelloidea and North America has been a particularly rich center of evolution of the family (McCafferty and Wang, 2000). Of the 10 ephemerellid genera occurring in North America, *Attenella*, *Dannella*, *Ephemerella*, *Eurylophella*, and *Serratella* are represented in Florida.

The nymphs of the family Ephemerellidae are distinguished from other families of mayflies by the following combination of characters: gills absent on abdominal segment II, rudimentary or absent on abdominal segment I (Fig. 18); abdominal gills on segments III-VII or IV-VII consisting of dorsal and ventral lamellae with numerous lobes (Fig. 18); and with paired submedian tubercles present on abdominal terga of most species (Fig. 18).

Ephemerellid nymphs are typically found in flowing waters ranging from small streams to large rivers. Nymphal microhabitats generally include crevices of rocks and snags, in vegetation, and among leaf packs trapped or wedged between rocks and wood snags. Nymphs are mostly clingers and are commonly observed tightly attached to the substrate. When disturbed or exposed out of the water, the nymphs remain quiescent or immobile for sometime, then start to move when the substrate becomes partially dry, and either crawl slowly or flick the caudal filaments in an up and down fashion. Most species are omnivorous and have a univoltine life cycle. Emergence of most species occurs in late winter, spring, and early summer.

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDA EPHEMERELLIDAE
[modified from Berner and Pescador (1988)]

1. Lamellate gills present on abdominal terga III-VII (Fig. 130) 2

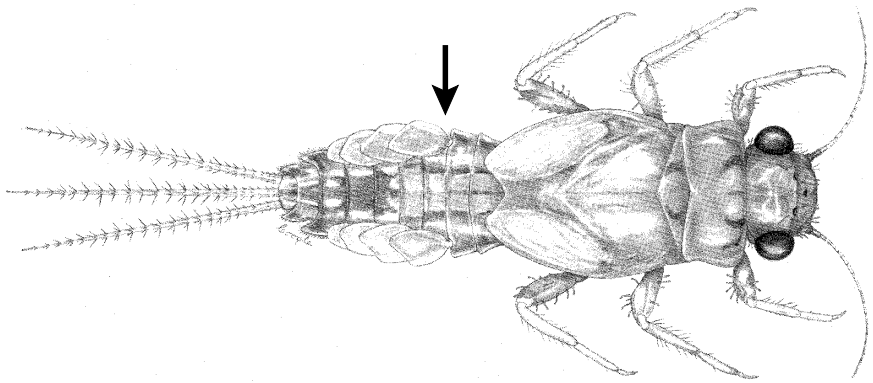


Fig. 130 [from Berner (1950)]

Lamellate gills present on abdominal segments IV-VII (Fig. 131) 3

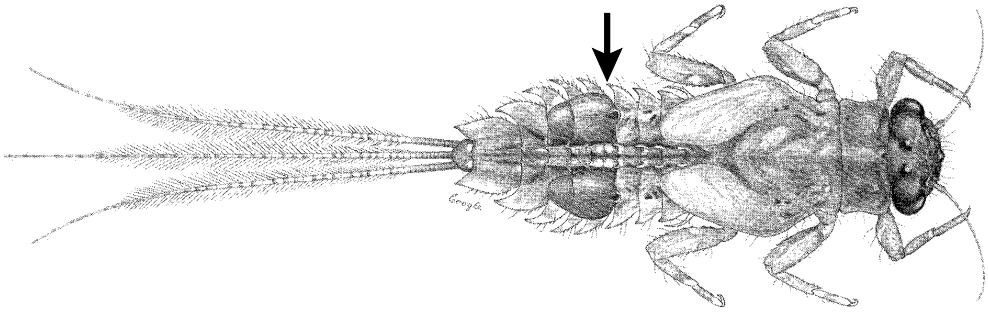


Fig. 131 [from Berner (1950)]

2(1) Caudal filaments with whorls of spines at apex of each segment and with only sparse long fine intersegmental setae or none (Fig. 132); maxillary palpi absent (Fig. 133) . . . . . *Serratella* (p. 63); *S. deficiens* (Morgan)

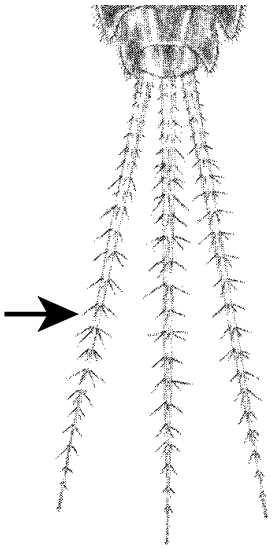


Fig. 132 [from Berner (1950)]

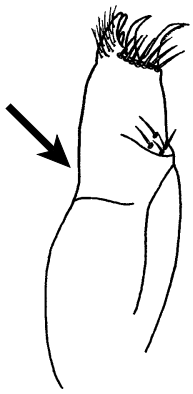


Fig. 133 [from Berner (1950)]

Caudal filaments rarely with whorls of spines at apex of each segment but with many long fine intersegmental setae (Fig. 134); maxillary palpi well developed (Fig. 135) . . . . . *Ephemerella* (p. 58)

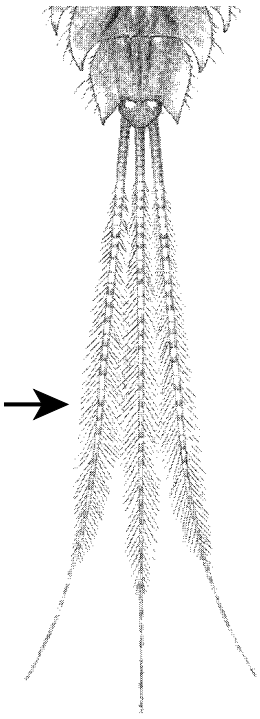


Fig. 134 [from Berner (1950)]

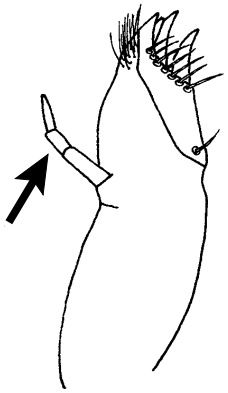


Fig. 135 [from Berner (1950)]

3(1) Tarsal claws without denticles (Fig. 136); head, body, and appendages covered with long setae (Fig. 137) . . . . . *Dannella* (p. 57), *D. simplex* (McDunnough)

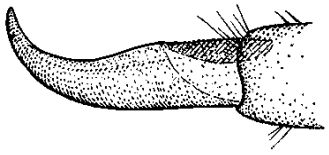


Fig. 136 [modified from Allen & Edmunds (1963)]

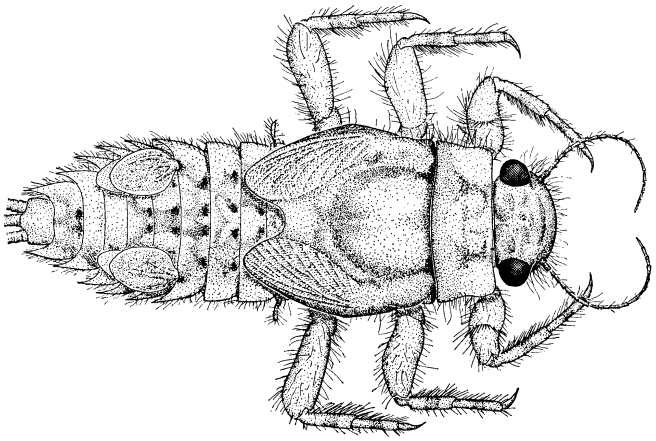


Fig. 137 [from Allen & Edmunds (1962)]

Tarsal claws with denticles (Fig. 138); head, body, and appendages not covered with long setae 4

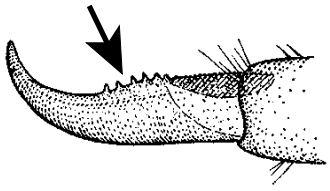


Fig. 138 [from Allen & Edmunds (1963)]

4(3) Abdominal segment IX distinctly longer than segment VIII (Fig. 131); abdominal gill IV semioperculate, covering succeeding gills (Fig. 131) . . . . . *Eurylophella* (p. 61), *E. doris* (McDunnough)

Abdominal segments VII-IX subequal in length (Fig. 139); abdominal gill IV not semioperculate, all gills visible and overlapping (Fig. 139) . . . . . *Attenella* (p. 57), *A. attenuata* (McDunnough)

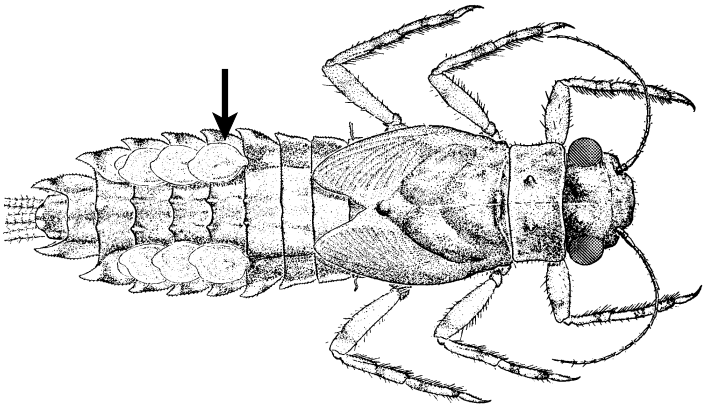


Fig. 139 [from Allen & Edmunds (1961)]

Genus ***Attenella*** Edmunds

DIAGNOSIS: The nymphs of the genus *Attenella* can be distinguished from other ephemerellid genera by the following combination of characters: lamellate gills present on abdominal segments IV-VII (Fig. 139); tarsal claws with denticles (Fig. 138); abdominal segments VII-IX subequal in length; and all gills visible and overlapping (Fig. 139). The nymphs appear similar to the more common genus *Eurylophella* but are easily distinguished by the subequal abdominal segments VII-IX and by having all abdominal gills visible (Fig. 139).

NOTES: *Attenella* is a Nearctic genus with four species: *A. attenuata* (McDunnough), *A. delantala* (Mayo), *A. margarita* (Needham), and *A. soquele* (Day). Only the species *A. attenuata* is represented in the Southeast including Florida, with the others occurring mostly in western North America, from British Columbia and Alberta south to California and New Mexico. Present knowledge of the geographic distribution, ecology, seasonal distribution, and behavior of the species is provided by Berner and Pescador (1988). The species is rare and geographically limited to the panhandle. Its occurrence in peninsular Florida (Hillsborough County) as reported by Cowell and Carew (1976) (see Berner and Pescador, 1988) remains dubious as the identification of the specimens has never been verified. The emergence of adults in the state has only been reported in May. For more details on this species consult Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Dannella*** Edmunds

DIAGNOSIS: The nymphs of *Dannella* can be distinguished from other ephemerellid genera by the following combination of characters: lamellate gills present on abdominal segments IV-VII (Fig. 137); tarsal claws without denticles (Fig. 136); and head, body, and appendages covered with long setae (Fig. 137).

NOTES: The taxonomic status of the genus *Dannella* has been recently reviewed by McCafferty (2000). A study of the phylogenetics and classification of the *Timpanoga* complex by McCafferty and Wang (1994) recognized *Dannella* as a subgenus of the genus *Timpanoga.* However, the recent review (McCafferty, 2000) elevated *Dannella* to its current generic status.

Dannella is a Nearctic genus with four species, one of which, *D. simplex* (McDunnough), occurs in Florida and is geographically limited to the panhandle. The species is easily recognized from other ephemerellid species in Florida by the above mentioned generic characters. Nymphs of *D. simplex* are rare and sometimes collected along with *Attenella attenuata* in quieter sections near the margins of streams. Similar to other ephemerellid nymphs, *D. simplex* nymphs are clingers and collector-gatherers. Based on nymphal collections, the species appears to have a univoltine life cycle. A summary of the ecology, seasonal distribution, and behavior of this rarely collected species is provided by Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Ephemerella*** Walsh

DIAGNOSIS: The nymphs of *Ephemerella* can be distinguished from other genera of the family by the following combination of characters: lamellate gills occur on abdominal terga III-VII (Fig. 130); caudal filaments rarely with whorls of spines at apex of each segment, but with many fine intersegmental setae (Fig. 134); and maxillary palpi well-developed (Fig. 135).

NOTES: This Holarctic genus has its highest species diversity in North America and is the most speciose Nearctic ephemerellid having 18 species, with *E. excrucians* Walsh and *E. invaria* (Walker) occurring in Florida. They can be separated by the characters in the following key to species. A recent revision of North American *Ephemerella* and *Serratella* by Jacobus and McCafferty (2003) has changed the composition and nomenclature of the *Ephemerella* fauna of Florida. That study supports previous reservations expressed by Berner and Pescador (1988) of the occurrence of the two species, *E. dorothea* Needham and *E. rotunda* Morgan, in the state. Based on the new species definition of *E. excrucians*, its geographic range now extends to Florida which is a new state record. *Ephemerella choctawhatchee* is now a junior synonym of *E. invaria*. Both *E. invaria* and *E. excrucians* have only been collected from the panhandle, with *E. excrucians* restricted to the western panhandle. Current knowledge of the ecology, seasonal distribution, and life history of *E. invaria* in Florida is much the same as that provided by Berner and Pescador (1988).

We have observed a high degree of variability among the nymphs of *E. excrucians* particularly with regard to color pattern. The three color forms within the species are shown in **Figures A-C** of **Plate I** (p. 60). The nymph in **Fig. A** has broad pale yellow bands on abdominal segments IV-V, and on the thorax, and the head is mostly pale yellow. In **Fig. B** the nymph is generally brown with a distinct narrow pale yellow longtitudinal median stripe on the abdomen. The stripe sometimes extends halfway to the mesothorax. There are also numerous small pale yellow spots scattered dorsally on the abdomen and the thorax. In **Fig. C** the nymph is dark brown, almost black in color with only a few yellow spots scattered dorsally on the anterior abdominal segments. The most common of the forms is the one in **Fig. B** which is found across the general distribution of *E. excrucians*, while the nymphs in **Figs. A** and **C** are not as common, particularly that shown in **Fig A**. Representative specimens were sent to L. Jacobus at Purdue University who is currently revising the Ephemerellidae of eastern North America and he believes that the color pattern of *E. excrucians* is highly variable (pers. comm.). This enormous degree of intraspecific variation in our opinion requires further investigation and may require molecular analysis of populations or rearing to resolve the issue. All three color forms occur sympatrically.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Jacobus and McCafferty (2001).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *EPHEMERELLA* [adapted from Allen and Edmunds (1965)]

1. Posterior margins of abdominal terga without paired submedian tubercles (Fig. 140), minute paired protuberances may be present on posterior margins of some abdominal terga . . . . . *E. excrucians* Walsh

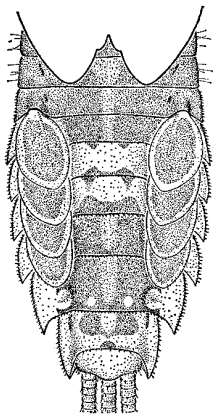


Fig. 140 [from Allen & Edmunds (1965)]

Posterior margins of abdominal terga III-VIII with paired submedian tubercles (Fig. 141), barely discernible on terga III and terga VIII . . . . . *E. invaria* (Walker)

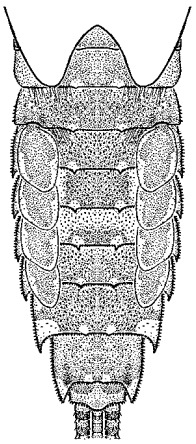


Fig. 141 [from Allen & Edmunds (1965)]

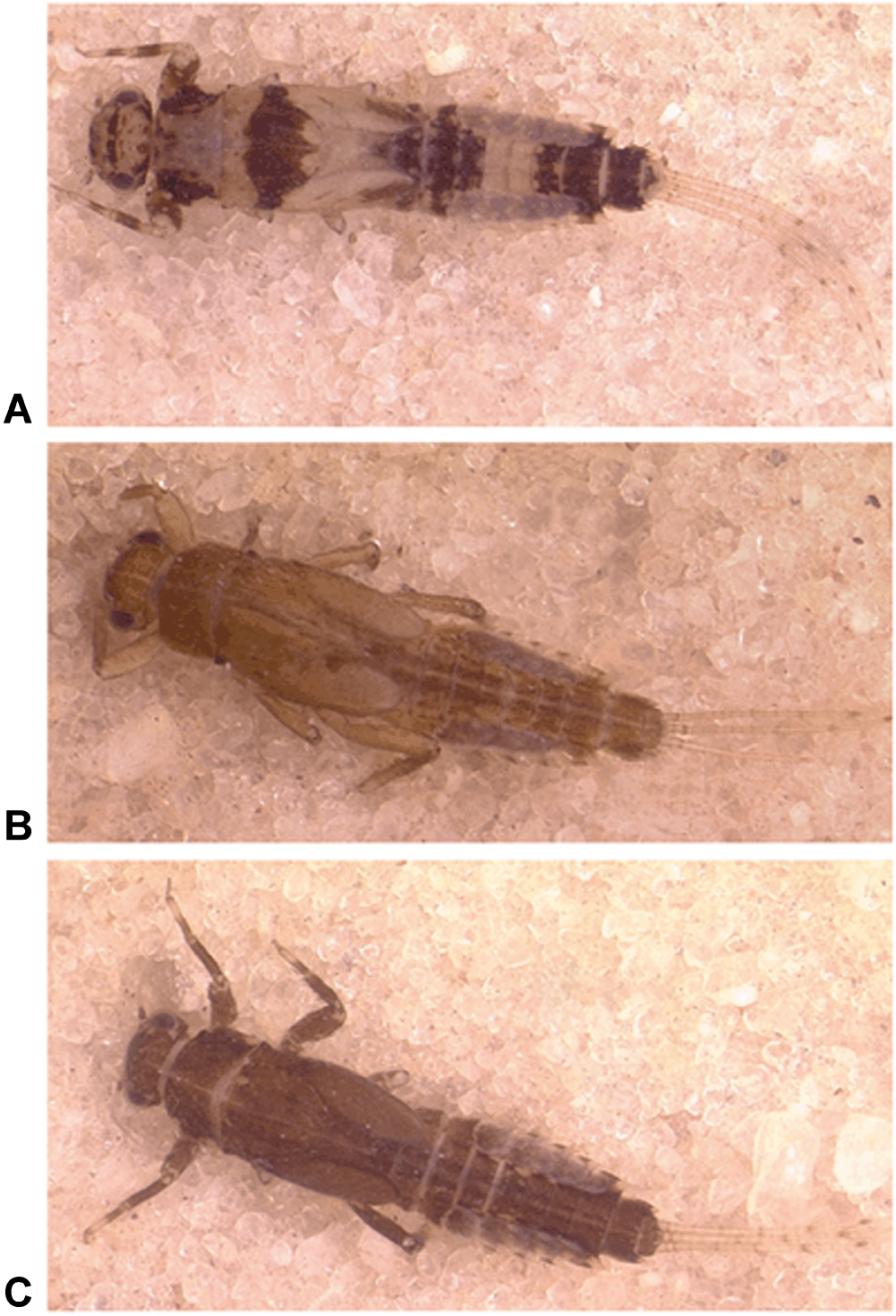


PLATE I. *Ephemerella excrucians*

Genus ***Eurylophella*** Tiensuu

DIAGNOSIS: The nymphs of *Eurylophella* can be distinguished from other ephemerellid genera by the following combination of characters: lamellate gills present on abdominal segments IV-VII with gill on segment IV semi-operculate covering most of the posterior abdominal gills (Fig. 131); gills on abdominal segment I are filamentous; tarsal claws with denticles (Fig. 138); and abdominal segment IX distinctly longer than segment VIII (Fig. 131).

NOTES: A comprehensive study of the morphology of mature nymphs and allozyme frequencies of the genus by Funk and Sweeney (1994) recognized 14 species in eastern North America. Recently, Burian (2002) added the species *E. coxalis* to the genus based on a series of reared specimens. Only one species, *Eurylophella doris* (Traver), is represented in Florida. Funk and Sweeney (1994) reinstated *E. doris* as a species distinct from *E. temporalis* (McDunnough) based on results of their genetic analysis. *Eurylophella doris* is geographically restricted to the southeastern costal plain from Delaware to Florida and west to Alabama. In Florida, *E. doris* is the most common and widely distributed ephemerellid in the state. The species has been recorded from Escambia County south to Highlands County.

Eurylophella nymphs are commonly found in streams, in areas of slow current velocity, particularly near margins, among submerged root masses, woody snags, and other organic debris. The nymphs are typically clinger/sprawlers and collector-gatherers. According to Funk and Sweeney (1994) seasonality and adult emergence periods are distinctive for all species. In Florida, *E. doris* is a late winter, spring, and early summer species. The period of principal emergence is in the spring, chiefly in April, but scattered emergences occur from early February through late June (Berner and Pescador, 1988). For further documentation on the ecology, seasonal distribution, and behavior of the species in the state refer to Berner and Pescador (1988).

We have found the nymphs of *E. doris* to be quite variable in color pattern and have collected at least four distinct color forms in the state which can occur sympatrically. We have called this to the attention of D. Funk (Stroud Research Center, Philadelphia Academy of Science) who stated that the occurrence of such enormous intraspecific color variation in *Eurylophella* is quite common. **Figures D-G** of **Plate II** (p. 62) show the color variations of nymphs of *E. doris*. The color pattern of the nymph represented in **Fig. D** is very similar to the type species of the genus as pictured in Needham, Traver, and Hsu (1935) where there are broad pale yellow bands on the abdomen and thorax. The nymph in **Fig. E** has a color pattern very similar to that of *E. enoensis* Funk, a newly described species found in the Appalachian region, which has a very prominent and moderately broad pale median longitudinal stripe along the entire length of the body. The color pattern of the nymphs represented in **Figs. F-G** are more of the *E. temporalis* mold with an intricate network of pale yellow and brown markings on the body. The nymph in **Fig. F** shows an intricate pigmentation pattern that is more pronounced than the most common color form represented in **Fig. G**. As in *Ephemerella excrucians*, we feel that a closer look is needed to understand these variations and to determine if we are dealing with intraspecific variation or separate species.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

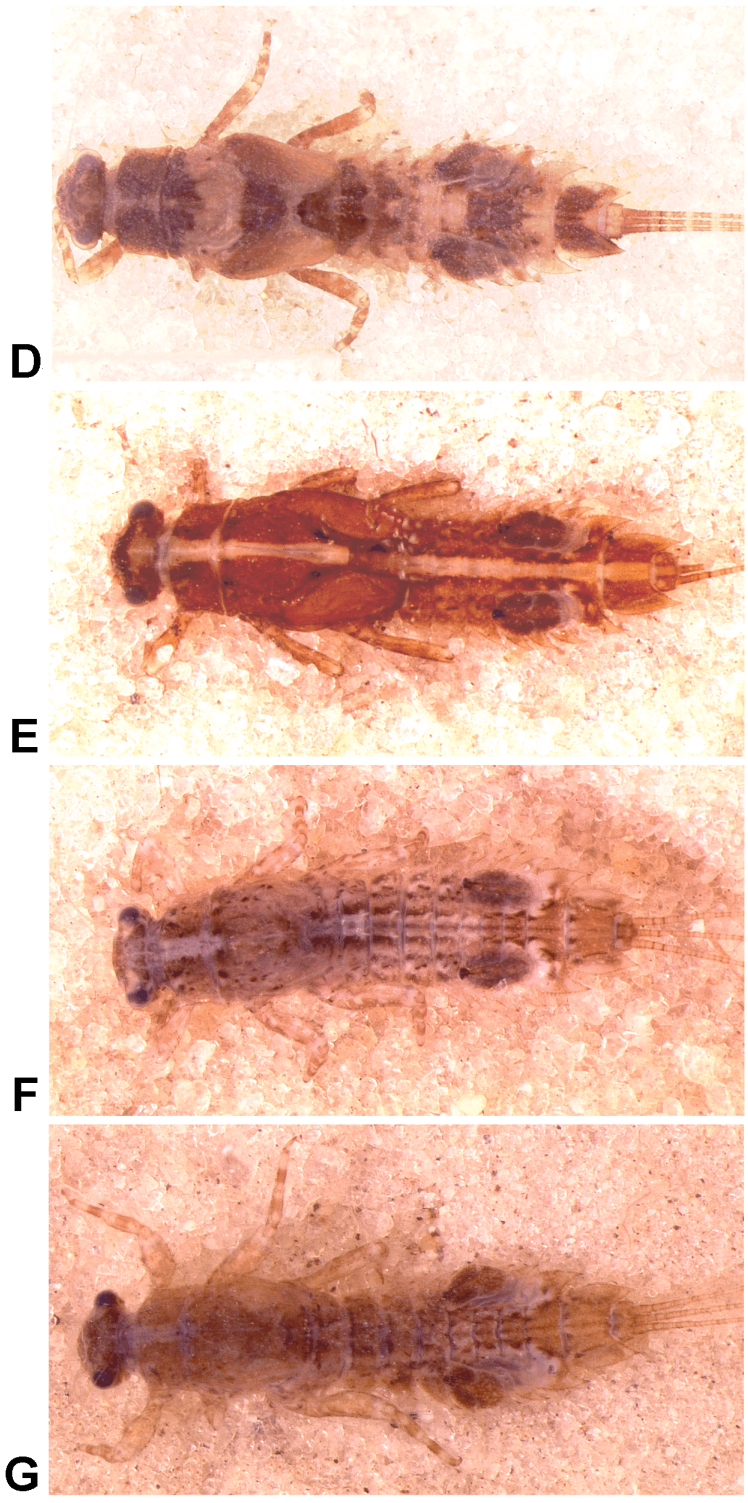


PLATE II. *Eurylophella doris*

Genus ***Serratella*** Edmunds

DIAGNOSIS: The nymphs of *Serratella* can be distinguished from other genera of the family by the following combination of characters: lamellate gills present on abdominal terga III-VII (Fig. 130); caudal filaments with whorls of spines at apex of each segment and only sparse long fine intersegmental setae or none (Fig. 132); and maxillary palpi absent (Fig. 133).

NOTES: This Holarctic genus appears to have its center of diversity in the Nearctic, and is widespread both in the eastern and western regions of North America. In a recent study of population variability and reexamination of type material of *Serratella* by Jacobus and McCafferty (2003), several new synonymies were recognized reducing the number of Nearctic species to nine. Only one species, *S. deficiens* (Morgan), is represented in Florida. Similar to most of the ephemerellid species in the state, *S. deficiens* is geographically restricted to the panhandle with its largest concentration in the western panhandle. Similar to most ephemerellid nymphs, *S. deficiens* nymphs are clingers and collector-gatherers. Based on nymphal collections, the species appears to have a univoltine life cycle. Berner and Pescador (1988) provide a summary of the extent of our current knowledge of the ecology, seasonal distribution, life history, and behavior of the species.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Jacobus and McCafferty (2003).

FAMILY EPHEMERIDAE

The Ephemeridae is a family of large burrowing mayflies with a worldwide distribution, except Australia. Ephemerid nymphs can be distinguished from the other families of mayflies by the following combination of characters: mandibular tusks are curved upward apically as viewed laterally (Fig. 7); and ventral apex of hind tibiae is projected into distinct acute point (Fig. 8). In North America, there are four genera, three of which (*Ephemera*, *Hexagenia*, and *Pentagenia*) are listed for Florida.

The nymphs are lentic and lotic dwellers and actively burrow in sand, silt, and mud. In streams and rivers, they are common in quiet areas where flow is slower than the main channel. Young nymphs are often collected among submerged roots along the undercut banks of streams and rivers. Lotic habitats vary from small streams to larger rivers depending on the species. In lakes, nymphs are mostly found the sublittoral zone usually at depths ranging from 5 to 30 feet. These burrowing mayflies are mostly collector-gatherers and are also considered passive filter-feeders. Depending on the species and latitude, life cycle pattern varies from univoltine to semivoltine. These mayflies are well known for their mass emergences and very large swarms that are often a public nuisance and sometimes even a road hazard.

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDA EPHEMERIDAE
[modified from Berner and Pescador (1988)]

1. Mandibular tusks broad and with row of spurs along lateral margins (Fig. 142); terminal segment of labial palpi club shaped, broadly rounded apically (Fig. 143) . . . . . *Pentagenia* (p. 68); *P. vittigera* (Walsh)

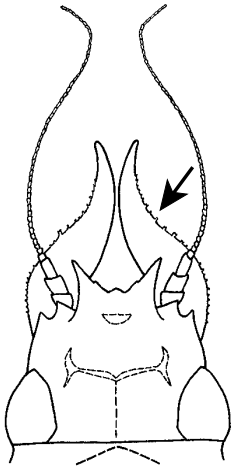


Fig. 142 [from Burks (1953)]

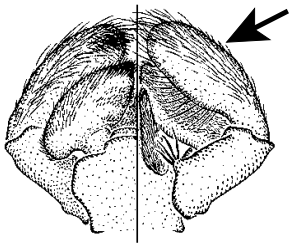


Fig. 143 [from McCafferty (1975)]

Mandibular tusks slender and without row of spurs along lateral margins (Fig. 144); terminal segment of labial palpi truncate apically (Fig. 145) 2

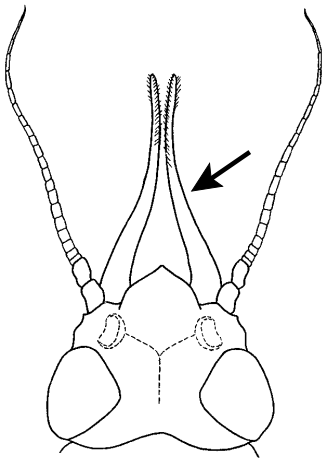


Fig. 144 [from Burks (1953)]

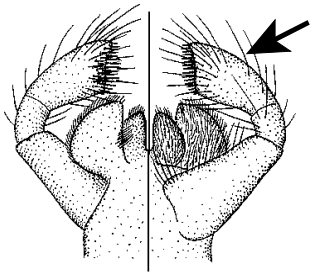


Fig. 145 [from McCafferty (1975)]

2(1) Frontal process of head distinctly bifid (Fig. 146); mandibular tusks with small group of basal and lateral spurs (Fig. 147); foretibiae not emarginate apically and not greatly flattened (Fig. 148) . . . . . *Ephemera* (p. 67); *E. simulans* Walker

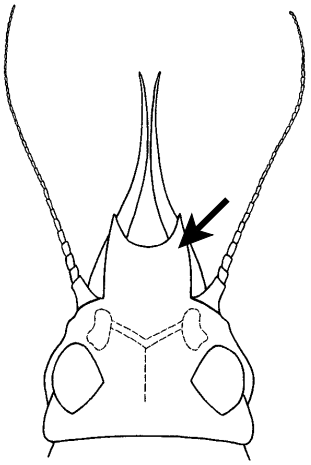


Fig. 146 [from Burks (1953)]

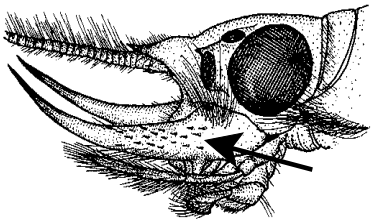


Fig. 147 [from Edmunds, Jensen, & Berner (1976)]

Fig. 148 [from Berner & Pescador (1988)]

Frontal process of head entire (Fig. 149); mandibular tusks without spurs but with long hairs (Fig. 150); foretibiae slightly to distinctly emarginate along distal margin (Fig. 151) . . . . . *Hexagenia* (p. 67)

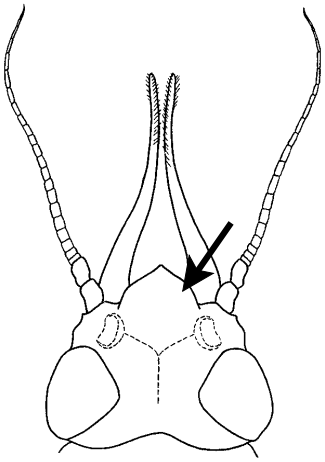


Fig. 149 [from Burks (1953)]

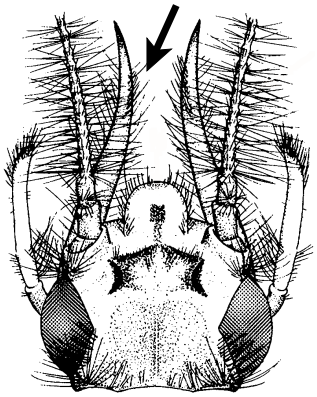


Fig. 150 [from Edmunds, Jensen, & Berner (1976)]

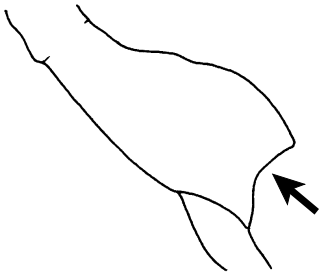


Fig. 151 [from Berner & Pescador (1988)]

Genus ***Ephemera*** Linnaeus

DIAGNOSIS: The nymphs of the genus *Ephemera* can be distinguished from other genera of the family by the following combination of characters: mandibular tusks slender with small group of basal and lateral spurs (Fig. 147); frontal process of head distinctly bifid (Fig. 146); and foretibiae not emarginate apically and not greatly flattened (Fig. 148).

NOTES: The genus has six species in North America, one of which, *E. simulans* Walker, is listed by Berner and Pescador (1988) as present in Florida based on a collection made in 1935. The occurrence of the species in the state is dubious as no additional specimens have been taken in the state in nearly 70 years.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Hexagenia*** Walsh

DIAGNOSIS: The nymphs of *Hexagenia* can be distinguished from other ephemerid genera by the following combination of characters: mandibular tusks are slender without row of spurs along lateral margins (Fig. 144); frontal process of head entire (Fig. 149); mandibular tusks lack spurs but have long hairs (Fig. 150); and foretibiae slightly to distinctly emarginate along distal margin (Fig. 151).

NOTES: Of the seven Nearctic *Hexagenia* species currently recognized, *H. bilineata* (Say), *H. limbata* (Serville), and *H. orlando* Traver, are found in Florida. At this time, the nymphs of Florida *Hexagenia* cannot be identified to species. For the past few years, we have experienced problems in accurately identifying the Florida nymphs of *Hexagenia* to species. The taxonomic key of Berner and Pescador (1988) included the use of the following characters to identify nymphs: color pattern of abdominal terga and sterna, relative body size, shape of mesotarsal claws, and shape of frontal process. After examining many nymphs of *Hexagenia* collected from various localities and by successfully rearing series of adults from mature nymphs (courtesy of J. G. Peters), we have found that these characters are highly variable. Reared nymphs with both swollen mesotarsal claws and slightly conical frontal processes have turned out to be *H. limbata* adults. Therefore, we can no longer use the nymphal key of Berner and Pescador (1988) and need to find more reliable characters to accurately identify the nymphs to species. Furthermore, the question of the taxonomic status of *H. orlando* as a valid species or simply an ecophenotype of *H. limbata* may need to be revisited. Except for the currently used smaller body size, color pattern, and confinement to the sand-bottomed lakes of central Florida, we currently have no characters to distinguish the two species as adults with a high level of confidence. The genitalia of the two species are not convincingly different, unlike the distinct difference between the genitalia of *H. limbata* and *H. bilineata*. Perhaps molecular analyses of *H. orlando* and *H. limbata* populations should be undertaken to help resolve this taxonomic dilemma.

Berner and Pescador (1988) discussed the ecology and biology of the *Hexagenia* fauna of Florida. More recently, Lobinske et al. (1996) studied the life history and productivity of *H. limbata* in a central Florida river and found the species to have a univoltine life cycle.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Pentagenia*** Walsh

DIAGNOSIS: The nymph of Pentagenia can be distinguished from other ephemerid genera by the following combination of characters: mandibular tusks broad with row of spurs along the lateral margins (Fig. 142); and terminal segment of the labial palpi club shaped and broadly rounded apically (Fig. 143).

The nymphs are large river dwellers and construct U-shaped burrows in hard clay banks. They are collector-gatherers and appear to have a univoltine life cycle.

NOTES: The only Nearctic species of *Pentagenia* is *P. vittigera* (Walsh) which Berner and Pescador (1988) included in the list of Florida mayflies. The species is widely distributed across the eastern United States with scattered records in Texas. In Florida, collection records indicate the occurrence of the species in the Apalachicola drainage with two adults, one collected in May, 1941 and one in July, 1953. Since then, no other specimens have been collected which makes us wonder if this rare species is still present in the state. See Berner and Pescador (1988) for more information on the species.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

FAMILY HEPTAGENIIDAE

The family Heptageniidae is widely distributed and one of the most common groups in the Holarctic. Nymphs of the family Heptageniidae can be distinguished from other mayfly families by the following combination of characters: head and body distinctly flattened with eyes and antennae dorsal (Fig. 19); mandibles not visible in dorsal view (Fig. 19); tarsal claws much shorter than tarsi; tibiae and tarsi straight; maxillary palpi two-segmented. There are 17 Nearctic heptageniid genera, with *Heptagenia*, *Maccaffertium*, *Macdunnoa*, and *Stenacron* represented in Florida.

The heptageniids are often referred to as flatheaded mayflies because of the conspicuously flattened nymphal head which dorsally conceals the mouthparts. The nymphs are mainly lotic dwellers and are often dominant members of the benthic assemblages of streams and rivers. They are generally clingers and collector-gatherers or scapers, though a few are predators (e.g. *Anepeorus, Raptoheptagenia*). Life cycle pattern varies from univoltine to semivoltine depending on latitude and species.

The possibility of the genus *Spinadis* occurring in Florida was suggested by Berner and Pescador (1988) based on collection records from the Altamaha River, Toombs County, Georgia (Edmunds and Jensen, 1974). The carnivorous nymphs have only been collected from deep areas of large and swift flowing rivers and we have yet to collect the species in the state.

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDA HEPTAGENIIDAE
[modified from Berner and Pescador (1988)]

1. Gills on abdominal segment VII similar to preceding pairs but smaller, trachea with several branches (Fig. 152) . . . . . *Heptagenia* (p. 72); *H. flavescens* (Walsh)

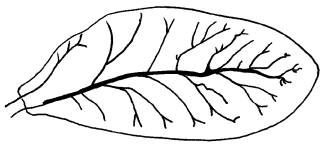


Fig. 152 [from Berner & Pescador (1988)]

Gills on abdominal segment VII reduced to slender filaments; trachea of gill VII absent (Fig. 153) or if present, with few or no branches (Fig. 154) 2

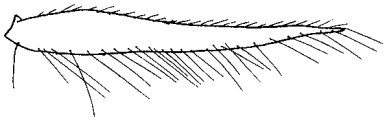


Fig. 153 [from Berner (1950)]

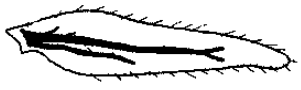


Fig. 154 [from Berner (1950)]

2(1) Gills on abdominal segments I-VI pointed at apex (Fig. 155); spine-like setae on crown of maxilla (Fig. 156) . . . . . *Stenacron* (p. 75)

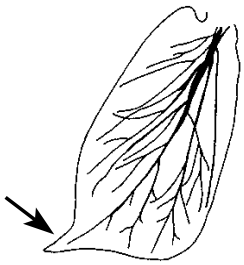


Fig. 155 [from Berner & Pescador (1988)]

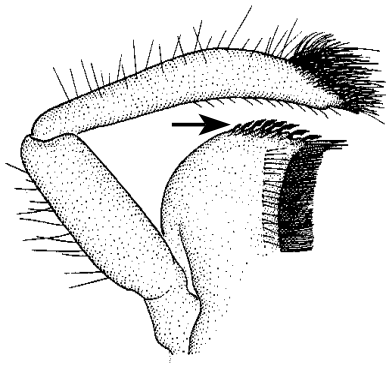


Fig. 156 [from Edmunds, Jensen, & Berner (1976)]

Gills on abdominal segment I-VI truncate or rounded at apex (Fig. 157); hair-like setae, spine-like setae or both present on crown of maxilla (Fig. 158) 3

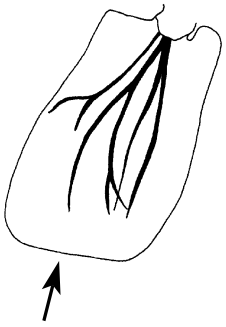


Fig. 157 [from Berner & Pescador (1988)]

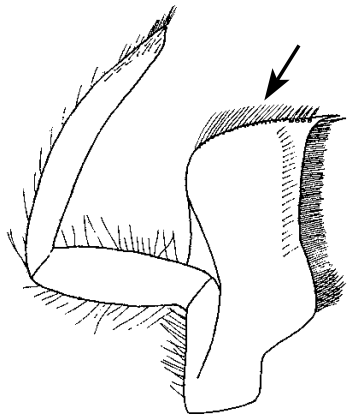


Fig. 158 [from Berner (1950)]

3(2) Gills on abdominal segment VII greatly reduced (Fig. 159), visible only under high magnification . . . . . *Macdunnoa* (p. 75); *M. brunnea* Flowers

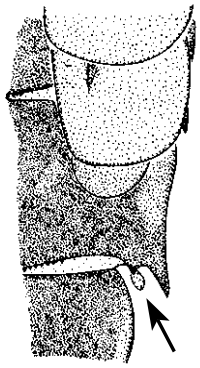


Fig. 159 [from Flowers (1982)]

Gills on abdominal segment VII distinct and elongate (Fig. 160) . . . . . *Maccaffertium* (p. 72)

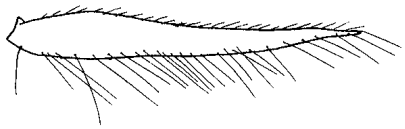


Fig. 160 [from Berner (1950)]

Genus ***Heptagenia*** Walsh

DIAGNOSIS: The nymphs of *Heptagenia* can be distinguished from other heptageniid genera by the gills on segment VII similar to preceding pairs but smaller, tracheae with several branches (Fig. 152).

NOTES: The genus is generally worldwide in distribution. In the Nearctic, the genus has 12 recognized species and one, *H. flavescens* (Walsh), is found in Florida. The nymphs usually occur in rock crevices, on wood snags, and among organic debris in streams and rivers. For information on the ecology and biology of the species refer to Berner and Pescador (1988). *Heptagenia flavescens* now seems to be rare at sites where it was previously collected. The species is geographically limited to the panhandle. Adults have been collected in the spring.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Wang and McCafferty (2004).

Genus ***Maccaffertium*** Bednarik

DIAGNOSIS: The nymphs of *Maccaffertium* can be differentiated from other heptageniid genera by the following combination of characters: gills on abdominal segment I-VI truncate at apex (Fig. 157); and gills on abdominal segment VII elongate to slender filaments without tracheae (Fig. 160).

NOTES: In a recent consideration of the taxonomy of the Heptageniidae, Wang and McCafferty (2004) elevated the subgenus *Maccaffertium* of the genus *Stenonema* to generic level. *Stenonema* is now a monotypic genus represented by the species *S. femoratum.* All other species previously considered *Stenonema* are now transferred to the genus *Maccaffertium.* Thus, the genus *Maccaffertium* has 19 recognized Nearctic species, with *M. exiguum* (Traver), *M. mexicanum integrum* (McDunnough), and *M. smithae* (Traver) found in Florida. Although Berner and Pescador (1988) included in their list, *Stenonema modestum* (Banks) in Florida based on three male imagos collected in a small tributary of the Blackwater River, failure to collect nymphs or additional adult specimens after many years, strongly suggests either a misidentification, possibly a temporary introduction from the nearby fish hatchery, or a now extinct population.

Species of *Maccaffertium* are among the most commonly collected mayflies in Florida. They are found in running waters ranging from very small ravine streams to large rivers. Leaf packs, rocks, and snags in areas of good flow are preferred microhabitats. Nymphs of *Maccaffertium* are collector-gatherers and/or scrapers. *Maccaffertium exiguum* is distributed throughout the state, while *M. smithae* is found from the northern peninsula across the panhandle, and *M. mexicanum integrum* is limited to the panhandle. Emergence of all three species occurs year round in Florida.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Wang and McCafferty (2004).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *MACCAFFERTIUM*
[modified from Berner and Pescador (1988)]

1. Mesonotum of nymphs with conspicuous pale yellow band at base of wingpads (Fig.161); maxillary crown with several spine-like setae and fewer than 10 (usually 0) hair-like setae (Fig. 162) . . . . . *M. exiguum* (Traver)

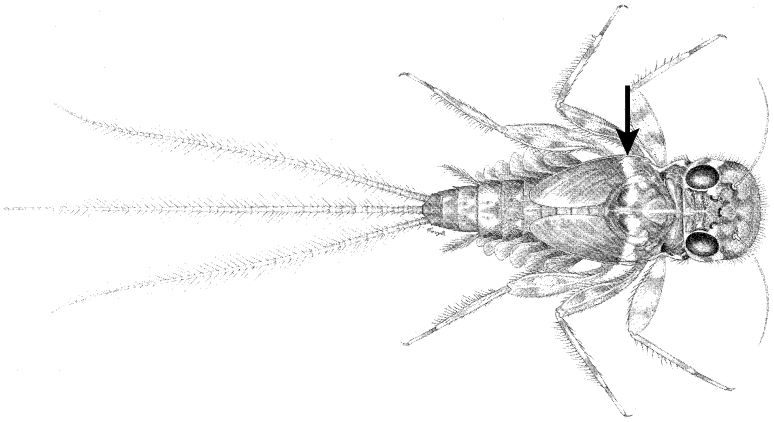


Fig. 161 [from Berner (1950)]

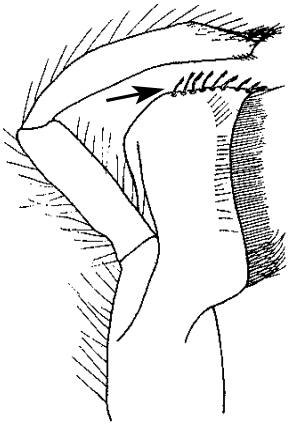


Fig. 162 [from Berner (1950)]

Mesonotum of nymphs without yellow band; maxillary crown with 10 or more hair-like setae (Fig. 163) 2

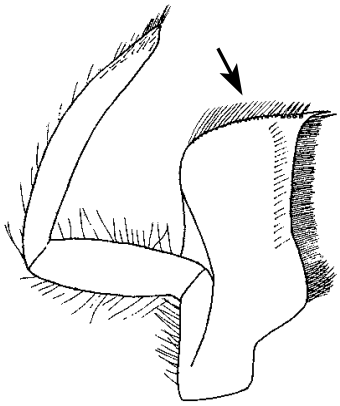


Fig. 163 [from Berner (1950)]

2(1) Abdominal terga VII-IX with distinct V-shaped pale mark (Fig. 164); maxillary crown with 2 or 3 spine-like setae (Fig. 165) . . . . . *M. mexicanum integrum* (McDunnough)

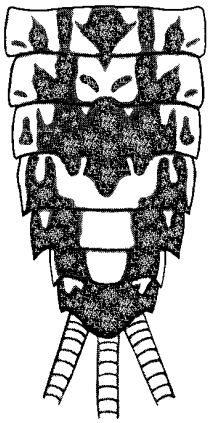


Fig. 164 [modified from Bednarik & McCafferty (1979)]

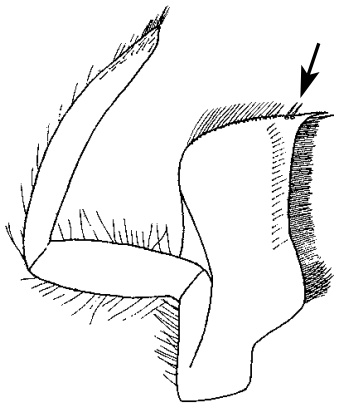


Fig. 165 [modified from Berner (1950)]

Abdominal terga VII-IX without V-shaped pale mark; maxillary crown with 3 to 7 spine-like setae (Fig. 166) . . . . . *M. smithae* (Traver)

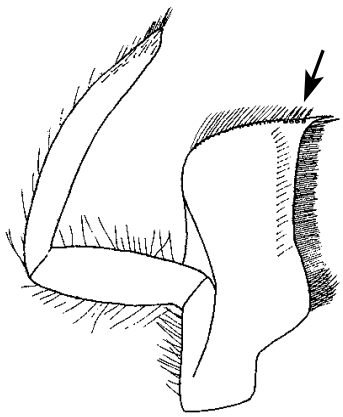


Fig. 166 [from Berner (1950)]

Genus ***Macdunnoa*** Lehmkuhl

DIAGNOSIS: The nymphs of *Macdunnoa* can be distinguished from other genera of the family Heptageniidae by the following combination of characters: gills on abdominal segment I-VI rounded at apex (Fig. 159); and gills on abdominal segment VII greatly reduced (Fig. 159), visible only under high magnification. In addition to the extremely reduced abdominal gills on segment VII, the nymphs are distinctive by their dark brown body color and the distinctly spatulate denticles on the posterior margin of the abdominal terga.

NOTES: There are three species in the genus, with *M. brunnea* Flowers, represented in the panhandle of Florida. The nymphs of *Macdunnoa* are lotic dwellers, in moderate-sized streams with slow to moderate current. Nymphs of the species are sporadically collected in eastern North America from Florida to Canada. Flowers (1982) collected the nymphs in rotting leaves among rocks in deep areas where the current is swift in Rocky Comfort Creek, Gadsden County. Our most recent nymphal collection was in 1999 from Willacoochee Creek, Gadsden County. Nymphs were in the stream margins with moderate flow and among organic debris trapped between wood snags. Adults have been collected from March to May.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Stenacron*** Jensen

DIAGNOSIS: The nymphs of *Stenacron* can be distinguished from other heptageniid genera by the following combination of characters: gills on abdominal segments I-VI pointed at apex (Fig. 155); gills on abdominal segment VII reduced to slender filament with weakly developed tracheal branches (Fig. 154); and with only spine-like setae on crown of maxilla (Fig. 156).

NOTES: There are seven species of *Stenacron* in North America, with *S. floridense* (Lewis) and *S. interpunctatum* (Say) occurring in Florida. We have found that the dark markings on the posterior abdominal sterna (Fig. 167) are a stable and reliable character to complement previously used characters in distinguishing the two species. The addition of this character should resolve the occasional occurrence of intraspecific variation of the tergal submedian stripes which can complicate the identification of the two species. The nymphs are common and abundant in streams and rivers where they live on the undersides of rocks, in leaf packs, on snags, and in vegetation. The nymphs are clingers and opportunistic feeders as collector-gatherers and scrapers. Except for *S. interpunctatum,* which has been reported to be univoltine or semivoltine (McCafferty and Huff, 1978), the life cycle of other species is unknown.
Recent collection records indicate that *S. floridense* is restricted to the panhandle and that *S. interpunctatum* is distributed throughout the state. Both species emerge year round in Florida.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *STENACRON*
[modified from Berner and Pescador (1988)]

1. Middorsal pale yellow streaks continuous or nearly so; lateral dark markings usually present on sterna VI/VII-IX (Fig. 167); 9 or 10 pectinate spines on crown of maxilla (Fig. 168); widely distributed in the panhandle and peninsula . . . *S. interpunctatum* (Say)

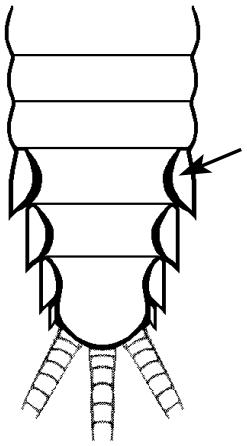


Fig. 167 [modified from Bednarik & McCafferty (1979)]

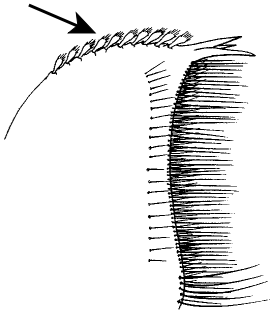


Fig. 168 [from Bednarik & McCafferty (1979)]

Middorsal pale yellow streaks, if present, usually discontinuous; lateral margins of sterna V-IX usually without dark markings, if present limited to lateral or posterior margins of sternum IX; 8 (rarely 9) pectinate spines on crown of maxilla (Fig. 169); found in the panhandle . . . . . *S. floridense* (Lewis)

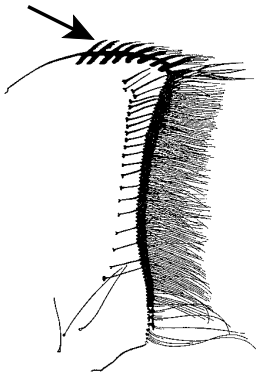


Fig. 169 [from Lewis (1974)]

FAMILY ISONYCHIIDAE

The family Isonychiidae is a monotypic family of Holarctic, Oriental, and Neotropical distribution, represented by the genus *Isonychia*. There are 16 species found in North America. *Isonychia* range in size from 9-17 mm. Nymphs are distinguished by the following combination of characters: maxillae with filamentous gills at base; forelegs with a double row of long setae on inner surface of femora and tibiae; gills present at bases of forecoxae; gills dorsal on abdominal segment I; and meso- and metatarsal claws denticulate. Nymphs are strong swimmers and are usually found associated with woody snags and leaf packs in areas of strong flow. *Isonychia* nymphs are filter-feeders using their forelegs with two rows of long setae to filter food from flowing water. In the southeastern coastal plain adults emerge throughout the year.

Genus ***Isonychia*** Eaton

DIAGNOSIS: This genus is distinguished from other mayflies by the following combination of characters: filamentous gills present at base of maxillae; forelegs with a double row of long setae on inner surface of femora and tibiae (Figs. 11, 14); forecoxae with gills (Fig. 14); gills dorsal on abdominal segment I; meso- and metatarsal claws denticulate; and foretibiae with a conspicuous apical spine (Figs. 11, 14).

NOTES: There are five species of *Isonychia* found in Florida: *I. arida* (Say), *I. berneri* Kondratieff and Voshell, *I. georgiae* McDunnough, *I. sayi* Burks, and *I. sicca* (Walsh). Kondratieff and Voshell (1984) provided a revision of the genus *Isonychia*. The Florida species of *Isonychia* are distinguished from each other by the characters shown in the following key to species. *Isonychia berneri* was described from the adult and a nymphal association has not yet been made, so this species is not included in the species key for nymphs. Kondratieff and Voshell (1984) suggested using the arrangement of small setae of the last gills to distinguish between *I. arida* and *I. sicca*, but we have found this character to be variable and thus refrain from using it in the key to species. The two species can be distinguished in the last instars by the tibiae of the forelegs possessing the adult foreleg color pattern (see key to species). *Isonychia georgiae* is newly recorded from Florida based on specimens collected by L. Berner in Torreya State Park in the 1950's, which he referred to as *Isonychia* sp. G. and additionally two specimens collected via Hester-Dendy from the Little River, Gadsden County, in 1980. We have done much collecting in both areas in recent years and have not collected any further specimens of *I. georgiae.*

The Florida species of *Isonychia* are confined to the panhandle from the Suwannee River basin westward. The most common species of *Isonychia* in Florida appears to be *I. arida* and the species is found in both small streams and large rivers throughout the panhandle. *Isonychia berneri,* which can only be confirmed from the adult, is known from the Choctawhatchee River basin westward and is very common in the Blackwater River drainage, while *I. sayi* is much less common and known primarily from the western panhandle also being common in the Blackwater River drainage. *Isonychia sicca* has only been confirmed from the Apalachicola River basin thus far. The species of *Isonychia* are all found only in waters with good flow, ranging from small streams to large rivers. Nymphs are most often associated with woody snags and leaf packs, and are also commonly found in submerged roots along undercut banks. *Isonychia* are filter-feeders.

In Florida, the adults emerge from early spring to late summer.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *ISONYCHIA* [modified from Kondratieff and Voshell (1984)]

1. Forecoxal gill a single robust finger-like filament (Fig. 170) . . . . . *I. georgiae* McDunnough

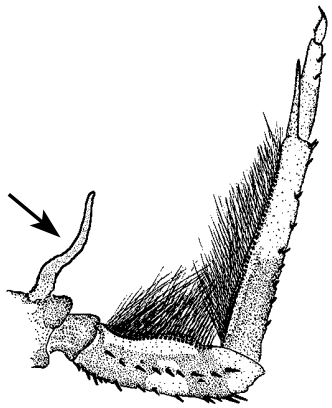


Fig. 170 [modified from Edmunds, Jensen, & Berner (1976)]

Forecoxal gills in tufts of multi-branched filaments (Fig. 171) 2

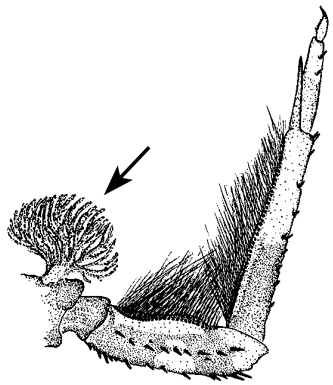


Fig. 171 [from Edmunds, Jensen, & Berner (1976)]

2(1) Abdominal gill lamellae 5-7 without stout spines on distal margin (Fig. 172) . . . . . *I. sayi* Burks

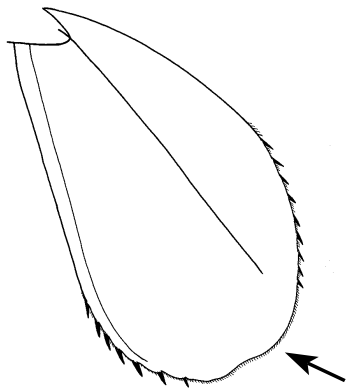


Fig. 172 [from Berner & Pescador (1988)]

Abdominal gill lamellae 5-7 with stout spines on distal margin (Fig. 173) 3

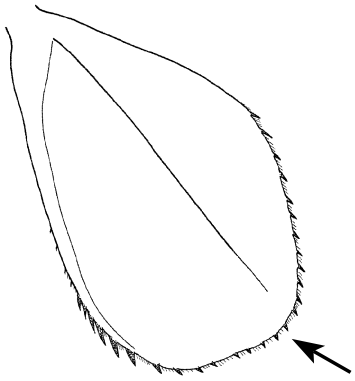


Fig. 173 [from Berner & Pescador (1988)]

3(2) Nymphs with less than fully-developed wingpads; foretibiae with dark brown band at middle (Fig. 174) . . . . . *I. arida* (Say) and *I. sicca* (Walsh)

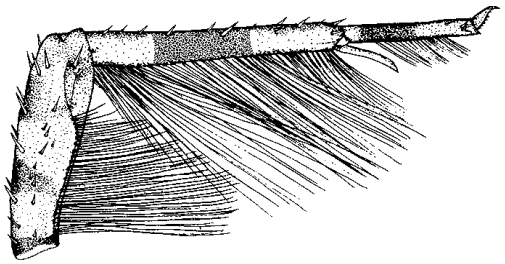


Fig. 174 [modified from Kondratieff & Voshell (1984)]

Nymphs with fully-developed (black) wingpads; foretibiae variable 4

4(3) Foretibiae with adult color pattern of dark brown bands at base and apex (Fig. 175) . . . . . *I. arida* (Say)

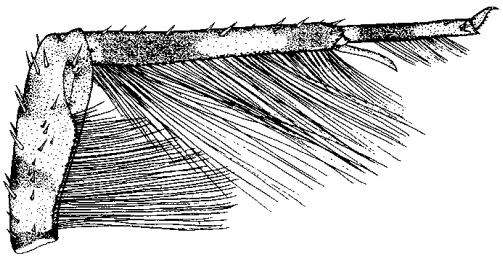


Fig. 175 [modified from Kondratieff & Voshell (1984)]

Foretibiae with adult color pattern of entirely dark brown (Fig. 176) . . . . *I. sicca* (Walsh)

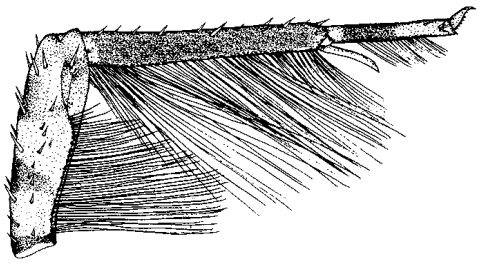


Fig. 176 [modified from Kondratieff & Voshell (1984)]

FAMILY LEPTOHYPHIDAE

This family was treated as "Tricorythidae" in Berner and Pescador (1988), although elevated to family status by Landa (1973) and treated as a distinct family by Landa and Soldán (1985). In a footnote, Berner and Pescador (1988) pointed out that they followed the older scheme of McCafferty and Edmunds (1979) for the sake of consistency. All Florida species formerly treated in Tricorythidae are now placed in Leptohyphidae and there are no Tricorythidae in North America. The North American species of Leptohyphidae were recently revised by Wiersema and McCafferty (2000).

The nymphs of Leptohyphidae can be distinguished from the other mayfly families by the following characters: gills on segment II triangular, subtriangular, or oval, not meeting medially (Fig. 15); margin of gill lamellae 3-6 simple or bilobed, not fringed.

The nymphs usually occur in streams with at least some current. They are most commonly found in moss, root mats, and vegetation in streams and rivers. The nymphs are mostly clingers, with a few being sprawlers. Depending on species and latitude, life cycle pattern varies from univoltine to multivoltine.

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDA LEPTOHYPHIDAE
[modified from Wiersema and McCafferty (2000)]

1. Body strongly dorsoventrally flattened; posterolateral projections of abdominal terga VII and VIII longer than midlength of respective terga (Fig. 177); forefemora greatly expanded (width approximately three-fourths to subequal length), bordered by thick setae, and with dorsal transverse band of moderately long to short robust setae (Fig. 178) . . . . . *Asioplax* (p. 83); *A. dolani* (Allen)

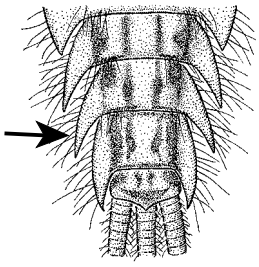


Fig. 177 [from Allen (1967)]

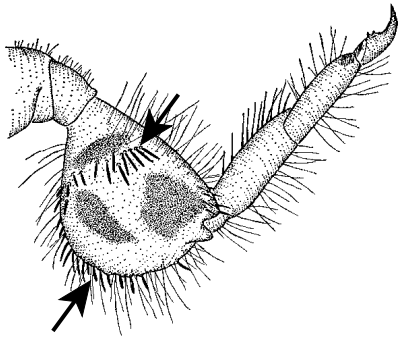


Fig. 178 [from Allen (1967)]

Body not strongly flattened; posterolateral projections of abdominal terga VII and VIII no more than subequal to midlength of respective terga (Fig. 179); forefemora not greatly expanded (width no more than two-thirds of length, usually less than half as wide as long), not bordered by thick setae, and with dorsal transverse band of long, delicate setae (Fig. 180) . . . . . *Tricorythodes* (p. 83); *T. albilineatus* Berner

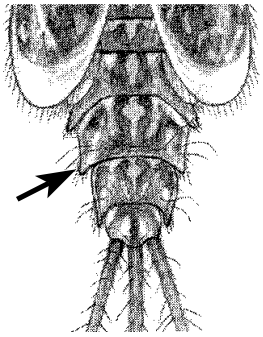


Fig. 179 [from Berner (1950)]

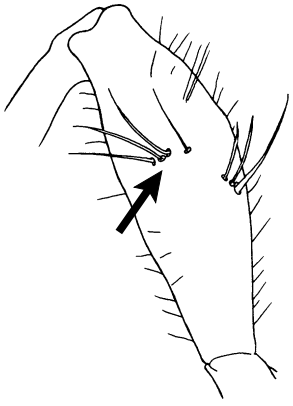


Fig. 180 [from Berner & Pescador (1988)]

Genus ***Asioplax*** Wiersema and McCafferty

DIAGNOSIS: The nymphs of *Asioplax* can be distinguished from other members of the family by the following combination of characters: body strongly dorsoventrally flattened; posterolateral projection of abdominal terga VII and VIII longer than midlength of respective terga (Fig. 177); and forefemora greatly expanded (approximately three-fourths to subequal length), bordered by thick setae, with dorsal transverse band of moderately long to short robust setae (Fig. 178).

NOTES: In the Nearctic, there are five species of *Asioplax,* with *A. dolani* (Allen) now recorded from Florida. *Asioplax dolani* was treated as *Leptohyphes dolani* in Berner and Pescador (1988). The generic characters easily identify the only species in the state. The species has been reported from Texas eastward to the Southeast. In Florida, the species is one of the least common and most difficult to collect of mayflies. The nymphs have the same habitats as described for the family. Similar to *Brachycercus* or *Cercobrachys*, one must be patient to let the substrate samples slightly dry to force the nymphs to move, otherwise they are easily missed. The species was previously recorded from the Withlacoochee River near Pinetta, at the Hamilton-Madison county line (Berner and Pescador, 1988). Our most recent records include nymphs from Econfina Creek, Bay County and the Santa Fe River, Alachua/Union County. The adults have not been recorded from the state. For additional information on the ecology and biology of the species see Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Wiersema and McCafferty (2000).

Genus ***Tricorythodes*** Ulmer

DIAGNOSIS: The nymphs of *Tricorythodes* can be distinguished from other genera of the family by the following combination of characters: body not strongly flattened; posterolateral projections of abdominal terga VII and VIII no more than subequal to midlength of respective terga (Fig. 179); and forefemora not greatly expanded (no more than two-thirds of length, usually less than half as wide as long), not bordered by thick setae, and with dorsal transverse band of long and delicate setae (Fig. 180).

NOTES: The nymphs are predominantly found in sand-bottom streams in quiet areas with a thin layer of silt and other organic debris. The general distribution of the species is similar to *Asioplax dolani*, occurring in the Southwestern and Southeastern United States. In Florida, *Tricorythodes* has been collected in both the peninsula and panhandle. Like *Asioplax*, the nymphs can easily be missed when collecting because of their small size and their tendency to remain motionless until slight dehydration occurs. The species emerges throughout the year in Floirda.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Wiersema and McCafferty (2000).

FAMILY LEPTOPHLEBIIDAE

This cosmopolitan family is one of the largest and most diverse families of mayflies. It has its highest concentration of diversity in the Southern Hemisphere. Ten Nearctic genera are currently recognized, five of which are represented in Florida: *Choroterpes, Habrophlebia, Habrophlebiodes, Leptophlebia*, and *Paraleptophlebia*. The nymphs can be distinguished from other mayfly families by the following combination of characters: abdominal gills on segments II-VII either forked (Fig. 25), in tufts (Fig. 26), or with double lamellae terminating in filaments or points (Fig. 27); and maxillae with a dense brush of hairs on distal margin (Fig. 28).

The nymphs inhabit a wide variety of habitats ranging from slow to fast flowing streams and rivers. Leptophlebiid nymphs are common near the water edges where there are small rocks, wood snags, leaf packs, and other organic debris.

KEY TO GENERA FOR MATURE NYMPHS OF FLORIDA LEPTOPHLEBIIDAE
[modified from Berner and Pescador (1988)]

1. Abdominal gills on segments II-VII with cluster of filaments (Fig. 181) . . . . *Habrophlebia* (p. 88); *H. vibrans* Needham

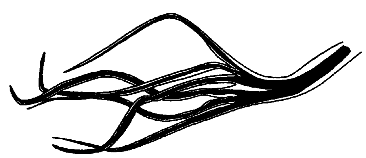


Fig. 181 [from Berner (1950)]

Abdominal gills on segments II-VII forked (Fig. 182) or bilamellate (Fig. 183) 2

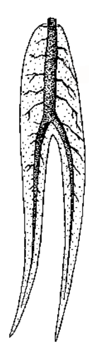


Fig. 182 [from Edmunds, Jensen, & Berner (1976)]

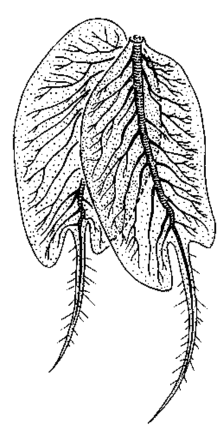


Fig. 183 [from Edmunds, Jensen, & Berner (1976)]

2(1) Gills on abdominal segment I differ in structure from those on succeeding segments (Figs. 184, 185) 3

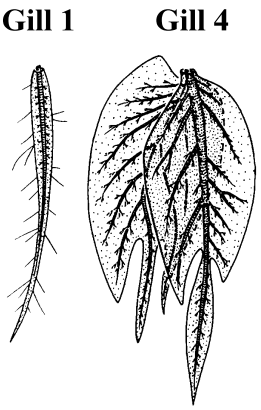


Fig. 184 [from Edmunds, Jensen, & Berner (1976)]

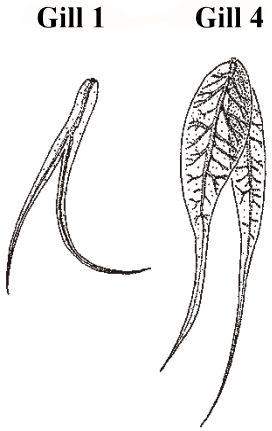


Fig. 185 [from Burian (2001)]

Gills on abdominal segment I similar in structure to those on succeeding segments (Fig. 186) 4

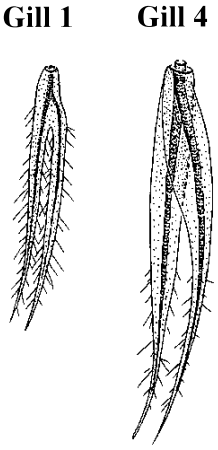


Fig. 186 [from Edmunds, Jensen, & Berner (1976)]

3(2) Gills on abdominal segment I single (Fig. 184); gills 2-7 with dorsal lamellae ending in a single spatulate process (Fig. 187) . . . . . *Choroterpes* (p. 88); *C. basalis* (Banks)

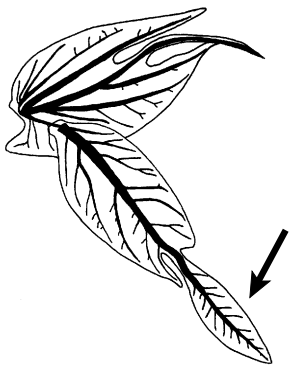


Fig. 187 [from Berner (1950)]

Gills on abdominal segment I forked (Figs. 185); gills 2-7 with dorsal lamellae not ending in a single spatulate filament (Figs. 188, 189) . . . . . *Leptophlebia* (p. 89)

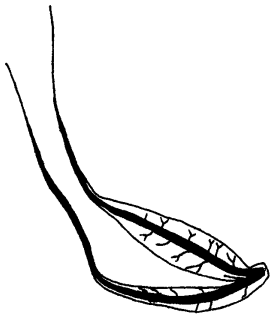


Fig. 188 [from Berner (1950)]

Fig. 189 [from Berner (1950)]

4(2) Gills with prominent tracheal branches, with bifurcation at approximately 1/3 length of gill (Fig. 190); labrum with moderately deep median emargination (Fig. 191); small row of spinules present only on posterior margins of abdominal terga VI-X or VII-X (Fig. 192) . . . . . *Habrophlebiodes* (p. 89); *H. brunneipennis* Berner

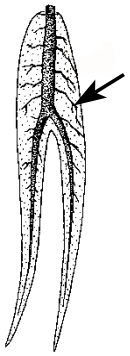


Fig. 190 [from Edmunds, Jensen, & Berner (1976)]

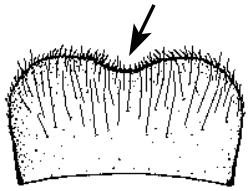


Fig. 191 [modified from Edmunds, Jensen, & Berner (1976)]

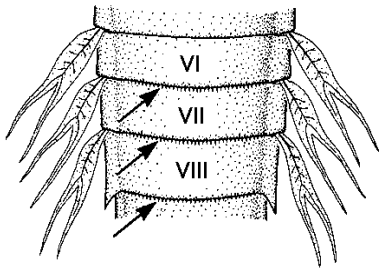


Fig. 192 [modified from Edmunds, Jensen, & Berner (1976)]

Gills usually without tracheal branches (if present, only 1-3 weakly developed branches), with bifurcation at approximately 1/4 length of gill (Fig. 193); labrum with broad and shallow median emargination (Fig. 194); small row of spinules usually present on posterior margins of abdominal terga I-X . . . . . *Paraleptophlebia* (p. 94); *P. volitans* (McDunnough)

Fig. 193 [from Berner (1950)]

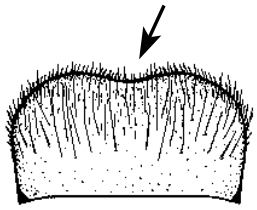


Fig. 194 [modified from Edmunds, Jensen, & Berner (1976)]

Genus ***Choroterpes*** Eaton

DIAGNOSIS: The nymphs of *Choroterpes* can be distinguished from other leptophlebiid genera by the following combination of characters: gills on abdominal segment I single (Fig. 184); and gills on abdominal segments II-VII with dorsal lamellae terminating in a spatulate process (Fig. 187).

NOTES: The widely distributed genus *Choroterpes* has five recognized Nearctic species, one of which, *C. basalis* (Banks), is represented in Florida. Since the publication of *The Mayflies of Florida* (Berner and Pescador, 1988), a few papers on the taxonomy of the genus have been published (McCafferty, 1992; Burian, 1995; Henry 1995). However, the only paper of significance to the fauna of Florida is Burian (1995), a review of the taxonomy of the eastern Nearctic species of the genus in which he synonymized *C. ferruginea* Traver, *C. fusca* Spieth, and *C. hubbelli* Berner with *C. basalis*. The synonymy has greatly changed the general geographic range of *C. basalis* which now extends from eastern Canada throughout the northeastern and southeastern United States. In Florida, the species is sporadically collected but geographically widespread, occurring from the panhandle south to Collier County. The nymphs are usually found in crevices of rocks, on wood snags, in leaf packs, and among roots along the banks of streams and rivers. The nymphs are generally clinger/sprawlers and collector-gatherers. Collection records indicate that emergence in Florida appears to occur throughout the year. See Berner and Pescador (1988) for additional information on nymphal habits, ecology, seasonal distribution, and life history of the species.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Burian (1995); Edmunds and Waltz (1996).

Genus ***Habrophlebia*** Eaton

DIAGNOSIS: This small Holarctic genus can be distinguished from other leptophlebiid genera by the abdominal gills on segments II-VII consisting of a cluster of filaments (Fig. 181).

NOTES: The genus occurs throughout Europe and in Eastern North America from the mountain streams of eastern Canada to the lowland streams of north Florida (Peters, 1988). In the Nearctic, the genus is monotypic with only the geographically widespread species *Habrophlebia vibrans* Needham present in Florida.

The nymphs are rare and inhabit small streams near the edges among vegetation or in leaf debris where there is an accumulation of silt. In Florida, the species is geographically restricted to the panhandle. A few nymphs were recently collected from McDavid Creek and Mitchell Creek in Escambia County. The nymphs were found in shallow areas near the banks among leaf packs wedged between snags and roots. Knowledge of the life cycle of the species is limited. Lauzon and Harper (1986) reported a 2-year life cycle (semivoltine) for a population in Quebec in contrast to the univoltine pattern observed by Giberson and Mackay (1991) in Central Ontario, Canada. See Berner and Pescador (1988) for additional information on this species.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Habrophlebiodes*** Ulmer

DIAGNOSIS: The nymphs of *Habrophlebiodes* can be distinguished from other leptophlebiid genera by the following combination of characters: gills with prominent tracheal branches and bifurcate approximately 1/3 distance from the base (Fig. 190); labrum with moderately deep median emargination (Fig. 191); and a row of small spinules present only on posterior margins of abdominal terga VI-X or VII-X (Fig. 192).

NOTES: This genus occurs in the Orient and Nearctic. The vicariant distribution of *Habrophlebiodes* was reviewed by Peters (1988). In the Nearctic, *Habrophlebiodes* is geographically restricted to eastern North America with the concentration of diversity in the Southeast. Of the four Nearctic species known, *H. americana* (Banks) has a geographic range extending from eastern Canada to the southeastern United States while the other three species are restricted to the Southeast, with *Habrophlebiodes brunneipennis* Berner represented in Florida. The nymphs of *H. brunneipennis* and *Paraleptophlebia volitans* are morphologically similar and it can be difficult to distinguish between the two taxa. We have found that the gills are most useful to distinguish between the two genera. *Habrophlebiodes* has relatively broad and short gills with prominent tracheal branches and the gills bifurcate approximately 1/3 the distance from the base (Figs. 182, 190), while the gills of *Paraleptophlebia* are relatively longer and more slender, usually without tracheal branches (in rare cases with 1-3 weakly developed branches) and are bifurcate approximately 1/4 distance from the base (Figs. 186, 193). An interesting ecological difference that we have observed between the two taxa is that *H. brunneipennis* is a common element of the benthic fauna associated with steephead streams while *P. volitans* is rare or absent from these systems. In Florida, *H. brunneipennis* is found throughout the panhandle with a few collection records from Taylor County south to Alachua County. The nymphs are commonly found in leaf packs along margins of slow to moderately swift-flowing streams. Berner and Pescador (1988) provide a comprehensive review of the ecology, seasonal distribution, life history, and behavior of the species.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

Genus ***Leptophlebia*** Westwood

DIAGNOSIS: The nymphs of *Leptophlebia* can be distinguished from other leptophlebiid genera by the following combination of characters: abdominal gills on segments II-VII forked or bilamellate (Figs. 183, 185, 188, 189); gills on abdominal segment I forked and differ in structure from those on segments II-VII (Fig. 185).

NOTES: A recent comprehensive revision of North American *Leptophlebia* has changed the taxonomy of the genus, with the redefinition of some species leading to a number of synonymies, and a subsequent change in the species composition of the genus (Burian, 2001). In North

America 7 species are now recognized, 3 of which are represented in Florida: *Leptophlebia bradleyi* Needham, *L. cupida* (Say), and *L. intermedia* (Traver). The species *Leptophlebia collina* (Traver), one of the three *Leptophlebia* species that was listed in Berner and Pescador (1988), is now a junior synonym of *L. cupida*.

The nymphs of *Leptophlebia* are found in a wide variety of habitats including streams, rivers, and lakes. In streams and rivers, they prefer to live in the quiet eddies, pools, or reaches near the banks where dead leaves accumulate and submerged vegetation is abundant. The nymphs are processors of decaying leaves. They are mostly clingers and generally collector-gatherers, with a few being scrapers. An unusual behavior demonstrated by nymphs of *Leptophlebia* is that of migration prior to emergence. In northern Europe some species migrate from the main river to marginal pools (Olsson, 1983) and in Canada *L. cupida* migrates upstream to marshy areas to emerge (Hayden and Clifford, 1974). Species of *Leptophlebia* in Illinois are found in temporary ponds in the spring (Burks, 1953) and similar records are known throughout North America (Burian, 2001). Ide (1935) considered this behavior to be characteristic of the genus. In Florida, mature *L. bradleyi* may be found on the edges of ponds in winter and *L. intermedia* is frequently found in overflow pools as water levels drop in the spring. We suspect that Florida species also migrate laterally or upstream before emergence.

Leptophebia bradleyi is one of the most distinctive species of the genus in North America. It has long and slender gills which are gradually tapered apically and have prominent networks of tracheae (Figs. 185, 188). Moreover, the species has a relatively long slender body and dorsally intricate color pattern. The nymphs are rare, mostly found in slow-flowing streams with silty bottoms, leaf litter, and submerged vegetation. The species is one of the earliest emerging mayflies in North America with adults recorded from December in the Southeast to early April in the Northeast (Burian 2001). Based on collection records, the species appears to have a univoltine life cycle. See Burian (2001) and Berner and Pescador (1988) for additional information on the ecology, seasonal distribution, and life cycle of the species. The species is widely distributed, ranging from southern New England through the Southeast across to Texas and Mexico. In Florida, the species occurs from the panhandle south to Pasco County.

The nymphs of *L. cupida* and *L. intermedia* appear morphologically similar, but can be distinguished by the shape of the setae on the inner margin of the forefemora (Figs. 201, 202) and the banding of the legs. The forefemora of *L. intermedia* are dominated by palmate setae (Fig. 201) compared to a combination of uniserrate and biserrate setae in *L. cupida* (Fig. 202). Moreover, all segments of the legs of *L. intermedia* have prominent banding while *L. cupida* has only the tibiae and tarsi prominently banded and the femora faintly banded or without banding. A good view of the shape of femoral setae requires mounting the legs of specimens on slides and careful examination under a compound microscope to accurately identify the species. Banding of the legs of the Florida species may not be as pronounced as shown in Fig. 200, hence careful observation of this character must be exercised.

The nymphs of both species are lotic, occurring in small to moderate-size streams and rivers. They are most abundant near the banks of streams and rivers where there is little movement of water and with reasonable accumulation of snags, leaf packs, and other organic debris. The ecology and biology of some northern populations of *L. cupida* and *L. intermedia* was summarized by Burian (2001). In Maine and Connecticut, the nymphs are usually sympatric with no obvious spatial, temporal, or food resource partitioning, but adult flight behavior is quite different. Berner and Pescador (1988) provide a comprehensive review of the ecology and biology of *L. intermedia* in Florida.

Leptophlebia cupida is geographically widespread across North America compared to *L. intermedia* which is concentrated in the eastern United States. Information on the distribution of these species in Florida must wait until verification of specimens previously identified as *L. intermedia* in our collection is completed.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *LEPTOPHLEBIA* [modified from Burian (2001)]

1. Gill lamellae relatively slender and gradually tapered toward apex (Fig. 195); few to no large spine-like setae along lateral margins of abdominal terga (Fig. 196); forelegs with pattern of banding as in Fig. 197 . . . . . *L. bradleyi* Needham

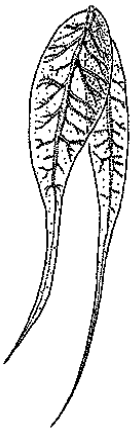


Fig. 195 [from Burian (2001)]

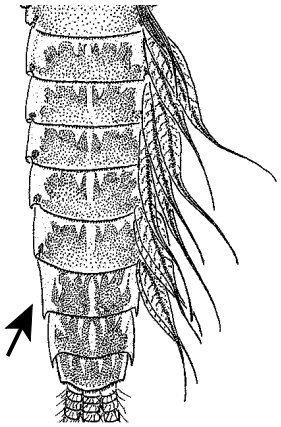


Fig. 196 [from Burian (2001)]

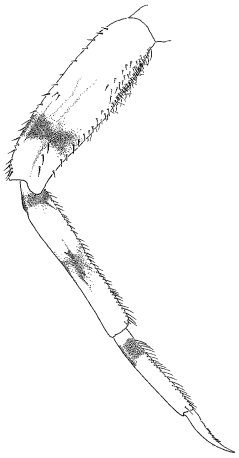


Fig. 197 [from Burian (2001)]

Gill lamellae broad, produced into one or two blunt lobes at base of apical filament (Fig. 198); several large spine-like setae along lateral margins of abdominal terga (Fig. 199); pattern of banding of forelegs as in Fig. 200 2

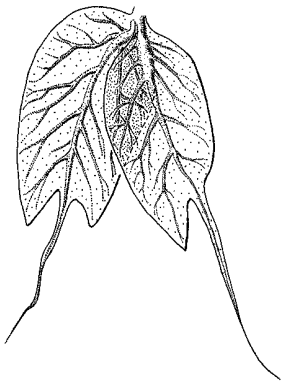


Fig. 198 [from Burian (2001)]

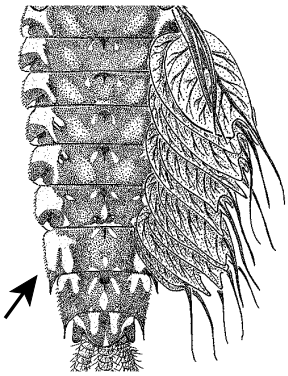


Fig. 199 [from Burian (2001)]

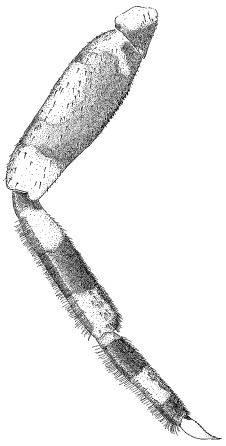


Fig. 200 [from Burian (2001)]

2 (1) Leading edge of forefemora with large palmate setae dominant (Fig. 201); legs distinctly banded (Fig. 200) . . . . . *L. intermedia* (Traver)

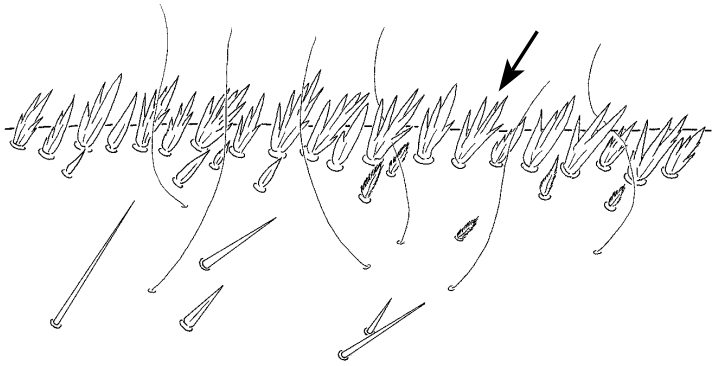


Fig. 201 [from Burian (2001)]

Leading edge of forefemora with a combination of medium and coarse uniserrate and biserrate setae (Fig. 202); legs with inconspicuous banding . . . . . *L. cupida* (Say)

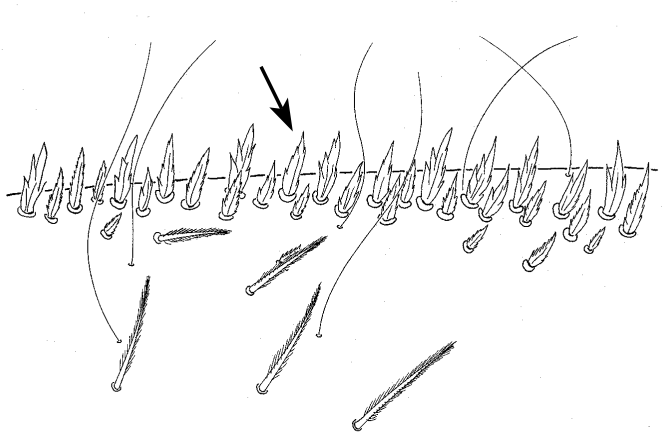


Fig. 202 [from Burian (2001)]

Genus ***Paraleptophlebia*** Lestage

DIAGNOSIS: The nymphs of *Paraleptophlebia* can be distinguished from other leptophlebiid genera by the following combination of characters: abdominal gills long and slender usually without tracheal branches, if present then 1-3 weakly developed branches (Figs. 186, 193); gills bifurcate at 1/4 distance from base (Fig. 193); labrum with broad and shallow median emargination (Fig. 194); and with row of small spinules on posterior margins of abdominal terga I-X (see Fig. 192).

NOTES*:* This Holarctic genus is the most speciose and one of the most geographically widespread leptophlebiid genera in the Nearctic with 39 recognized species. Twelve species are represented in the Southeast, with *Paraleptophlebia volitans* (McDunnough) occurring in Florida. This species has been reported in eastern North America including Florida with recent records from Oklahoma and Texas. In Florida, *P. volitans* has a similar distribution to other leptophlebiid genera with the concentration of abundance in the panhandle. Since it is the only species of the genus in the state, *P. volitans* is easily distinguished from other leptophlebiids in the state by the key generic characters. As previously noted, the morphologically similar nymphs of *P. volitans* and *H. brunneipenis* can be most easily differentiated by the gills (see notes for *Habrophlebiodes*).

The nymphs are generally found in small to medium size streams. In Florida, we have collected the nymphs in leaf packs, on snags, and among roots along banks in relatively shallow sections of streams with moderate flow. The nymphs are clingers and collector-gatherers as are most species of the genus (Giberson and Mackay, 1991). *Paraleptophlebia volitans* appears to have a univoltine life cycle and appears to emerge year round in Florida. For more detailed discussion of the ecology, seasonal distribution, life history, and behavior of the species, see Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

FAMILY METRETOPODIDAE

The family Metretopodidae includes the Holarctic genus *Metretopus* Eaton and the Nearctic genus *Siphloplecton* Clemens which is represented in Florida. Berner (1978) provided a comprehensive taxonomic review of the family. Nymphs of the family can be recognized from other mayfly families by the following combination of characters: claws of forelegs bifid (Fig. 24); claws of middle and hind legs long and slender, about as long as tibiae; and labial palpi two-segmented.

The nymphs generally occur in slow-flowing streams among vegetation in shallow water. They are mostly clingers and strong swimmers. Life cycle pattern is unknown, although collection records indicate that they are univoltine.

Genus ***Siphloplecton*** Clemens

DIAGNOSIS: The nymphs of *Siphloplecton* are distinguished from other Florida mayflies by the characters for the family given above.

NOTES: Of the seven species of *Siphloplecton,* four are represented in Florida: *S. brunneum* Berner, *S. fuscum* Berner, *S. simile* Berner, and *S. speciosum* Traver. Since the publication of Berner (1978) little study has been done on this group. Only adults of *Siphloplecton* can be accurately identified to species in Florida. We have not found any reliable characters to separate the nymphs of the four species. For now, we advise people to refrain from attempting to identify the nymphs to species until reliable characters are found for accurate identification. The geographic distribution of *Siphloplecton* in Florida is restricted to the panhandle. Collection records for Florida species of *Siploplecton* are as follows: *S. speciosum* is the most widespread species and is known from Holmes County westward; *S. brunneum* is known only from Pine Log Creek, Bay County and the Blackwater River in Okaloosa and Santa Rosa Counties; *S. fuscum* is known only from the Blackwater River, Okaloosa County; and *S. simile* is known from the Withlacoochee River, Hamilton County and also the Blackwater River, Okaloosa and Santa Rosa Counties. Adults have been collected from January through early April. For additional information on taxonomy and biology of the species see Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

FAMILY NEOEPHEMERIDAE

The family Neoephemeridae occurs in the Holarctic, Palearctic, and Oriental regions. Following the recent revision by Bae and McCafferty (1998), only the genus *Neoephemera* occurs in North America. The nymphs can be distinguished from other mayfly families by the following combination of characters: abdominal gills 2 quadrate and joined medially covering succeeding gills (Fig. 16); maxillary and labial palpi three segmented; and hind wingpads present. The nymphs are found in moderate-sized streams in areas of slow to moderate flow. Leaf packs, moss, and submerged roots along undercut banks are preferred microhabitats. The nymphs are clinger/sprawlers and are shredders and to some extent gatherers. Where life cycle is known, they are univoltine.

Genus ***Neoephemera*** McDunnough

DIAGNOSIS: The nymph of *Neoephemera* is quite distinctive and easily recognized by the characters that define the family. In addition to the above mentioned family characters, the thoracic mesonotum has distinct anterolateral lobes (Fig. 16) and the caudal filaments lack long setae (Figs. 203, 204).

NOTES*:* In the Nearctic, *Neoephemera* has four species, with *N. compressa* Berner and *N. youngi* Berner represented in Florida. The two species are distinctive, with differences in the degree of development of the posterolateral spines of the abdominal segments, being much more prominent in *N. compressa* than in *N. youngi* (Figs. 203, 204). Their geographic distribution is restricted to the panhandle, although *N. compressa* has not been recorded outside of the Alapaha and Suwannee River basins compared to *N. youngi* which generally occurs across the panhandle. We have observed collections of *N. youngi* to be of reduced number in areas where they were previously common in samples in the 1970's and 1980's such as Rocky Comfort and Bear Creeks in the Ochlockonee River basin. Of streams that we have collected in recent years, the only streams where the species still remains a major component of the benthic assemblage are Flat and Crooked Creeks in Gadsden County. The nymphs are collected along the canopied banks of these moderate-size, sand-bottomed streams where there is plenty of organic debris trapped among submerged roots along undercut banks. The emergence pattern of both species is similar and occurs from late spring to early summer and both species appear to have a univoltine life cycle.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

KEY TO SPECIES FOR MATURE NYMPHS OF FLORIDA *NEOEPHEMERA* [from Berner and Pescador (1988)]

1. Posterolateral abdominal spines strongly produced (Fig. 203); posterior margin of abdominal terga VI-VIII with median spines; anterolateral corners of mesonotum pointed (Fig. 203); pronotal submedian tubercles prominent . . . . . *N. compressa* Berner

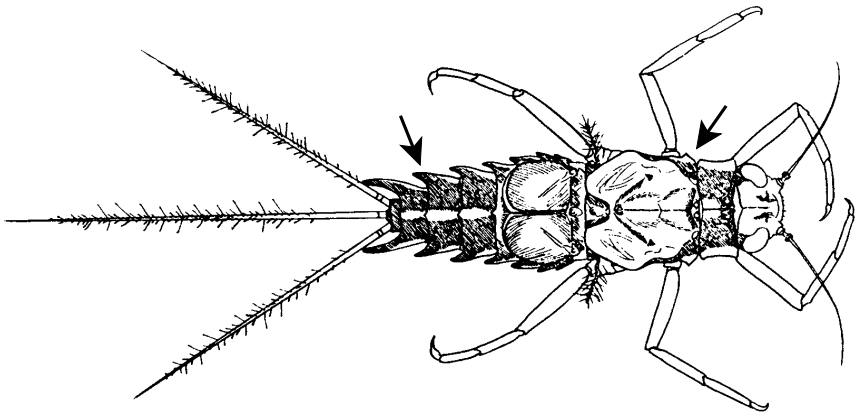


Fig. 203 [from Berner (1956)]

Posterolateral abdominal spines moderately produced (Fig. 204); posterior margin of abdominal terga VII-VIII without median spines, slightly developed on VI; anterolateral corners of mesonotum rounded (Fig. 204); pronotal submedian tubercles reduced . . . . . *N. youngi* Berner

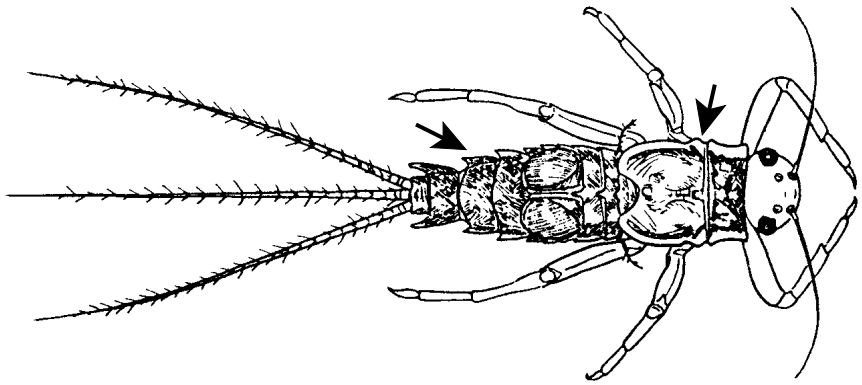


Fig. 204 [from Berner (1956)]

FAMILY OLIGONEURIIDAE

The Oligoneuriidae are a unique group and perhaps the most highly evolved among the adult mayflies because of their adaptation for swift flight. A good number of species in the family are rare or endangered. The nymphs can be distinguished from other families of mayflies by the following combination of characters: inner margins of femora and tibiae of forelegs with a double row of long setae (Fig. 12); gills of abdominal segment I ventral (Fig. 12); forecoxae without gills; and accessory gills present at bases of maxillae. This essentially Pantropical family is believed to have evolved in the South America-Africa-Madagascar-India landmass. The family is represented in the Nearctic by the genera, *Homoeoneuria* and *Lachlania,* with the former occurring in Florida. The nymphs are generally found in moderate-sized streams and large rivers. The swift-current dwelling nymphs have radiated into either slow moving forms that cling tenaciously to rocks, snags, trapped debris and leaf packs in the current or agile semi-burrowers in loose shifting sand. The nymphs are collectors/filter-feeders and appear to have a univoltine life cycle.

Genus ***Homoeoneuria*** Eaton

DIAGNOSIS: The nymphs of *Homoeoneuria* can be distinguished from other oligoneuriid genera by the following combination of characters: foretarsi reduced to papilla-like structure (Fig. 12); meso- and metatarsal claws are non-denticulate; and abdominal sternum I with finger-like posteromedian process (Fig. 13).

NOTES: Pescador and Peters (1980) published a comprehensive revision of the genus including its zoogeography, keys to nymphs and adults, and general ecology and biology of the species. Of the six recognized species of the genus, five are Nearctic and one is Neotropical. Only one species, *Homoeoneuria dolani* Edmunds, Berner and Traver, is represented in Florida. The nymph of *H. dolani* is distinguished from other species of the genus by the following: lack of a spot on the prothoracic coxae; without pigmentation or markings on the vertex and thoracic nota; distance of papilla-like tarsi of forelegs from apex of tibiae approximately 2/3 maximum width of tibiae; and apical portion of foretibiae straight.

The nymphs are semi-burrowers forming a U-shaped burrow with the head and mouthparts exposed above the surface of the substrate, facing the current, and apical section of the caudal filaments exposed. The nymphs are collectors/filter-feeders and appear to have a univoltine life cycle (Pescador and Peters, 1980).

The species has only been collected in sandy rivers of the Southeast. In Florida, the nymphs were collected in loose shifting sand near the river edge at depths of 0.8-1.5 meters in moderately fast flowing reaches of the Blackwater, Shoal, and Yellow Rivers. The nymphs were collected from May to October and adults in late July to August. For more information on the ecology and biology of the species consult Pescador and Peters (1980) and Berner and Pescador (1988).

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

FAMILY POLYMITARCYIDAE

The family Polymitarcyidae is a group of specialized burrowing mayflies. The family has four Nearctic genera, with *Ephoron* and *Tortopus* represented in Florida. The nymphs of Polymitarcyidae can be distinguished from other mayfly families by the following combination of characters: mandibular tusks not curved upward when viewed laterally (Fig. 9); and ventral apex of hind tibiae rounded (Fig. 10). The nymphs occur in larger streams, rivers, and lakes and generally form U-shaped burrows in the substrate. They are collector-gatherers and to a certain extent filter-feeders.

KEY TO MATURE NYMPHS OF FLORIDA POLYMITARCYIDAE
[modified from Edmunds and Waltz (1996)]

1. Mandibular tusks slender with numerous tubercles on upper surface (Fig. 205); head with prominent frontal process (Fig. 206); foretarsi rounded and clearly demarcated from foretibiae (Fig. 206) . . . . . *Ephoron* (p.100)

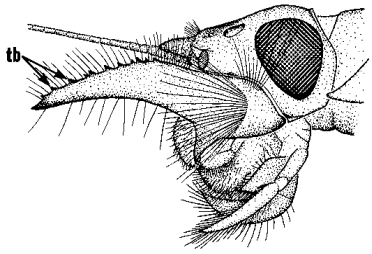


Fig. 205 [from Edmunds, Jensen, & Berner (1976)]

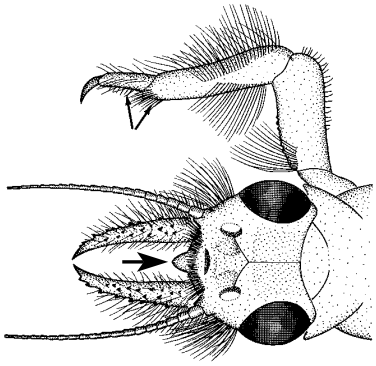


Fig. 206 [from Edmunds, Jensen, & Berner (1976)]

Mandibular tusks robust with one to three tubercles on inner margin (Fig. 207); head without frontal process, at most an expanded shelf area (Fig. 207); foretarsi flattened and broadly fused with tibiae (Fig. 207) . . . . . *Tortopus* (p. 100); *T. puella* (Pictet)

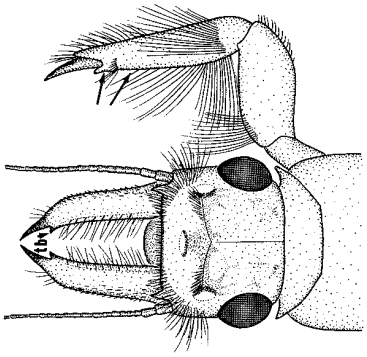


Fig. 207 [modified from Edmunds, Jensen, & Berner (1976)]

Genus ***Ephoron*** Williamson

DIAGNOSIS: The nymphs of *Ephoron* can be distinguished from other polymitarcyid genera by the following combination of characters: mandibular tusks slender with numerous tubercles on upper surface (Fig. 205); head with prominent frontal process (Fig. 206); and foretarsi rounded and clearly demarcated from foretibiae (Fig. 206).

NOTES: There are two North American species of *Ephoron*, *E. album* (Say) and *E. leukon* Williamson. An immature nymph was recently collected from the Alapaha River near Jennings, Hamilton County. According to Robert Mattson who collected the nymph by dipnet, the specimen was taken in the middle of the river at a time when the water level was unseasonably low. The nymph is too immature to accurately identify to species. For now we simply designate it as *Ephoron* sp. This specimen is a new state record.

The genus generally occurs in relatively large streams in gravel and sand in a wide variety of currents from slow-moving sections of rivers to the swift riffles of streams. Nymphs usually stay deep in their burrows during the daylight but migrate near the surface at night.

ADDITIONAL REFERENCES: Edmunds and Waltz (1996).

Genus ***Tortopus*** Needham and Murphy

DIAGNOSIS: The nymphs of *Tortopus* can be distinguished from other genera of the family by the following combination of characters: mandibular tusks robust with one to three tubercles on inner margin (Fig. 207); head without frontal process, at most an expanded shelf area (Fig. 207); foretarsi flattened and broadly fused with tibiae (Fig. 207).

NOTES: There are three Nearctic species of *Tortopus*, with *T. puella* (Pictet) represented in Florida. *Tortopus puella* is now the senior synonym of *T. incertus,* the name listed in Berner and Pescador (1988). In Florida, the species has only been collected in the panhandle, most commonly from the Apalachicola and Choctawhatchee drainages. The nymphs burrow into clay banks at right angles to the surface and produce U-shaped tubes with parallel arms. *Tortopus* nymphs filter-feed in their burrows. The adults emerge from late June to late October and the species appears to have a univoltine life cycle. For more information on the ecology and biology of the species refer to Berner and Pescador (1988)

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996).

FAMILY PSEUDIRONIDAE

Berner and Pescador (1988) treated *Pseudiron* in Pseudironinae, a subfamily of Heptageniidae. It is now treated as a family. Pseudironidae differ from the closely related Heptageniidae by their elongate abdominal gills and the subequal length of the tibiae and tarsal claws. Additionally, nymphs can be distinguished from other mayfly families by the following combination of characters: tarsal claws as long or longer than the tarsi; tarsi and tibiae bowed (Fig. 20); maxillary palpi four-segmented (Fig. 21); abdominal gills with finger-like attachment (Fig. 22).

The nymphs are mostly associated with sandy river beds in medium-sized streams to large rivers over much of North America. In the Blackwater and Yellow Rivers, the nymphs occur in coarse and loose shifting sand, strong current, and deeper areas of the river. The predatory nymphs are sprawlers with their long slender legs spread out spider-like. They have a univoltine life cycle. Although uncommon and rarely collected, the genus has a wide geographic distribution occurring in the central and southeastern United States west to Utah and Wyoming and across central and western Canada. In Florida, the species is confined to the sandy rivers of the western panhandle.

Genus ***Pseudiron*** McDunnough

DIAGNOSIS: The nymphs of this genus are easily distinguished from other mayflies by the family characters mentioned above. Pescador (1985) provides a comprehensive review of the taxonomy, distribution, ecology, and biology of *Pseudiron centralis* McDunnough which is summarized in Berner and Pescador (1988). The species' interesting geographic gradation of color and pigmentation is also discussed, whereby northern populations are darker and more heavily pigmented than southern populations. Recently, however, the late Dr. W. L. Peters and J. G. Peters collected nymphs from the Yellow River which have similar coloration and pigmentation as northern populations. These specimens are darker and have more intricate pigmentation than the typical light colored nymphs of the species in the area. Populations of these two forms would be excellent candidates for molecular analysis to explore a possible genetic basis for color dimorphism. The two nymphal forms are shown in **Figures H** (light form, Blackwater River) and **I** (dark form, Yellow River) of **Plate III**.

H I

PLATE III. *Pseudiron centralis*

NOTES: The nymphs are predatory and feed primarily on chironomid larvae. The emergence pattern of adults appears to be similar across its geographic range. In the Sand River of Alberta, Canada adults emerged from late June to late July (Soluk and Clifford, 1984) and from mid-March to early May in Florida (Pescador, 1985).

Pseudiron centralis, Dolania americana, and *Homoeoneuria dolani* are all restricted to lotic habitats with clean shifting sand substrates. All three species occur in the Blackwater and Yellow River drainages in Florida. These species are most sensitive to sedimentation because it creates compaction and significantly reduces the loose shifting ability of the sand, a critical environmental requirement for the survival of these species. Increasing sedimentation in the area could have a significant impact on the survival of these rare species in the state.

ADDITIONAL REFERENCES: Berner and Pescador (1988); Edmunds and Waltz (1996); Wang and McCafferty (1995).

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APPENDIX A: CHECKLIST OF FLORIDA MAYFLIES

The mayfly fauna of Florida presently includes 76 species representing 41 genera in 15 families. The arrangement of taxa in this checklist follows a modified version of the scheme of classification used by McCafferty (1991).

KEY: N = nymph known in Florida; **N* =** nymphal identification is problematic in Florida; **A =** adult known in Florida; **??** = dubious record; **???** = previously reported in the state but no collection record in the past 50 years

Suborder Carapacea

Family Baetiscidae

Baetisca becki Schneider & Berner	N A
B. escambiensis Berner	N A
B. gibbera Berner	N
B. laurentina McDunnough	N ??
B. obesa (Say)	N A
B. rogersi Berner	N A

Suborder Furcatergalia

Infraorder Lanceolata

Family Leptophlebiidae

Choroterpes basalis (Banks)	N A
Habrophlebia vibrans Needham	N
Habrophlebiodes brunneipennis Berner	N A
Leptophlebia bradleyi Needham	N A
L. cupida (Say)	N* A
L. intermedia (Traver)	N* A
Paraleptophlebia volitans (McDunnough)	N A

Infraorder Palpotarsa

Family Behningiidae

Dolania americana Edmunds & Traver	N A

Infraorder Scapphodonta

Family Polymitarcyidae

Ephoron sp.	N
Tortopus puella (Pictet)	N A

Family Ephemeridae

Ephemera simulans Walker	N ???
*Hexagenia bilinea*ta (Say)	A
H. limbata (Serville)	N* A
H. orlando Traver	N* A
Pentagenia vittigera (Walsh)	A ???

Infraorder Pannota

Family Neoephemeridae

Neoephemera compressa Berner	N	A
N. youngi Berner	N	A

Family Caenidae

Brachycercus berneri Soldán	N	A
B. maculatus Berner	N	A
B. nasutus Soldán	N	A
Brachycercus n. sp.	N	
Caenis amica Hagen	N	A
C. diminuta Walker	N	A
C. hilaris (Say)	N	A
C. macafferti Provonsha	N	A
C. punctata McDunnough	N	A
Cercobrachys etowah Soldán	N	A

Family Ephemerellidae

Attenella attenuata (McDunnough)	N	A
Dannella simplex (McDunnough)	N	
Ephemerella excrucians Walsh	N	
Ephemerella invaria (Walker)	N	A
Eurylophella doris (Traver)	N	A
Serratella deficiens (Morgan)	N	

Family Leptohyphidae

Asioplax dolani (Allen)	N	
Tricorythodes albilineatus Berner	N	A

Suborder Pisciforma

Family Baetidae

Acentrella alachua (Berner)	N	A
Acentrella parvula (McDunnough)	N	A
Acerpenna pygmaea (Hagen)	N	A
Baetis intercalaris McDunnough	N	A
Callibaetis floridanus Banks	N	A
C. pretiosus Banks	N	A
Centroptilum triangulifer (McDunnough)	N	
Diphetor hageni (Eaton)	N	A
Plauditus bimaculatus (Berner)	N	A
P. punctiventris (McDunnough)	N	
Procloeon hobbsi (Berner)	N	A
P. rubropictum (McDunnough)	N	A

P. viridoculare (Berner)	N	A
Pseudocentroptiloides usa Waltz & McCafferty	N	
Pseudocloeon ephippiatum (Traver)	N	A
P. frondale (McDunnough)	N	A
P. propinquum (Walsh)	N	A
Family Metretopodidae		
S. brunneum Berner		A
S. fuscum Berner		A
S. simile Berner		A
S. speciosum Traver	N*	A
Suborder Setisura		
Family Isonychiidae		
Isonychia arida (Say)	N*	A
I. berneri Kondratieff & Voshell		A
I. georgiae McDunnough	N	
I. sayi Burks	N	A
I. sicca (Walsh)	N*	A
Family Oligoneuriidae		
Homoeoneuria dolani Edmunds, Berner & Traver	N	A
Family Pseudironidae		
Pseudiron centralis McDunnough	N	A
Family Heptageniidae		
Heptagenia flavescens (Walsh)	N	A
Maccaffertium exiguum (Traver)	N	A
M. mexicanum integrum (McDunnough)	N	A
M. smithae (Traver)	N	A
Macdunnoa brunnea Flowers	N	A
Stenacron floridense (Lewis)	N	A
S. interpunctatum (Say)	N	A

APPENDIX B: DATABASE OF FLORIDA MAYFLIES

Appendix B includes a database of the 76 mayfly species known in the state. Knowledge of the distribution and regional biodiversity of species and the ecosystems in which they live is essential to the identification of biologically important areas and facilitates setting priorities for conservation and restoration. Additionally, basic information on geographic distribution provides insight as to what species can be expected to occur in a given study area and from this sampling strategies may then be selected for certain target species. The efficacy of the benthic sampling strategies can later be evaluated through comparison of taxa sampled with past collection records (Pescador et al., 1995, 2000). Likewise, general knowledge of the seasonality of the life stages can assist in the development of effective sampling strategies in any biomonitoring exercise.

The data tables presented below, one for each mayfly family arranged alphabetically by genus and species, were extracted from part of the database which we are constantly updating to keep track of mayfly collection records in Florida. There are approximately 1500 collection records compiled in the this part of the database. The information sources we used to gather these data include the following: 1) specimens loaned to us and examined during the course of preparing the guide; 2) mayfly collections housed in the Florida A&M collection; and 3) records gleaned from the taxonomic literature. With respect to all three of these sources, the data tables are a survey and only a representative account of the Ephemeroptera of Florida. These records provide essential baseline information for a more comprehensive future inventory of the mayfly fauna of the state.

Data fields for each family table include: **Species** (scientific names, arranged alphabetically); **Basin** (USGS basin where collection was made); **Waterbody** (name of the river, stream, or lake where the species was collected); **County** (county where collected); **Stage** (life stage, N= nymph; A= adult); **Date Coll.** (the month, day, and year the species was collected); **Source** (source of collection record, including one of the following: literature records enclosed in parentheses; the abbreviated names of agencies that loaned us material; or mayfly collections housed at Florida A&M University, abbreviated as FAMU)]; and **Locality description** (information on the exact location of the collection site). The agencies that have loaned us specimens for study include: Florida Department of Environmental Protection (FDEP), and Suwannee River Water Management District (SRWMD). Additonal information that is included in the FAMU data such as FAMU Ravines Study, FAMU Eglin Study or FAMU ORB (Ochlockonee River Basin) etc., refers to research projects that facilitated the collection of the specimens.

The veracity and completeness of the following data were dependent on the amount of information presented with collection accounts and the locality labels of the given sources. In many cases collection information is vague as to exact collection locality.

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Acentrella alachua				N	3/9/1983	FDEP Punta Gorda	25020004
Acentrella alachua				N	11/4/1986	FDEP Punta Gorda	26010518
Acentrella alachua		Cypress Ck.		N		FDEP Punta Gorda	July 1999, near Alva, FL
Acentrella alachua	Aucilla R.	Aucilla R.	Jefferson	N	2/18/1993	FAMU	Hwy 98
Acentrella alachua	Santa Fe R.	Blues Ck.	Alachua	N	2/1/1997	FAMU	NW Gainesville
Acentrella alachua	Suwannee R. (lower)	Suwannee R.	Lafayette/Suwannee	N	6/2/1993	SRWMD	SR 51
Acentrella parvula	Apalachicola R.	Rock Ck.	Liberty	N	6/26/1996	FAMU Ravines Study	Torreya State Park, lower end
Acentrella parvula	Apalachicola R.	Rock Ck.	Liberty	N	4/9/1998	FAMU Ravines Study	Torreya State Park, lower end
Acentrella parvula	Apalachicola R.	Sweetwater Ck.	Liberty	N	6/12/2003	FAMU Ravines Study	CR 270
Acentrella parvula	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	12/17/1991	FAMU	3 km N of SR 6
Acentrella parvula	Withlacoochee R., N.	Withlacoochee R.	Hamilton/Madison	N	6/3/1992	SRWMD	above Suwannee R.
Acerpenna pygmaea				N	2/23/1983	FDEP Punta Gorda	26010592
Acerpenna pygmaea	Apalachicola R.	Crooked Ck.	Gadsden	N	3/22/1995	FAMU Ravines Study	CR 270
Acerpenna pygmaea	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	upper end, Site 5
Acerpenna pygmaea	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	6/24/1996	FAMU Ravines Study	upper end, Site 5
Acerpenna pygmaea	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	4/1/1999	FAMU Ravines Study	at head
Acerpenna pygmaea	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/18/1995	FAMU Ravines Study	CR 270
Acerpenna pygmaea	Apalachicola R.	Sweetwater Ck.	Liberty	N	11/2/1996	FAMU Ravines Study	CR 270
Acerpenna pygmaea	Apalachicola R.	Sweetwater Ck.	Liberty	N	11/20/1998	FAMU Ravines Study	CR 270
Acerpenna pygmaea	Aucilla R.	Aucilla R.	Jefferson	N	8/21/1991	FAMU	Hwy 98
Acerpenna pygmaea	Aucilla R.	Aucilla R.	Jefferson	N	4/15/1992	FAMU	Hwy 27, AR2-A
Acerpenna pygmaea	Aucilla R.	Aucilla R.	Jefferson	N	6/17/1992	FAMU	Hwy 27, AR2
Acerpenna pygmaea	Aucilla R.	Aucilla R.	Jefferson	N	12/9/1992		Hwy 27, AR2
Acerpenna pygmaea	Aucilla R.	Aucilla R.	Jefferson	N	4/28/1993	FAMU	Hwy 90, AR1
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	6/19/1991	FAMU	Hwy 98, ER2-A
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	6/19/1991	FAMU	Hwy 98, ER2
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	8/21/1991	FAMU	Hwy 98, ER2-A
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	2/19/1992	FAMU	Hwy 98, ER2
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	4/15/1992	FAMU	Econfina Community, ER3-A
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	10/21/1992	FAMU	Hwy 98, ER2
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	2/18/1993	FAMU	Hwy 98, ER2
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	4/14/1993	FAMU	Hwy 98, ER2-C

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Acerpenna pygmaea	Aucilla R.	Econfina R.	Taylor	N	4/14/1993	FAMU	Hwy 98, ER2
Acerpenna pygmaea	Choctawhatchee Bay	Blount Ck.	Walton	N	11/21/1998	FAMU Ravines Study	Eglin AFB, unnamed BR off BR 201
Acerpenna pygmaea	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 221
Acerpenna pygmaea	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 221
Acerpenna pygmaea	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Acerpenna pygmaea	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 221
Acerpenna pygmaea	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Acerpenna pygmaea	Choctawhatchee Bay	S. trib. Sconiers Mill Ck.	Walton	N	3/3/2000	FAMU	CR 278, 4.5 mi SW DeFuniak Springs
Acerpenna pygmaea	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Acerpenna pygmaea	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Acerpenna pygmaea	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 637
Acerpenna pygmaea	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Acerpenna pygmaea	Ochlockonee R.	Camp Ck.	Gadsden	N	2/24/1987	FAMU ORB Study	CR 274
Acerpenna pygmaea	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/14/1995	FAMU Ravines Study	near lower end
Acerpenna pygmaea	Ochlockonee R.	Telogia Ck.	Liberty	N	7/1/1987	FAMU ORB Study	CR 271
Acerpenna pygmaea	Santa Fe R.	Santa Fe R.	Alachua/Bradford	N	6/9/1992	SRWMD	CR 231/235
Acerpenna pygmaea	Santa Fe R.	unnamed stream	Alachua	N	11/30/1996	FAMU	San Felasco State Preserve
Acerpenna pygmaea	St. Johns R. (lower)	Gold Head Branch	Clay	A	6/27/1998	FAMU Ravines Study	Gold Head Branch St. Park
Acerpenna pygmaea	St. Johns R. (lower)	Gold Head Branch	Clay	A	6/27/1998	FAMU Ravines Study	Gold Head Branch St. Park
Acerpenna pygmaea	St. Johns R. (lower)	Gold Head Branch	Clay	N	6/27/1998	FAMU Ravines Study	Gold Head Branch St. Park
Acerpenna pygmaea	St. Johns R. (lower)	Gold Head Branch	Clay	N	3/7/1999	FAMU Ravines Study	Gold Head Branch St. Park
Acerpenna pygmaea	St. Johns R. (upper)	Econlockhatchee R.	Seminole	N	5/12/2001	FAMU	Snowhill Rd.
Acerpenna pygmaea	St. Marks R.	Burnt Mill Ck.	Jefferson	N	12/2/1992	FAMU	SR 59
Acerpenna pygmaea	St. Marks R.	Burnt Mill Ck.	Jefferson	N	4/1/1993	FAMU	Hwy 27
Acerpenna pygmaea	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	10/29/1998	FAMU Ravines Study	Eglin AFB, BR 601
Acerpenna pygmaea	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Acerpenna pygmaea	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 601
Acerpenna pygmaea	Yellow R.	Little Boiling Ck.	Santa Rosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 213
Baetis intercalaris				N	3/9/1983	FDEP Punta Gorda	25020004
Baetis intercalaris				N	12/23/1983	FDEP Punta Gorda	25020401
Baetis intercalaris	Apalachicola R.	Crooked Ck.	Gadsden	N	3/22/1995	FAMU Ravines Study	CR 270
Baetis intercalaris	Apalachicola R.	Crooked Ck.	Gadsden	N	2/19/1998	FAMU Ravines Study	CR 270, 10 km W of Greensboro

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Baetis intercalaris	Apalachicola R.	Crooked Ck.	Gadsden	A	6/7/1999	FAMU Ravines Study	CR 270
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	3/22/1995	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	11/2/1996	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	2/19/1998	FAMU Ravines Study	CR 270A, 8 km S of Chattahoochee
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU Ravines Study	SR 269, 8 km S of Chattahoochee
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	2/18/1999	FAMU Ravines Study	CR 270A, 8 km S of Chattahoochee
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	4/27/1999	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	A	6/7/1999	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Baetis intercalaris	Apalachicola R.	No Name Branch	Liberty	N	2/11/2003	FDEP Pensacola	No Name Ravine, ABRP off CR 270
Baetis intercalaris	Apalachicola R.	Rock Ck.	Liberty	N	6/26/1996	FAMU Ravines Study	Torreya State Park
Baetis intercalaris	Apalachicola R.	Rock Ck.	Liberty	A	6/8/1999	FAMU Ravines Study	Torreya State Park, lower end
Baetis intercalaris	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/18/1995	FAMU Ravines Study	CR 270
Baetis intercalaris	Apalachicola R.	Sweetwater Ck.	Liberty	N	11/20/1998	FAMU Ravines Study	CR 270
Baetis intercalaris	Apalachicola R.	Sweetwater Ck.	Liberty	N	6/7/1999	FAMU Ravines Study	CR 270
Baetis intercalaris	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	2/19/1998	FAMU Ravines Study	CR 270A, 8 km S of Chattahoochee
Baetis intercalaris	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	2/18/1999	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	4/27/1999	FAMU Ravines Study	CR 270A
Baetis intercalaris	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	3/2/2000	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Baetis intercalaris	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	6/8/1999	FAMU Ravines Study	CR 270, ABRP, Traveler's Tract
Baetis intercalaris	Aucilla R.	Aucilla R.	Jefferson	N	2/18/1993	FAMU	Hwy 98
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	3/3/1986	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	5/1/1986	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	5/25/1988	FAMU ORB Study	CR 159, 4 mi NW Havana
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/23/1988	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/12/1991	FAMU ORB Study	SR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	8/14/1991	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	2/12/1992	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/8/1992	FAMU ORB Study	CR 159, 6.5 km NW Havana
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	12/7/1992	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	2/11/1993	FAMU ORB Study	CR 159

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Family: Baetidae Page 1-4

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/7/1993	FAMU ORB Study	CR 159
Baetis intercalaris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	1/27/1994	FAMU ORB Study	SR 159, 6.5 km NW Havana
Baetis intercalaris	Ochlockonee R.	Bear Ck.	Gadsden	N	9/26/1968	FAMU	bridge on dirt rd, 1 mi N of SR 65C
Baetis intercalaris	Ochlockonee R.	Camp Ck.	Gadsden	N	10/29/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Camp Ck.	Gadsden	N	6/14/1988	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Camp Ck.	Gadsden	N	12/15/1988	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck	Gadsden	N	2/23/2000	FAMU	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck.	Gadsden	N	1/14/1987	FAMU ORB Study	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck.	Gadsden	N	1/14/1987	FAMU ORB Study	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck.	Gadsden	N	2/24/1987	FAMU ORB Study	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Cane Ck.	Gadsden	N	6/14/1988	FAMU ORB Study	Cane Ck Rd off CR 274
Baetis intercalaris	Ochlockonee R.	Little R.	Gadsden	N	5/1/1986	FAMU ORB Study	SR 12
Baetis intercalaris	Ochlockonee R.	Little R.	Gadsden	N	2/12/1987	FAMU ORB Study	SR 12, 5 mi SW Havana, Sta 4
Baetis intercalaris	Ochlockonee R.	Little R.	Gadsden	N	2/29/1988	FAMU ORB Study	CR 268, 6.5 mi SE Quincy, Sta. 6
Baetis intercalaris	Ochlockonee R.	Little R.	Gadsden	N	2/12/1992	FAMU ORB Study	Hwy 90
Baetis intercalaris	Ochlockonee R.	Little R.	Gadsden	N	4/7/1993	FAMU ORB Study	Hwy 90
Baetis intercalaris	Ochlockonee R.	Monroe Ck.	Gadsden	N	4/30/2000	FAMU	CR 268
Baetis intercalaris	Ochlockonee R.	Monroe Ck.	Gadsden	N	3/10/2001	FAMU	CR 268
Baetis intercalaris	Ochlockonee R.	Ochlockonee R.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	5/29/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	5/29/1986	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	5/29/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	8/18/1986	FAMU ORB Study	SR 65B
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	10/29/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	1/14/1987	FAMU ORB Study	SR 65B
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	1/14/1987	FAMU ORB Study	CR 274

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	9/2/1987	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	2/8/1988	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	6/14/1988	FAMU ORB Study	CR 274
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/15/1988	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/15/1988	FAMU ORB Study	CR 267
Baetis intercalaris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	3/27/1990	FAMU ORB Study	CR 274, 5.3 mi SW Quincy, Sta. 1
Baetis intercalaris	Ochlockonee R.	Telogia Ck.	Gadsden	N	3/4/1987	FAMU ORB Study	SR 65D, 2 mi SE Greensboro, Sta 1
Baetis intercalaris	Ochlockonee R.	Three Pole Ck.	Leon	N	4/3/1995	FDEP Tallahassee	CR 260
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	5/1/1986	FAMU ORB Study	SR 65
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	11/25/1986	FAMU ORB Study	SR 65 + 65A, 6.5 mi N Quincy, Sta. B
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	2/12/1987	FAMU ORB Study	CR 161, 6 mi NE Quincy
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	4/27/1999	FAMU	SR 65
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N Quincy
Baetis intercalaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	2/24/2001	FAMU	Barineau Rd 0.75 mi W SR 65
Baetis intercalaris	Ochlockonee R.	Winkley Branch	Gadsden	N	10/25/1988	FAMU ORB Study	SR 12, 3.5 mi E Quincy, Sta. 5
Baetis intercalaris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	4/1/1992	FAMU	CR 59
Baetis intercalaris	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	12/17/1991	FAMU	3 km N of SR 6
Baetis intercalaris	Withlacoochee R., N.	Withlacoochee R.	Hamilton/Madison	N	9/2/1992	SRWMD	above Suwannee R.
Callibaetis floridanus				N	4/7/1983	FDEP Punta Gorda	DER swale, Punta Gorda
Callibaetis floridanus	Apalachicola R.	Beaver Dam Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, Site 6
Callibaetis floridanus	Santa Fe R.	Santa Fe R.	Alachua/Columbia	N	6/10/1992	SRWMD	Hwy 441
Callibaetis floridanus	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1991	FAMU	Hwy 98
Callibaetis floridanus	Steinhatchee R.	Econfina R.	Taylor	N	9/8/1993	FAMU	Hwy 27
Callibaetis floridanus	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994	FAMU	Hwy 98
Callibaetis floridanus	Suwannee R. (upper)	Suwannee R.	Hamilton	N	12/17/1991	FAMU	0.5 km E of Hwy 129
Callibaetis pretiosus	Apalachicola R.	Beaver Dam Ck.	Liberty	A	6/24/1996	FAMU Ravines Study	ABRP, Site 6

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Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Callibaetis pretiosus	Apalachicola R.	Crooked Ck.	Gadsden	A	4/1/1999	FAMU Ravines Study	CR 270
Callibaetis pretiosus	Apalachicola R.	Kelley Branch	Liberty	N	3/11/1994	FAMU Ravines Study	ABRP, Site 1
Callibaetis pretiosus	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, Site 4
Callibaetis pretiosus	Aucilla R.	Aucilla R.	Jefferson	N	6/17/1992	FAMU	Hwy 27
Callibaetis pretiosus	Aucilla R.	Aucilla R.	Jefferson	N	12/9/1992	FAMU	Hwy 27
Callibaetis pretiosus	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	8/14/1991	FAMU Ravines Study	near lower end
Callibaetis pretiosus	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	10/15/1991	FAMU Ravines Study	near lower end
Callibaetis pretiosus	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/5/1991	FAMU Ravines Study	near lower end
Callibaetis pretiosus	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/12/1992	FAMU Ravines Study	near lower end
Callibaetis pretiosus	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	7/9/1986	FAMU ORB Study	SR 12
Callibaetis pretiosus	Santa Fe R.	Santa Fe R.	Columbia	N	5/12/1993	SRWMD	O'leno State Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	5/1/1998	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	6/27/1998	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	10/3/1998	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	10/3/1998	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	3/6/1999	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	3/6/1999	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Johns R. (lower)	Gold Head Branch	Clay	A	6/5/1999	FAMU Ravines Study	Gold Head Branch St. Park
Callibaetis pretiosus	St. Marks R.	St. Marks R.	Leon	N	6/3/1992	FAMU	1.5 km NE Chaires
Callibaetis pretiosus	St. Marks R.	St. Marks R.	Leon	N	4/1/1993	FAMU	1.5 km NE Chaires
Callibaetis pretiosus	Yellow R.	Little Boiling Ck.	Santa Rosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 213
Callibaetis pretiosus	Yellow R.	Shoal R.	Okaloosa	A	10/16/1997	FAMU Ravines Study	Hwy 90, 2 mi E Crestview
Centroptilum triangulifer	Apalachicola R.	Wilson Mill Ck.	Calhoun	N	10/28/2004	FAMU	CR 274
Centroptilum triangulifer	Chipola R.	Chipola R.	Calhoun	N	1/20/1974	FAMU	SR 20
Centroptilum triangulifer	St. Marks R.	Burnt Mill Ck.	Jefferson	N	8/11/1993	FAMU	SR 59
Diphetor hageni	Apalachicola R.	No Name Branch	Liberty	N	2/11/2003	FDEP Pensacola	No Name Ravine, ABRP off CR 270
Diphetor hageni	Apalachicola R.	Rock Ck.	Liberty	N	6/26/1996	FAMU Ravines Study	Torreya State Park
Diphetor hageni	Apalachicola R.	Rock Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	Torreya State Park, lower end
Diphetor hageni	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	2/18/1999	FAMU Ravines Study	CR 270A, 8 km S of Chattahoochee
Diphetor hageni	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	4/27/1999	FAMU Ravines Study	CR 270A
Diphetor hageni	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	3/9/1999	FAMU Ravines Study	ABRP, Traveler's Tract
Diphetor hageni	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	4/17/2003	FAMU Ravines Study	ABRP, Travelers Tract

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Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Plauditus bimaculatus	Apalachicola R.	Beaver Dam Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, lower end, Site 6
Plauditus bimaculatus	Apalachicola R.	Crooked Ck.	Gadsden	N	3/22/1995	FAMU Ravines Study	CR 270
Plauditus bimaculatus	Apalachicola R.	Crooked Ck.	Gadsden	N	11/2/1996	FAMU Ravines Study	CR 270
Plauditus bimaculatus	Apalachicola R.	Crooked Ck.	Gadsden	N	2/19/1998	FAMU Ravines Study	CR 270
Plauditus bimaculatus	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	upper end, Site 5
Plauditus bimaculatus	Apalachicola R.	unnamed stream	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, NE of bluff overlook, Site 3
Plauditus bimaculatus	Chipola R.	Chipola R.	Calhoun	N	5/4/1995	FAMU	boat ramp 5 km W of Altha
Plauditus bimaculatus	Choctawhatchee Bay	Bear Bay Branch	Walton	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 381
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	3/20/1998	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	10/27/1998	FAMU Ravines Study	Eglin AFB, at head, W side of BR 231
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	10/28/1998	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, at head, W side of BR 231
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	6/16/1999	FAMU Ravines Study	Eglin AFB, at head, W side of BR 231
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Plauditus bimaculatus	Choctawhatchee Bay	Little Rocky Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, Old Hwy 285
Plauditus bimaculatus	Choctawhatchee Bay	Oakie Ck.	Walton	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 208
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	11/13/1997	FAMU Ravines Study	Eglin AFB, BR 233
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	3/20/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S of BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	10/28/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S of BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	10/28/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S of BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S of BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	6/16/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Trib. Turkey Ck.	Okaloosa	A	10/27/1998	FAMU Ravines Study	Eglin AFB, BR 639
Plauditus bimaculatus	Choctawhatchee Bay	Trib. Turkey Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 639
Plauditus bimaculatus	Choctawhatchee Bay	Trib. Turkey Ck.	Okaloosa	A	6/16/1999	FAMU Ravines Study	Eglin AFB, steephead off BR 639

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Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Plauditus bimaculatus	Choctawhatchee Bay	Trib. Turkey Ck.	Okaloosa	N	6/16/1999	FAMU Ravines Study	Eglin AFB, steephead off BR 639
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	10/27/1998	FAMU Ravines Study	Eglin AFB, BR 637
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 637
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	6/16/1999	FAMU Ravines Study	Eglin AFB, BR 232
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	Eglin AFB, BR 637
Plauditus bimaculatus	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	at head, 0.3 km W of Okaloosa tower
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	10/28/1998	FAMU Ravines Study	Eglin AFB, BR 601
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	10/29/1998	FAMU Ravines Study	Eglin AFB, BR 601
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	3/10/1999	FAMU Ravines Study	at head, 0.3 km W of Okaloosa tower
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	at head, 0.3 km W of Okaloosa tower
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	at head, 0.3 km W of Okaloosa tower
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	6/16/1999	FAMU Ravines Study	at head, 0.3 km W of Okaloosa tower
Plauditus bimaculatus	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 601
Plauditus bimaculatus	Yellow R.	Little Boiling Ck.	Santa Rosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 213
Plauditus punctiventris	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/29/1946	FAMU	
Plauditus sp.	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/5/1991	FAMU Ravines Study	near upper end
Procloeon hobbsi	Choctawhatchee R.	Choctawhatchee R.	Walton	N	9/20/1970	FAMU	Simpler's Camp
Procloeon hobbsi	Choctawhatchee R.	Holmes Ck.	Washington	N	9/5/1970	FAMU	W of SR 79 at Boynton Cutoff
Procloeon hobbsi	Santa Fe R.	Santa Fe R.	Gilchrist	N	12/8/1997	SRWMD	Hwy 129
Procloeon hobbsi	St. Marks R.	Burnt Mill Ck.	Jefferson	N	8/11/1993	FAMU	SR 59
Procloeon hobbsi	Suwannee R. (lower)	Suwannee R.	Dixie/Gilchrist	N	6/4/1992	SRWMD	CR 340
Procloeon rubropictum	Chipola R.	Chipola R.	Calhoun	A	9/6/1972	FAMU	SR 71
Procloeon rubropictum	Choctawhatchee R.	Pine Log Ck.	Bay	N	5/31/1940	FAMU	
Procloeon rubropictum	St. Marks R.	Wakulla R.	Wakulla	N	5/29/1940	FAMU	
Procloeon viridoculare				N	2/23/1983	FDEP Punta Gorda	26010592

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Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Procloeon viridoculare				N	8/30/1983	FDEP Punta Gorda	26010592
Procloeon viridoculare	Apalachicola R.	Sweetwater Ck.	Liberty	A	5/19/1994	FAMU Ravines Study	CR 270
Procloeon viridoculare	Aucilla R.	Aucilla R.	Jefferson	N	6/17/1992	FAMU	Hwy 27
Procloeon viridoculare	Aucilla R.	Aucilla R.	Jefferson	N	10/21/1992	FAMU	Hwy 27
Procloeon viridoculare	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 637
Procloeon viridoculare	Kissimmee R.	Lake Francis	Highlands	N		FDEP Punta Gorda	March 1995, shoreline zone
Procloeon viridoculare	Ochlockonee R.	Little R.	Gadsden	N	10/15/1991	FAMU ORB Study	Hwy 90
Procloeon viridoculare	Steinhatchee R.	Econfina R.	Taylor	N	9/8/1993	FAMU	Hwy 27
Procloeon viridoculare	Suwannee R. (upper)	Suwanee R.	Hamilton	N	12/17/1991	FAMU	0.5 km E of Hwy 129
Procloeon viridoculare	Suwannee R. (upper)	Suwanee R.	Madison	N	2/26/1992	FAMU	Suwannee R. State Park
Pseudocentroptiloides usa	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/19/1994	FAMU ORB Study	CR 159
Pseudocentroptiloides usa	Suwannee R. (upper)	Suwanee R.	Hamilton	N	12/17/1991	FAMU	0.5 km E of Hwy 129
Pseudocloeon ephippiatum				N	10/18/1983	FDEP Punta Gorda	25010011
Pseudocloeon ephippiatum	Apalachicola R.	Crooked Ck.	Gadsden	A	11/20/1998	FAMU Ravines Study	CR 270
Pseudocloeon ephippiatum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 221
Pseudocloeon ephippiatum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	10/27/1998	FAMU Ravines Study	Eglin AFB, W side BR 231, at head
Pseudocloeon ephippiatum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Pseudocloeon ephippiatum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Pseudocloeon ephippiatum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	10/28/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon ephippiatum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	10/28/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	6/16/1999	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon ephippiatum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon ephippiatum	St. Johns R. (lower)	Lowrey Lake Run	Clay	A	7/2/1996	FAMU Ravines Study	Camp Blanding, at Greble Rd
Pseudocloeon ephippiatum	Suwannee R. (lower)	Suwannee R.	Dixie/Gilchrist	N	6/4/1992	SRWMD	CR 340
Pseudocloeon ephippiatum	Yellow R.	Boiling Ck.	Santa Rosa	N	3/20/1998	FAMU Ravines Study	Eglin AFB, BR 211
Pseudocloeon ephippiatum	Yellow R.	Indigo Ck.	Santa Rosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 213

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Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Pseudocloeon ephippiatum	Yellow R.	Little Boiling Ck.	Santa Rosa	N	3/20/1998	FAMU Ravines Study	Eglin AFB, BR 213
Pseudocloeon ephippiatum	Yellow R.	Yellow R.	Okaloosa	N	7/23/2002	FDEP Pensacola	below Hwy 90
Pseudocloeon frondale				N	2/23/1983	FDEP Punta Gorda	26010592
Pseudocloeon frondale	Apalachicola R.	Gregory Mill Ck.	Liberty	N	4/28/2003	FAMU Ravines Study	CR 379
Pseudocloeon frondale	Apalachicola R.	Little Sweetwater Ck.	Liberty	N	3/11/1994	FAMU Ravines Study	ABRP, Site 4
Pseudocloeon frondale	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon frondale	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon frondale	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon frondale	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	6/16/1999	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon frondale	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon frondale	Escambia R.	Mitchell Ck.		N	6/21/1993	FDEP Pensacola	Hwy 29, B-40
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/5/1991	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/12/1992	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/8/1992	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/11/1993	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/7/1993	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/7/1993	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	A	5/6/1993	FAMU Ravines Study	near middle, FM1-1
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU Ravines Study	near middle
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	8/18/1994	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	3/30/1995	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	A	9/14/1995	FAMU Ravines Study	near lower end, FM2
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/14/1995	FAMU Ravines Study	near middle
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	6/18/1997	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/24/1998	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	A	12/10/1998	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/10/1998	FAMU Ravines Study	near upper end
Pseudocloeon frondale	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	6/14/1988	FAMU ORB Study	SR 65
Pseudocloeon frondale	Santa Fe R.	Santa Fe R.	Gilchrist/Suwannee	N	6/4/1992	SRWMD	Hwy 129
Pseudocloeon frondale	St. Marks R.	Black Ck.	Leon	N	1/29/2002	FAMU	Baum Rd.
Pseudocloeon frondale	St. Marks R.	St. Marks R.	Leon	N	4/1/1992	FAMU	1 km S of Hwy 27

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Pseudocloeon frondale	St. Marks R.	St. Marks R.	Leon	N	4/1/1993	FAMU	1 km S of Hwy 27
Pseudocloeon frondale	Steinhatchee R.	Fenholloway R.	Taylor	N	4/14/1994	FAMU	Fenholloway
Pseudocloeon frondale	Yellow R.	Boiling Ck.	Santa Rosa	N	3/20/1998	FAMU Ravines Study	Eglin AFB, BR 211
Pseudocloeon frondale	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Pseudocloeon frondale	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	6/16/1999	FAMU Ravines Study	Eglin AFB, BR 601
Pseudocloeon propinquum				N	3/16/1983	FDEP Punta Gorda	25020111
Pseudocloeon propinquum				N	12/23/1983	FDEP Punta Gorda	25020401
Pseudocloeon propinquum	Apalachicola R.	Beaver Dam Ck.	Liberty	N	4/7/1994	FAMU Ravines Study	ABRP, Site 6
Pseudocloeon propinquum	Apalachicola R.	Beaver Dam Ck.	Liberty	A	8/30/1995	FAMU Ravines Study	ABRP, lower end, Site 6
Pseudocloeon propinquum	Apalachicola R.	Beaver Dam Ck.	Liberty	A	8/30/1995	FAMU Ravines Study	ABRP, 5 km N of Bristol
Pseudocloeon propinquum	Apalachicola R.	Beaver Dam Ck.	Liberty	N	8/30/1995	FAMU Ravines Study	ABRP, Site 6
Pseudocloeon propinquum	Apalachicola R.	Beaver Dam Ck.	Liberty	A	6/24/1996	FAMU Ravines Study	ABRP, lower end, Site 6
Pseudocloeon propinquum	Apalachicola R.	Crooked Ck.	Gadsden	N	3/22/1995	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Crooked Ck.	Gadsden	N	4/18/1995	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Crooked Ck.	Gadsden	N	2/5/1996	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Crooked Ck.	Gadsden	N	11/2/1996	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Crooked Ck.	Gadsden	A	4/1/1999	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Crooked Ck.	Gadsden	A	6/7/1999	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Flat Ck.	Gadsden	N	4/18/1995	FAMU Ravines Study	CR 270A
Pseudocloeon propinquum	Apalachicola R.	Flat Ck.	Gadsden	N	4/17/1996	FAMU Ravines Study	CR 270A
Pseudocloeon propinquum	Apalachicola R.	Flat Ck.	Gadsden	N	11/2/1996	FAMU Ravines Study	CR 270A
Pseudocloeon propinquum	Apalachicola R.	Flat Ck.	Gadsden	A	6/7/1999	FAMU Ravines Study	CR 270A
Pseudocloeon propinquum	Apalachicola R.	Gregory Mill Ck.	Liberty	N	4/28/2003	FAMU Ravines Study	CR 379
Pseudocloeon propinquum	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	4/7/1994	FAMU Ravines Study	lower end, Site 4
Pseudocloeon propinquum	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	upper end, Site 5
Pseudocloeon propinquum	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	8/30/1995	FAMU Ravines Study	Site 4
Pseudocloeon propinquum	Apalachicola R.	Little Sweetwater Ck.	Liberty	N	8/30/1995	FAMU Ravines Study	ABRP, Site 5
Pseudocloeon propinquum	Apalachicola R.	Little Sweetwater Ck.	Liberty	N	8/30/1995	FAMU Ravines Study	ABRP, Site 4
Pseudocloeon propinquum	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	6/24/1996	FAMU Ravines Study	upper end, Site 5
Pseudocloeon propinquum	Apalachicola R.	Rock Ck.	Liberty	A	4/1/1999	FAMU Ravines Study	Torreya State Park, lower end
Pseudocloeon propinquum	Apalachicola R.	Rock Ck.	Liberty	N	6/8/1999	FAMU Ravines Study	Torreya State Park, lower end
Pseudocloeon propinquum	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/18/1995	FAMU Ravines Study	CR 270

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Family: Baetidae Page 1-12

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Pseudocloeon propinquum	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Sweetwater Ck.	Liberty	N	11/20/1998	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/1/1999	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Sweetwater Ck.	Liberty	A	6/7/1999	FAMU Ravines Study	CR 270
Pseudocloeon propinquum	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	4/27/1999	FAMU Ravines Study	CR 270A
Pseudocloeon propinquum	Apalachicola R.	Trib. Rock Ck.	Liberty	N	6/26/1996	FAMU Ravines Study	Torreya State Park, lower end of stream
Pseudocloeon propinquum	Apalachicola R.	Trib. Rock Ck.	Liberty	N	4/9/1998	FAMU Ravines Study	Torreya State Park, lower end of stream
Pseudocloeon propinquum	Aucilla R.	Aucilla R.	Jefferson	N	2/18/1993	FAMU	Hwy 98
Pseudocloeon propinquum	Chipola R.	Tenmile Ck.	Calhoun	N	6/25/1996	FAMU	SR 73, 7 km N Clarksville
Pseudocloeon propinquum	Choctawhatchee Bay	Bear Bay Branch	Walton	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 381
Pseudocloeon propinquum	Choctawhatchee Bay	Blount Ck.	Walton	N	11/21/1998	FAMU Ravines Study	Eglin AFB, unnamed BR off BR 201
Pseudocloeon propinquum	Choctawhatchee Bay	Blount Mill Ck.	Walton	N	4/11/2003	FAMU Ravines Study	Eglin AFB, BR 208
Pseudocloeon propinquum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 221
Pseudocloeon propinquum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	10/27/1998	FAMU Ravines Study	Eglin AFB, BR 221
Pseudocloeon propinquum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Pseudocloeon propinquum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	10/28/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	10/28/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Trib. Little Rocky Ck.	Walton	N	4/12/2003	FAMU Ravines Study	Eglin AFB, Old Hwy 285
Pseudocloeon propinquum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon propinquum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 637
Pseudocloeon propinquum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon propinquum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Pseudocloeon propinquum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/8/1992	FAMU ORB Study	CR 159
Pseudocloeon propinquum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	7/26/1994	FAMU ORB Study	CR 159
Pseudocloeon propinquum	Ochlockonee R.	Bear Ck.	Gadsden	N	9/26/1968	FAMU	bridge on dirt rd, 1 mi N of SR 65C
Pseudocloeon propinquum	Ochlockonee R.	Camp Ck.	Gadsden	N	4/23/1987	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Camp Ck.	Gadsden	N	9/2/1987	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Cane Ck.	Gadsden	N	4/13/1988	FAMU ORB Study	Cane Ck Rd off CR 274

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Pseudocloeon propinquum	Ochlockonee R.	Monroe Ck.	Gadsden	N	4/30/2000	FAMU	CR 268
Pseudocloeon propinquum	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	10/12/1988	FAMU ORB Study	SR 65
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	9/24/1986	FAMU ORB Study	CR 267
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	10/29/1986	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/23/1987	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/23/1987	FAMU ORB Study	CR 267
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	10/13/1987	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	10/13/1987	FAMU ORB Study	CR 267
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 274
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/13/1988	FAMU ORB Study	CR 267
Pseudocloeon propinquum	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	6/14/1988	FAMU ORB Study	CR 267
Pseudocloeon propinquum	Ochlockonee R.	Telogia Ck.	Gadsden	N	5/6/1986	FAMU ORB Study	SR 20, 2.5 mi E Bristol, Sta. D
Pseudocloeon propinquum	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	4/27/1999	FAMU	SR 65
Pseudocloeon propinquum	St. Johns R. (upper)	Econlockhatchee R.	Seminole	N	5/12/2001	FAMU	Snowhill Rd
Pseudocloeon propinquum	St. Johns R. (upper)	Econlockhatchee R.	Seminole	N	5/12/2001	FAMU	Snowhill Rd.
Pseudocloeon propinquum	St. Marks R.	McBride Slough	Wakulla	N	1/31/1998	FAMU	CR 267
Pseudocloeon propinquum	St. Marks R.	St. Marks R.	Wakulla	N	6/19/1991	FAMU	0.5 km N of Hwy 98
Pseudocloeon propinquum	St. Marks R.	St. Marks R.	Wakulla	N	4/14/1993	FAMU	0.5 km N of Hwy 98
Pseudocloeon propinquum	Steinhatchee R.	Econfina R.	Taylor	N	8/21/1991	FAMU	Hwy 98
Pseudocloeon propinquum	Steinhatchee R.	Econfina R.	Taylor	N	2/18/1993	FAMU	Hwy 98
Pseudocloeon propinquum	Steinhatchee R.	Econfina R.	Taylor	N	7/13/1994	FAMU	Hwy 27
Pseudocloeon propinquum	Steinhatchee R.	Fenholloway R.	Taylor	N	4/14/1994	FAMU	Fenholloway
Pseudocloeon propinquum	Suwanee R. (lower)	Suwanee R.	Madison	N	10/29/1991	FAMU	Suwannee River State Park
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	10/29/1991	FAMU	3 km N of SR 6
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	12/17/1991	FAMU	3 km N of SR 6
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	12/17/1991	FAMU	3 km N of SR 6
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	4/22/1992	FAMU	3 km N of SR 6
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	10/28/1992	FAMU	3 km N of SR 6
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	4/28/1993	FAMU	3 km N of SR 6
Pseudocloeon propinquum	Withlacoochee R., N.	Withlacoochee R.	Hamilton/Madison	N	6/3/1992	SRWMD	above Suwannee R.
Pseudocloeon propinquum	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	10/29/1998	FAMU Ravines Study	Eglin AFB, BR 601

FLORIDA EPHEMEROPTERA

Family: Baetidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Pseudocloeon propinquum	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Pseudocloeon propinquum	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 601

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Baetiscidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Baetisca becki	Blackwater R.	Blackwater R.	Okaloosa	N	4/21/1976	FAMU	Kennedy Branch, 6 mi. W of Blackman
Baetisca becki	Blackwater R.	Blackwater R.	Okaloosa	N	4/28/1976	FAMU	at Peaden Bridge
Baetisca becki	Blackwater R.	Blackwater R.	Okaloosa	N	4/30/1976	FAMU	FAMU Biol. Sta.
Baetisca becki	Blackwater R.	Blackwater R.	Okaloosa	N	5/8/1976	FAMU	FAMU Biol. Sta.
Baetisca becki	Blackwater R.	Blackwater R.	Okaloosa	A	5/6/1977	FAMU	FAMU Biol. Sta.
Baetisca becki	Blackwater R.	Blackwater R.	Okaloosa	A	5/2/1978	FAMU	FAMU Biol. Sta.
Baetisca becki	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	2/25/1985	FAMU	SR 65B
Baetisca becki	Perdido Bay	Perdido R.	Escambia	N	5/5/1961	(Schneider&Berner,1963)	
Baetisca becki	St. Andrews Bay	Sweetwater Ck.	Santa Rosa	N	3/9/1960	(Schneider&Berner,1963)	
Baetisca escambiensis	Blackwater R.	Blackwater R.	Okaloosa	N	8/15/1967	FAMU	FAMU Biol. Sta.
Baetisca escambiensis	Blackwater R.	Blackwater R.	Okaloosa	N	11/29/1968	FAMU	FAMU Biol. Sta.
Baetisca escambiensis	Blackwater R.	Blackwater R.	Okaloosa	A	10/29/1971	FAMU	FAMU Biol. Sta.
Baetisca escambiensis	Blackwater R.	Blackwater R.	Okaloosa	N	10/28/1973	FAMU	FAMU Biol. Sta.
Baetisca escambiensis	Blackwater R.	Blackwater R.	Okaloosa	N	8/22/1974	FAMU	FAMU Biol. Sta.
Baetisca escambiensis	Blackwater R.	Blackwater R.	Okaloosa	N	10/16/1974	FAMU	Environmental Center
Baetisca escambiensis	Blackwater R.	Blackwater R.	Santa Rosa	N	10/26/1973	FAMU	FAMU Biol. Sta.
Baetisca gibbera	Blackwater R.	Blackwater R.	Okaloosa	N	11/16/1968	FAMU	
Baetisca gibbera	Blackwater R.	Blackwater R.	Santa Rosa	N	11/28/1968	FAMU	
Baetisca gibbera	Escambia R.	Escambia R.	Escambia	N	10/23/1954	FSCA	
Baetisca gibbera	Escambia R.	Escambia R.	Escambia	N	9/14/1976	FDEP Pensacola	SR 4
Baetisca gibbera	St. Johns R. (lower)	Black Ck.	Clay	N	11/26/1951	FSCA	
Baetisca laurentina	Blackwater R.	Blackwater R.	Okaloosa	N	3/11/1970	FAMU	
Baetisca obesa	Alapaha R.	Alapaha R.	Hamilton	N	2/5/1993	SRWMD	CR 150
Baetisca obesa	Blackwater R.	Blackwater R.	Santa Rosa	N	3/12/1971	FAMU	at Riverside
Baetisca obesa	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Baetisca obesa	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	6/16/1995	FAMU Ravines Study	Eglin AFB
Baetisca obesa	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Baetisca obesa	Choctawhatchee R.	Seven Runs Ck.	Walton	N	3/28/1971	FAMU	SR 81
Baetisca obesa	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N of Quincy
Baetisca obesa	Withlacoochee R.	Withlacoochee R.	Madison	N	1/15/1952	(Berner, 1953)	FL State Line N of Madison
Baetisca rogersi	Apalachicola Bay	unnamed stream	Gadsden	A	3/17/1939	(Berner, 1940)	4.5 mi S River Junction
Baetisca rogersi	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8km S Chattahoochee

FLORIDA EPHEMEROPTERA

Family: Baetiscidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Baetisca rogersi	Apalachicola R.	unnamed stream	Gadsden	A	3/17/1939	(Berner, 1940)	4.5 mi S River Junction
Baetisca rogersi	Blackwater R.	Blackwater R.	Santa Rosa	N	4/26/1994	FAMU	Fish Hatch. Rd. 15 mi W Crestview
Baetisca rogersi	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Baetisca rogersi	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	6/16/1995	FAMU Ravines Study	Eglin AFB
Baetisca rogersi	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Baetisca rogersi	Choctawhatchee Bay	Turkey Hen Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB
Baetisca rogersi	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65 N Quincy
Baetisca rogersi	St. Andrews Bay	Econfina Ck.	Bay	N	2/24/1993	FDEP Pensacola	Scott Rd.
Baetisca rogersi	St. Andrews Bay	Econfina Ck.	Bay	N	2/7/1995	FDEP Pensacola	Scott Rd.
Baetisca rogersi	St. Andrews Bay	Econfina Ck.	Bay	N	7/2/1995	FDEP Pensacola	Scott Rd.
Baetisca rogersi	St. Andrews Bay	Sweetwater Ck.	Bay	N	10/16/1997	FAMU Ravines Study	Sweetwater Branch Rd., 2 mi SW Betts
Baetisca rogersi	Yellow R.	Big Horse Ck.	Okaloosa	N	1/30/1995	FDEP Pensacola	Hwy 2
Baetisca rogersi	Yellow R.	Indigo Ck.	Santa Rosa	N	5/26/2004	FAMU Eglin Study	Eglin AFB, BR 213
Baetisca rogersi	Yellow R.	Pine Log Ck.	Walton	N	2/16/1994	FDEP Pensacola	Hwy 2

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FLORIDA EPHEMEROPTERA

Family: Behningiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Dolania americana	Blackwater R.	Blackwater R.	Okaloosa	N	9/15/1976	FDEP Pensacola	SR 4
Dolania americana	Blackwater R.	Blackwater R.	Okaloosa	N	2/15/1977	FDEP Pensacola	SR 4
Dolania americana	Blackwater R.	Blackwater R.	Okaloosa	N	9/22/1977	FAMU	FAMU Bio. Sta. 4.5mi NW Holt
Dolania americana	Blackwater R.	Blackwater R.	Okaloosa	N	10/17/1977	FDEP Pensacola	SR 4
Dolania americana	Blackwater R.	Blackwater R.	Okaloosa	N	11/27/2001	FDEP Pensacola	above Racetrack Landing
Dolania americana	Chipola R.	Juniper Ck.	Calhoun	N	11/22/1977	FDEP Pensacola	Hwy 73
Dolania americana	Chipola R.	Juniper Ck.	Calhoun	N	1/25/1979	FDEP Pensacola	Hwy 73
Dolania americana	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	11/3/1999	FAMU Ravines Study	Eglin AFB, BR 232
Dolania americana	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Dolania americana	Ochlockonee R.	Telogia Ck.	Gadsden	N	5/6/1987	FAMU ORB Study	CR 270A, 4.5 mi SW Gretna
Dolania americana	Ochlockonee R.	Telogia Ck.	Liberty	N	10/20/1990	FAMU ORB Study	6.6 mi NW Hosford
Dolania americana	Perdido R.	Perdido R.	Escambia	N	11/23/1976	FDEP Pensacola	Hwy 184
Dolania americana	Perdido R.	Perdido R.	Escambia	N	5/3/1977	FDEP Pensacola	Hwy 184
Dolania americana	Perdido R.	Perdido R.	Escambia	N	11/2/1977	FDEP Pensacola	Hwy 184
Dolania americana	Perdido R.	Perdido R.	Escambia	N	4/5/1978	FDEP Pensacola	Hwy 184
Dolania americana	Perdido R.	Perdido R.	Escambia	N	7/16/1978	FDEP Pensacola	Hwy 184

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Caenidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Brachycercus berneri	Apalachicola R.	Flat Ck.	Gadsden	N	6/24/1996	FAMU	CR 270A, 8 km S Chattahoochee
Brachycercus berneri	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/30/1946	FAMU	
Brachycercus berneri	Ochlockonee R.	Bear Ck.	Gadsden	N	5/8/1967	FAMU	CR 65, 8 mi S Quincy
Brachycercus maculatus	Apalachicola R.	Flat Ck.	Gadsden	N	4/18/1995	FAMU Ravines Study	CR 270A
Brachycercus maculatus	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU Ravines Study	CR 270A
Brachycercus maculatus	Aucilla R.	Econfina R.	Taylor	N	7/13/1994	FAMU ORB Study	Hwy 27
Brachycercus maculatus	Caloosahatchee R.	Telegraph Ck.	Lee	N	5/24/1988	FDEP Punta Gorda	SR 78
Brachycercus maculatus	Myakka R.	Myakka R.	Sarasota	N	3/23/1983	FDEP Punta Gorda	Border Drive
Brachycercus maculatus	Peace R.	Horse Ck.	Desoto	N	6/8/1978	FDEP Punta Gorda	SR 72
Brachycercus maculatus	Peace R.	Peace R.	Desoto	N	2/4/1980	FDEP Punta Gorda	near Arcadia
Brachycercus maculatus	Peace R.	Shell Ck.	Charlotte	N	1/26/1983	FDEP Punta Gorda	6 mi E SR 74
Brachycercus maculatus	Santa Fe R.	Santa Fe R.	Alachua	A	2/28/1939	(Berner, 1946)	Poe Springs
Brachycercus maculatus	Santa Fe R.	Santa Fe R.	Gilchrist/Suwannee	N	8/6/1992	SRWMD	Hwy 129
Brachycercus n. sp.	Chipola R.	Waddells Mill Ck.	Jackson	N	11/28/1960	FAMU	
Brachycercus nasutus	Yellow R.	Yellow R.	Okaloosa	N	8/1/1961	FAMU	SR 4
Caenis amica			Orange	A	3/12/1978	(Provonsha, 1990)	Winter Park
Caenis amica	Apalachicola R.	Beaverdam Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, lower end
Caenis amica	Apalachicola R.	Little Sweetwater Ck.	Liberty	A	4/7/1994	FAMU Ravines Study	nr. confluence w/ Apalachicola R.
Caenis amica	Apalachicola R.	Rocky Ck.	Gadsden	A	4/1/1999	FAMU Ravines Study	Torreya St. Park, lower end
Caenis amica	Apalachicola R.	Sweetwater Ck	Liberty	A	4/1/1999	FAMU Ravines Study	CR 270
Caenis amica	Aucilla R.	Aucilla R.	Jefferson/Madison	N	12/17/1991	FAMU	Hwy 98
Caenis amica	Aucilla R.	Econfina R.	Taylor	N	8/19/1992	FAMU	Hwy 27
Caenis amica	Blackwater R.	Blackwater R.	Okaloosa	A	5/11/1971	(Provonsha, 1990)	FAMU Bio. Sta., 4.5 mi NW Holt
Caenis amica	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	
Caenis amica	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 232
Caenis amica	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	1/4/1987	FAMU ORB Study	CR 274
Caenis amica	Ochlockonee R.	Telogia Ck.	Gadsden	N	3/4/1987	FAMU ORB Study	CR 274
Caenis amica	Ochlockonee R.	Telogia Ck.	Gadsden	N	3/4/1987	FAMU ORB Study	CR 270A
Caenis amica	Ochlockonee R.	Telogia Ck.	Liberty	A	4/3/1974	(Provonsha, 1990)	creek 1 mi W Ochlockonee R.
Caenis amica	Oklawaha R.	Little R.	Gadsden	N	4/8/1992	FAMU ORB Study	Hwy 90
Caenis amica	Oklawaha R.	Oklawaha R.	Marion	A	4/10/1948	(Provonsha, 1990)	Oklawaha River
Caenis amica	St. Johns R. (lower)	Gold Head Branch	Clay	A	3/6/1999	FAMU Ravines Study	Gold Head Branch St. Park

FLORIDA EPHEMEROPTERA

Family: Caenidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Caenis amica	St. Johns R. (lower)	Gold Head Branch	Clay	A	3/6/1999	FAMU Ravines Study	Gold Head Branch St. Park
Caenis amica	St. Johns R. (upper)	Juniper Ck.	Marion	A	3/23/2002		Hwy 19, Ocala Nat. Forest
Caenis diminuta				N	7/17/1981	FDEP Punta Gorda	25020530
Caenis diminuta			Clay	A	3/6/1999	FAMU Ravines Study	Gold Head Branch St. Park
Caenis diminuta			Dade	N	6/11/1978	(Provonsha, 1990)	South Miami Canal
Caenis diminuta			Highlands	A	3/19/1979	(Provonsha, 1990)	Archbold Biol. Sta.
Caenis diminuta			Jefferson	A		(Provonsha, 1990)	Monticello
Caenis diminuta		Dunford Lake	Washington	N	7/24/1995	FDEP Pensacola	
Caenis diminuta		Horseshoe Lake	Marion	A	5/16/2003		Horseshoe Lake Park, Orange Springs
Caenis diminuta		Lake Clay	Highlands	N		FDEP Punta Gorda	
Caenis diminuta	Apalachicola R.	Beaver Dam Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, lower end
Caenis diminuta	Apalachicola R.	Chipola R.	Calhoun	A	3/28/1998	FAMU	boat ramp 5 km SW Altha
Caenis diminuta	Apalachicola R.	Crooked Ck.	Gadsden	A	4/18/1995	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Caenis diminuta	Apalachicola R.	Crooked Ck.	Gadsden	A	4/18/1995	FAMU Ravines Study	CR 270, 10 km W Greensboro
Caenis diminuta	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/1/1999	FAMU Ravines Study	CR 270
Caenis diminuta	Aucilla R.	Aucilla R.	Jefferson	N	12/17/1991	FAMU	Hwy 98
Caenis diminuta	Aucilla R.	Aucilla R.	Taylor	N	2/19/1992	FAMU	Hwy 98
Caenis diminuta	Blackwater R.	Blackwater R.	Okaloosa	A	4/24/1971	(Provonsha, 1990)	FAMU Bio. Sta. 4.5 mi NW Holt
Caenis diminuta	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	A	3/10/1999	FAMU Ravines Study	Eglin AFB, BR 601
Caenis diminuta	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	A	4/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Caenis diminuta	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	A	4/11/2001	FAMU Ravines Study	Eglin AFB, BR 601
Caenis diminuta	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/11/2001	FAMU Ravines Study	Eglin AFB, BR 221
Caenis diminuta	Choctawhatchee Bay	Open Branch	Walton	N	7/13/2000	FDEP Pensacola	below ER 214/374
Caenis diminuta	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S. BR 232
Caenis diminuta	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Caenis diminuta	Choctawhatchee R.	Black Ck.	Walton	A	5/1/1971	(Provonsha, 1990)	Daniel's Fish Camp S Hwy 294
Caenis diminuta	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	4/16/1967	(Provonsha, 1990)	7 mi S Quincy
Caenis diminuta	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	3/3/1986	FAMU ORB Study	SR 12
Caenis diminuta	Ochlockonee R.	Telogia Ck.	Gadsden	N	1/27/1987	FAMU ORB Study	CR 270A at bridge 4.5 mi SW Gretna
Caenis diminuta	Oklawaha R.	Lake Alice	Alachua	N/A	10/28/1938	(Provonsha, 1990)	Lake Alice
Caenis diminuta	Oklawaha R.	Oklawaha R.	Marion	A	4/10/1948	(Provonsha, 1990)	Oklawaha River
Caenis diminuta	Santa Fe R.	Lowry Lake Run	Clay	A	7/2/1996	FAMU	Camp Blanding Training Sta.

FLORIDA EPHEMEROPTERA

Family: Caenidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Caenis diminuta	Santa Fe R.	Santa Fe R.	Alachua/Columbia	N	2/10/1993	SRWMD	Hwy 441
Caenis diminuta	Santa Fe R.	Santa Fe R.	Gilchrist/Suwannee	N	11/11/1992	SRWMD	Hwy 129
Caenis diminuta	St. Johns R. (lower)	Gold Head Branch	Clay	A	3/6/1999	FAMU Ravines Study	Gold Head Branch St. Park
Caenis diminuta	St. Johns R. (upper)	Juniper Ck.	Marion	A	3/23/2002		Hwy 19, Ocala National Forest
Caenis diminuta	St. Marks R.	St. Marks R.	Leon	N	2/4/1993	FAMU	1.5 mi NE Chaires
Caenis diminuta	St. Marks R.	St. Marks R.	Leon	N	4/1/1993	FAMU ORB Study	1.5 mi NE Chaires
Caenis diminuta	Steinhatchee R.	Econfina R.	Taylor	A	9/9/1992	FAMU	Hwy 98
Caenis diminuta	Waccasassa R.	Otter Ck.	Levy	A	9/19/1959	(Provonsha, 1990)	
Caenis diminuta	Yellow R.	Boiling Ck.	Santa Rosa	A	5/27/2004	FAMU Ravines Study	Eglin AFB, BR 211
Caenis hilaris	Ochlockonee R.	Telogia Ck.	Gadsden	N	1/27/1987	FAMU ORB Study	CR 270A 4.5 SW Gretna
Caenis hilaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	7/7/1986	FAMU ORB Study	CR 161 6 mi NE Quincy
Caenis hilaris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	5/12/1987	FAMU ORB Study	SR 65 + 65A
Caenis hilaris	Yellow R.	Yellow R.	Okaloosa	N	6/22/1993	FDEP Pensacola	Hwy 189
Caenis macafferti		Eight Mile Ck.	Walton	N	5/30/2000	FDEP Pensacola	Hwy 181
Caenis macafferti	Apalachicola R.	Chipola R.	Calhoun	A	4/20/1972	(Provonsha, 1990)	Hwy 20
Caenis macafferti	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU Ravines Study	SR 269, 8 km S Chattahoochee
Caenis macafferti	Apalachicola R.	Sweetwater Ck.	Liberty	N	6/4/1938	(Provonsha, 1990)	
Caenis macafferti	Choctawhatchee Bay	Mill Ck.	Okaloosa	N	7/25/2000	FDEP Pensacola	Eglin Golf Course, Hole 9
Caenis macafferti	Choctawhatchee Bay	Mill Ck.	Okaloosa	N	7/25/2000	FDEP Pensacola	Eglin Golf Course, Hole 13
Caenis macafferti	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Caenis macafferti	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 232
Caenis macafferti	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/19/1994	FAMU ORB Study	SR 159 8.6 km NW Havana
Caenis macafferti	Ochlockonee R.	Camp Ck.	Gadsden	N	8/10/1987	FAMU ORB Study	CR 274
Caenis macafferti	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/28/1993	FAMU ORB Study	SR 159 6.5 km NW Havana
Caenis macafferti	Ochlockonee R.	Lake Talquin	Leon	N	9/30/1992	FAMU	Lake Talquin
Caenis macafferti	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	8/19/1986	FAMU ORB Study	CR 274
Caenis macafferti	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1987	FAMU ORB Study	CR 274
Caenis macafferti	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	7/7/1986	FAMU ORB Study	CR 161 6 mi NE Quincy
Caenis macafferti	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	5/12/1987	FAMU ORB Study	6.5 mi N Quincy
Caenis macafferti	Peace R.	Payne Ck.	Hardee	N	6/2/1991	FDEP Punta Gorda	Sta. PC-4
Caenis macafferti	Peace R.	Peace R.	DeSoto	A	8/4/1950	(Provonsha, 1990)	
Caenis macafferti	Santa Fe R.	Santa Fe R.	Bradford	N	9/3/1996	SRWMD	Worthington Springs

FLORIDA EPHEMEROPTERA

Family: Caenidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Caenis macafferti	Withlacoochee R.	Withlacoochee R.	Madison/Hamilton	N	9/4/1992	SRWMD	CR 150
Caenis n. sp.	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 232
Caenis n. sp.	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 601
Caenis n. sp.	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	4/11/2001	FAMU Ravines Study	Eglin AFB, BR 601
Caenis n. sp.	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	6/11/2001	FAMU Ravines Study	Eglin AFB, BR 601
Caenis punctata	Apalachicola R.	Apalachicola R.	Liberty	A	9/10/1971	FAMU	SR 20
Caenis punctata	Apalachicola R.	Apalachicola R.	Liberty	A	4/29/1972	FAMU	Hwy 20, Bristol
Caenis punctata	Apalachicola R.	Crooked Ck.	Gadsden	A	4/18/1995	FAMU Ravines Study	CR 270, 10 km W Greensboro
Caenis punctata	Apalachicola R.	Flat Ck.	Gadsden	A	4/18/1995	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	9/17/1971	FAMU	SR 71, Scotts Ferry
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	7/8/1972	FAMU	SR 20
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	7/16/1972	FAMU	SR 20
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	9/12/1972	FAMU	SR 71, Scotts Ferry
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	10/11/1972	FAMU	SR 71, Scotts Ferry
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	9/7/1973	FAMU	SR 20
Caenis punctata	Chipola R.	Chipola R.	Calhoun	A	11/6/1973	FAMU	SR 20
Caenis punctata	Chipola R.	Dead Lakes	Gulf	A	10/29/1971	FAMU	Hwy 71, 4 mi N Wewahitchka
Caenis punctata	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	9/24/1986	FAMU ORB Study	SR 12
Caenis punctata	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 274
Caenis punctata	Santa Fe R.	Santa Fe R.	Bradford	N	5/6/1996	FAMU	CR 231/235
Caenis sp.	Ochlockonee R.	Little R.	Gadsden	N	1/4/1986	FAMU ORB Study	CR 268 6.5 SE Quincy
Caenis sp.	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N		FAMU	5.3 mi SW Quincy
Cercobrachys etowah	Apalachicola	Flat Ck.	Gadsden	N	7/24/1996	FAMU	CR 270A 8 km S Chattahoochee
Cercobrachys etowah	Chipola R.	Chipola R.	Calhoun	N	4/12/1972	FAMU	Hwy 20
Cercobrachys etowah	Chipola R.	Chipola R.	Jackson	N	4/22/1999	FDEP Pensacola	I-10
Cercobrachys etowah	Peace R.	Peace R.	De Soto	N	11/30/1985	FAMU	Arcadia

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Ephemerellidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Attenella attenuata	Yellow R.	Shoal R.	Walton	N	3/22/1993	FDEP Pensacola	
Dannella simplex	Apalachicola R.	Crooked Ck.	Gadsden	N	4/18/1995	FAMU	CR 20
Dannella simplex	Apalachicola R.	Flat Ck.	Gadsden	N	4/27/1999	FAMU	CR 270A , 8km S Chattahootchee
Dannella simplex	Choctawhatchee Bay	Alaqua Ck.	Walton	N	3/2/1992	FDEP Pensacola	Pine Allen Bridge
Dannella simplex	Choctawhatchee Bay	Alaqua Ck.	Walton	N	3/6/2001	FDEP Pensacola	Forest Oak Rd.
Dannella simplex	Ochlockonee R.	Rocky Comfort Ck	Gadsden	N	4/13/1988	FAMU ORB Study	CR 274
Dannella simplex	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/13/1988	FAMU	CR 267
Dannella simplex	Pea R.	Limestone Ck.	Walton	N	3/1/2001	FDEP Pensacola	Beck Ridge Rd.
Dannella simplex	Yellow R.	Big Horse Ck.	Okaloosa	N	4/22/1991	FDEP Pensacola	
Ephemerella excrucians	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	3/1/2000	FAMU Ravines Study	Blackwater R. St. Forest, Red Rock Rd
Ephemerella excrucians	Blackwater R.	Pond Ck.	Santa Rosa	N	3/14/2002	FDEP Pensacola	Arcadia Mill bridge
Ephemerella excrucians	Blackwater R.	Pond Ck.	Santa Rosa	N	4/3/2002	FDEP Pensacola	above Arcadia Mill Bridge
Ephemerella excrucians	Choctawhatchee Bay	Alaqua Ck.	Walton	N	3/6/2001	FDEP Pensacola	Forest Oak Rd.
Ephemerella excrucians	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Ephemerella excrucians	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Ephemerella excrucians	Pensacola Bay	Pond Ck.	Santa Rosa	N	4/3/2002	FDEP Pensacola	above Arcadia Mill Bridge
Ephemerella excrucians	Yellow R.	Trib. Turkey Ck.	Okaloosa	N	4/12/2003	FAMU Ravines Study	Eglin AFB, BR 232
Ephemerella invaria	Apalachicola R.		Gadsden	N	3/17/1939	(Berner, 1946)	4.5 mi S River Junction
Ephemerella invaria	Apalachicola R.	Crooked Ck.	Gadsden	N	3/22/1995	FAMU	CR 270, 10 km S Greensboro
Ephemerella invaria	Apalachicola R.	Crooked Ck.	Gadsden	A	4/10/1996	FAMU Ravines Study	CR 270, 10 km W Greensboro
Ephemerella invaria	Apalachicola R.	Crooked Ck.	Gadsden	N	2/19/1998	FAMU	CR 270, 10 km W Greensboro
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N	4/17/1996	FAMU	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	A	2/18/1999	FAMU	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N	2/18/1999	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N/A	2/18/1999	FAMU	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N	4/27/1999	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Ephemerella invaria	Apalachicola R.	Rock Ck.	Liberty	N	4/8/1998	FAMU Ravines Study	Torreya State Park, lower end
Ephemerella invaria	Apalachicola R.	Rock Ck.	Liberty	N	6/8/1999	FAMU Ravines Study	Torreya State Park, lower end
Ephemerella invaria	Apalachicola R.	Sweetwater Ck.	Liberty	N	12/17/1939	(Berner, 1946)	

FLORIDA EPHEMEROPTERA

Family: Ephemerellidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Ephemerella invaria	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/18/1995	FAMU Ravines Study	CR 270
Ephemerella invaria	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	2/19/1998	FAMU	CR 270A
Ephemerella invaria	Apalachicola R.	Trib. Flat Ck.	Gadsden	A	2/18/1999	FAMU	CR 270A
Ephemerella invaria	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	3/31/1999	FAMU Ravines Study	CR 270A
Ephemerella invaria	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A
Ephemerella invaria	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	3/2/2000	FAMU Ravines Study	CR 270A
Ephemerella invaria	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	3/9/1999	FAMU Ravines Study	ABRP, Travelers Tract
Ephemerella invaria	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	3/1/2000	FAMU Ravines Study	Blackwater R. St. Forest, Red Rock Rd
Ephemerella invaria	Choctawhatchee Bay		Okaloosa	N	4/3/1938	(Berner, 1946)	3.6 mi N Niceville
Ephemerella invaria	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/8/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/14/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/19/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/23/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/23/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/23/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	N	2/23/1996	FAMU	CR 268, 6 km W Midway
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/8/1997	FAMU	
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/10/1997	FAMU	
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	N	2/19/1997	FAMU	
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/15/1999	FAMU	
Ephemerella invaria	Ochlockonee R.	Monroe Ck.	Gadsden	N	3/10/2001	FAMU	CR 268
Ephemerella sp.	Apalachicola R.	Rock Ck.	Liberty	N	11/3/1999	FAMU Ravines Study	Eglin Air Base, BR 232
Ephemerella sp.	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 221
Ephemerella sp.	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 221
Ephemerella sp.	Ochlockonee R.	Rocky Ck.	Gadsden	A	4/10/1996	FAMU ORB Study	10 km W Greensboro
Eurylophella doris	Apalachicola R.	Flat Ck.	Gadsden	N	10/12/1998	FAMU	CR 270A, 8 km S Chattahootchee
Eurylophella doris	Apalachicola R.	Flat Ck.	Gadsden	N	10/12/1998	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Eurylophella doris	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8 km S Chattahoochee
Eurylophella doris	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8 km S Chattahoochee
Eurylophella doris	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Eurylophella doris	Apalachicola R.	Rock Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	Torreya St. Park, upper end

FLORIDA EPHEMEROPTERA

Family: Ephemerellidae Page 5-3

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Eurylophella doris	Apalachicola R.	Rock Ck.	Liberty	A	9/4/1998	FAMU Ravines Study	Torreya St. Park, upper end
Eurylophella doris	Aucilla R.	Aucilla R.	Gadsden	N	2/26/1992	FAMU	Hwy 98
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	10/20/1991	FAMU	Hwy 98
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	12/9/1991	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	12/17/1991	FAMU	Hwy 98
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	2/19/1992	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	4/15/1992	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	10/21/1992	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	12/9/1992	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Madison	N	4/14/1993	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Taylor	N	2/19/1992	FAMU	Hwy 98
Eurylophella doris	Aucilla R.	Aucilla R.	Jefferson/Taylor	N	2/19/1992	FAMU	Hwy 98
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	10/10/1991	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	12/3/1991	FAMU	Hwy 27
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	12/3/1991	FAMU	SR 59
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	12/3/1991	FAMU	
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	12/3/1991	FAMU	SR 59
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	4/1/1992	FAMU	SR 59
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	9/29/1992	FAMU	SR 59
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	12/2/1992	FAMU	SR 59
Eurylophella doris	Aucilla R.	Burnt Mill Ck.	Jefferson	N	12/2/1992	FAMU	SR 59
Eurylophella doris	Blackwater R.	Blackwater R	Santa Rosa	N	4/26/1994	FAMU	Fish Hatchery Rd.
Eurylophella doris	Blackwater R.	Blackwater R.	Santa Rosa	N	4/20/1994	FAMU	Fish Hatchery Rd.
Eurylophella doris	Blackwater R.	Blackwater R.	Santa Rosa	A	3/10/1999	FAMU Ravines Study	Blackwater R. St. Park, Bryant Bridge
Eurylophella doris	Blackwater R.	Coon Camp Branch	Santa Rosa	N		FDEP Pensacola	below North River Rd.
Eurylophella doris	Blackwater R.	Hickory Hammock Ck.	Santa Rosa	N	3/7/2000	FDEP Pensacola	
Eurylophella doris	Blackwater R.	Turkey Ck.	Santa Rosa	N	7/15/1999	FDEP Pensacola	above Amos Cabiness Rd.
Eurylophella doris	Blackwater R.	Wolf Trap Branch	Santa Rosa	N	8/10/1999	FDEP Pensacola	North River Rd.
Eurylophella doris	Chipola R.	Farley Ck.	Calhoun	N	1/26/1984	FDEP Pensacola	CR 275
Eurylophella doris	Chipola R.	Ten Mile Ck.	Calhoun	N	2/10/1998	FDEP Pensacola	
Eurylophella doris	Choctawhatchee Bay	Bull Ck.	Okaloosa	N	8/31/2000	FDEP Tallahassee	ER 454
Eurylophella doris	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	head, 0.3 km W Okaloosa tower

FLORIDA EPHEMEROPTERA

Family: Ephemerellidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Eurylophella doris	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Eurylophella doris	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	4/9/1999	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Eurylophella doris	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Eurylophella doris	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Eurylophella doris	Choctawhatchee Bay	Mill Ck.	Okaloosa	N	7/25/2000	FDEP Pensacola	Eglin Golf Course, Hole 9
Eurylophella doris	Choctawhatchee Bay	Mt. Sinai Branch	Walton	N	8/10/2000	FDEP Pensacola	above ER 412
Eurylophella doris	Choctawhatchee Bay	Open Branch	Walton	N	7/13/2000	FDEP Pensacola	ER 214/374
Eurylophella doris	Choctawhatchee Bay	Rock Ck.	Walton	N	7/20/2000	FDEP Pensacola	ER 214/374
Eurylophella doris	Choctawhatchee Bay	Rocky Ck.	Walton	N	7/20/2000	FDEP Pensacola	below ER 214/374
Eurylophella doris	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	3/7/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Eurylophella doris	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Eurylophella doris	Choctawhatchee Bay	S. Fork Bear Ck.	Walton	N	2/25/1993	FDEP Pensacola	
Eurylophella doris	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637
Eurylophella doris	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Eurylophella doris	Choctawhatchee R.	Eight Mile Ck.	Walton	N	5/30/2000	FDEP Pensacola	CR 181
Eurylophella doris	Choctawhatchee R.	Little Crooked Ck.	Bay	N	3/3/1999	FAMU Ravines Study	Pine Log St. Forest, SR 79
Eurylophella doris	Choctawhatchee R.	Rocky Ck.	Walton	N	7/13/2000	FDEP Pensacola	
Eurylophella doris	Escambia R.	Brickton Ck.	Escambia	N	2/16/2000	FDEP Pensacola	Brickton Rd.
Eurylophella doris	Escambia R.	McCushill Mill Ck.	Santa Rosa	N	1/25/1999	FDEP Pensacola	Ebenezer Church Rd.
Eurylophella doris	Escambia R.	Mill Ck.	Escambia	N	2/12/1998	FDEP Pensacola	Jefferson Ave.
Eurylophella doris	Escambia R.	Trib. Mitchell Ck.	Escambia	N	3/21/2002	FDEP Pensacola	Pipeline Branch
Eurylophella doris	Kissimmee R.	Carter Ck.	Highlands	N	1/14/1981	FDEP Punta Gorda	Arbuckle Ck. Rd.
Eurylophella doris	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	12/7/1992	FAMU	CR 159, 6.5 km NW Havana
Eurylophella doris	Ochlockonee R.	Camp Ck.	Gadsden	N	1/29/1986	FAMU ORB Study	CR 274
Eurylophella doris	Ochlockonee R.	Camp Ck.	Gadsden	N	10/29/1986	FAMU ORB Study	CR 274
Eurylophella doris	Ochlockonee R.	Cane Ck.	Gadsden	N	2/23/2000	FAMU	Hwy 274
Eurylophella doris	Ochlockonee R.	Cane Ck.	Gadsden	N	2/23/2000	FAMU	Hwy 274
Eurylophella doris	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near middle (FM1-1)
Eurylophella doris	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/19/1994	FAMU ORB Study	near middle (FM1-1)
Eurylophella doris	Ochlockonee R.	Flat Ck.	Gadsden	N	4/5/1996	FAMU	CR 270A, 8km S Chattahoochee
Eurylophella doris	Ochlockonee R.	Little R.	Gadsden	N	12/7/1992	FAMU	Hwy 90
Eurylophella doris	Ochlockonee R.	Ochlockonee R.	Gadsden	N	3/3/1987	FAMU	SR 65

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Family: Ephemerellidae Page 5-5

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N		FAMU ORB Study	10 mi S Quincy
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	2/8/1988	FAMU	SR 65
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	2/8/1988	FAMU ORB Study	CR 267
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	4/13/1988	FAMU	CR 267
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	9/12/1988	FAMU ORB Study	SR 65
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	10/12/1988	FAMU	CR 267
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	12/15/1988	FAMU	CR 267
Eurylophella doris	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	12/15/1988	FAMU ORB Study	CR 267
Eurylophella doris	Ochlockonee R.	Rocky Ck.	Gadsden	N	10/29/1986	FAMU ORB Study	CR 267
Eurylophella doris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	12/3/1986	FAMU ORB Study	CR 267
Eurylophella doris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/13/1988		CR 267
Eurylophella doris	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	5/6/1988	FAMU ORB Study	CR 257
Eurylophella doris	Ochlockonee R.	Telogia Ck.	Gadsden	N	3/4/1987	FAMU ORB Study	SR 20, 2.5 mi E. Bristol
Eurylophella doris	Ochlockonee R.	Telogia Ck.	Gadsden	N	3/4/1987	FAMU ORB Study	CR 271, 6.6 mi NW Hosford
Eurylophella doris	Ochlockonee R.	Telogia Ck.	Gadsden	N	3/4/1987	FAMU ORB Study	SR 20, 2.5 mi E. Bristol
Eurylophella doris	Ochlockonee R.	Telogia Ck.	Gadsden	N	11/24/1987	FAMU ORB Study	
Eurylophella doris	Ochlockonee R.	Telogia Ck.	Gadsden	N	11/24/1987	FAMU ORB Study	SR 65D, 2 mi. SE Greensboro
Eurylophella doris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N		FAMU ORB Study	SR 65, 6.5 mi N Quincy
Eurylophella doris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N		FAMU ORB Study	SR 65 + 65A
Eurylophella doris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N Quincy
Eurylophella doris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N Quincy
Eurylophella doris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N Quincy
Eurylophella doris	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N Quincy
Eurylophella doris	Peace R.	Horse Ck.	Hardee	N	1/26/1984	FDEP Punta Gorda	SR 64
Eurylophella doris	Pensacola Bay	Catfish Branch	Santa Rosa	N	2/10/2000	FDEP Pensacola	below Ford, ER 736
Eurylophella doris	Pensacola Bay	East Bay R.	Okaloosa	N	3/8/2001	FDEP Pensacola	ER 259
Eurylophella doris	Pensacola Bay	Live Oak Ck.	Okaloosa	N	8/22/2000	FDEP Pensacola	below borrow pit
Eurylophella doris	Pensacola Bay	Mare Ck.		N	3/3/1998	FDEP Pensacola	100 m below Mattie Kennedy Rd.
Eurylophella doris	Pensacola Bay	Narrow's Ck.	Okaloosa	N	2/25/1998	FDEP Pensacola	
Eurylophella doris	Pensacola Bay	Panther Ck.	Okaloosa	N	8/24/2000	FDEP Pensacola	above ER 678
Eurylophella doris	Pensacola Bay	Panther Ck.	Santa Rosa	N	8/24/2000	FDEP Pensacola	above ER 678
Eurylophella doris	Pensacola Bay	Pond Ck.	Santa Rosa	N	3/14/2002	FDEP Pensacola	Arcadia Mill, Milton

FLORIDA EPHEMEROPTERA

Family: Ephemerellidae Page 5-6

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Eurylophella doris	Pensacola Bay	Prairie Ck.	Okaloosa	N	8/29/2000	FDEP Pensacola	above ER 678
Eurylophella doris	Pensacola Bay	Prairie Ck.	Okaloosa	N	8/29/2000	FDEP Pensacola	above ER 678
Eurylophella doris	Pensacola Bay	Turtle Ck.	Okaloosa	N	8/8/2000	FDEP Pensacola	ER 239, below clay pit B-165
Eurylophella doris	Perdido R.	McDavid Ck.	Escambia	N	6/21/1993	FDEP Pensacola	SR 99
Eurylophella doris	Santa Fe R.	Santa Fe R.	Alachua/Bradford	N	11/10/1992	SRWMD	CR 231/235
Eurylophella doris	St. Andrews Bay	East Turkey Hen Ck.	Okaloosa	N	4/9/1999	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Eurylophella doris	St. Andrews Bay	East Turkey Hen Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Eurylophella doris	St. Andrews Bay	Econfina Ck.	Bay	N	11/7/1995	FDEP Pensacola	Scott Rd.
Eurylophella doris	St. Marks R.	Alapaha R.	Jefferson	N	11/4/1993	FAMU	SR 59
Eurylophella doris	St. Marks R.	Aucilla R.	Jefferson/Taylor	N	2/19/1992	FAMU	Hwy 98
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	9/3/1991	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	10/10/1991	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	10/10/1991	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	10/10/1991	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	1/16/1992	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	1/16/1992	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	1/16/1992	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	9/29/1992	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	11/5/1992	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	11/6/1992	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	12/2/1992	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	12/2/1992	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	2/4/1993	FAMU	
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	4/1/1993	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	4/1/1993	FAMU	SR 59
Eurylophella doris	St. Marks R.	Burnt Mill Ck.	Jefferson	N	11/4/1993	FAMU	Hwy 27
Eurylophella doris	St. Marks R.	Burt Mill Ck.	Jefferson	N	1/16/1992	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Aucilla R.	Jefferson/Madison	N	12/9/1992	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Aucilla R.	Jefferson/Taylor	N	12/9/1990	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	6/19/1991	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	8/21/1991	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	10/22/1991	FAMU	Hwy 98

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Family: Ephemerellidae Page 5-7

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	10/22/1991	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	10/22/1991	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/8/1991	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1991	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1991	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1991	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1991	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	2/19/1992	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	2/19/1992	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	2/19/1992	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	4/15/1992	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	4/16/1992	FAMU	Econfina Community
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	4/16/1992	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	4/16/1992		Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1992	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1992		
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	12/9/1992	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	4/14/1993	FAMU	Hwy 27
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	4/14/1993	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	9/18/1993	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	11/18/1993	FAMU	Hwy 27 (ER1)
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	1/16/1994	FAMU ORB Study	Hwy 98 (ER2)
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994	FAMU ORB Study	Hwy 27 [ER1]
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994	FAMU ORB Study	Hwy 98 (ER2-B)
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994		Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994	FAMU	Hwy 98
Eurylophella doris	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994	FAMU	Hwy 98
Eurylophella doris	Suwannee R.	Suwannee R.	Hamilton/Suwannee	N	4/28/1993	FAMU	0.5 km E Hwy 129
Eurylophella doris	Suwannee R. (upper)	Suwannee R	Madison/Suwannee	N	10/29/1991	FAMU	Suwannee R. St. Pk., Hwy 90
Eurylophella doris	Suwannee R. (upper)	Suwannee R.	Columbia/Hamilton	N	10/29/1991	FAMU	7.5 km N SR 6
Eurylophella doris	Suwannee R. (upper)	Suwannee R.	Columbia/Hamilton	N	2/26/1992	FAMU	7.5 km N SR 6
Eurylophella doris	Suwannee R. (upper)	Suwannee R.	Hamilton	N	4/15/1993	SRWMD	

FLORIDA EPHEMEROPTERA

Family: Ephemerellidae Page 5-8

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Eurylophella doris	Suwannee R. (upper)	Suwannee R.	Hamilton/Suwannee	N	4/22/1992	FAMU	0.5 km E Hwy 129
Eurylophella doris	Suwannee R. (upper)	Suwannee R.	Madison/Suwannee	N	2/26/1992	FAMU	1 km N Hwy 90
Eurylophella doris	Yellow R.	Big Swamp Ck.	Walton	N	3/15/1999	FDEP Pensacola	McKee Rd.
Eurylophella doris	Yellow R.	Fundy Bayou	Santa Rosa	N	2/8/2000	FDEP Pensacola	
Eurylophella doris	Yellow R.	Gum Ck.	Walton	N	3/10/1997	FDEP Pensacola	below SR 83
Eurylophella doris	Yellow R.	Indigo Ck.	Santa Rosa	N	5/26/2004	FAMU Eglin Study	Eglin AFB, BR 213
Eurylophella doris	Yellow R.	Long Ck.	Okaloosa	N	2/28/1999	FDEP Pensacola	above I-10
Eurylophella doris	Yellow R.	South steephead Hick's Ck.	Santa Rosa	N	2/15/2000	FDEP Pensacola	
Eurylophella doris	Yellow R.	Weaver Ck.	Santa Rosa	N	2/24/2000	FDEP Pensacola	ER 736
Serratella deficiens	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	3/31/1999	FAMU	CR 270A
Serratella deficiens	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	3/31/1999	FAMU	CR 270A
Serratella deficiens	Choctawhatchee Bay	Bull Ck.	Okaloosa	N	8/31/2000	FDEP Pensacola	ER 454
Serratella deficiens	Choctawhatchee Bay	East Turkey Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Serratella deficiens	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Serratella deficiens	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 601
Serratella deficiens	Choctawhatchee Bay	Mt. Sinai Branch	Walton	N	8/10/2000	FDEP Pensacola	above ER 412
Serratella deficiens	Choctawhatchee Bay	Open Branch	Walton	N	7/10/2003	FDEP Pensacola	above ER 214
Serratella deficiens	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, 0.4mi S BR 232
Serratella deficiens	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 601
Serratella deficiens	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Serratella deficiens	Ochlockonee R.	Monroe Ck.	Gadsden	N	2/19/1997	FAMU	
Serratella deficiens	Pea R.	Limestone Ck.	Walton	N	3/1/2001	FDEP Pensacola	Beck Ridge Rd.
Serratella deficiens	Pensacola Bay	Panther Ck.	Santa Rosa	N	8/24/2000	FDEP Pensacola	above ER 678
Serratella deficiens	St. Andrews Bay	East Turkey Hen Ck.	Okaloosa	N	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 601
Serratella deficiens	St. Andrews Bay	Econfina Ck.	Bay	N	6/28/1993	FDEP Pensacola	WS B54

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Ephemeridae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Ephemera simulans	St. Johns R. (lower)	Kingsley Lake	Clay	N	5/15/1935	FAMU	verbatim date = May, 1935
Hexagenia bilineata	Apalachicola R.	Apalachicola R.	Liberty	A	8/28/1973	FAMU	SR 20
Hexagenia bilineata	Apalachicola R.	Lake Seminole	Jackson	A	7/25/1970	FAMU	Three Rivers Street
Hexagenia bilineata	Chipola R.	unknown	Jackson	A	8/23/1984	FAMU	Florida Caverns State Park
Hexagenia bilineata	Ochlockonee R.	River Bluff	Leon	A	8/17/1983	FAMU	River Bluff at Lake Talquin
Hexagenia limbata	Blackwater R.	Blackwater R.	Okaloosa	A	4/24/1976	FAMU	FAMU Biol. Sta.
Hexagenia limbata	Blackwater R.	Blackwater R.	Okaloosa	N, A	5/7/2004	FAMU	FAMU Biol. Sta., 4.5 mi NW Holt
Hexagenia limbata	Blackwater R.	Blackwater R.	Okaloosa	N, A	5/7/2004	FAMU	FAMU Biol. Sta., 4.5 mi NW Holt
Hexagenia limbata	Blackwater R.	Blackwater R.	Okaloosa	N, A	5/7/2004	FAMU	FAMU Biol. Sta., 4.5 mi NW Holt
Hexagenia limbata	Blackwater R.	Blackwater R.	Okaloosa	N, A	5/7/2004	FAMU	FAMU Biol. Sta., 4.5 mi NW Holt
Hexagenia orlando		Blue Lake	Putnam	A	8/6/1988	FAMU	Southeast of Hawthorne
Hexagenia orlando	Kissimmee R.	Lake June-in-Winter	Highlands	A	7/19/1962	FAMU	
Hexagenia orlando	Kissimmee R.	Lake Placid	Highlands	A	3/27/1961	FAMU	
Hexagenia orlando	Oklawaha R.	Lake Eaton	Marion	A	8/25/1975	FAMU	
Hexagenia orlando	St. Johns R. (lower)	Kingsley Lake	Clay	A	7/9/1985	FAMU	Camp Blanding
Hexagenia sp.		Brickton Branch		N	12/9/1997	FDEP Pensacola	Brickyard Rd.
Hexagenia sp.		Hicks Ck.		N	2/17/2000	FDEP Pensacola	
Hexagenia sp.		Mare Ck.		N	2/9/2000	FDEP Pensacola	
Hexagenia sp.		Sweetwater Ck.		N	8/19/1998	FDEP Pensacola	Grefen Rd.
Hexagenia sp.		Ten Mile Ck.		N	2/21/1994	FDEP Pensacola	
Hexagenia sp.	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8km S Chattahoochee
Hexagenia sp.	Blackwater R.	Beaver Ck.	Okaloosa	N	2/20/1998	FDEP Pensacola	Beaver Creek Rd.
Hexagenia sp.	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	12/19/1998	FDEP Pensacola	Springhill Rd.
Hexagenia sp.	Blackwater R.	Long Branch	Okaloosa	N	2/19/1998	FDEP Pensacola	
Hexagenia sp.	Blackwater R.	Mare Branch	Santa Rosa	N	3/2/1998	FDEP Pensacola	Mattie Kennedy Rd.
Hexagenia sp.	Blackwater R.	Muddy Branch	Okaloosa	N	2/27/1998	FDEP Pensacola	SR 4
Hexagenia sp.	Blackwater R.	Panther Ck.	Okaloosa	N	2/24/1998	FDEP Pensacola	Sherman Kennedy Rd.
Hexagenia sp.	Blackwater R.	West Fork Coldwater Ck.	Santa Rosa	N	8/19/1998	FDEP Pensacola	Walling Rd.
Hexagenia sp.	Chipola R.	Chipola R.	Calhoun	N	4/12/1983	FDEP Pensacola	below Rocky Ck.
Hexagenia sp.	Chipola R.	Turkey Pen Pond	Calhoun	N	7/27/1995	FDEP Pensacola	
Hexagenia sp.	Chipola R.	Turkey Pen Pond	Calhoun	N	9/12/1995	FDEP Pensacola	
Hexagenia sp.	Choctawhatchee Bay	Alaqua Ck.	Walton	N	2/6/1995	FDEP Pensacola	Pine Allen Bridge

FLORIDA EPHEMEROPTERA

Family: Ephemeridae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Hexagenia sp.	Choctawhatchee Bay	Alaqua Ck.	Walton	N	3/6/2001	FDEP Pensacola	Forest Oak Rd.
Hexagenia sp.	Choctawhatchee Bay	Alaqua Ck.	Washington	N	8/13/1997	FDEP Pensacola	Forest Oak Rd.
Hexagenia sp.	Choctawhatchee Bay	Bullhide Ck.	Walton	N	10/3/2000	FDEP Pensacola	
Hexagenia sp.	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Hexagenia sp.	Choctawhatchee Bay	Lafayette Ck.	Walton	N	8/17/1998	FDEP Pensacola	Hwy 20
Hexagenia sp.	Choctawhatchee R.	Blue Lake	Washington	N	8/30/1995	FDEP Pensacola	B-79
Hexagenia sp.	Choctawhatchee R.	Bruce Ck.	Walton	N	7/28/1998	FDEP Pensacola	SR 81
Hexagenia sp.	Choctawhatchee R.	Court Martial Lake	Bay	N	1/17/1996	FDEP Pensacola	
Hexagenia sp.	Choctawhatchee R.	Double Pond	Holmes	N	9/5/1995	FDEP Pensacola	
Hexagenia sp.	Choctawhatchee R.	Lake Cassidy	Holmes	N	3/11/1994	FDEP Pensacola	NS B-72
Hexagenia sp.	Choctawhatchee R.	Pate Lake	Washington	N	3/10/1994	FDEP Pensacola	NS B58
Hexagenia sp.	Escambia R.	Cotton Lake	Escambia	N	9/9/1998	FDEP Pensacola	
Hexagenia sp.	Escambia R.	Escambia R.	Escambia	N	8/17/1983		NS-2 B-51
Hexagenia sp.	Escambia R.	Escambia R.	Escambia	N	8/17/1983	FDEP Pensacola	
Hexagenia sp.	Hillsborough	Trout Ck.	Hillsborough	N	9/12/1994	FDEP Punta Gorda	
Hexagenia sp.	Kissimmee R.	Lake Annie	Highlands	N	7/17/1984	FDEP Punta Gorda	
Hexagenia sp.	Kissimmee R.	Lake Placid	Highlands	N	9/18/1985	FDEP Punta Gorda	
Hexagenia sp.	Kissimmee R.	Lake Viola	Highlands	N	9/12/1994	FDEP Punta Gorda	
Hexagenia sp.	Ochlockonee R.	Camp Ck.	Gadsden	N	1/14/1987	FAMU ORB Study	CR 270
Hexagenia sp.	Ochlockonee R.	Camp Ck.	Gadsden	N	9/2/1987	FAMU ORB Study	CR 276
Hexagenia sp.	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near middle
Hexagenia sp.	Ochlockonee R.	Little Talquin	Leon	A	8/18/1991	FAMU ORB Study	River Bluff Pk
Hexagenia sp.	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	2/23/2000	FAMU	HWY 267
Hexagenia sp.	Ochlockonee R.	Quincy Ck.	Gadsden	N	10/25/2000	FAMU ORB Study	SR 12, 3.5 mi S Quincy
Hexagenia sp.	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	2/8/1988	FAMU ORB Study	CR 276
Hexagenia sp.	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/13/1988	FAMU ORB Study	CR 276
Hexagenia sp.	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	10/12/1988	FAMU ORB Study	SR 267
Hexagenia sp.	Ochlockonee R.	Telogia Ck.	Gadsden	N	7/1/1987	FAMU ORB Study	CR 270A, 4.5 mi SW Greensboro
Hexagenia sp.	Ochlockonee R.	Telogia Ck.	Liberty	N	5/6/1986	FAMU ORB Study	2.5 mi E Bristol
Hexagenia sp.	Ochlockonee R.	Telogia Ck.	Liberty	N	5/6/1987	FAMU ORB Study	2.5 mi E Bristol
Hexagenia sp.	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	6/3/1988	FAMU ORB Study	CR 161
Hexagenia sp.	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	4/8/1997	FDEP Pensacola	CR 161

FLORIDA EPHEMEROPTERA

Family: Ephemeridae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Hexagenia sp.	Pea R.	Limestone Ck.	Walton	N	3/1/2001	FDEP Pensacola	
Hexagenia sp.	Pea R.	Natural Bridge Ck.	Walton	N	2/1/1995	FDEP Pensacola	Hwy 181
Hexagenia sp.	Pensacola Bay	Dean Ck.	Santa Rosa	N	1/25/1995	FDEP Pensacola	
Hexagenia sp.	Pensacola Bay	East Bay R.		N	3/8/2001	FDEP Pensacola	above ER 259
Hexagenia sp.	Pensacola Bay	Live Oak Ck.	Okaloosa	N	8/15/2000	FDEP Pensacola	ER above 234
Hexagenia sp.	Pensacola Bay	Live Oak Ck.	Okaloosa	N	8/17/2000	FDEP Pensacola	ER 235/181 above culvert
Hexagenia sp.	Pensacola Bay	Prairie Ck.	Okaloosa	N	8/29/2000	FDEP Pensacola	above ER 678
Hexagenia sp.	Perdido R.	Sandy Hollow Ck.	Escambia	N	1/25/2001	FDEP Pensacola	below Sandy Hollow Rd.
Hexagenia sp.	Santa Fe R.	New R.	Bradford/Union	N	8/13/1992	SRWMD	CR 229
Hexagenia sp.	Santa Fe R.	Santa Fe R.	Gilchrist/Suwannee	N	8/6/1992	SRWMD	Hwy 129
Hexagenia sp.	St. Andrews Bay	Deer Pt. Lake	Bay	N	8/25/1998	FDEP Pensacola	
Hexagenia sp.	St. Andrews Bay	Econfina Ck.	Bay	N	6/28/1993	FDEP Pensacola	
Hexagenia sp.	St. Andrews Bay	Econfina Ck.	Bay	N	2/23/1994	FDEP Pensacola	CR 388
Hexagenia sp.	St. Andrews Bay	Econfina Ck.	Bay	N	2/6/2001	FDEP Pensacola	Scott Rd.
Hexagenia sp.	St. Andrews Bay	Gap Lake	Washington	N	3/9/1994	FDEP Pensacola	B-82
Hexagenia sp.	St. Andrews Bay	Major Lake	Washington	N	8/29/1995	FDEP Pensacola	
Hexagenia sp.	St. Andrews Bay	Major Lake	Washington	N	12/13/1996	FDEP Pensacola	
Hexagenia sp.	Withlacoochee R., S.	Withlacoochee R.	Pasco	N	12/3/1999	FDEP Orlando	CR 575
Hexagenia sp.	Yellow R.	Big Horse Ck.	Okaloosa	N	2/16/1994	FDEP Pensacola	SR 2
Hexagenia sp.	Yellow R.	Big Horse Ck.	Okaloosa	N	7/15/1998	FDEP Pensacola	SR 2
Hexagenia sp.	Yellow R.	Big Horse Ck.	Okaloosa	N	2/8/2001	FDEP Pensacola	SR 2
Hexagenia sp.	Yellow R.	Indigo Ck	Santa Rosa	N	5/26/2004	FAMU Eglin Study	Eglin AFB, BR 213
Hexagenia sp.	Yellow R.	Julian Mill Ck.	Santa Rosa	N	8/18/1998	FDEP Pensacola	Garnier Landing Rd.
Hexagenia sp.	Yellow R.	Juniper Ck.	Okaloosa	N	10/23/1996	FDEP Pensacola	PJ Adams Rd.
Hexagenia sp.	Yellow R.	Murder Ck.	Okaloosa	N	7/23/1998	FDEP Pensacola	SR 85A
Hexagenia sp.	Yellow R.	Pond Ck.	Walton	N	3/14/2002	FDEP Pensacola	
Hexagenia sp.	Yellow R.	Turkey Ck.	Walton	N	7/21/1998	FDEP Pensacola	SR 2A
Hexagenia sp.	Yellow R.	Weaver Ck.	Santa Rosa	N	2/24/2000	FDEP Pensacola	ER 736
Hexagenia sp.	Yellow R.	Yellow R.		N	5/4/1983	FDEP Pensacola	
Pentagenia vittigera	Apalachicola R.	Apalachicola R.	Gadsden	A	6/3/1953	FAMU	
Pentagenia vittigera	Apalachicola R.	Apalachicola R.	Liberty	A	5/3/1941	FAMU	Alum Bluff

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Heptageniidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Heptagenia flavescens	Apalachicola R.		Gadsden	A	4/4/1953	(Berner, 1953)	light in Chattahoochee
Heptagenia flavescens	Blackwater R.	Blackwater R.	Okaloosa	A	4/25/1973	FAMU	FAMU Biol. Sta.
Heptagenia flavescens	Blackwater R.	Blackwater R.	Okaloosa	A	6/10/1977	FAMU	below Bryant Bridge
Heptagenia flavescens	Choctawhatchee R.	Choctawhatchee R.	Walton	N	2/22/1977	FDEP Pensacola	Hwy 20
Heptagenia flavescens	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	9/23/1987	FAMU ORB Study	CR 159
Heptagenia flavescens	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	4/27/1969	FAMU	CR 268
Heptagenia flavescens	Yellow R.	Shoal R.		N	3/22/1993	FDEP Pensacola	B-77
Heptagenia flavescens	Yellow R.	Yellow R.	Okaloosa	N	2/22/1977	FDEP Pensacola	Hwy 189
Maccaffertium exiguum				N		FDEP Punta Gorda	25020111
Maccaffertium exiguum				N	3/3/1981	FDEP Punta Gorda	25020004
Maccaffertium exiguum				N	9/27/1987	FDEP Punta Gorda	28020086
Maccaffertium exiguum				N	10/27/1987	FDEP Punta Gorda	28020086
Maccaffertium exiguum	Apalachicola R.	Rock Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	Torreya State Park, upper end
Maccaffertium exiguum	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	CR 270, 15km N Bristol
Maccaffertium exiguum	Apalachicola R.	Sweetwater Ck.	Liberty	A	11/20/1998	FAMU Ravines Study	CR 270, 15km N Bristol
Maccaffertium exiguum	Aucilla R.	Aucilla R.	Madison	A	7/24/1991	FAMU ORB Study	CR 357, 8mi S Lamont
Maccaffertium exiguum	Aucilla R.	Aucilla R.	Madison	A	8/24/1991	FAMU ORB Study	CR 357, 8 mi S Lamont
Maccaffertium exiguum	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	3/1/2000	FAMU	Blackwater R. St. Forest, Red Rock Rd
Maccaffertium exiguum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB
Maccaffertium exiguum	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB BR 221
Maccaffertium exiguum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	BR 232, Eglin AFB
Maccaffertium exiguum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	7/26/1994	FAMU ORB Study	bridge 4 NW
Maccaffertium exiguum	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	4/27/1988	FAMU ORB Study	SR 65+65A, 6 mi NE Quincy
Maccaffertium exiguum	St. Johns R., (upper)	Econlockhatchee R.	Seminole	N	5/12/2001	FDEP Orlando	Snowhill Rd., 100m downstream
Maccaffertium exiguum	Withlacoochee R.	Withlacoochee R.	Hamilton/Madison	N	6/3/1992	SRWMD	above Suwannee R.
Maccaffertium exiguum	Yellow R.	Boiling Ck.	Santa Rosa	A	3/20/0199	FAMU Ravines Study	Eglin AFB, BR 211
Maccaffertium mexicanum integrum				N		FDEP Punta Gorda	26010502
Maccaffertium mexicanum integrum				N	3/17/1981	FDEP	26010392
Maccaffertium mexicanum integrum	Alapaha R.	Alapaha R.	Hamilton	N	2/5/1993	SRWMD	CR 150
Maccaffertium mexicanum integrum	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, 0.3 mi S BR 232
Maccaffertium mexicanum integrum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	
Maccaffertium mexicanum integrum	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 637

FLORIDA EPHEMEROPTERA

Family: Heptageniidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Maccaffertium mexicanum integrum	Ochlockonee R.	Turkey Ck.	Gadsden	N	4/24/1994	FAMU ORB Study	4 mi S Quincy off CR 267A
Maccaffertium mexicanum integrum	Ochlockonee R.	Turkey Ck.	Gadsden	N	4/24/1994	FAMU ORB Study	4 mi S Quincy off CR 267A
Maccaffertium mexicanum integrum	Steinhatchee R.	Econfina R.	Taylor	N	8/13/1994	FAMU ORB Study	Hwy 27
Maccaffertium mexicanum integrum	Steinhatchee R.	Fenholloway R.	Taylor	N	7/13/1994	FAMU ORB Study	at Fenholloway
Maccaffertium mexicanum integrum	Suwanee R. (upper)	Suwannee R.	Suwannee	N	6/3/1992	SRWMD	Ellaville
Maccaffertium mexicanum integrum	Yellow R.	Boiling Ck.	Santa Rosa	A	3/20/1998	FAMU Ravines Study	Eglin AFB, BR 211
Maccaffertium smithae		Mare Ck.		A	2/19/2001	FDEP Pensacola	below East River Road
Maccaffertium smithae	Apalachicola R.	Crooked Ck.	Gadsden	N	3/2/2000	FAMU	CR 270, 10 km NW Greensboro
Maccaffertium smithae	Apalachicola R.	Flat Ck.	Gadsden	A	12/10/1998	FAMU	CR 270A, 8km S Chattahoochee
Maccaffertium smithae	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU	CR 270A, 8km S Chattahoochee
Maccaffertium smithae	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU Ravines Study	CR 270A, 8km S Chattahoochee
Maccaffertium smithae	Apalachicola R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8km S Chattahoochee
Maccaffertium smithae	Apalachicola R.	Little Sweetwater Ck.	Liberty	N	2/18/1999	FAMU Ravines Study	head, ABRP, 5km N Bristol
Maccaffertium smithae	Apalachicola R.	Little Sweetwater Ck.	Liberty	N	4/1/1999	FAMU Ravines Study	head, ABRP, 5km N Bristol
Maccaffertium smithae	Apalachicola R.	Little Sweetwater Ck.	Liberty	N	4/1/1999	FAMU	head, ABRP, 5km N Bristol
Maccaffertium smithae	Apalachicola R.	Rock Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	Torreya State Park, lower end
Maccaffertium smithae	Apalachicola R.	Rock Ck.	Liberty	A	9/20/1998	FAMU Ravines Study	Torreya State Park, lower end
Maccaffertium smithae	Apalachicola R.	Sweetwater Ck.	Bay	N	9/16/1997	FAMU Ravines Study	Sweetwater Branch Rd., 2m SW Betts
Maccaffertium smithae	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	CR 270, 15 km N Bristol
Maccaffertium smithae	Apalachicola R.	Sweetwater Ck.	Liberty	A	11/20/1998	FAMU Ravines Study	CR 270, 15km N Bristol
Maccaffertium smithae	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	6/9/1999	FAMU Ravines Study	ABRP, Travelers Tract
Maccaffertium smithae	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	7/6/1999	FAMU Ravines Study	ABRP, Travelers Tract
Maccaffertium smithae	Apalachicola R.	Turkey Ck.	Gadsden	A	4/24/1994	FAMU	CR 267A
Maccaffertium smithae	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	3/1/2000	FAMU	Blackwater R. St. Forest, Red Rock Rd
Maccaffertium smithae	Blackwater R.	Blackwater R.	Okaloosa	N	2/15/1994	FDEP Tallahassee	
Maccaffertium smithae	Blackwater R.	Reedy Ck.	Santa Rosa	N	3/1/2000		Blackwater R. St. Pk., E McClellan
Maccaffertium smithae	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	3/11/1999	FAMU Ravines Study	Eglin AFB, BR 601
Maccaffertium smithae	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	4/2/1999	FAMU Ravines Study	head, 0.3 km Okaloosa tower
Maccaffertium smithae	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 221
Maccaffertium smithae	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 221
Maccaffertium smithae	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Maccaffertium smithae	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/9/1999	FAMU Ravines Study	head, Eglin AFB, W BR 231

FLORIDA EPHEMEROPTERA

Family: Heptageniidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Maccaffertium smithae	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Maccaffertium smithae	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	5/25/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Maccaffertium smithae	Choctawhatchee Bay	Rogue Ck.	Okaloosa	N	4/7/2000	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Maccaffertium smithae	Choctawhatchee Bay	Sconiers Mill Ck.	Walton	N	3/3/2000	FAMU	SR 278 4.5 mi SW Defuniak Springs
Maccaffertium smithae	Choctawhatchee Bay	Trib. Turkey Ck	Okaloosa	N	3/1/2000		steephead off BR 639
Maccaffertium smithae	Choctawhatchee Bay	Trib. Turkey Ck.	Okaloosa	N	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 639
Maccaffertium smithae	Choctawhatchee Bay	Trib. Turkey Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 639
Maccaffertium smithae	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Maccaffertium smithae	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 232
Maccaffertium smithae	Choctawhatchee R.	East Pittman Ck.	Holmes	N	2/1/1995	FDEP Pensacola	CR 177A
Maccaffertium smithae	Choctawhatchee R.	Little Crooked Ck.	Bay	N	3/3/2000	FAMU	Pine Log State Forest, SR 79
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/4/1986	FAMU ORB Study	CR 159, 4.0 mi NW Havana
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/23/1988	FAMU ORB Study	CR 159, 4.0 mi NW Havana
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/16/1993	FAMU ORB Study	CR 159
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	1/27/1994	FAMU ORB Study	Mill White Road, 6 km W Attapulgus
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/19/1994	FAMU ORB Study	CR 159, 6.5 km NW Havana
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	7/26/1994	FAMU ORB Study	CR 159, 4 mi NW Havana
Maccaffertium smithae	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	9/28/2000	FAMU ORB Study	at bridge, 4 mi NW Havana
Maccaffertium smithae	Ochlockonee R.	Cane Ck.	Gadsden	N	2/3/2000	FAMU	CR 274
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	6/16/1993	FAMU ORB Study	near upper end
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/28/1993	FAMU ORB Study	near upper end
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near upper end
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near middle
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	8/18/1994	FAMU ORB Study	near middle
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	8/18/1994	FAMU Ravines Study	near upper end, FM1
Maccaffertium smithae	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/3/1999	FAMU Ravines Study	near upper end
Maccaffertium smithae	Ochlockonee R.	Little R.	Gadsden	N	5/1/1987	FAMU ORB Study	6 mi NE Quincy
Maccaffertium smithae	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	SR 12
Maccaffertium smithae	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/4/1996	FAMU	CR 268, 6 km W Midway
Maccaffertium smithae	Ochlockonee R.	Quincy Ck.	Gadsden	N	10/25/1988	FAMU ORB Study	SR 12
Maccaffertium smithae	Ochlockonee R.	Rock Ck.	Liberty	N	9/3/1999	FAMU Ravines Study	Torreya State Park
Maccaffertium smithae	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/3/1986	FAMU ORB Study	SR 65+65A, 6.5 mi N Quincy

FLORIDA EPHEMEROPTERA

Family: Heptageniidae Page 7-4

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Maccaffertium smithae	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	3/2/2000	FAMU	SR 65, N Quincy
Maccaffertium smithae	Santa Fe R.	Ichetucknee R.	Columbia	N	2/12/1993	SRWMD	
Maccaffertium smithae	St. Johns R. (lower)	Gold Head Branch	Clay	N	3/7/1999	FAMU Ravines Study	Gold Head Branch St. Park
Maccaffertium smithae	St. Johns R. (lower)	Gold Head Branch	Clay	A	6/5/1999	FAMU Ravines Study	Gold Head Branch St. Park
Maccaffertium smithae	St. Johns R. (lower)	Gold Head Branch Ck.	Clay	A	10/3/1998	FAMU	Gold Head Branch St. Park
Maccaffertium smithae	St. Marks R.	Burnt Mill Ck.	Jefferson	N	8/11/1993	FAMU ORB Study	SR 59
Maccaffertium smithae	Steinhatchee R.	Steinhatchee R.	Taylor	N	11/9/1992	SRWMD	
Maccaffertium smithae	Withlacoochee R.	Withlacoochee R.	Hamilton/Madison	N	6/5/1992	SRWMD	CR 150
Maccaffertium smithae	Yellow R.	Pine Log Ck.	Walton	A	2/17/1994	FDEP Pensacola	SR 2
Macdunnoa brunnea	Apalachicola R.	Apalachicola R.	Liberty	A	5/20/1973	FAMU	Hwy 20
Macdunnoa brunnea	Blackwater R.	Blackwater R.	Okaloosa	A	4/25/1972	FAMU	FAMU Biol. Sta.
Macdunnoa brunnea	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	4/21/1968	FAMU	SR 65B
Macdunnoa brunnea	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	5/1/1979	FAMU	SR 65B
Macdunnoa brunnea	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/15/1980	FAMU	SR 65B
Macdunnoa brunnea	Ochlockonee R.	Turkey Ck.	Gadsden	A	5/2/1980	FAMU	SR 65B
Macdunnoa brunnea	Ochlockonee R.	Willacoochee Ck.	Gadsden	N	4/27/1999	FAMU	SR 65
Stenacron floridense	Apalachicola R.	Flat Ck.	Gadsden	A	12/10/1998	FAMU	CR 270A, 8 km S Chattahoochee
Stenacron floridense	Aucilla R.	Aucilla R.	Madison	A	8/24/1991	FAMU ORB Study	CR 257, 8 mi S Lamont
Stenacron floridense	Aucilla R.	Aucilla R.	Madison	A	8/24/1991	FAMU	CR 257, 8 mi S Lamont
Stenacron floridense	Aucilla R.	Econfina R.	Taylor	A	1/16/1994	FAMU ORB Study	Hwy 98 (ER2-B)
Stenacron floridense	Blackwater R.	Blackwater R.	Okaloosa	A	8/6/1971	FAMU	Bryant Bridge
Stenacron floridense	Blackwater R.	Blackwater R.	Okaloosa	A	5/20/1973	FAMU	FAMU Biol. Sta.
Stenacron floridense	Blackwater R.	Blackwater R.	Okaloosa	A	4/23/1974	FAMU	Kennedy Bridge
Stenacron floridense	Choctawhatchee Bay	Lafayette Ck.	Walton	A	6/22/1971	FAMU	Hwy 20
Stenacron floridense	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, 0.4 mi S BR 232
Stenacron floridense	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	4/7/1999		
Stenacron floridense	Choctawhatchee R.	Turkey Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Stenacron floridense	Ochlockonee R.	Willacoochee Ck.	Gadsden	A	7/7/1986	FAMU ORB Study	SR 65 + 65A, 6.5 mi N Quincy
Stenacron floridense	Steinhatchee R.	Econfina R.	Taylor	A	1/18/1994	FAMU ORB Study	Hwy 98
Stenacron interpunctatum					8/4/1976	FDEP Punta Gorda	25020124
Stenacron interpunctatum				A	12/30/1981	FDEP Punta Gorda	25020111
Stenacron interpunctatum				A	2/15/1984	FDEP Punta Gorda	25020124

FLORIDA EPHEMEROPTERA

Family: Heptageniidae Page 7-5

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Stenacron interpunctatum				A	4/13/1987	FDEP Punta Gorda	26010592
Stenacron interpunctatum	Aucilla R.	Aucilla R.	Jefferson	N	4/15/1992	FAMU	Hwy 27
Stenacron interpunctatum	Aucilla R.	Fenholloway R.	Taylor	N	8/13/1994	FAMU ORB Study	CR 356
Stenacron interpunctatum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	3/3/1986	FAMU ORB Study	CR 159, NW Havana
Stenacron interpunctatum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	9/28/1993	FAMU ORB Study	CR 169, NW Havana
Stenacron interpunctatum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	7/26/1994	FAMU ORB Study	4 mi. NW Havana
Stenacron interpunctatum	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	9/28/2000	FAMU ORB Study	6.5 km NW Havana
Stenacron interpunctatum	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near middle
Stenacron interpunctatum	Ochlockonee R.	Ocklawaha Ck.	Gadsden	N	2/3/2000	FAMU	CR 267
Stenacron interpunctatum	Santa Fe R.	Santa Fe R.	Alachua/Union	N	3/9/1993	SRWMD	Worthington Springs
Stenacron interpunctatum	Santa Fe R.	Santa Fe R.	Gilchrist/Suwannee	N	6/4/1992	SRWMD	Hwy 129
Stenacron interpunctatum	Santa Fe R.	Santa Fe R.	Gilchrist/Suwannee	N	3/10/1993	SRWMD	Hwy 129
Stenacron interpunctatum	St. Andrews Bay	Econfina Ck.	Bay	N	2/24/1993	FDEP Pensacola	Scott Rd.
Stenacron interpunctatum	Steinhatchee R.	Econfina R.	Taylor	N	9/8/1993	FAMU ORB Study	Hwy 98 ER2-B
Stenacron interpunctatum	Steinhatchee R.	Econfina R.	Taylor	N	1/18/1994	FAMU ORB Study	Hwy 98 [ER2]
Stenacron interpunctatum	Steinhatchee R.	Econfina R.	Taylor	N	8/13/1994	FAMU ORB Study	Hwy 27
Stenacron sp.	Apalachicola R.	Rock Ck.	Liberty	A	4/9/1996	FAMU Ravines Study	Torreya State Park, upper end
Stenacron sp.	Choctawhatchee Bay	Rogue Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Stenacron sp.	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	3/3/1986	FAMU ORB Study	CR 159
Stenacron sp.	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	SR 12
Stenacron sp.	Ochlockonee R.	Little R.	Gadsden	N	8/27/1991	FAMU ORB Study	Hwy 90
Stenacron sp.	Ochlockonee R.	Little R.	Gadsden	N	10/14/1992	FAMU ORB Study	Hwy 90
Stenacron sp.	Ochlockonee R.	Willacoochee Ck.	Gadsden	A	5/29/1988	FAMU ORB Study	CR 161
Stenacron sp.	St. Marks R.	Mc Bride Slough	Wakulla	N	1/31/1998	FAMU ORB Study	CR 267
Stenacron sp.	St. Marks R.	St. Marks R.	Wakulla	N	4/14/1997	FAMU ORB Study	Hwy 98
Stenacron sp.	Steinhatchee R.	Steinhatchee R.	Taylor	N	11/9/1992	SRWMD	
Stenacron sp.	Suwannee R. (upper)	Suwannee R.	Madison	N	4/28/1993	FAMU ORB Study	Suwannee R. State Park, Hwy 90
Stenacron sp.	Withlacoochee R.	Withlacoochee R.	Columbia/Hamilton	N	3/9/1993	SRWMD	above Suwannee Confluence
Stenacron sp.	Yellow R.	Indigo Ck.	Santa Rosa	A	5/19/1998	FAMU Ravines Study	Eglin AFB, BR 213

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Isonychiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Isonychia arida	Apalachicola R.	Crooked Ck.	Gadsden	A	4/1/1999	FAMU Ravines Study	CR 270
Isonychia arida	Apalachicola R.	Crooked Ck.	Gadsden	A	6/7/1999	FAMU Ravines Study	CR 270
Isonychia arida	Apalachicola R.	Flat Ck.	Gadsden	N	4/18/1995	FAMU Ravines Study	CR 270A
Isonychia arida	Apalachicola R.	Flat Ck.	Gadsden	N	11/2/1996	FAMU Ravines Study	CR 270A
Isonychia arida	Apalachicola R.	Flat Ck.	Gadsden	N	3/31/1999	FAMU Ravines Study	CR 270A
Isonychia arida	Apalachicola R.	Flat Ck.	Gadsden	A	6/7/1999	FAMU Ravines Study	CR 270A
Isonychia arida	Apalachicola R.	Flat Ck.	Gadsden	N	6/7/1999	FAMU Ravines Study	CR 270A
Isonychia arida	Apalachicola R.	Sweetwater Ck.	Liberty	A	5/19/1994	FAMU	CR 270
Isonychia arida	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/9/1998	FAMU Ravines Study	CR 270
Isonychia arida	Apalachicola R.	Sweetwater Ck.	Liberty	A	11/20/1998	FAMU Ravines Study	CR 270
Isonychia arida	Apalachicola R.	Sweetwater Ck.	Liberty	A	6/7/1999	FAMU Ravines Study	CR 270
Isonychia arida	Aucilla R.	Aucilla R.	Jefferson	N	8/21/1991	FAMU	Hwy 98
Isonychia arida	Aucilla R.	Aucilla R.	Madison	A	7/24/1991	FAMU	CR 257
Isonychia arida	Chipola R.	Chipola R.	Calhoun	A	5/18/1994	FAMU	CR 274
Isonychia arida	Chipola R.	Rocky Ck.	Jackson	A	5/18/1994	FAMU	SR 71
Isonychia arida	Chipola R.	Rocky Ck.	Jackson	A	5/4/1995	FAMU	SR 71
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Franklin	N	6/16/1993	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	A	5/14/1986	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	A	4/15/1987	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	10/22/1987	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/23/1988	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	A	6/6/1991	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	8/14/1991	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	10/15/1991	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/8/1992	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/8/1992	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	10/14/1992	FAMU ORB Study	CR 159
Isonychia arida	Ochlockonee R.	Camp Ck.	Gadsden	A	4/4/1988	FAMU ORB Study	CR 274
Isonychia arida	Ochlockonee R.	FAMU Farm Str.	Gadsden	A	4/19/1994	FAMU Ravines Study	upper end
Isonychia arida	Ochlockonee R.	Little R.	Gadsden	A	6/26/1986	FAMU ORB Study	SR 12
Isonychia arida	Ochlockonee R.	Little R.	Gadsden	N	4/14/1987	FAMU ORB Study	CR 268
Isonychia arida	Ochlockonee R.	Little R.	Gadsden	A	5/13/1987	FAMU ORB Study	SR 12

FLORIDA EPHEMEROPTERA

Family: Isonychiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Isonychia arida	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	CR 268
Isonychia arida	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	SR 12
Isonychia arida	Ochlockonee R.	Little R.	Gadsden	A	5/31/1990	FAMU ORB Study	SR 12
Isonychia arida	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	5/18/1988	FAMU ORB Study	CR 274
Isonychia arida	Ochlockonee R.	Telogia Ck.	Liberty	A	5/7/1986	FAMU ORB Study	CR 271
Isonychia arida	Ochlockonee R.	Telogia Ck.	Liberty	A	5/7/1986	FAMU ORB Study	CR 271
Isonychia arida	Ochlockonee R.	Willacoochee Ck.	Gadsden	A	5/13/1988	FAMU ORB Study	CR 161
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	9/23/1987	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	10/22/1987	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/23/1988	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/12/1991	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	8/14/1991	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	8/14/1991	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	12/5/1991	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	2/12/1992	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/8/1992	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/10/1992	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	10/14/1992	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	12/7/1992	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	12/7/1992	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	2/11/1993	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	4/7/1993	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	6/16/1993	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	9/28/1993	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	7/26/1994	FAMU ORB Study	CR 159
Isonychia arida/sicca	Ochlockonee R.	Little R.	Gadsden	N	2/12/1987	FAMU ORB Study	SR 12
Isonychia arida/sicca	Ochlockonee R.	Little R.	Gadsden	N	2/12/1987	FAMU ORB Study	SR 12
Isonychia arida/sicca	Ochlockonee R.	Little R.	Gadsden	N	4/14/1987	FAMU ORB Study	CR 268
Isonychia arida/sicca	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	SR 12
Isonychia arida/sicca	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	CR 268
Isonychia arida/sicca	Withlacoochee R., N.	Withlacoochee R.	Hamilton/Madison	N	6/3/1992	SRWMD	above Suwannee R.
Isonychia berneri	Choctawhatchee Bay	Alaqua Ck.	Walton	A	6/25/1996	FAMU	CR 282, 5 km N of Portland

FLORIDA EPHEMEROPTERA

Family: Isonychiidae Page 8-3

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Isonychia berneri	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 221
Isonychia berneri	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	5/21/1998	FAMU Ravines Study	Eglin AFB, BR 232
Isonychia berneri	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	4/7/1999	FAMU Ravines Study	Eglin AFB, BR 232
Isonychia georgiae	Apalachicola R.	Crooked Ck.	Liberty	N	3/27/1954	FAMU Berner	about 10 mi S of River Junction
Isonychia georgiae	Apalachicola R.	Rock Ck.	Liberty	N	6/4/1953	FAMU Berner	just outside Torreya State Park
Isonychia georgiae	Apalachicola R.	Rock Ck.	Liberty	N	3/30/1955	FAMU Berner	at Torreya State Park
Isonychia georgiae	Apalachicola R.	unnamed stream	Gadsden	N	4/4/1953	FAMU Berner	10 mi S of River Junction, Torreya Rd.
Isonychia sayi	Choctawhatchee R.	Holmes Ck.	Washington	N	4/2/1938	FAMU Berner	Chipley
Isonychia sayi	Escambia R.	Escambia R.	Escambia	N	3/30/1953	FAMU Berner	Sta. 1 Phil. Acad. Nat. Sci. Survey
Isonychia sayi	Ochlockonee R.	Camp Ck.	Gadsden	A	4/15/1986	FAMU ORB Study	CR 274
Isonychia sayi	Ochlockonee R.	Little R.	Gadsden	N	5/13/1987	FAMU ORB Study	CR 268
Isonychia sayi	Yellow R.	Yellow R.	Okaloosa	N	5/13/1994	FAMU	campground S of Holt
Isonychia sicca	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU Ravines Study	CR 269
Isonychia sicca	Apalachicola R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU Ravines Study	CR 270A
Isonychia sicca	Apalachicola R.	Flat Ck.	Gadsden	N	2/18/1999	FAMU Ravines Study	CR 270A
Isonychia sicca	Apalachicola R.	Flat Ck.	Gadsden	N	3/31/1999	FAMU Ravines Study	CR 270A
Isonychia sicca	Apalachicola R.	Rock Ck.	Liberty	N	6/26/1996	FAMU Ravines Study	Torreya State Park, lower end
Isonychia sicca	Apalachicola R.	Rock Ck.	Liberty	N	11/20/1998	FAMU Ravines Study	Torreya State Park, lower end
Isonychia sicca	Apalachicola R.	Rock Ck.	Liberty	N	6/8/1999	FAMU Ravines Study	Torreya State Park, lower end
Isonychia sicca	Apalachicola R.	Sweetwater Ck.	Liberty	N	4/18/1995	FAMU Ravines Study	CR 270
Isonychia sicca	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	3/9/1999	FAMU Ravines Study	ABRP, Travelers Tract, off CR 270
Isonychia sicca	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	6/8/1999	FAMU Ravines Study	ABRP, Travelers Tract, off CR 270
Isonychia sicca	Aucilla R.	Aucilla R.	Jefferson	N	6/19/1991	FAMU	Hwy 98
Isonychia sicca	Aucilla R.	Aucilla R.	Jefferson	N	6/17/1992	FAMU	Hwy 98
Isonychia sicca	Chipola R.	Chipola R.	Calhoun	A	5/18/1994	FAMU	CR 274
Isonychia sicca	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	8/28/1991	FAMU	3 km N of SR 6
Isonychia sicca	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	8/28/1991	FAMU	3 km N of SR 6
Isonychia sicca	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	10/29/1991	FAMU	3 km N of SR 6
Isonychia sicca	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	12/17/1991	FAMU	3 km N of SR 6
Isonychia sicca	Withlacoochee R., N.	Withlacoochee R.	Hamilton	N	12/16/1992	FAMU	3 km N of SR 6
Isonychia sp.	Apalachicola R.	Beaver Dam Ck.	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, lower end
Isonychia sp.	Apalachicola R.	Kelley Branch	Liberty	A	3/22/1995	FAMU Ravines Study	ABRP, upper end

FLORIDA EPHEMEROPTERA

Family: Isonychiidae Page 8-4

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Isonychia sp.	Apalachicola R.	Sweetwater Ck.	Liberty	N	11/20/1998	FAMU Ravines Study	CR 270
Isonychia sp.	Apalachicola R.	Trib. Sweetwater Ck.	Liberty	N	2/18/1999	FAMU Ravines Study	ABRP, Travelers Tract, off CR 270
Isonychia sp.	Aucilla R.	Aucilla R.	Jefferson	N	6/19/1991	FAMU	Hwy 98
Isonychia sp.	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	3/1/2000	FAMU	Blackwater R. St. Forest, Red Rock Rd
Isonychia sp.	Choctawhatchee Bay	Juniper Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 221
Isonychia sp.	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Isonychia sp.	Choctawhatchee Bay	Oakie Ck.	Walton	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 208
Isonychia sp.	Choctawhatchee Bay	Turkey Ck.	Okaloosa	A	6/15/1999	FAMU Ravines Study	Eglin AFB, BR 637
Isonychia sp.	Ochlockonee R.	Camp Ck.	Gadsden	A	4/15/1986	FAMU ORB Study	CR 274
Isonychia sp.	Pea R.	Limestone Ck.	Walton	N	1/31/1995	FDEP Pensacola	Beck Ridge Rd.
Isonychia sp.	St. Andrews Bay	Econfina Ck.	Bay	N	2/24/1993	FDEP Pensacola	CR 388
Isonychia sp.	Yellow R.	East Turkey Hen Ck.	Okaloosa	A	4/8/1999	FAMU Ravines Study	Eglin AFB, BR 601
Isonychia sp.	Yellow R.	Little Boiling Ck.	Santa Rosa	A	3/19/1998	FAMU Ravines Study	Eglin AFB, BR 213

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Leptohyphidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Asioplax dolani	Santa Fe R.	Santa Fe R.	Alachua/Bradford	N	9/8/1992	SRWMD	CR 231/235
Asioplax dolani	St. Andrews Bay	Econfina Ck.	Bay	N	6/28/1993	FDEP Pensacola	CR 388
Tricorythodes albilineatus				N	12/30/1981	FDEP Punta Gorda	25020111
Tricorythodes albilineatus			Alachua	N	3/24/1937	(Berner, 1946)	
Tricorythodes albilineatus			Hernando	N	3/27/1938	(Berner, 1946)	County line South end of county
Tricorythodes albilineatus			Jackson	N	6/9/1938	(Berner, 1946)	Blue Springs nr. Marianna
Tricorythodes albilineatus			Marion	N	5/7/1934	(Berner, 1946)	Silver Springs
Tricorythodes albilineatus			Okaloosa	N	6/7/1938	(Berner, 1946)	5.1 mi W Walton County line
Tricorythodes albilineatus			Walton	N/A	6/7/1938	(Berner, 1946)	13.8 mi W Freeport
Tricorythodes albilineatus			Walton	N	5/31/1940	(Berner, 1946)	9.5 mi West Portland
Tricorythodes albilineatus		Weeki Wachee Springs	Hernando	A	8/20/1938	(Berner, 1946)	Weeki Wachee Springs
Tricorythodes albilineatus	Apalachicola R.		Gadsden	N	7/1/1939	(Berner, 1946)	10 mi. S River Junction
Tricorythodes albilineatus	Apalachicola R.	Rock Ck.	Liberty	N	6/8/1999	FAMU Ravines Study	Torreya State Park, lower end
Tricorythodes albilineatus	Apalachicola R.	Sweetwater Ck.	Liberty	N	6/10/1938	(Berner, 1946)	
Tricorythodes albilineatus	Aucilla R.	Aucilla R.	Madison	A	6/4/1938	(Berner, 1946)	Jefferson County line
Tricorythodes albilineatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 221
Tricorythodes albilineatus	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB, BR 221
Tricorythodes albilineatus	Choctawhatchee R.	Holmes Ck.	Washington	N	7/2/1939	(Berner, 1946)	Holmes Co. line
Tricorythodes albilineatus	Choctawhatchee R.	Pine Log Ck.	Bay	N	5/31/1940	(Berner, 1946)	
Tricorythodes albilineatus	Hillsborough R.	Hillsborough R.	Hillsborough	N	2/11/1938	(Berner, 1946)	
Tricorythodes albilineatus	Hillsborough R.	Six Mile Ck.	Hillsborough	N	3/26/1938	(Berner, 1946)	
Tricorythodes albilineatus	Ochlockonee R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU	CR 269, 8 km S Chattahoochee
Tricorythodes albilineatus	Oklawaha R.	Ocklawaha Ck.	Marion	N/A	3/19/1938	(Berner, 1946)	Hwy 38
Tricorythodes albilineatus	Perdido R.	Perdido R.	Escambia	N	6/21/1993	FDEP Pensacola	Hwy 184
Tricorythodes albilineatus	Santa Fe R.	Santa Fe R.	Alachua	N	5/14/1934	(Berner, 1946)	at Poe Springs
Tricorythodes albilineatus	Santa Fe R.	Santa Fe R.	Alachua	N/A	2/11/1939	(Berner, 1946)	at Poe Springs
Tricorythodes albilineatus	Santa Fe R.	Santa Fe R.	Alachua	N/A	10/25/1939	(Berner, 1946)	at Poe Springs
Tricorythodes albilineatus	Santa Fe R.	Santa Fe R.	Alachua	N/A	4/6/1940	(Berner, 1946)	at Poe Springs
Tricorythodes albilineatus	St. Andrews Bay		Bay	N	5/30/1940	(Berner, 1946)	27.4 mi N St. Andrews
Tricorythodes albilineatus	St. Marks R.		Leon	N	6/5/1938	(Berner, 1946)	7 mi S Hwy 19 on Hwy 127
Tricorythodes albilineatus	St. Marks R.	Wakulla Springs	Wakulla	N/A	5/29/1940	(Berner, 1946)	Wakulla Springs
Tricorythodes albilineatus	Steinhatchee R.	Econfina R.	Taylor	N	8/11/1993	FAMU ORB Study	Hwy 98

FLORIDA EPHEMEROPTERA

Family: Leptohyphidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Tricorythodes albilineatus	Steinhatchee R.	Econfina R.	Taylor	N	7/13/1994	FAMU ORB Study	
Tricorythodes albilineatus	Suwannee R. (lower)	Santa Fe R.	Bradford/Alachua	N	6/3/1992	SRWMD	CR 231
Tricorythodes albilineatus	Suwannee R. (upper)	Suwannee R.	Gilchrist	N	4/5/1938	(Berner, 1946)	Fanning Springs
Tricorythodes albilineatus	Suwannee R., (upper)	Suwannee R.	Madison/Suwannee	N	8/26/1992	FAMU ORB Study	Suwannee R. State Park, Hwy 90
Tricorythodes albilineatus	Withlacoochee R., N.	Withlacoochee R.	Hamilton/Madison	N	6/3/1992	SRWMD	above Suwannee R.
Tricorythodes albilineatus	Withlacoochee R., N.	Withlacoochee R.	Madison	N	8/26/1993	FAMU ORB Study	2km N SR 6
Tricorythodes albilineatus	Withlacoochee R., S.	Withlacoochee R.	Citrus	N	4/2/1937	(Berner, 1946)	

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Leptophlebiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Choroterpes basalis			Alachua	N/A	4/21/1939	(Berner, 1946)	Jerome Sink, 2.5 mi N Newberry
Choroterpes basalis			Duval	N	8/28/1938	(Berner, 1946)	11 mi N Jacksonville
Choroterpes basalis			Walton	N	5/31/1940	(Berner, 1946)	2.1 mi W Walton County line
Choroterpes basalis	Choctawhatchee Bay		Walton	N	7/31/1938	(Berner, 1946)	9.5 mi W Portland
Choroterpes basalis	Choctawhatchee Bay		Walton	N/A	5/31/1940	(Berner, 1946)	9.5 mi W Portland
Choroterpes basalis	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	7/27/2000	FDEP Pensacola	below Rocky Bayou Dr.
Choroterpes basalis	Fisheating Ck.	Fisheating Ck.	Highlands	N	5/29/1981	FDEP Punta Gorda	near Palmdale
Choroterpes basalis	Fisheating Ck.	Fisheating Ck.	Highlands	N	10/14/1986	FDEP Punta Gorda	near Palmdale
Choroterpes basalis	Myakka R.	Myakka R.	Manatee	N	4/16/1984	FDEP Punta Gorda	NE of Myakka City
Choroterpes basalis	Oklawaha R.	Hatchet Ck.	Alachua	N	4/22/1939	(Berner, 1946)	
Choroterpes basalis	Oklawaha R.	Redwater Lake	Putnam	N	10/20/1940	(Berner, 1946)	
Choroterpes basalis	Peace R.	Horse Ck.	Hardee	N	7/17/1984	FDEP Punta Gorda	SR 64
Choroterpes basalis	Santa Fe R.	Santa Fe R.	Alachua/Union	N	5/11/1993	SRWMD	Worthington Springs
Choroterpes basalis	St. Andrews Bay		Bay	N	5/6/1940	(Berner, 1946)	5.6 mi N Panama City
Choroterpes basalis	Withlacoochee R., S.	Rainbow Springs	Marion	N	3/9/1940	(Berner, 1946)	
Habrophlebia vibrans	Blackwater R.	Blackwater R.	Okaloosa	N	3/12/1970	FAMU	Peaden Bridge
Habrophlebia vibrans	Blackwater R.	Blackwater R.	Okaloosa	N	2/21/1971	FAMU	Peaden Bridge
Habrophlebia vibrans	Blackwater R.	Riley Spring Branch	Santa Rosa	N	3/11/1972	FAMU	W. of Riley Landing
Habrophlebia vibrans	Escambia R	Mitchell Ck.	Escambia	N	3/21/2002	FDEP Pensacola	Pipeline Branch, W Cox Rd.
Habrophlebia vibrans	Escambia R.	Brickton Ck.	Escambia	N	2/16/2000	FDEP Pensacola	Brickton Rd.
Habrophlebia vibrans	Escambia R.	Mitchell Ck	Escambia	N	2/20/1992	FDEP Pensacola	above Hwy 29
Habrophlebia vibrans	Escambia R.	Thomas Ck.	Santa Rosa	N	1/26/1995	FDEP Pensacola	
Habrophlebia vibrans	Pensacola Bay	Catfish Branch	Santa Rosa	N	2/10/2000	FDEP Pensacola	below Ford, ER 736
Habrophlebia vibrans	Perdido R.	McDavid Ck.	Escambia	N	2/14/1994	FDEP Pensacola	SR 99
Habrophlebiodes brunneipennis			Alachua	A	3/5/1938	(Berner, 1946)	Devil's Mill Hopper
Habrophlebiodes brunneipennis			Alachua	A	4/17/1940	(Berner, 1946)	Experiment Station, Univ. of Fla.
Habrophlebiodes brunneipennis			Alachua	N	1/30/1941	(Berner, 1946)	Experiment Station, Univ. of Fla.
Habrophlebiodes brunneipennis			Jackson	A	3/5/1938	(Berner, 1946)	3.6 mi S Altha SR 6
Habrophlebiodes brunneipennis			Jackson	A	6/9/1939	(Berner, 1946)	3.6 N Altha
Habrophlebiodes brunneipennis			Jackson	N	7/1/1939	(Berner, 1946)	2.9 N Altha
Habrophlebiodes brunneipennis			Jefferson	N	2/5/1938	(Berner, 1946)	Drifton
Habrophlebiodes brunneipennis			Leon	N	3/18/1939	(Berner, 1946)	7 mi N Tallahassee

FLORIDA EPHEMEROPTERA

Family: Leptophlebiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Habrophlebiodes brunneipennis			Walton	N	6/7/1938	(Berner, 1946)	7.3 mi W Ebro
Habrophlebiodes brunneipennis			Walton	N	5/31/1940	(Berner, 1946)	10.6 mi W Washington Co. line
Habrophlebiodes brunneipennis	Apalachicola R.	Sweetwater Ck	Liberty	N	6/10/1938	(Berner, 1946)	
Habrophlebiodes brunneipennis	Apalachicola R.	Sweetwater Ck.	Liberty	N	6/10/1938	(Berner, 1946)	
Habrophlebiodes brunneipennis	Apalachicola R.	Trib. Sweetwater R.	Liberty	N	6/8/1999	FAMU Ravines Study	ABRP, Travelers Tract
Habrophlebiodes brunneipennis	Aucilla R.	Aucilla R.	Jefferson	N	4/16/1992	FAMU ORB Study	Hwy 98
Habrophlebiodes brunneipennis	Aucilla R.	Fenholloway R.	Taylor	N	4/14/1994	FAMU ORB Study	at Fenholloway
Habrophlebiodes brunneipennis	Choctawhatchee Bay		Walton	N	4/2/1938	(Berner, 1946)	5.4 mi W Freeport
Habrophlebiodes brunneipennis	Choctawhatchee Bay	East Turkey Hen Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Habrophlebiodes brunneipennis	Choctawhatchee Bay	Juniper Ck.	Okaloosa	N	4/12/2001	FAMU Ravines Study	Eglin AFB BR 221
Habrophlebiodes brunneipennis	Choctawhatchee Bay	Mill Ck.	Okaloosa	N	7/25/2000	FDEP Pensacola	Eglin Golf Course, Hole 9
Habrophlebiodes brunneipennis	Choctawhatchee Bay	Rocky Ck.	Walton	N	8/10/2000	FDEP Pensacola	Mt. Sinai Branch above ER 412
Habrophlebiodes brunneipennis	Choctawhatchee Bay	Swift Ck.	Okaloosa	N	7/11/2000	FDEP Pensacola	below RR Trestle Culvert, CR 626
Habrophlebiodes brunneipennis	Choctawhatchee Bay	Turkey Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	Eglin AFB, BR 221
Habrophlebiodes brunneipennis	Choctawhatchee R.	East Turkey Hen Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	Eglin AFB, BR 601
Habrophlebiodes brunneipennis	Escambia R.		Santa Rosa	A	4/4/1938	(Berner, 1946)	7.1 mi W Milton
Habrophlebiodes brunneipennis	Escambia R.		Santa Rosa	N	4/4/1938	(Berner, 1946)	7.1 mi W Milton
Habrophlebiodes brunneipennis	Escambia R.	Brickton Ck.	Escambia	N	2/16/2000	FDEP Pensacola	Brickton Rd.
Habrophlebiodes brunneipennis	Escambia R.	Prichard Mill Branch	Escambia	N	2/11/1998	FDEP Pensacola	Dawson Rd.
Habrophlebiodes brunneipennis	Ochlockonee R.		Leon	N/A	3/12/1939	(Berner, 1946)	11.2 mi W Tallahassee
Habrophlebiodes brunneipennis	Ochlockonee R.		Leon	A	3/17/1939	(Berner, 1946)	11.2 mi W Tallahassee
Habrophlebiodes brunneipennis	Ochlockonee R.		Leon	N	3/17/1939	(Berner, 1946)	11.2 mi W Tallahassee
Habrophlebiodes brunneipennis	Ochlockonee R.		Leon	A	3/18/1939	(Berner, 1946)	11.2 mi W Tallahassee
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/5/1991	FAMU ORB Study	near upper end (FM1-C)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/6/1991	FAMU ORB Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/12/1992	FAMU ORB Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/12/1992	FAMU ORB Study	near lower end (FM2-B)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/8/1992	FAMU ORB Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/8/1992	FAMU ORB Study	near upper end (FM1-C)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	6/10/1992	FAMU ORB Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	6/10/1992	FAMU ORB Study	near upper end (FM1-B)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	10/14/1992	FAMU ORB Study	near upper end [FM1]

FLORIDA EPHEMEROPTERA

Family: Leptophlebiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	10/14/1992	FAMU ORB Study	near upper end (FM1-B)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/7/1992	FAMU ORB Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	12/7/1992	FAMU ORB Study	near upper end (FM1-B)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/11/1993	FAMU ORB Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	A	4/7/1993	FAMU ORB Study	near upper end
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/7/1993	FAMU ORB Study	near upper end (FM1-A)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	A	5/6/1993	FAMU Ravines Study	near middle
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/26/1993	FAMU ORB Study	near middle FM1 -D
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/28/1993	FAMU ORB Study	near middle (FM1-1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/28/1993	FAMU Ravines Study	near upper end (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/28/1993	FAMU ORB Study	upper end (FM1-A)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near middle (FM1-1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	1/27/1994	FAMU ORB Study	near middle (FM1-1-A)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/19/1994	FAMU ORB Study	near middle (FM1-1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	4/19/1994	FAMU ORB Study	near middle (FMI-A)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	7/18/1994	FAMU ORB Study	near middle (FM1)
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	9/14/1995	FAMU Ravines Study	(FM1), Uv-blacklight
Habrophlebiodes brunneipennis	Ochlockonee R.	FAMU Farm Str.	Gadsden	N	2/24/1998	FAMU Ravines Study	near upper end
Habrophlebiodes brunneipennis	Ochlockonee R.	Ochlockonee R.	Gadsden	N	11/11/1993	FAMU ORB Study	near upper end (FM1-B)
Habrophlebiodes brunneipennis	Ochlockonee R.	Smith Ck.	Wakulla	N	6/6/1938	(Berner, 1946)	
Habrophlebiodes brunneipennis	Oklawaha R.		Alachua	N	1/16/1938	(Berner, 1946)	2.5 mi W Gainesville, Hwy 14
Habrophlebiodes brunneipennis	Oklawaha R.		Alachua	A	1/18/1938	(Berner, 1946)	2.5 mi W Gainesville, Hwy 14
Habrophlebiodes brunneipennis	Oklawaha R.		Alachua	A	3/5/1938	(Berner, 1946)	2.5 mi W Gainesville, Hwy 14
Habrophlebiodes brunneipennis	Oklawaha R.		Alachua	A	6/16/1938	(Berner, 1946)	2.5 mi W Gainesville, Hwy 14
Habrophlebiodes brunneipennis	Oklawaha R.		Alachua	A	6/18/1938	(Berner, 1946)	2.5 mi W Gainesville, Hwy 14
Habrophlebiodes brunneipennis	Pea R.	Eight Mile Ck.	Walton	N	5/30/2000	FDEP Pensacola	CR 181
Habrophlebiodes brunneipennis	Pensacola Bay	Catfish Branch	Santa Rosa	N	1/26/1995	FDEP Pensacola	below Ford, ER 731
Habrophlebiodes brunneipennis	Pensacola Bay	Turtle Ck.	Okaloosa	N	8/1/2000	FDEP Pensacola	below ER 181
Habrophlebiodes brunneipennis	Pensacola Bay	Turtle Ck.	Okaloosa	N	8/8/2000	FDEP Pensacola	below Clay Pit B-165
Habrophlebiodes brunneipennis	Santa Fe R.	Devil's Mill Hopper	Alachua	N	4/18/1933	(Berner, 1946)	
Habrophlebiodes brunneipennis	Santa Fe R.	Worthington Springs	Alachua	N	2/5/1939	(Berner, 1946)	
Habrophlebiodes brunneipennis	St. Andrews Bay		Bay	N	11/4/1938	(Berner, 1946)	5.6 mi N Panama City

FLORIDA EPHEMEROPTERA

Family: Leptophlebiidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Habrophlebiodes brunneipennis	St. Andrews Bay		Bay	N	5/30/1939	(Berner, 1946)	5.6 mi N Panama City
Habrophlebiodes brunneipennis	St. Andrews Bay		Bay	N	5/30/1940	(Berner, 1946)	5.6 mi N Panama City
Habrophlebiodes brunneipennis	St. Marks R.	Smith Ck.	Wakulla		6/6/1938	(Berner, 1946)	
Habrophlebiodes brunneipennis	Suwannee R. (upper)		Hamilton	N	2/4/1938	(Berner, 1946)	8.3 mi S Jasper
Habrophlebiodes brunneipennis	Suwannee R. (upper)	Falling Ck.	Columbia	A	11/13/1938	(Berner, 1946)	
Habrophlebiodes brunneipennis	Suwannee R. (upper)	Falling Ck.	Columbia	N	11/13/1938	(Berner, 1946)	
Habrophlebiodes brunneipennis	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	6/17/1999	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Habrophlebiodes brunneipennis	Yellow R.	East Turkey Hen Ck.	Okaloosa	N	3/2/2000	FAMU Ravines Study	head, 0.3 km W Okaloosa tower
Habrophlebiodes brunneipennis	Yellow R.	Titi Ck.	Okaloosa	N	2/28/1999	FDEP Pensacola	Long Creek above I-10
Habrophlebiodes brunneipennis	Yellow R.	Trib. Deep Ck.	Okaloosa	N	8/26/1999	FAMU Ravines Study	Eglin AFB
Habrophlebiodes brunneipennis	Yellow R.	Trib. Turkey Ck.	Okaloosa	A	3/2/2000	FAMU Ravines Study	steephead off BR 639 Eglin AFB
Leptophlebia bradleyi	Pensacola Bay	Blackwater R	Okaloosa	N	11/27/2000	FDEP Pensacola	above racetrack landing
Leptophlebia bradleyi	Santa Fe R.	Santa Fe R.	Columbia	N	11/11/1992	SRWMD	O'leno State Park
Leptophlebia bradleyi	St. Marks R.	Burnt Mill Ck.	Jefferson	N	4/1/1993	FAMU ORB Study	Hwy 27 [BM2]
Leptophlebia cupida	Apalachicola Bay	Blackwater R.	Okaloosa	N	2/15/1977	FDEP Pensacola	SR 4
Leptophlebia cupida	Apalachicola R.	Trib. Flat Ck.	Gadsden	N	2/18/1999	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Leptophlebia cupida	Choctawhatchee R.	Falling Waters Ck.	Washington	N	3/9/1999	FAMU	Falling Waters State Park
Leptophlebia cupida	Ochlockonee R.	Cane Ck.	Gadsden	N	11/23/2000	FAMU	CR 274
Leptophlebia cupida	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	2/8/1988	FAMU ORB Study	CR 274
Leptophlebia cupida	Ochlockonee R.	Unnamed Ck.	Liberty	N	2/27/1973	(Burian, 2001)	1 mi. W Ochlockonee R, Hwy 20
Leptophlebia cupida	St. Johns R. (lower)	Black Ck.	Clay	N	1/22/1995	FAMU	Camp Blanding Wildlife Mgt. Area
Leptophlebia cupida	St. Marks R.	Lost Ck.	Wakulla	N	2/12/1975	(Burian, 2001)	
Leptophlebia intermedia	Apalachicola R.	Bull Branch	Okaloosa	N	3/2/1998	FDEP Pensacola	Ezra Cook Rd.
Leptophlebia intermedia	Blackwater R.	Alligator Ck.	Santa Rosa	N	3/10/1999	FAMU	Bryant Bridge Rd, 2.5 mi NW Holt
Leptophlebia intermedia	Escambia R	Mill Ck.	Escambia	N	2/12/1998	FDEP Pensacola	Jefferson Ave.
Leptophlebia intermedia	Ochlockonee R.	Cane Ck.	Gadsden	N	2/23/0200	FAMU	Hwy 274
Leptophlebia intermedia	Ochlockonee R.	Flat Ck.	Gadsden	N	12/10/1998	FAMU	CR 270A, 8km S Chattahoochee
Leptophlebia intermedia	Ochlockonee R.	Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8km S Chattahoochee
Leptophlebia intermedia	Ochlockonee R.	Monroe Ck.	Gadsden	A	2/14/1996	FAMU	CR 268
Leptophlebia intermedia	Ochlockonee R.	Monroe Ck.	Gadsden	N	3/10/2001	FAMU	CR 268
Leptophlebia intermedia	Ochlockonee R.	Monroe Ck.	Monroe	N	2/8/1999	FAMU	CR 268, 6 km W Midway
Leptophlebia intermedia	Ochlockonee R.	Trib. Flat Ck.	Gadsden	N	3/2/2000	FAMU	CR 270A, 8km S Chattahoochee

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Family: Leptophlebiidae Page 10-5

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Leptophlebia intermedia	Ochlockonee R.	Unnamed Ck.	Liberty	N	3/27/1973	(Burian, 2001)	1 mi W Ochlockonee R
Leptophlebia intermedia	Ochlockonee R.	Upper Bear Ck.	Gadsden	N	1/30/2002	DEP Tallahassee	CR 267
Leptophlebia intermedia	Pensacola Bay	East Bay R.	Okaloosa	N	3/8/2001	FDEP Pensacola	ER 259
Leptophlebia intermedia	Santa Fe R.	New R.	Bradford/Union	N	2/8/1993	SRWMD	SR 18
Leptophlebia sp.	Ochlockonee R.	Willacoochee Ck.	Gadsden	A	5/11/1988	FAMU-ORB	
Paraleptophlebia volitans	Blackwater R.	Beaver Ck.	Okaloosa	N	2/20/1998	FDEP Pensacola	above Beaver Creek Rd.
Paraleptophlebia volitans	Blackwater R.	Blackwater R.	Okaloosa	N	11/27/2000	FDEP Pensacola	above race track landing
Paraleptophlebia volitans	Blackwater R.	Hickory Hammock Ck.	Santa Rosa	N	3/7/2000	FDEP Pensacola	Hickory Hammock Ck.
Paraleptophlebia volitans	Blackwater R.	Long Branch	Okaloosa	N	2/19/1998	FDEP Pensacola	below Martin Mill Rd.
Paraleptophlebia volitans	Blackwater R.	Long Branch Ck.	Okaloosa	N	2/19/1998	FDEP Pensacola	below Martin Mill Rd.
Paraleptophlebia volitans	Chipola R	Ten Mile Ck.	Calhoun	N	2/10/1998	FDEP Pensacola	SR 73
Paraleptophlebia volitans	Chipola R.	Ten Mile Ck.	Calhoun	N	2/10/1998	FDEP Pensacola	SR 73
Paraleptophlebia volitans	Ochlockonee R.	Camp Ck.	Gadsden	N	5/20/1987	FAMU ORB Study	CR 274
Paraleptophlebia volitans	Ochlockonee R.	Camp Ck.	Gadsden	N	12/15/1988	FAMU ORB Study	8 mi SW Quincy
Paraleptophlebia volitans	Pensacola Bay	Live Oak Ck.	Okaloosa	N	8/22/2000	FDEP Pensacola	ER 181, below Borrow Pit
Paraleptophlebia volitans	Pensacola Bay	Panther Ck.	Santa Rosa	N	8/24/2000	FDEP Pensacola	above ER 678
Paraleptophlebia volitans	St. Johns R. (lower)	Gold Head Branch	Clay	N	3/7/1999	FAMU Ravines Study	Goldhead Branch St. Park
Paraleptophlebia volitans	St. Johns R. (lower)	Gold Head Branch	Clay	A	6/5/1999	FAMU Ravines Study	Goldhead Branch St. Park
Paraleptophlebia volitans	St. Marks R.	Burnt Mill Ck.	Jefferson	N	9/29/1992	FAMU ORB Study	SR 59 [BM1]
Paraleptophlebia volitans	St. Marks R.	Burnt Mill Ck.	Jefferson	N	8/11/1993	FAMU ORB Study	SR 59
Paraleptophlebia volitans	Suwannee R. (upper)	Falling Ck.	Columbia	N	5/8/1995	SRWMD	near Lake City
Paraleptophlebia volitans	Yellow R.	Weaver Ck.	Santa Rosa	N	2/24/2000	FDEP Pensacola	below ER 736

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Metretopodidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Siphloplecton brunneum	Blackwater R.	Blackwater R.	Okaloosa	A	1/29/1971	(Berner, 1978)	Peaden bridge, NW Cannon Town
Siphloplecton brunneum	Blackwater R.	Blackwater R.	Okaloosa	A	1/30/1971	(Berner, 1978)	Bryant bridge, 4.5 mi Holt
Siphloplecton brunneum	Blackwater R.	Blackwater R.	Okaloosa	A	3/4/1972	(Berner, 1978)	FAMU Biol. Sta., 4.5 mi NW Holt
Siphloplecton brunneum	Blackwater R.	Blackwater R.	Santa Rosa	A	3/21/1971	(Berner, 1978)	Riley Landing
Siphloplecton brunneum	Choctawhatchee R.	Pine Log Ck.	Bay	A	2/15/1971	(Berner, 1978)	SR 79
Siphloplecton brunneum	Choctawhatchee R.	Sevens Run Ck.	Walton	A	1/9/1971	(Berner, 1978)	Hwy 81
Siphloplecton fuscum	Blackwater R.	Blackwater R.	Okaloosa	A	3/11/1972	(Berner, 1978)	Bryant bridge, 3 mi NW Holt
Siphloplecton fuscum	Blackwater R.	Blackwater R.	Okaloosa	A	3/23/1973	(Berner, 1978)	FAMU Biol. Sta., 4.5 mi NW Holt
Siphloplecton simile	Blackwater R.	Blackwater R.	Okaloosa	A	5/2/1973	(Berner, 1978)	FAMU Biol. Sta.
Siphloplecton simile	Blackwater R.	Blackwater R.	Okaloosa	A	5/3/1973	(Berner, 1978)	FAMU Biol. Sta., 4.5 mi NW Holt
Siphloplecton simile	Blackwater R.	Blackwater R.	Okaloosa	A	4/20/1974	(Berner, 1978)	FAMU Biol. Sta., 4.5 mi NW Holt
Siphloplecton simile	Blackwater R.	Blackwater R.	Okaloosa	A	4/18/1975	(Berner, 1978)	FAMU Biol. Sta,. 4.5 mi NW Holt
Siphloplecton simile	Blackwater R.	Blackwater R.	Santa Rosa	A	3/4/1972	(Berner, 1978)	Riley Landing, 3 mi NW Holt
Siphloplecton sp.	Alapaha R.	Alapaha R.	Hamilton	N	2/5/1993	SRWMD	CR 150
Siphloplecton sp.	Blackwater R.	Big Coldwater Ck.	Santa Rosa	N	11/23/1976	FDEP Pensacola	
Siphloplecton sp.	Blackwater R.	Big Juniper Ck.	Santa Rosa	N	3/1/2000	FAMU Ravines Study	Blackwater R. St. Forest, Red Rock Rd
Siphloplecton sp.	Blackwater R.	Blackwater R.		N	9/14/1976	FDEP Pensacola	
Siphloplecton sp.	Choctawhatchee R.	Choctawhatchee R.		N	2/21/1977	FDEP Pensacola	
Siphloplecton sp.	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	11/28/1969	(Berner, 1978)	6 mi S CR 268
Siphloplecton sp.	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	A	11/25/1970	(Berner, 1978)	6 mi S CR 268
Siphloplecton sp.	Perdido R.	Perdido R	Escambia	N	2/16/1977	FDEP Pensacola	
Siphloplecton speciosum	Apalachicola R.		Gadsden	A	4/4/1953	(Berner, 1978)	4 m S River Junction
Siphloplecton speciosum	Blackwater R.	Blackwater R.	Okaloosa	A	5/26/1974	(Berner, 1978)	Bryant Bridge, 3 mi NW Holt
Siphloplecton speciosum	Ochlockonee R.	Bear Ck.	Gadsden	A	3/3/1968	(Berner, 1978)	CR 268, 1 mi N Hwy 65C
Siphloplecton speciosum	Yellow R.	Shoal R.	Okaloosa	A	4/24/1973	(Berner, 1978)	SR 85

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Neoephemeridae Page 12-1

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Neoephemera compressa	Alapaha R.	Alapaha R.	Hamilton	N	11/6/1992	SRWMD	CR 150
Neoephemera compressa	Escambia R.	unnamed stream	Escambia	N	10/23/1954	FAMU	near SR 4 at Escambia R.
Neoephemera compressa	Withlacoochee R.	Withlacoochee R.	Madison	N	1/28/1954	FAMU Berner	"West Bridge"
Neoephemera youngi	Apalachicola R	Sweetwater Ck.	Liberty	A	4/5/1951	(Berner, 1953)	
Neoephemera youngi	Apalachicola R.	Flat Ck.	Gadsden	N	3/31/1999	FAMU Ravines Study	CR 270A, 8 km S Chattahoochee
Neoephemera youngi	Apalachicola R.	Sweetwater Ck.	Liberty	A	4/14/1953	(Berner, 1953)	
Neoephemera youngi	Blackwater R.	Blackwater R.	Okaloosa	N	4/22/1972	FAMU	FAMU Biol. Sta.
Neoephemera youngi	Blackwater R.	Blackwater R.	Okaloosa	N	5/4/1977	FAMU	FAMU Biol. Sta.
Neoephemera youngi	Choctawhatchee Bay	Alaqua Ck.	Walton	N	3/6/2001	FDEP Pensacola	Forest Oak Rd.
Neoephemera youngi	Choctawhatchee R.	Sandy Ck.	Walton	N	2/22/1994	FDEP Pensacola	CR 183
Neoephemera youngi	Ochlockonee R.	Attapulgus Ck.	Gadsden	N	10/22/1987	FAMU ORB Study	CR 159
Neoephemera youngi	Ochlockonee R.	Bear Ck.	Gadsden	N	4/11/2000	FDEP Orlando	CR 267
Neoephemera youngi	Ochlockonee R.	Little R.	Gadsden	N		FAMU	SR 12
Neoephemera youngi	Ochlockonee R.	Monroe Ck.	Gadsden	N	2/14/1996	FAMU	CR 268, 6 km W Midway
Neoephemera youngi	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	4/10/1974	FAMU	SR 65B
Neoephemera youngi	Ochlockonee R.	Rocky Comfort Ck.	Gadsden	N	3/13/1975	FAMU	SR 65B
Neoephemera youngi	Pea R.	Limestone Ck.	Walton	N	3/1/2001	FDEP Pensacola	Beck Ridge Rd.

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Oligoneuriidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Homoeoneuria dolani	Blackwater R.	Blackwater R.	Okaloosa	N	8/3/1979	FAMU	FAMU Biol. Sta.
Homoeoneuria dolani	Blackwater R.	Blackwater R.	Santa Rosa	N	8/14/1967	FAMU	Deaton Bridge, 3.5 mi N Harold
Homoeoneuria dolani	Blackwater R.	Blackwater R.	Santa Rosa	N	8/14/1967	FAMU	Deaton Bridge, 3.5 mi N Harold
Homoeoneuria dolani	Yellow R.	Shoal R.	Okaloosa	N	5/18/1967	FAMU	CR 393 in Dorcas
Homoeoneuria dolani	Yellow R.	Shoal R.	Okaloosa	N	8/29/1967	FAMU	CR 393 in Dorcas

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Polymitarcyidae Page 14-1

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Ephoron sp.	Alapaha R.	Alapaha R.	Hamilton	N	5/8/2001	SRWMD	Jennings at CR 150
Tortopus puella	Apalachicola R.	Apalachicola R.	Franklin	N	7/14/1977	FDEP Pensacola	Buoy 40
Tortopus puella	Apalachicola R.	Apalachicola R.	Liberty	A	7/12/1967	FAMU	SR 20
Tortopus puella	Apalachicola R.	Apalachicola R.	Liberty	N	7/31/1967	FAMU	SR 20
Tortopus puella	Apalachicola R.	Apalachicola R.	Liberty	A	9/11/1972	FAMU	SR 20
Tortopus puella	Apalachicola R.	Apalachicola R.	Liberty	N	6/24/1973	FAMU	SR 20
Tortopus puella	Blackwater R.	Blackwater R.	Okaloosa	A	8/22/1974	FAMU	FAMU Biol. Sta.
Tortopus puella	Chipola R.	Chipola R.	Calhoun	A	7/11/1972	FAMU	SR 71
Tortopus puella	Choctawhatchee R.	Blue Lake	Washington	N	8/1/1995	FDEP Pensacola	
Tortopus puella	Choctawhatchee R.	Choctawhatchee R.	Walton	N	9/20/1970	FAMU	Cowford Camp
Tortopus puella	Yellow R.	Turkey Ck.	Walton	N	7/21/1998	FDEP Pensacola	SR 2A

END OF DATA TABLE

FLORIDA EPHEMEROPTERA

Family: Pseudironidae

Species	Basin	Waterbody	County	Stage	Date Coll.	Source	Locality description
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	A	5/9/1970	FAMU	Bryant Bridge, 4.3 mi NW Holt
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	N	1/31/1971	FAMU	Bryant Bridge, 4.3 mi NW Holt
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	A	3/13/1971	FAMU	Hwy 4 bridge, 4 mi NW Baker
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	N	11/22/1971	FAMU	FAMU Biol. Sta., 4.5 mi NW Holt
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	A	4/28/1976	FAMU	Peaden Bridge, NW Cannon Town
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	N	4/30/1977	FAMU	Bryant Bridge, 4.3 mi. NW Holt
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	A	4/7/1986	FAMU	4.5 mi NW Cannon Town
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	N	5/3/1991	FAMU	above Penny Ck.
Pseudiron centralis	Blackwater R.	Blackwater R.	Okaloosa	A	5/7/1998	FAMU	FAMU Biol. Sta., 4.5 mi NW Holt
Pseudiron centralis	Blackwater R.	Blackwater R.	Santa Rosa	A	3/21/1968	FAMU	Deaton Bridge, 3.5 mi N Deaton
Pseudiron centralis	Blackwater R.	Blackwater R.	Santa Rosa	N	4/24/1971	FAMU	Riley Landing, 3 mi NW Holt
Pseudiron centralis	Choctawhatchee Bay	Alaqua Ck.	Walton	N	3/2/1992	FDEP Pensacola	Pine Allen Bridge
Pseudiron centralis	Yellow R.	Shoal R.	Walton	N	3/17/1977	FAMU	CR 285, 14 mi W DeFuniak Springs

END OF DATA TABLE