

**STATUS OF CADDISFLIES (INSECTA:TRICHOPTERA) IN GREATEST CONSERVATION  
NEED IN FLORIDA**

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## ABSTRACT

This project investigated the status of caddisfly species designated as Species of Greatest Conservation Need (SGCN) in Florida's Comprehensive Wildlife Conservation Strategy. The project involved documenting the occurrence of these species throughout the state of Florida, and assessing their current conservation status. Collection records from the scientific literature and unpublished collection records from museum collections and ongoing studies were compiled into an electronic database. In addition to the pre-existing data, new data were obtained in a field survey of Trichoptera inhabiting 81 water bodies located throughout the state. Sites were selected based on their potential to harbor species on the SGCN list. Samples of adult caddisflies at each site were collected using light traps primarily in the spring of 2007. Specimens were identified to species level and the data added to the project's database. In total, 139 species were recorded in the faunal survey, including 16 SGCN and several new state records and species new to science. Based on the previously known occurrences and the recent field survey data, the geographic distributions of the SGCN were summarized. Along with summarizing the geographic distribution, we also assessed the current conservation status of each species. Following the scoring system used for the SGCN list, we assigned values for each species current population level and trend. A copy of the project's database was exported to spreadsheet format and was included with this report.

Five species were recommended for removal from the SGCN list: *Ceraclea floridana*, *Oecetis floridana*, *Oecetis pratelia*, *Oxyethira kingi*, and *Oxyethira janella*. The first four species were recommended for removal because they are of historic or accidental occurrence in Florida, or their taxonomic identity is in question. *Oxyethira janella* was recommended for removal because it is a widespread, common species that is secure both globally and within Florida. Three species (*Ochrotrichia okaloosa*, *Ochrotrichia provosti*, and *Lepidostoma morsei*), are known from only single specimens, but we believe they may still be extant in Florida, therefore we recommended they be retained as SGCN. Two species (*Cheumatopsyche petersi* and *Hydroptila molsonae*) appear to have declining ranges in Florida. The ranges of several species (*Cheumatopsyche gordonae*, *Ochrotrichia okaloosa*, *Oxyethira kelleyi*, *Lepidostoma morsei*) are restricted to the seepage/steephead streams on Eglin Air Force Base in the western Florida panhandle. Two species (*Oecetis parva*, *Triaenodes florida*) are restricted to natural lakes in Florida. Large spring runs appear to be habitat critical for supporting populations of *Hydroptila wakulla* and *Orthotrichia dentata*. Seepage/steephead streams are important refugia for many of the SGCN.

We recommend that the SGCN list be updated periodically due to the ever-growing body of knowledge regarding the caddisfly fauna of Florida. These updates should take place in concert with the work being done by the Florida Natural Areas Inventory and The Nature Conservancy.

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**TABLE OF CONTENTS**

	<u>Page</u>
<b>INTRODUCTION</b> .....	1
Objectives .....	2
<b>METHODS</b> .....	4
Data Sources .....	4
Faunal Survey .....	5
Analysis .....	7
<b>RESULTS AND DISCUSSION</b> .....	8
Project Database .....	8
Field Survey .....	8
Species Accounts .....	11
<b>SUMMARY AND CONCLUSIONS</b> .....	41
<b>LITERATURE CITED</b> .....	44
<b>APPENDIX A:</b> Florida's Trichoptera Species of Greatest Conservation Need .....	46
<b>APPENDIX B:</b> Field Survey Site Locations.....	47
<b>APPENDIX C:</b> Checklist of Trichoptera Species Collected in Field Survey.....	50

## INTRODUCTION

The following is a terminal report that describes an investigation and assessment of the conservation status of caddisfly species designated as Species of Greatest Conservation Need (SGCN) in Florida's Comprehensive Wildlife Conservation Strategy issued by the Florida Fish and Wildlife Conservation Commission in 2005 (FFWCC 2005). As per federal requirements to include a wide array of native wildlife species, Florida's Strategy designated 974 Species of Greatest Conservation Need, including 369 species of invertebrates, of which 29 are species within the aquatic insect order Trichoptera (Appendix A). The intention of including these species within the SGCN category was to provide broad representation of the diversity and health of the state's wildlife so that conservation planning and actions can be implemented to conserve multiple species through habitat conservation and management. The success of this holistic approach depends upon having accurate and detailed information concerning a wide array of wildlife species, including many invertebrates that are well known to only a few specialists, as is the case with Trichoptera.

Trichoptera (caddisflies), the largest order of aquatic insects, contains over 12,000 extant species worldwide, approximately 1300 species in North America, and nearly 200 species in Florida. Most species are intolerant of pollution and are considered excellent biological indicators of freshwater ecosystem health. The caddisfly fauna of Florida is highly diverse and contains more than 25 species endemic to the state. Because caddisflies are excellent freshwater bioindicators, and the Florida fauna is so distinctive, they rightly deserve representation on Florida's SGCN list. However, to fully realize the utility of this group in conservation planning and implementation, it is important that as much information as possible is documented in regards to species geographic distributions, habitat associations, and overall population levels and trends.

This project addressed information needs for the 29 species of caddisflies designated as SGCN, 28 species of which were listed as having unknown population levels and trends (Appendix A). The project's outcome, namely more accurate and complete data regarding the distribution and health status of these species, should be of use in updating the current SGCN list. Additionally, we hope the project will be of

benefit to other stakeholders such as the Florida Natural Areas Inventory (FNAI) and the Natural Heritage Program Network in their program which is active in tracking and ranking the conservation status of these species (Table 1).

The most recent similar print publication concerning the Trichoptera species addressed in this project was an accounting of Rare and Threatened caddisfly species in Florida (Table 1) by Morse (1994), presented in the 1994 invertebrate volume within the series of publications titled *Rare and Endangered Biota of Florida* sponsored by the Florida Committee on Rare and Endangered Plants and Animals (FCREPA). Since the time of that publication, knowledge of the state's caddisfly fauna has advanced considerably. The information and recommendations generated from this project will, we hope, be useful in updating species accounts for a future edition of the FCREPA invertebrate volume.

### **Objectives**

The overall goal of this project was to document the status of caddisfly species (Appendix A) designated as Species of Greatest Conservation Need (SGCN) in Florida's Comprehensive Wildlife Conservation Strategy. In order to achieve this overall goal, the following specific objectives were set forth:

- i) Compile the known distribution records of the 29 focal caddisfly species documented in the scientific literature and museum collections.
- ii) Conduct a field survey of Trichoptera at selected water bodies throughout Florida in order to document additional occurrences and to compare with previous collection records.
- iii) Create a specimen database of all known collection records for the 29 focal species.
- iv) Summarize the geographic distribution, species/habitat associations, and overall population levels and trends for each SGCN and provide recommendations as to how the current SGCN list should be modified.

By meeting these objectives, important information regarding members of a diverse and ecologically important group of organisms will be available for making informed conservation decisions necessary to protect species populations and the habitats that support them.

**Table 1.** Conservation status, as of April, 2008, for Trichoptera species designated as Species of Greatest Conservation Need in Florida's Comprehensive Wildlife Conservation Strategy (FFWCC, 2005).

Scientific Name	Common Name	FNAI <sup>1</sup>		FCREPA <sup>2</sup>		Reg. <sup>3</sup>
		Global Rank	State Rank	1982	1994	4 US FWS
<b>Hydropsychidae</b>						
<i>Cheumatopsyche gordonae</i>	Gordon's Little Sister Sedge Caddisfly	G2	S2	--	T	--
<i>Cheumatopsyche petersi</i>	Peters' Cheumatopsyche Caddisfly	G3	S2	T	R	--
<b>Hydroptilidae</b>						
<i>Hydroptila molsonae</i>	Molson's Microcaddisfly	G2G3	S1S2	T	R	--
<i>Hydroptila wakulla</i>	Wakulla Springs Vari-colored Microcaddisfly	G1G2	S1S2	--	T	--
<i>Ochrotrichia okaloosa</i>	Okaloosa Somber Microcaddisfly	G1	S1	--	T	
<i>Ochrotrichia provosti</i>	Provost's Somber Caddisfly	GH	SH	T	T	SC
<i>Orthotrichia curta</i>	Short Orthotrichian Microcaddisfly	G4	S1S2	R	R	--
<i>Orthotrichia dentata</i>	Dentate Orthotrichian Microcaddisfly	G2G3	SH	T	T	--
<i>Orthotrichia instabilis</i>	Changeable Orthotrichian Microcaddisfly	G3	S1	R	T	--
<i>Oxyethira elerobi</i>	Elerob's Microcaddisfly	G3G4	S2	T	R	--
<i>Oxyethira florida</i>	Florida Cream and Brown Microcaddisfly	G1G2	S1S2	T	T	--
<i>Oxyethira janella</i>	Little-entrance Oxyethiran Microcaddisfly	G5	S3S4	T	--	--
<i>Oxyethira kelleyi</i>	Kelly's Cream and Brown Mottled Microcaddisfly	G2	S2	--	T	--
<i>Oxyethira kingi</i>	King's Cream and Brown Mottled Microcaddisfly	GH	SH	--	T	--
<i>Oxyethira novasota</i>	Novasota Oxyethiran Microcaddisfly	G4G5	S2	R	--	--
<b>Lepidostomatidae</b>						
<i>Lepidostoma morsei</i>	Morse's Little Plain Brown Sedge	G2G3	S1	--	T	--
<b>Leptoceridae</b>						
<i>Ceraclea floridana</i>	Florida Ceracleean Caddisfly	GH	SH	U	U	SC
<i>Oecetis daytona</i>	Daytona Long-horned Caddisfly	G3	S2?	T	R	--
<i>Oecetis floridana</i>	Florida Long-horn Sedge	--	--	--	U	--
<i>Oecetis parva</i>	Little Oecetis Longhorn Caddisfly	G1	S1	U	U	SC
<i>Oecetis porteri</i>	Porter's Long-horn Caddisfly	G3G4	S2S3	--	T	--
<i>Oecetis pratelia</i>	Little Meadow Long-horned Caddisfly	GH	SH	T	T	--
<i>Triaenodes florida</i>	Floridian Triaenode Caddisfly	G2	S2	T	R	--
<i>Triaenodes furcella</i>	Little-fork Triaenode Caddisfly	G2G3	S2S3	T	T	--
<b>Philopotamidae</b>						
<i>Chimarra florida</i>	Floridian Finger-net Caddisfly	G4	S3	R	--	--
<b>Polycentropodidae</b>						
<i>Cernotina truncona</i>	Florida Cernotinan Caddisfly	G4	S2	U	R	--
<i>Polycentropus floridensis</i>	Florida Brown Checkered Summer Sedge	G2	S1	--	T	--
<b>Sericostomatidae</b>						
<i>Agarodes libalis</i>	Spring-loving Piloneuran Caddisfly	G3	S2S3	R	--	--
<i>Agarodes ziczac</i>	Zigzag Blackwater River Caddisfly	G2	S2	T	T	SC

<sup>1</sup>Florida Natural Areas Inventory uses the ranking system developed by The Nature Conservancy and the Natural Heritage Program Network.

<sup>2</sup>Florida Committee on Rare and Endangered Plants and Animals (FCREPA). **T** = Threatened; **R** = Rare; **U** = Undetermined. See Morse (1982, 1994) in the Literature Cited section for complete citations.

<sup>3</sup>Region 4 of the U.S. Fish and Wildlife Service (USFWS) in 2002 compiled a list of Species of Special Management Concern (Michael Floyd, personal communication). **SC** = Special Concern

## **METHODS**

The project approach addressed in a systematic fashion the project's overall goal to document the state-wide distribution and health status of caddisfly species designated as SGCN. The initial work focused on compiling existing information that documented the occurrence of these species in Florida. Then, based on what was previously known, water bodies around the state were selected to be included in the field survey. The additional data generated in the field survey then provided an additional dataset that was considered along with the preexisting data, in order to assess the conservation status of each species.

### **Data Sources**

Pertinent collection information from published literature records, as well as specimen data from the Trichoptera collections at Florida A&M University were entered into a relational database (Paradox) so that data could be easily retrieved and queried. Fortunately, much of these data were already part of the electronic database of Trichoptera records that is maintained by A.K. Rasmussen at the Florida A&M University. Specimen data included: species scientific name, name of water body and USGS basin where the specimen was collected, collection date, life stage and number of specimens, a locality description, and an additional field for miscellaneous comments. When possible, the collection locality was geo-referenced with latitude and longitude. Data for the Trichoptera SGCN were extracted from the database and used to form a project database of records of the focal species.

**Literature review.** A thorough review of the scientific literature was undertaken in order to uncover all published collection records of the listed species. The papers were gathered together and information from these references was entered into the project database. By doing this we were able to determine the historic occurrence of the species and target those locations in the faunal survey and attempt to document whether or not the species is still present in areas where they were recorded in the past. The literature sources used to document the occurrence of each species are cited in the individual species accounts presented in the Results section.



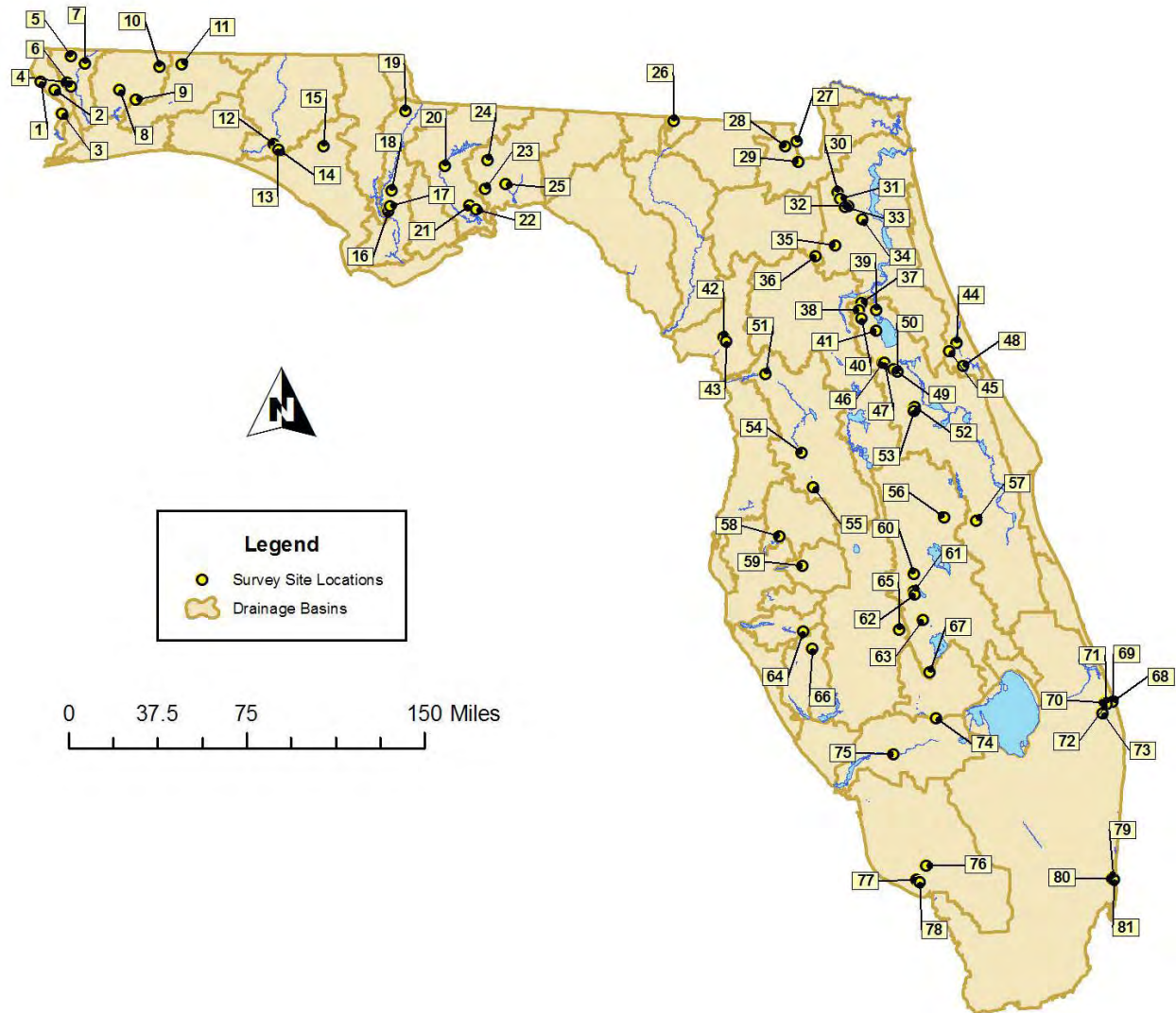
**Museum records.** Field surveys of Trichoptera carried out in the past 10 years by the authors and colleagues have substantially increased the Trichoptera holdings in the Florida A&M University Aquatic Insect Collection. These collections were an important source of information for better understanding the geographic distribution of many of the caddisfly species included on the SGCN list.

### **Faunal Survey**

After the existing collection data for species on the SGCN list were examined, sites were selected for the faunal survey. Site selection for the field survey was based on an analysis of existing collection records of the Trichoptera SGCN and a water body's potential to harbor these species. The water bodies selected met one or more of the following selection criteria:

- i) The water body was in an area where a species, possibly now extinct, had once been reported.
- ii) The water body showed a high potential for supporting the targeted species, but had been under-sampled, or not sampled at all in the past.
- iii) Benthic macroinvertebrate collections from the water body indicated that it supported an exceptionally diverse aquatic insect community.

A total of 81 sites were sampled in the field survey (Fig. 1, Appendix B) from October 2006 through the end of June 2007. Because the spring-time emergence of adult caddisflies generally occurs earlier in peninsular Florida than in the northern panhandle, sampling at sites in central and southern Florida took place for the most part in March and April 2007, and the field sites in northern Florida were sampled primarily during May and June of 2007.



**Figure 1.** Map of Florida showing locations of the 81 sites where light-trap samples of caddisflies were collected. The exact location of each water body sampled is presented in Appendix B.

**Light trapping.** Samples were collected by attracting adult caddisflies to light at night and trapping them in pans of alcohol (Fig. 2). Light traps consisted of 15-watt UV-blacklights (BioQuip® Item No. 2805) placed over white pans (30 cm x 25 cm) containing 80% ethyl alcohol. The lights were powered by 12-volt, sealed rechargeable batteries. Traps were placed near the water's edge and deployed from 1 - 2 hrs beginning at dusk. After trapping, the contents of the pans were poured into 0.5-gallon plastic containers and returned to the laboratory for processing. This collecting method has proven to be extremely effective for the capture of most caddisfly species. Care was taken not to negatively impact

caddisfly populations at any of the sites. Field notes concerning habitat type and condition were recorded at the time of each sampling. Photographs were taken at many of the sampling sites.

**Sample processing.** Caddisflies collected in the light-trap samples were removed and specimens, primarily males, were identified to species level. Representative specimens of each caddisfly species in the sample were placed in separate vials of alcohol along with locality and determination labels. Macro-caddisfly species were sorted and identified by D.R. Denson and A.K. Rasmussen. Micro-caddisfly specimens (Family Hydroptilidae) were sorted and identified by S.C. Harris. Collection records for all species collected were entered into the Trichoptera database. Voucher specimens will be deposited in the Florida A&M Aquatic Insect Collection and the Clemson University Arthropod Collection.

### Data Analysis

After the field survey was completed and the data had been entered into the project database, the geographic distributions and habitat associations for each species were characterized based on the previously known occurrences, as well as the recent field survey records. Information regarding each species occurrence by USGS basin, and county were tabulated. Based on the water body types where each of the SGCN species had been collected, species/habitat associations were assigned using the freshwater habitat categories as defined in Florida's Comprehensive Wildlife Conservation Strategy. An account was prepared for each species which summarized its geographic distribution in Florida, including a distribution map showing all known collection localities in Florida. Based on a species' known geographic distribution and number of occurrences, we recommended assigning a **Population Level** score of either: **Low**, **Medium**, **Abundant**, or **Unknown** and a **Population Trend** score of **Declining**,



**Figure 2.** Light-trapping method used to capture adult caddisflies in field survey.

**Stable, Increasing, or Unknown**, following the system used by FFWCC (2005) in the SGCN list. The SGCN list (Appendix A) had assigned previous population levels and trend scores of **Unknown** for all but one species on the SGCN list.

## **RESULTS AND DISCUSSION**

### **Project Database**

Contained along with this report, is the project database of collection records for the 29 species. The database table, originally created using the program Paradox (11.0), was exported to a Microsoft Excel spreadsheet for inclusion in this report. The database comprises 771 records containing detailed information on known occurrences of the 29 SGCN. Data field headings include the following: **Family** (arranged alphabetically); **Species** (scientific names, arranged alphabetically by family); **Basin** (USGS basin where the collection was made); **Water body** (name of river, stream, or lake where the species was collected); **County** (county in Florida where collected); **Stage** (life stage collected, A=adult; L=larva; P=pupa); **Date** [(the month, day, and year the species was collected (if the record indicated a range of dates, one month or less, over which time the specimens were collected, then a mid-date was used)]; **No./Sex** (Number of specimens collected and their sex, M=male; F=female); **Sampling Gear** (type of collection equipment used); **Source** (source of the collection record, this includes: literature records enclosed in parentheses (see Literature Cited section for complete citation) or the abbreviated names of the individual or agency that can be attributed to the specimen collection); **Lat.** (latitude); **Long.** (longitude); **Locality description** (other locality information which may be useful for more exactly determining the location of the collection site); **Comments** (additional information concerning the collection record).

### **Field Survey**

A checklist of all caddisfly species recorded in the field survey is presented in Appendix C. A table summarizing the results is shown in Table 2 below. In total, 19, 287 specimens representing 15 families, 33 genera and 139 species were identified from samples collected at the 81 sites. These records included 4,510 specimens representing 16 species designated as SGCN. The families Hydroptilidae and

Leptoceridae were the most speciose, accounting for 50 species and 37 species respectively. Species richness recorded at the survey sites ranged from 1 to 49 species, while species richness of the SGCN ranged from 0 to 6 species. The survey results included several species that have never been recorded in Florida and the discovery of at least 4 species new to science. The new state records and species descriptions will be published elsewhere.

**Table 2.** Summary of Field Survey Results. The location of each Survey Site is given in Appendix B.

Site ID#	Sampling Date	Total # Species	Total # Individuals	# SGCN Species	# SGCN Individuals
1	6/14/2007	37	692	5	209
2	6/14/2007	33	240	6	41
3	6/14/2007	25	363	4	147
4	6/15/2007	27	190	5	75
5	6/15/2007	21	130	3	13
6	6/14/2007	49	510	6	102
7	6/15/2007	13	28	1	1
8	6/13/2007	36	539	4	214
9	6/13/2007	36	460	4	84
10	5/19/2007	29	294	6	116
11	5/18/2007	23	284	1	22
12	5/11/2007	27	374	1	29
13	5/11/2007	43	765	6	217
14	5/11/2007	43	388	4	60
15	5/12/2007	25	390	2	87
16	5/9/2007	21	185	1	5
17	5/9/2007	33	262	5	75
18	5/9/2007	26	173	3	12
19	5/16/2007	17	262	3	18
20	5/23/2007	11	19	1	4
21	5/6/2007	38	576	3	35
22	5/6/2007	29	308	2	82
23	5/6/2007	43	373	4	79
24	10/26/2006	8	468	3	50
25	10/26/2006	16	287	3	60
26	5/27/2007	26	744	1	83
27	6/1/2007	21	155	3	26
28	6/1/2007	12	30	1	3
29	6/1/2007	31	156	3	12
30	5/26/2007	24	446	2	176
31	5/26/2007	24	313	2	25
32	5/26/2007	6	17	1	1
33	5/25/2007	19	289	2	53
34	5/25/2007	26	283	2	43
35	5/25/2007	13	28	0	0
36	5/25/2007	16	284	3	141
37	4/27/2007	21	234	2	51

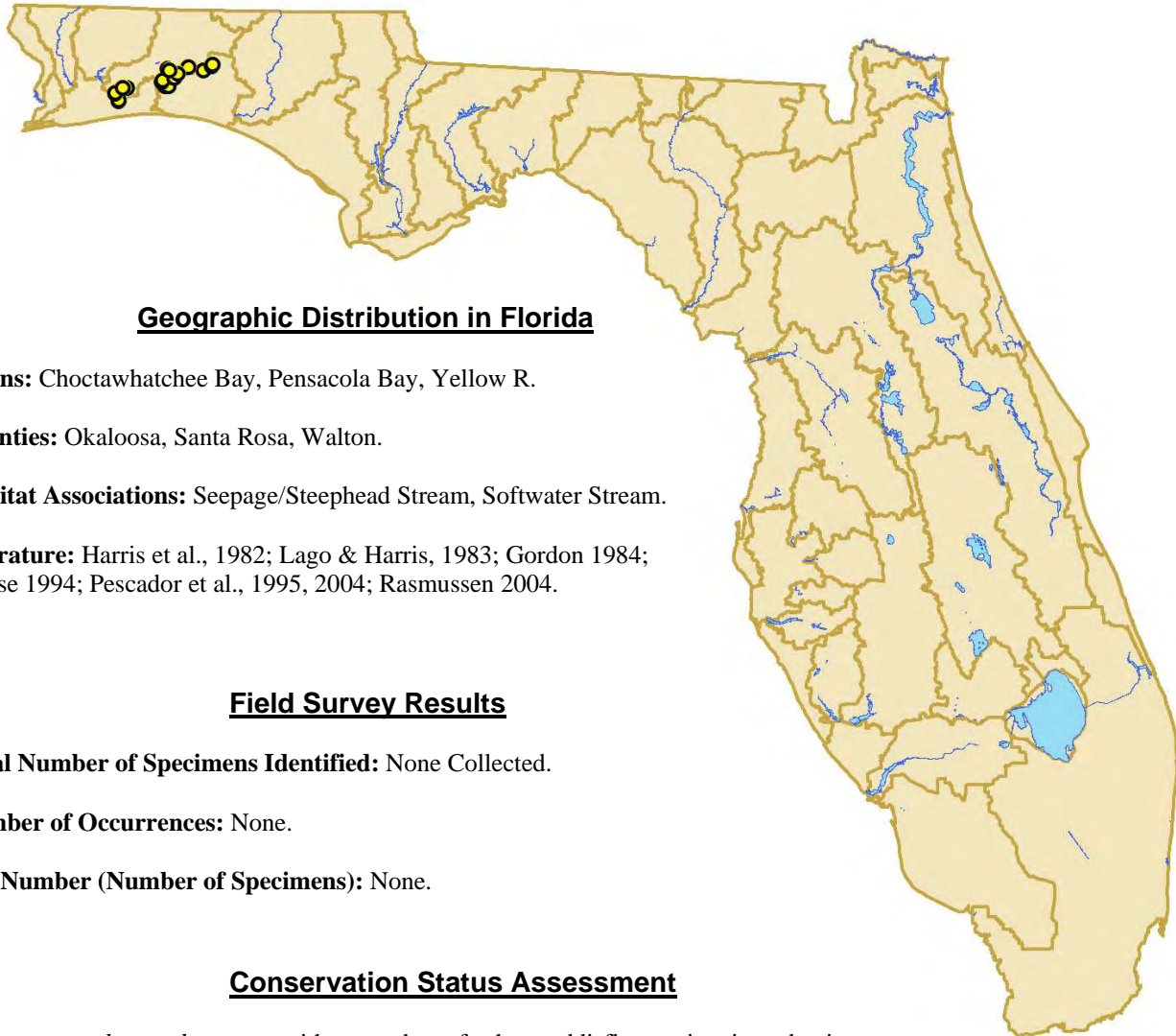
Site ID#	Sampling Date	Total # Species	Total # Individuals	# SGCN Species	# SGCN Individuals
38	4/27/2007	17	246	4	73
39	4/27/2007	12	94	3	3
40	4/27/2007	13	452	4	171
41	4/27/2007	18	53	2	2
42	6/8/2007	14	322	1	262
43	6/8/2007	16	103	1	39
44	6/22/2007	17	245	2	17
45	6/22/2007	8	134	2	82
46	4/28/2007	18	652	4	276
47	4/28/2007	15	110	5	10
48	6/22/2007	8	24	1	2
49	4/28/2007	20	255	2	25
50	4/28/2007	17	134	2	15
51	6/8/2007	22	272	4	74
52	5/9/2007	23	609	2	103
53	5/9/2007	20	379	2	40
54	6/8/2007	13	222	1	26
55	4/2/2007	15	207	2	95
56	5/12/2007	19	222	3	12
57	5/12/2007	20	188	1	39
58	4/3/2007	5	59	1	27
59	4/4/2007	17	310	1	26
60	3/31/2007	20	279	3	67
61	3/31/2007	13	274	1	34
62	3/31/2007	7	281	3	195
63	3/30/2007	12	40	1	15
64	5/4/2007	23	269	2	22
65	3/30/2007	9	83	1	13
66	5/4/2007	12	237	1	64
67	4/11/2007	21	363	2	82
68	4/14/2007	9	141	2	67
69	4/14/2007	8	259	2	26
70	4/14/2007	7	42	1	2
71	4/14/2007	2	2	0	0
72	4/14/2007	1	1	0	0
73	4/14/2007	7	135	0	0
74	4/11/2007	10	159	1	2
75	4/11/2007	13	298	1	4
76	4/12/2007	5	45	1	20
77	4/12/2007	1	7	1	7
78	4/12/2007	3	11	1	8
79	4/13/2007	1	4	0	0
80	4/13/2007	4	60	1	12
81	4/13/2007	2	6	0	0
<b>Total/Mean →</b>		<b>139/18</b>	<b>19,827/245</b>	<b>16/2</b>	<b>4510/56</b>

## **Species Accounts**

The following species accounts provide a summary, based on the data contained in the project database, of each species distribution in Florida. The accounts are arranged alphabetically by family and species. The species author(s) and year of publication are given next to the scientific name. We also provide a listing of literature sources that documented the species occurrence in Florida. The species geographic distribution in Florida is given by basin, county, and freshwater habitat types associated with the collection records. A distribution map showing the species occurrences in Florida was generated using the geographic coordinates assigned for each collection locality. The maps include both the location of previous collection records (open circles), as well as collection localities from the project's field survey (closed circles). The field survey results are summarized by site number, including how many specimens (if any) were collected at each site. At the bottom of each species account is an assessment of the conservation status and recommended changes to the currently assigned population levels and trends. A summary table of these recommendations is presented in Table 3 following the species accounts.

*Cheumatopsyche gordonae* Lago & Harris, 1983

Annulipalpia: Hydropsychidae



### Geographic Distribution in Florida

**Basins:** Choctawhatchee Bay, Pensacola Bay, Yellow R.

**Counties:** Okaloosa, Santa Rosa, Walton.

**Habitat Associations:** Seepage/Steephead Stream, Softwater Stream.

**Literature:** Harris et al., 1982; Lago & Harris, 1983; Gordon 1984; Morse 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected.

**Number of Occurrences:** None.

**Site Number (Number of Specimens):** None.

### Conservation Status Assessment

*Cheumatopsyche gordonae*, as with a number of other caddisfly species, is endemic to streams within Eglin Air Force Base in the western Florida panhandle. It occurs primarily in the small clear, spring-fed streams originating in steephead ravines that drain sandhill uplands of the area. The species was discovered and described as a result of a light-trapping survey of several sandhill streams on the eastern half of the base (Harris et al. 1982; Lago and Harris 1983). Results of additional light-trapping surveys we have conducted on Eglin over the past 10 years show that the species is widespread and abundant in the steephead streams throughout the base.

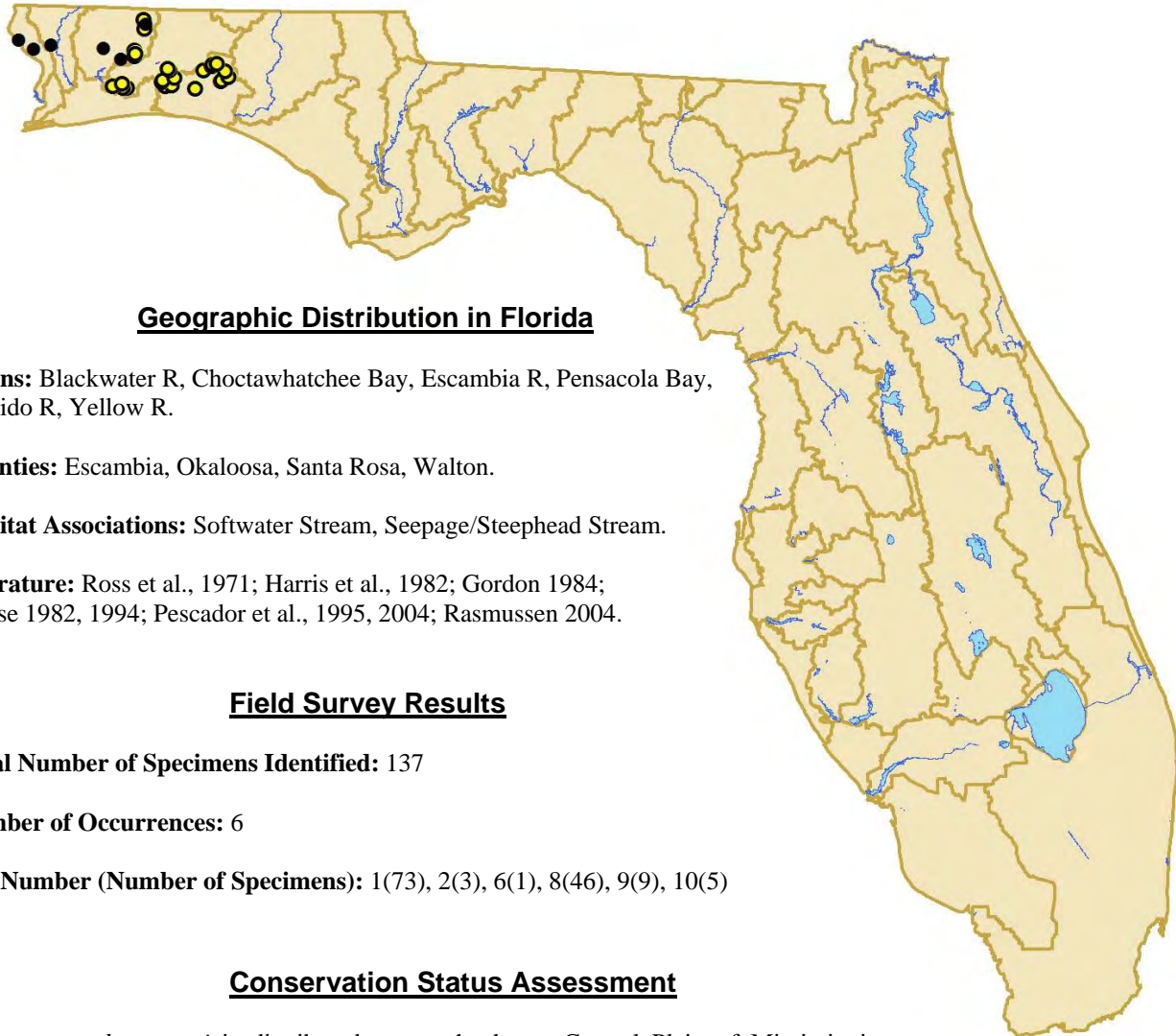


Because this species is endemic to a small geographic area and ecologically restricted to sensitive headwater streams, populations of *C. gordonae* should be monitored. Steephead streams where these populations occur should be protected from human disturbance. Due to the current sizeable population levels and ongoing measures to protect sensitive habitats where this species occurs, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and **Population Trend** reassigned from Unknown to **Stable**.



*Cheumatopsyche petersi* Ross, Morse and Gordon, 1971

Annulipalpia: Hydropsychidae



### Geographic Distribution in Florida

**Basins:** Blackwater R, Choctawhatchee Bay, Escambia R, Pensacola Bay, Perdido R, Yellow R.

**Counties:** Escambia, Okaloosa, Santa Rosa, Walton.

**Habitat Associations:** Softwater Stream, Seepage/Steephead Stream.

**Literature:** Ross et al., 1971; Harris et al., 1982; Gordon 1984; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

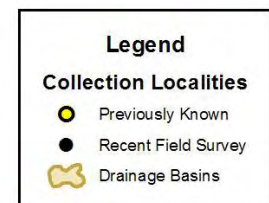
**Total Number of Specimens Identified:** 137

**Number of Occurrences:** 6

**Site Number (Number of Specimens):** 1(73), 2(3), 6(1), 8(46), 9(9), 10(5)

### Conservation Status Assessment

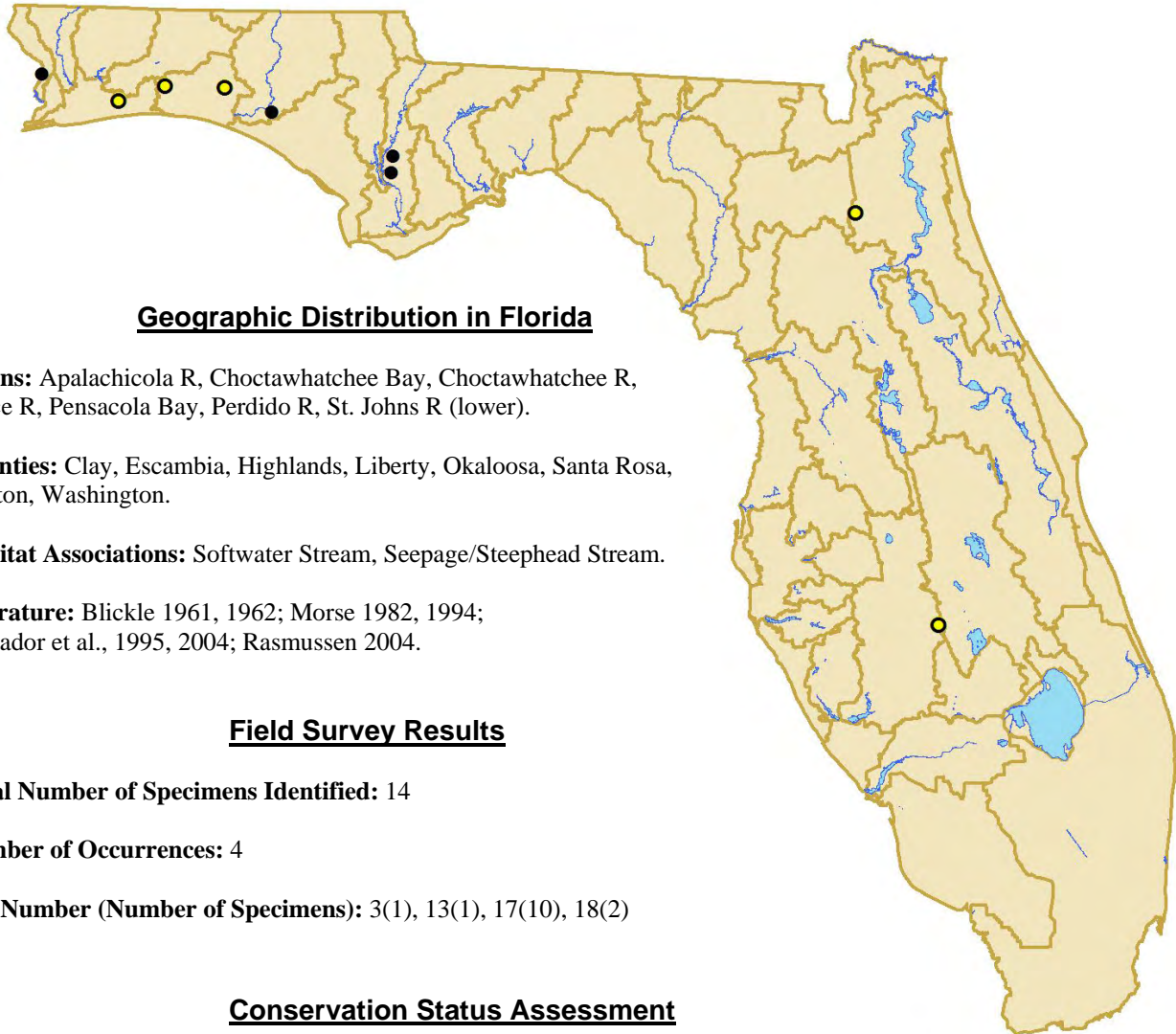
*Cheumatopsyche petersi* is distributed across the lower Coastal Plain of Mississippi, Alabama, and the far-western Florida panhandle. The species occurs most abundantly in large softwater (blackwater) streams and rivers, but also occurs in seepage/steephead streams. The species was first collected starting in 1968 by W.L. Peters et al., in large numbers from various sites along the Blackwater River. It appears these populations have since declined, which is probably due to declining ecosystem health of the river over the years. Fortunately, populations occur in many other stream systems, including six sites sampled in the faunal survey.



The occurrence of this species from streams of excellent water quality in the far western panhandle indicates that the overall outlook for *C. petersi* is positive as long as the health of these systems does not deteriorate. We recommend the **SGCN Population Level** be reassigned from Unknown to **Medium** and **Population Trend** reassigned from Unknown to **Declining**, based on the probable decline in the Blackwater River populations.

*Hydroptila molsonae* Blicke, 1961

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Choctawhatchee Bay, Choctawhatchee R, Peace R, Pensacola Bay, Perdido R, St. Johns R (lower).

**Counties:** Clay, Escambia, Highlands, Liberty, Okaloosa, Santa Rosa, Walton, Washington.

**Habitat Associations:** Softwater Stream, Seepage/Steephead Stream.

**Literature:** Blicke 1961, 1962; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 14

**Number of Occurrences:** 4

**Site Number (Number of Specimens):** 3(1), 13(1), 17(10), 18(2)

### Conservation Status Assessment

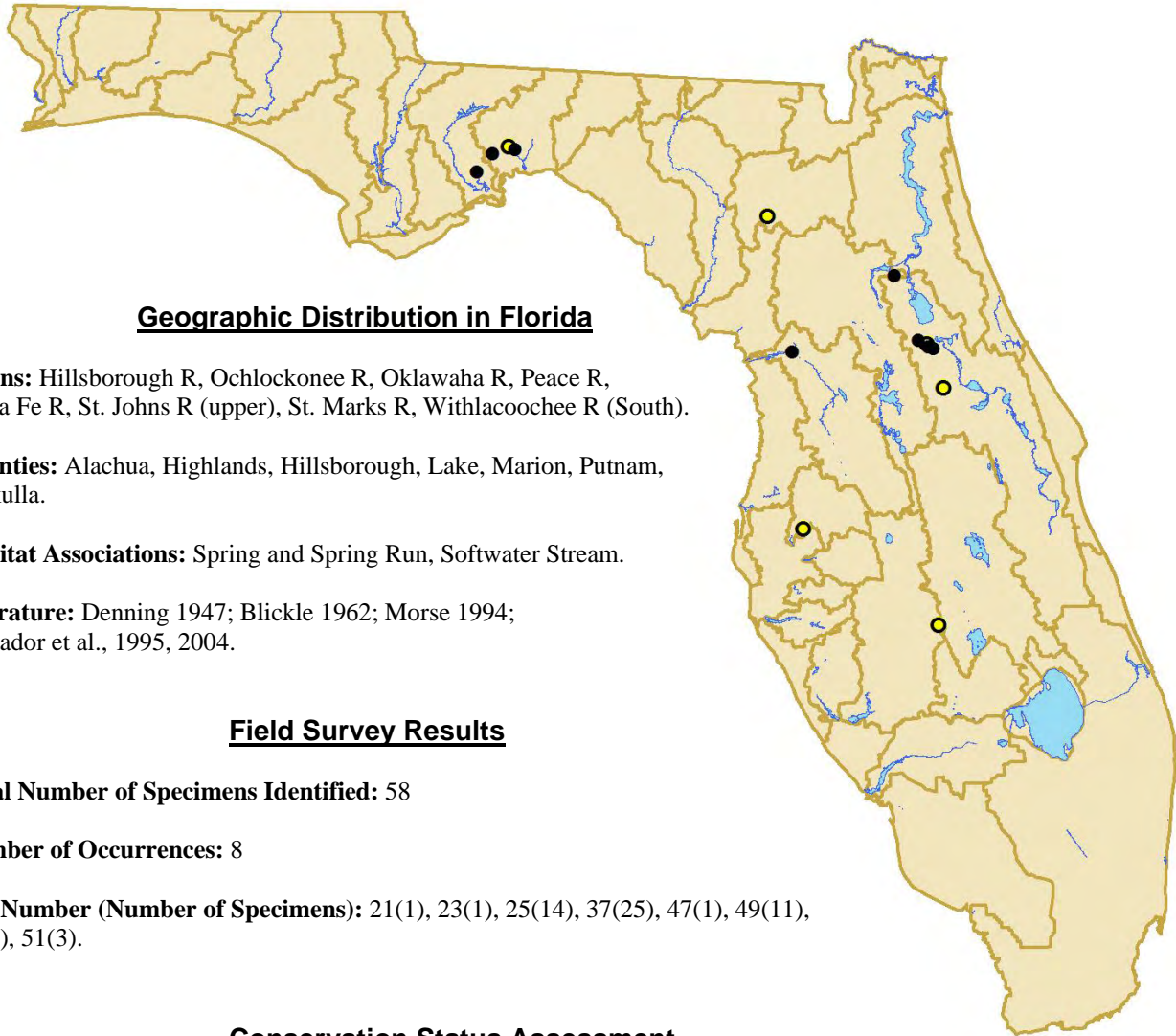
Blicke's 1957-1958 light-trapping survey of Hydroptilidae in Florida led to the discovery four new microcaddisfly species, including *Hydroptila molsonae*. The species was first collected on September 25, 1958 from Highland Hammock State Park in Highlands County, Florida (Blicke 1961). The species has since been taken from a number of localities from the lower Coastal Plain of Louisiana, Mississippi, Alabama, and Florida. In Florida we have collected *H. molsonae* in light-trap samples from several softwater (blackwater) streams in the western panhandle, as well as from a lake run stream on Camp Blanding in Clay County. Despite significant efforts light-trapping across central and southern Florida, including a sample from Charley Bowlegs Creek within Highlands Hammock State Park (Site 65), *H. molsonae* has not been recovered from this region since 1958.

Based on the small number of sites where this species has been found and the low abundance numbers, we recommend that the **Population Level** be reassigned from Unknown to **Low**, and based on the fact the species appears to no longer occur in central or southern Florida, we recommend the **Population Trend** be reassigned from Unknown to **Declining**.



*Hydroptila wakulla* Denning, 1947

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Hillsborough R, Ochlockonee R, Oklawaha R, Peace R, Santa Fe R, St. Johns R (upper), St. Marks R, Withlacoochee R (South).

**Counties:** Alachua, Highlands, Hillsborough, Lake, Marion, Putnam, Wakulla.

**Habitat Associations:** Spring and Spring Run, Softwater Stream.

**Literature:** Denning 1947; Blickle 1962; Morse 1994; Pescador et al., 1995, 2004.

### Field Survey Results

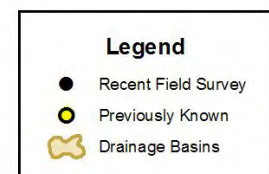
**Total Number of Specimens Identified:** 58

**Number of Occurrences:** 8

**Site Number (Number of Specimens):** 21(1), 23(1), 25(14), 37(25), 47(1), 49(11), 50(2), 51(3).

### Conservation Status Assessment

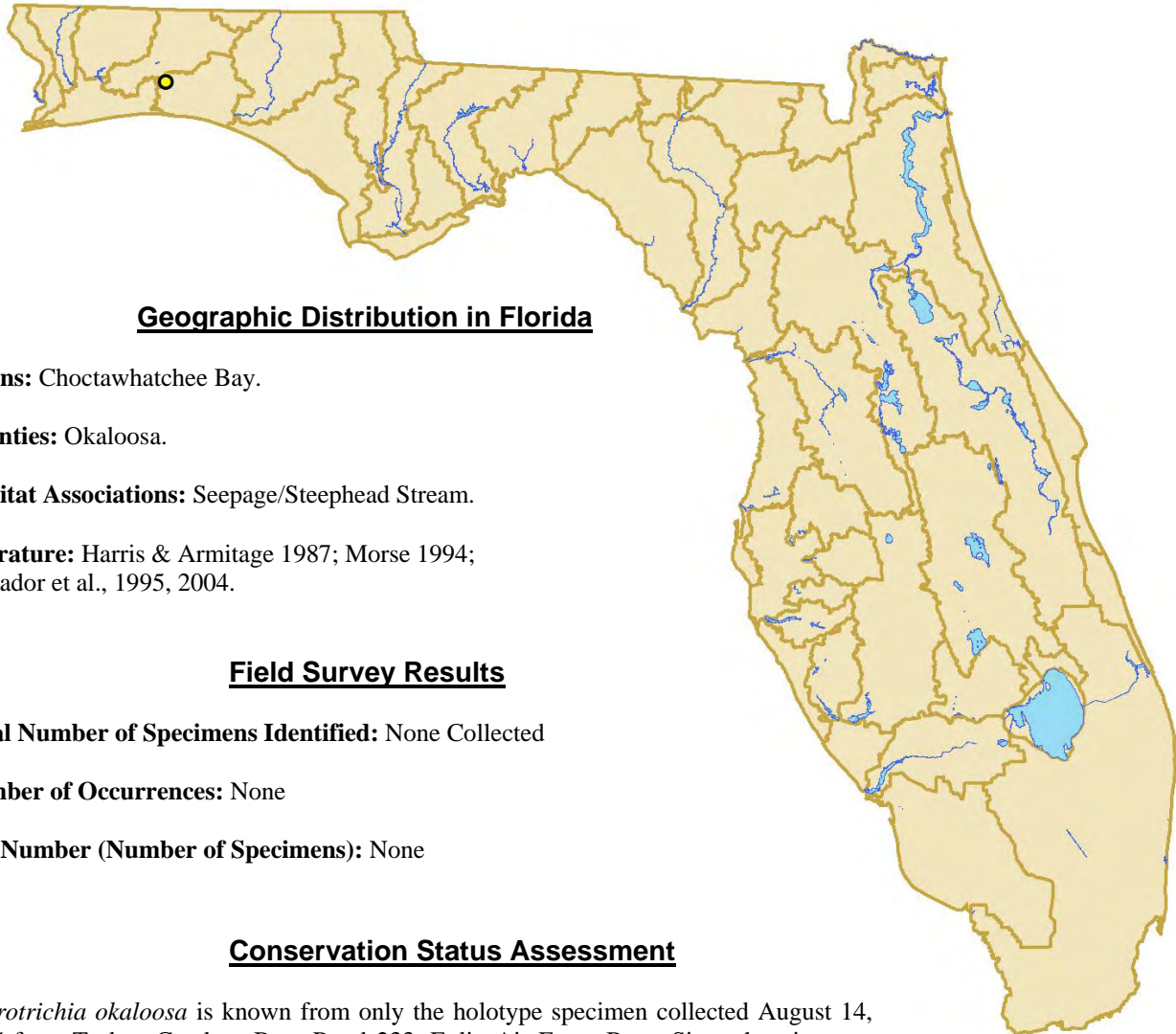
*Hydroptila wakulla*, a species endemic to Florida, derived its name from Wakulla Springs, the type locality where the species was first discovered in 1945 (Denning 1947). Blickle's 1957-1958 light-trapping survey of Hydroptilidae in Florida recorded *H. wakulla* from Wakulla Springs, as well as several localities on the Florida peninsula. During the field survey for this project, we recovered *H. wakulla* from 8 locations, including several large spring runs [Wakulla River (Site 25), Alexander Springs Creek (Site 49), and Rainbow River (Site 51)].



This species is vulnerable to extinction because of its narrow range and threats to its habitat. Populations should be monitored in order to detect future declines or losses. Additional impairment to large spring-run systems in Florida could have significant negative effects on the overall health of this species. Given the patchy distribution of *H. wakulla* and low collection abundance, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low**. The fact that a population has existed in the Wakulla Springs system over the past 60 years suggests population levels are stable, at least in the northern part of its range, therefore we recommend that the **Population Trend** be reassigned from Unknown to **Stable**.

*Ochrotrichia okaloosa* Harris, 1987

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Choctawhatchee Bay.

**Counties:** Okaloosa.

**Habitat Associations:** Seepage/Steephead Stream.

**Literature:** Harris & Armitage 1987; Morse 1994; Pescador et al., 1995, 2004.

### Field Survey Results

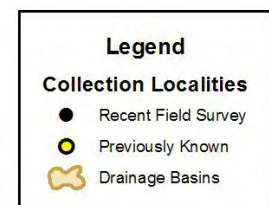
**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

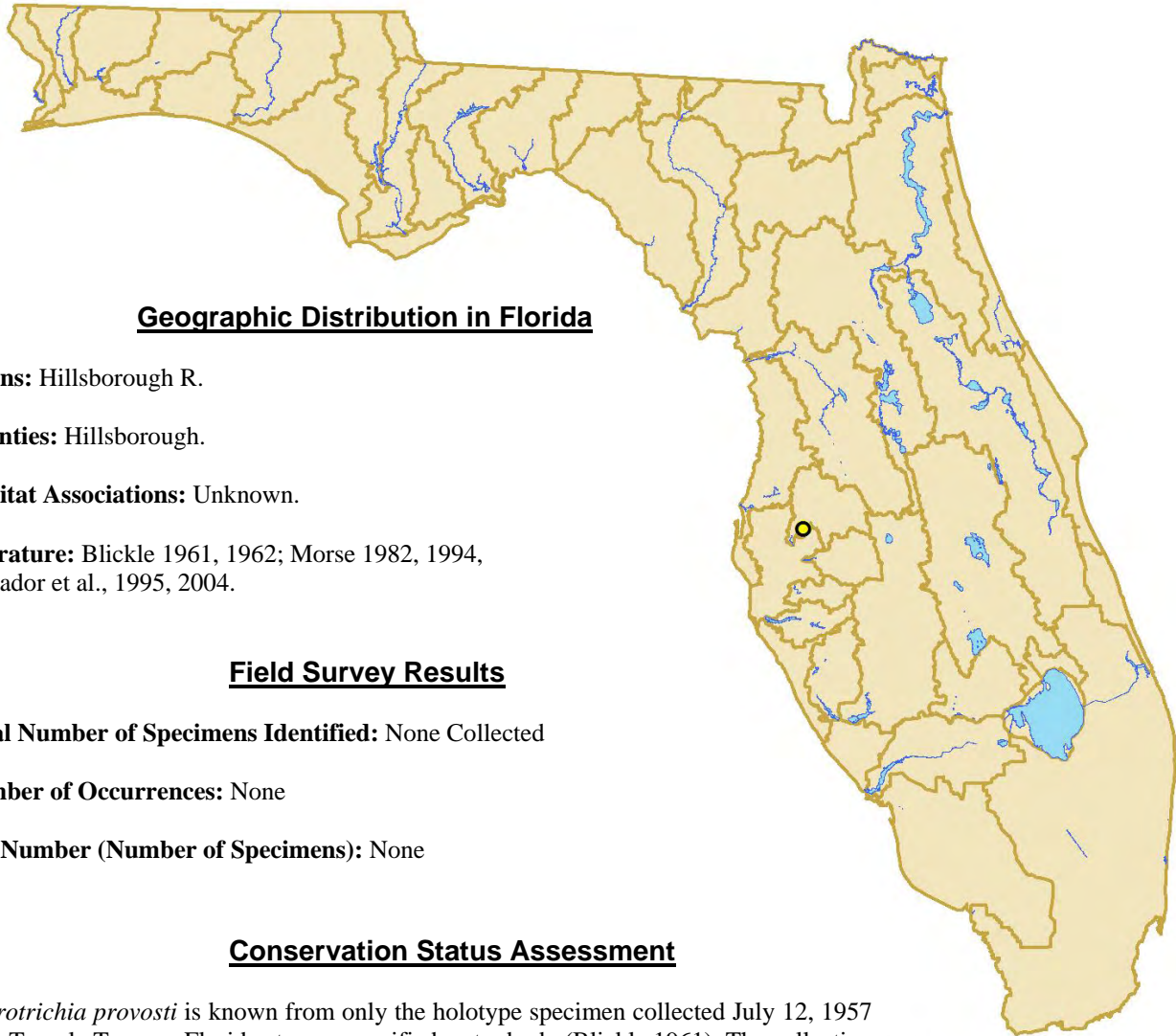
### Conservation Status Assessment

*Ochrotrichia okaloosa* is known from only the holotype specimen collected August 14, 1985 from Turkey Creek at Base Road 233, Eglin Air Force Base. Since that time, no other specimens have been recovered despite a number of other light-trap samples having been taken from other sites along Turkey Creek. The Turkey Creek system remains in excellent condition and supports a diverse and unique aquatic fauna, therefore, there appears to be no environmental reason why this species should be extinct. Additional collecting efforts at the type locality are needed to determine if there is still a population of this species in the area. *Ochrotrichia okaloosa*, as with certain other species of microcaddisflies, is very difficult to collect for unknown reasons. Most likely, certain aspects of its behavior and biology prevent it from being readily captured using standard light-trapping techniques. Other methods, besides light-trapping (e.g., Malaise traps, sweep-netting), may be more effective for collecting such species. Because *O. okaloosa* is known only from a single occurrence in a well sampled area, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low**, and that the Population Trend remain as **Unknown**.



*Ochrotrichia provosti* Blickle, 1961

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Hillsborough R.

**Counties:** Hillsborough.

**Habitat Associations:** Unknown.

**Literature:** Blickle 1961, 1962; Morse 1982, 1994, Pescador et al., 1995, 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

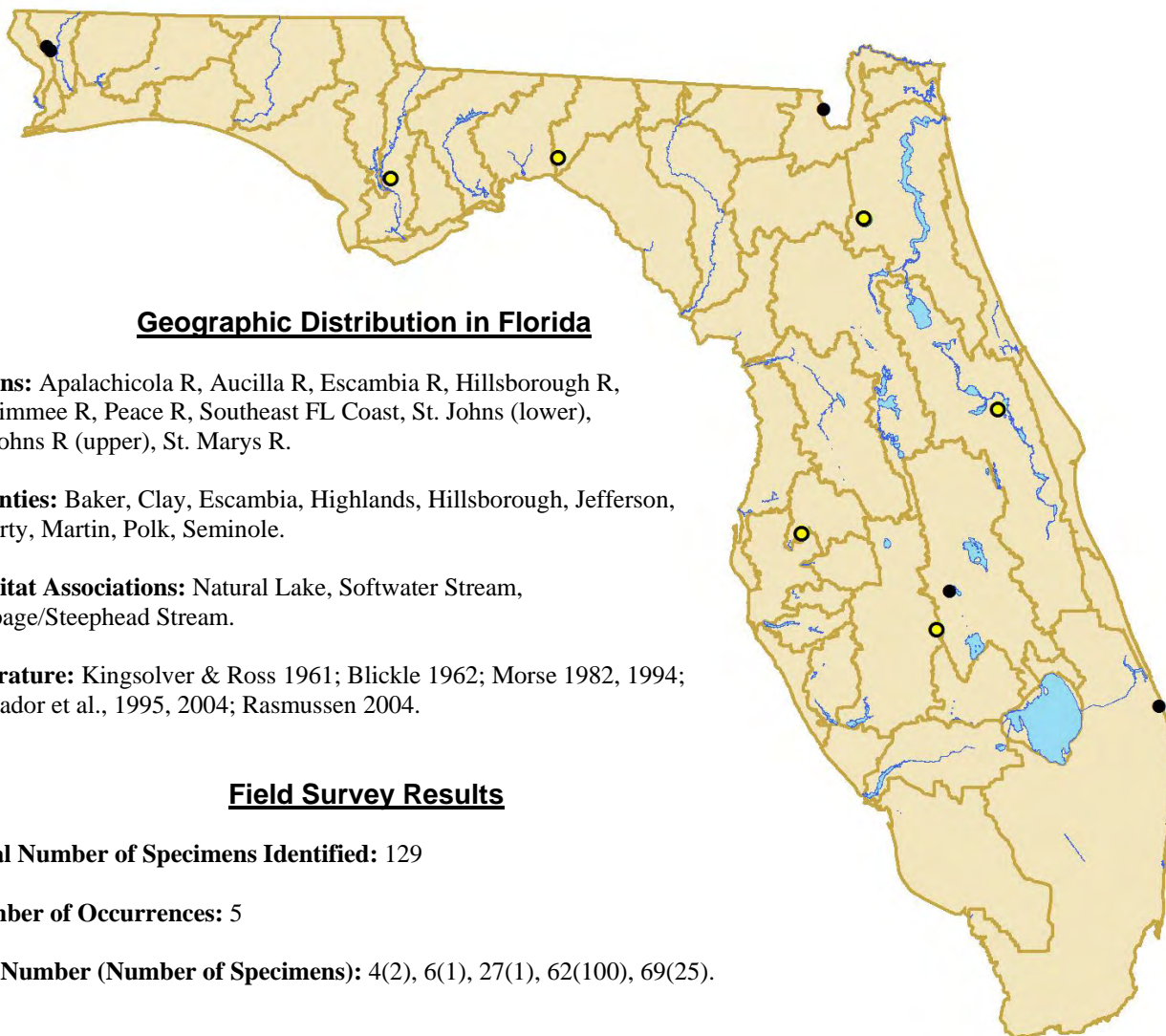
*Ochrotrichia provosti* is known from only the holotype specimen collected July 12, 1957 from Temple Terrace, Florida at an unspecified water body (Blickle 1961). The collection likely came from along or near the Hillsborough River which runs through parts of Temple Terrace. Recent light-trap samples we collected from several sites along the Hillsborough River did not yield any additional specimens. The river still supports a fairly diverse caddisfly fauna, including *Ochrotrichia tarsalis*. Whether *O. provosti* is extant or extinct is unknown. A number of other microcaddisfly species are known from only single individuals. This may well be due to certain aspects of their behavior and biology which makes them difficult to collect using standard light-trapping techniques. Other methods such as the use of malaise-traps and sweep netting may provide additional collections of such species.



Based on the single occurrence of *O. provosti* in an area that has since been surveyed, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low**, and that the **Population Trend** remain as **Unknown** for the aforementioned reasons.

*Orthotrichia curta* Kingsolver and Ross, 1961

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Aucilla R, Escambia R, Hillsborough R, Kissimmee R, Peace R, Southeast FL Coast, St. Johns (lower), St. Johns R (upper), St. Marys R.

**Counties:** Baker, Clay, Escambia, Highlands, Hillsborough, Jefferson, Liberty, Martin, Polk, Seminole.

**Habitat Associations:** Natural Lake, Softwater Stream, Seepage/Steephead Stream.

**Literature:** Kingsolver & Ross 1961; Blickle 1962; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 129

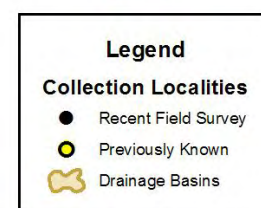
**Number of Occurrences:** 5

**Site Number (Number of Specimens):** 4(2), 6(1), 27(1), 62(100), 69(25).

### Conservation Status Assessment

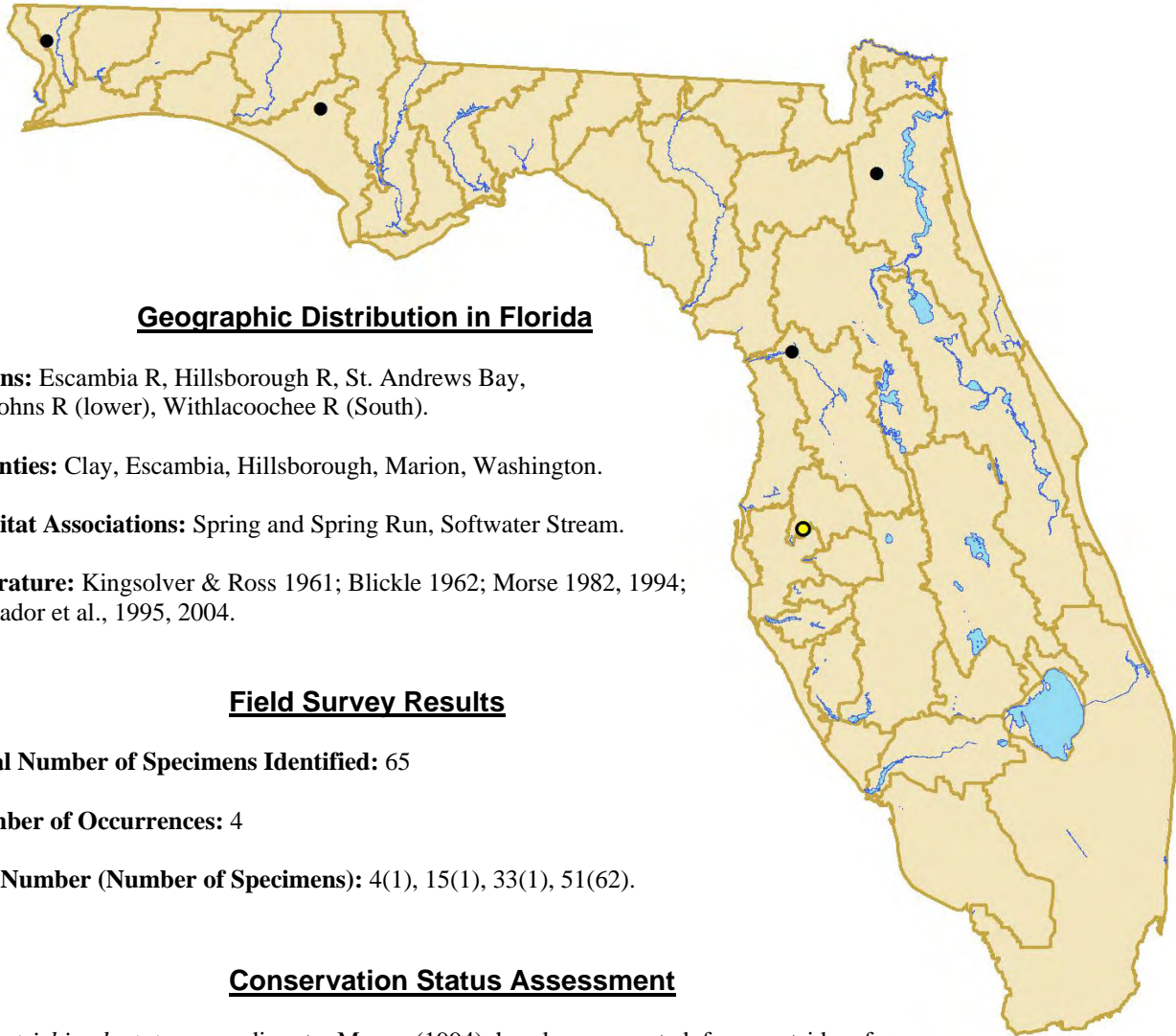
*Orthotrichia curta* is widely distributed with records from the southern United States (Texas, Louisiana, Alabama, Florida), as well as records from the upper Midwest, Northeast, and Quebec. The species was first described by Kingsolver and Ross (1961) based on specimens collected by R.L. Blickle in his 1957-1958 light-trapping survey of the Hydroptilidae of Florida. Type specimens were collected from Temple Terrace [near Tampa], Goose Prairie [presumed to mean Goose Pasture in Jefferson County], and Highland Hammock. Our collection records suggest that *O. curta* inhabits both lotic and lentic habitats, although populations appear to be most abundant within lakes and ponds. The highest number of individuals we recorded was 100 from Lake Godwin within Lake Wales Ridge State Forest (Site 62).

Based on the wide but sparse distribution of *O. curta* in Florida, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low** and that the **Population Trend** be reassigned to **Stable**.



*Orthotrichia dentata* Kingsolver and Ross, 1961

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Escambia R, Hillsborough R, St. Andrews Bay, St. Johns R (lower), Withlacoochee R (South).

**Counties:** Clay, Escambia, Hillsborough, Marion, Washington.

**Habitat Associations:** Spring and Spring Run, Softwater Stream.

**Literature:** Kingsolver & Ross 1961; Blicke 1962; Morse 1982, 1994; Pescador et al., 1995, 2004.

### Field Survey Results

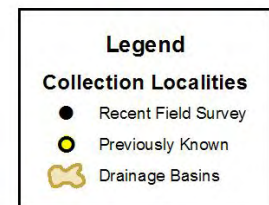
**Total Number of Specimens Identified:** 65

**Number of Occurrences:** 4

**Site Number (Number of Specimens):** 4(1), 15(1), 33(1), 51(62).

### Conservation Status Assessment

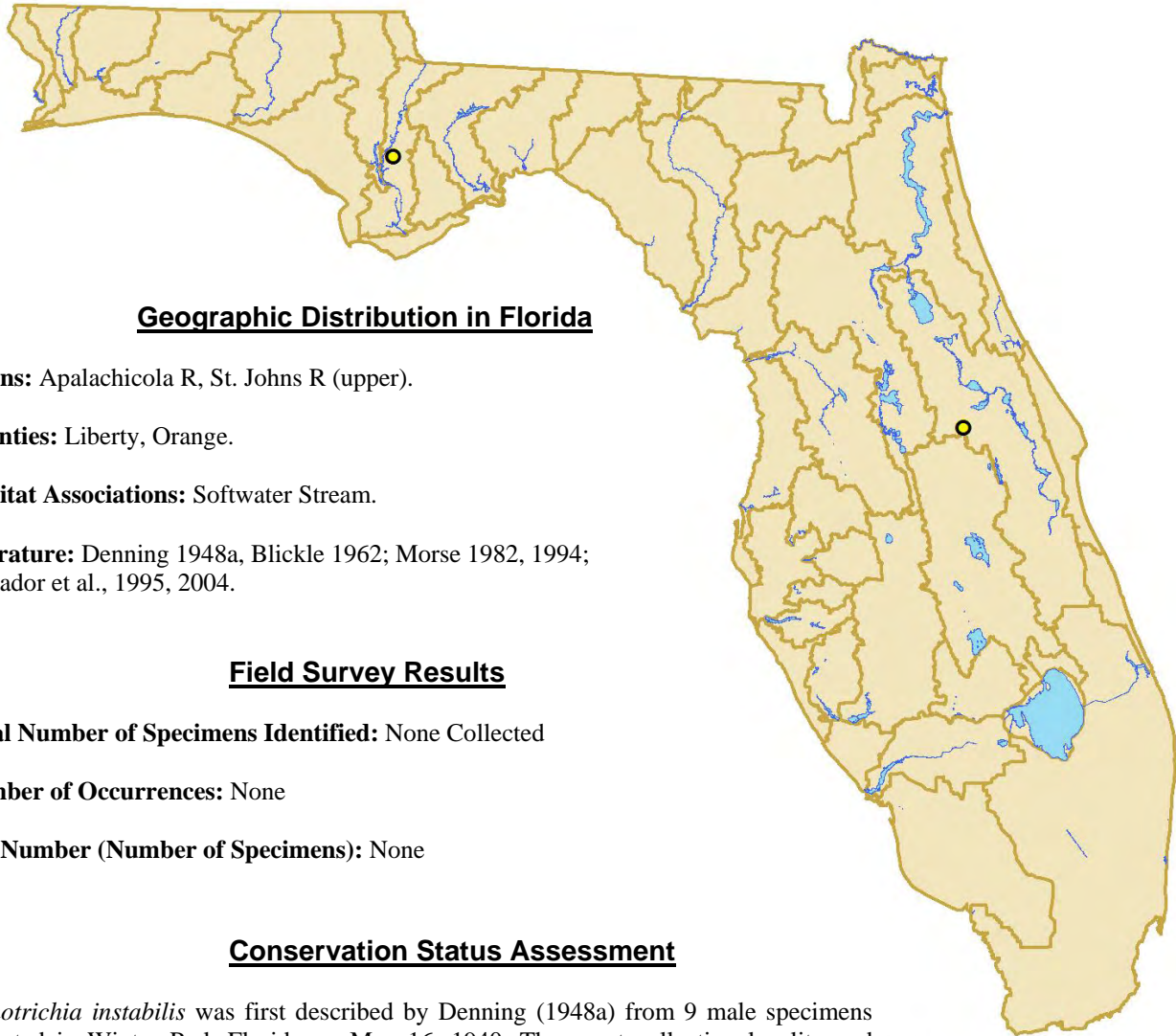
*Orthotrichia dentata*, according to Morse (1994) has been reported from outside of Florida at only one location in Mississippi and two locations in South Carolina. The only previously known record of *O. dentata* in Florida comes from the type specimens collected on April 1957 by Blicke in Temple Terrace Florida. The species was subsequently described based on these specimens by Kingsolver and Ross (1961). Our field survey did not recover any specimens from the Hillsborough River, near the type locality. However, we did collect *O. dentata* from 4 other sites, including a collection of 62 individuals from the Rainbow River, a large spring run. The Rainbow River population should be monitored for changes in population levels.



Based on the low number of occurrences and the small number of individuals recovered, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low**. Because of the recent discovery of additional populations in Florida, we recommend that the SGCN **Population Trend** be reassigned from unknown to **Stable**.

*Orthotrichia instabilis* Denning, 1948a

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, St. Johns R (upper).

**Counties:** Liberty, Orange.

**Habitat Associations:** Softwater Stream.

**Literature:** Denning 1948a, Blicke 1962; Morse 1982, 1994; Pescador et al., 1995, 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected

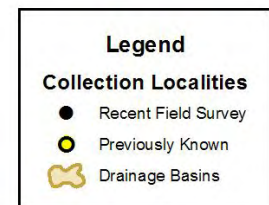
**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

*Orthotrichia instabilis* was first described by Denning (1948a) from 9 male specimens collected in Winter Park Florida on May 16, 1940. The exact collection locality and habitat were not specified. The species has since been reported from a few isolated and widespread localities in Arkansas, coastal Alabama, South Carolina, and New Hampshire. The coastal Alabama record was one individual collected from a marshy pool of a small stream (Harris et al. 1991). In Florida we have one additional collection record from Gregory Mill Creek, a softwater (blackwater) stream that flows through the Apalachicola National Forest. Unimpaired and relatively pristine blackwater streams such as Gregory Mill should be sampled more thoroughly to uncover additional populations of *O. instabilis*.

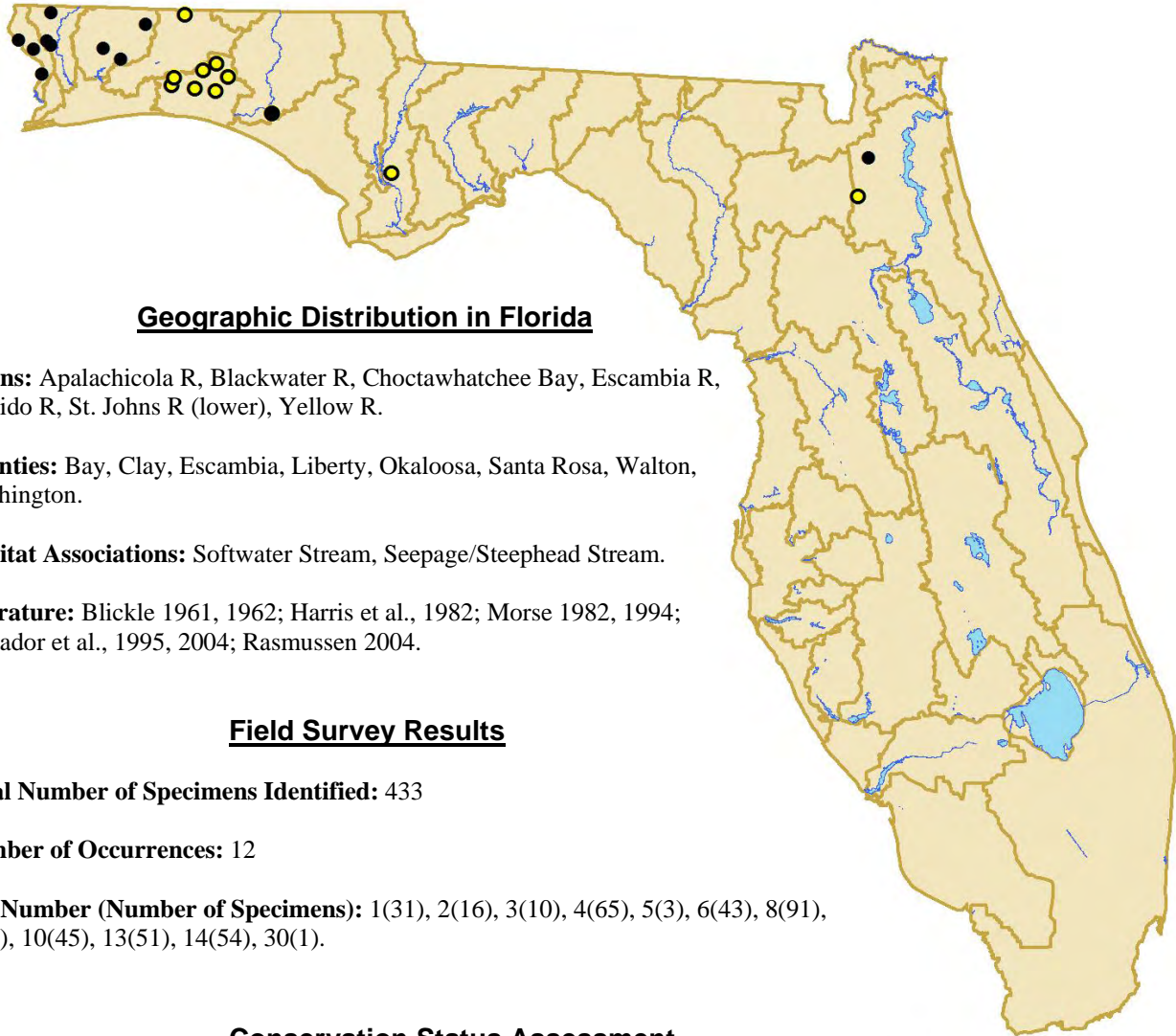
The apparent isolated populations of *O. instabilis* across a large portion of Eastern North America, suggests this species present populations are relicts of a once common eastern species. Based on current information, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low**, and that the SGCN **Population Trend** remain as **Unknown**.





*Oxyethira elerobi* (Blickle), 1961

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Blackwater R, Choctawhatchee Bay, Escambia R, Perdido R, St. Johns R (lower), Yellow R.

**Counties:** Bay, Clay, Escambia, Liberty, Okaloosa, Santa Rosa, Walton, Washington.

**Habitat Associations:** Softwater Stream, Seepage/Steephead Stream.

**Literature:** Blickle 1961, 1962; Harris et al., 1982; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

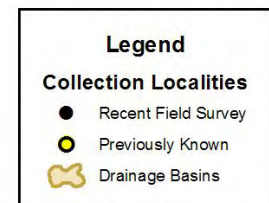
**Total Number of Specimens Identified:** 433

**Number of Occurrences:** 12

**Site Number (Number of Specimens):** 1(31), 2(16), 3(10), 4(65), 5(3), 6(43), 8(91), 9(23), 10(45), 13(51), 14(54), 30(1).

### Conservation Status Assessment

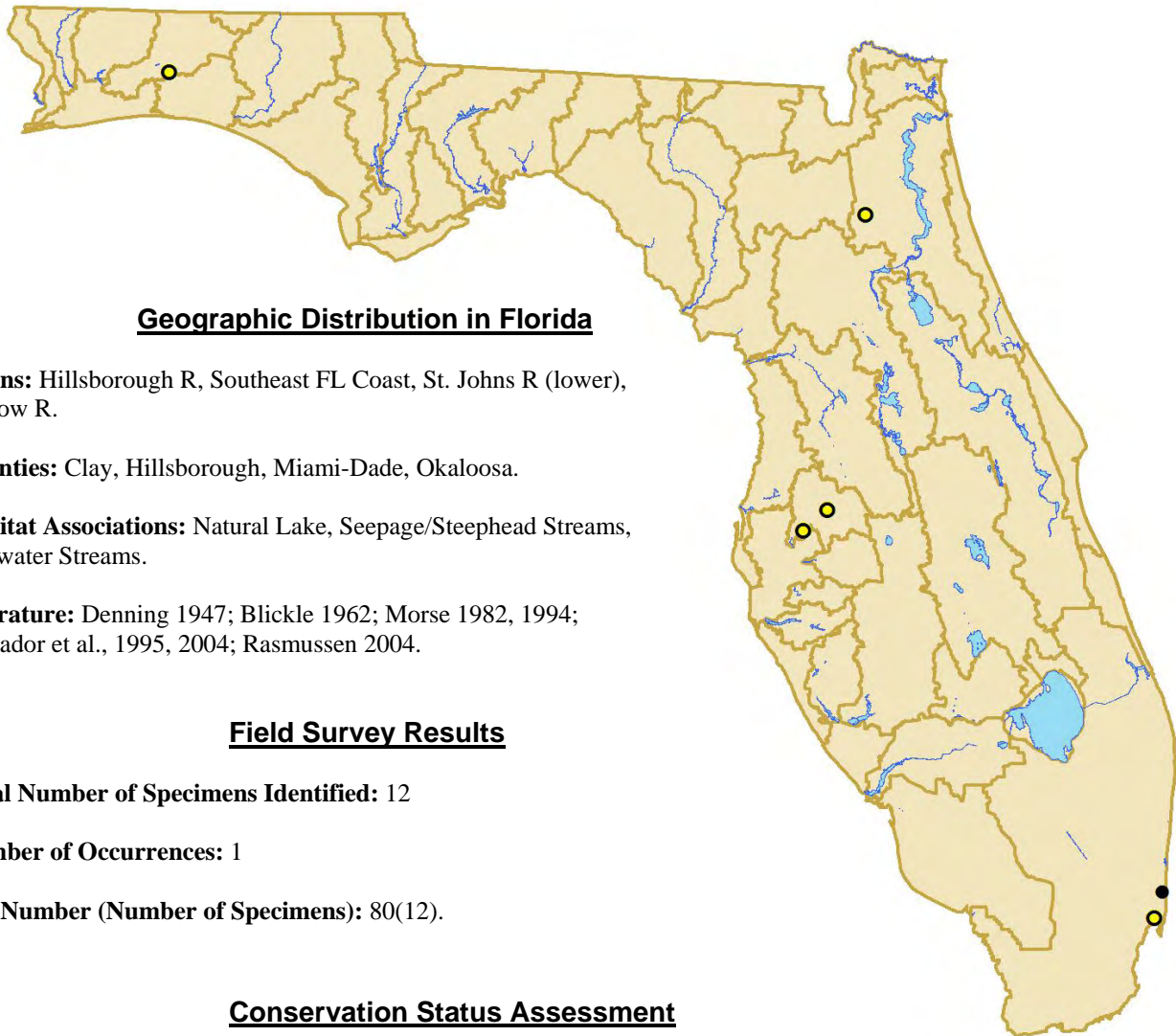
This southeastern species was discovered by R.L. Blickle during his 1957-1958 light-trapping survey of the Hydroptilidae of Florida (Blickle 1961, 1962). The type locality is Laurel Hill located in northeastern Okaloosa County. Through our survey efforts in Florida we have recorded the species at a number of locations, mainly softwater (blackwater) creeks and rivers. The species appears to be restricted to the northern tier of the state and is much more common in the western panhandle than in the east.



*Oxyethira elerobi* appears to be intolerant of perturbation, making it an excellent bioindicator of ecosystem health in Coastal Plain streams. Based on new data collected in the recent field survey, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** be reassigned from Unknown to **Stable**.

*Oxyethira florida* Denning, 1947

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Hillsborough R, Southeast FL Coast, St. Johns R (lower), Yellow R.

**Counties:** Clay, Hillsborough, Miami-Dade, Okaloosa.

**Habitat Associations:** Natural Lake, Seepage/Steephead Streams, Softwater Streams.

**Literature:** Denning 1947; Blickle 1962; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 12

**Number of Occurrences:** 1

**Site Number (Number of Specimens):** 80(12).

### Conservation Status Assessment

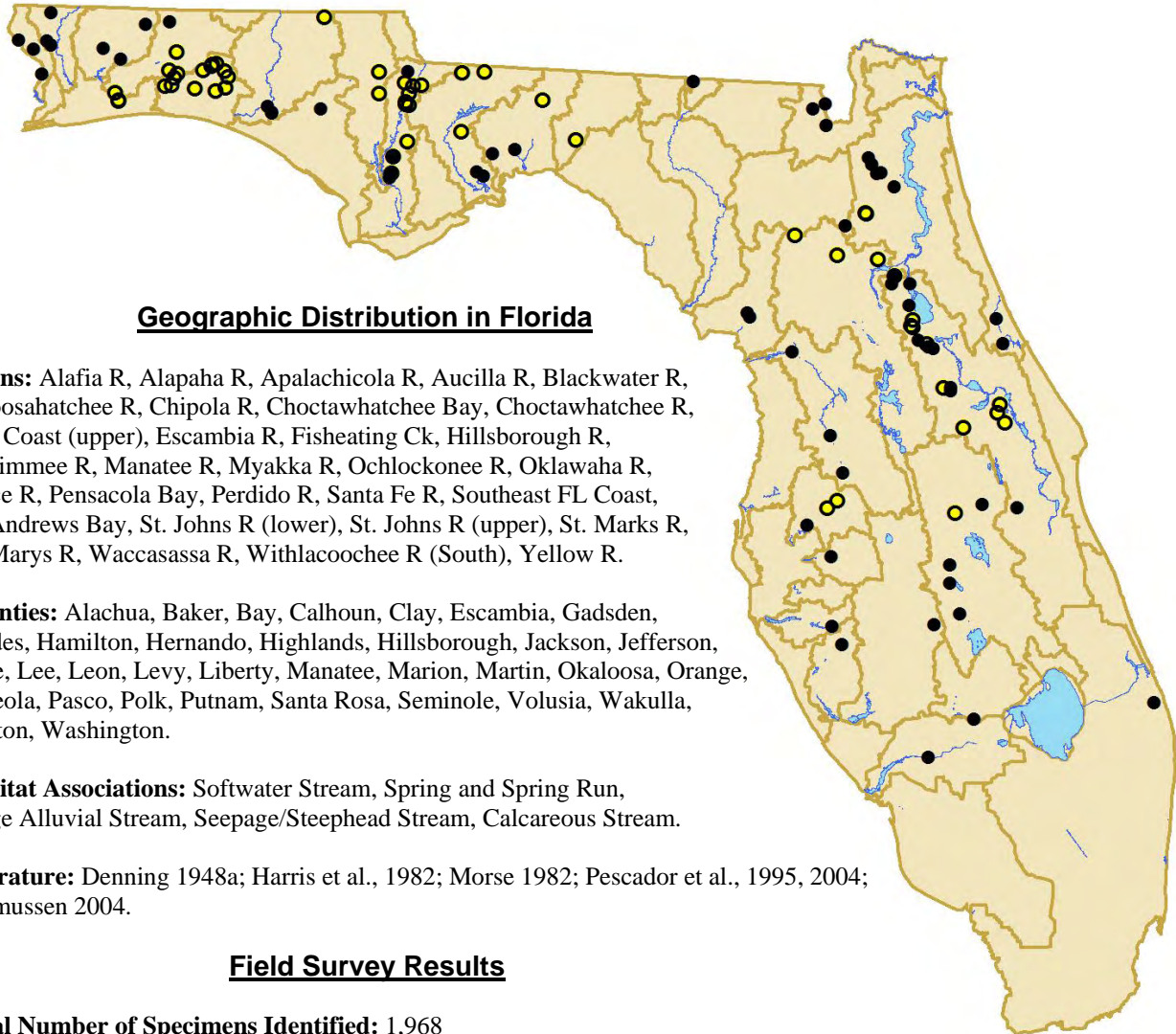
*Oxyethira florida* is known from Cuba, Florida, and Texas; however the Texas records have been called into question (Morse 1994). The type series of specimens was collected in Miami, Florida from 1944-1945 and described by Denning (1947). Subsequently the species was reported in Florida from Temple Terrace [near Tampa] by Blickle (1962), and by Rasmussen (2004) from two steephead ravine streams, one located within Gold Head Branch State Park (Clay County) and the other on Eglin Air Force Base in Okaloosa County. In 2005 we collected *O. florida* from the Hillsborough River within the Hillsborough River State Park. During the field survey for this project, *O. florida* was collected at only one site, Site 80, a small, constructed wetland-pond within Oleta River State Park in Miami-Dade County.

The recent collection of *O. florida* in the Miami area shows that the species has persisted in Miami over the years, despite the massive increase in human population and development of the area. The other recent collection records indicate the species is widespread in the state, but represented by relatively few isolated populations. Based on this information, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low** and the **Population Trend** be reassigned from Unknown to **Stable**.



*Oxyethira janella* Denning, 1948a

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Alafia R, Alapaha R, Apalachicola R, Aucilla R, Blackwater R, Caloosahatchee R, Chipola R, Choctawhatchee Bay, Choctawhatchee R, East Coast (upper), Escambia R, Fisheating Ck, Hillsborough R, Kissimmee R, Manatee R, Myakka R, Ochlockonee R, Oklawaha R, Peace R, Pensacola Bay, Perdido R, Santa Fe R, Southeast FL Coast, St. Andrews Bay, St. Johns R (lower), St. Johns R (upper), St. Marks R, St. Marys R, Waccasassa R, Withlacoochee R (South), Yellow R.

**Counties:** Alachua, Baker, Bay, Calhoun, Clay, Escambia, Gadsden, Glades, Hamilton, Hernando, Highlands, Hillsborough, Jackson, Jefferson, Lake, Lee, Leon, Levy, Liberty, Manatee, Marion, Martin, Okaloosa, Orange, Osceola, Pasco, Polk, Putnam, Santa Rosa, Seminole, Volusia, Wakulla, Walton, Washington.

**Habitat Associations:** Softwater Stream, Spring and Spring Run, Large Alluvial Stream, Seepage/Steephead Stream, Calcareous Stream.

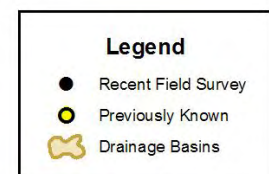
**Literature:** Denning 1948a; Harris et al., 1982; Morse 1982; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 1,968

**Number of Occurrences:** 61

**Site Number (Number of Specimens):** 1(44), 2(8), 3(97), 4(5), 5(9), 6(27), 8(12), 9(7), 10(1), 11(22), 12(29), 13(147), 14(1), 15(86), 16(5), 17(12), 18(2), 19(1), 21(33), 22(78), 23(41), 25(36), 26(83), 27(3), 28(3), 29(5), 30(175), 31(23), 32(1), 33(52), 34(2), 36(1), 37(26), 38(2), 39(1), 41(1), 42(262), 43(39), 44(15), 47(1), 48(2), 49(14), 50(13), 51(8), 52(98), 53(39), 54(26), 55(94), 56(1), 57(39), 58(27), 59(26), 60(28), 61(34), 63(15), 64(21), 65(13), 66(64), 70(2), 74(2), 75(4).

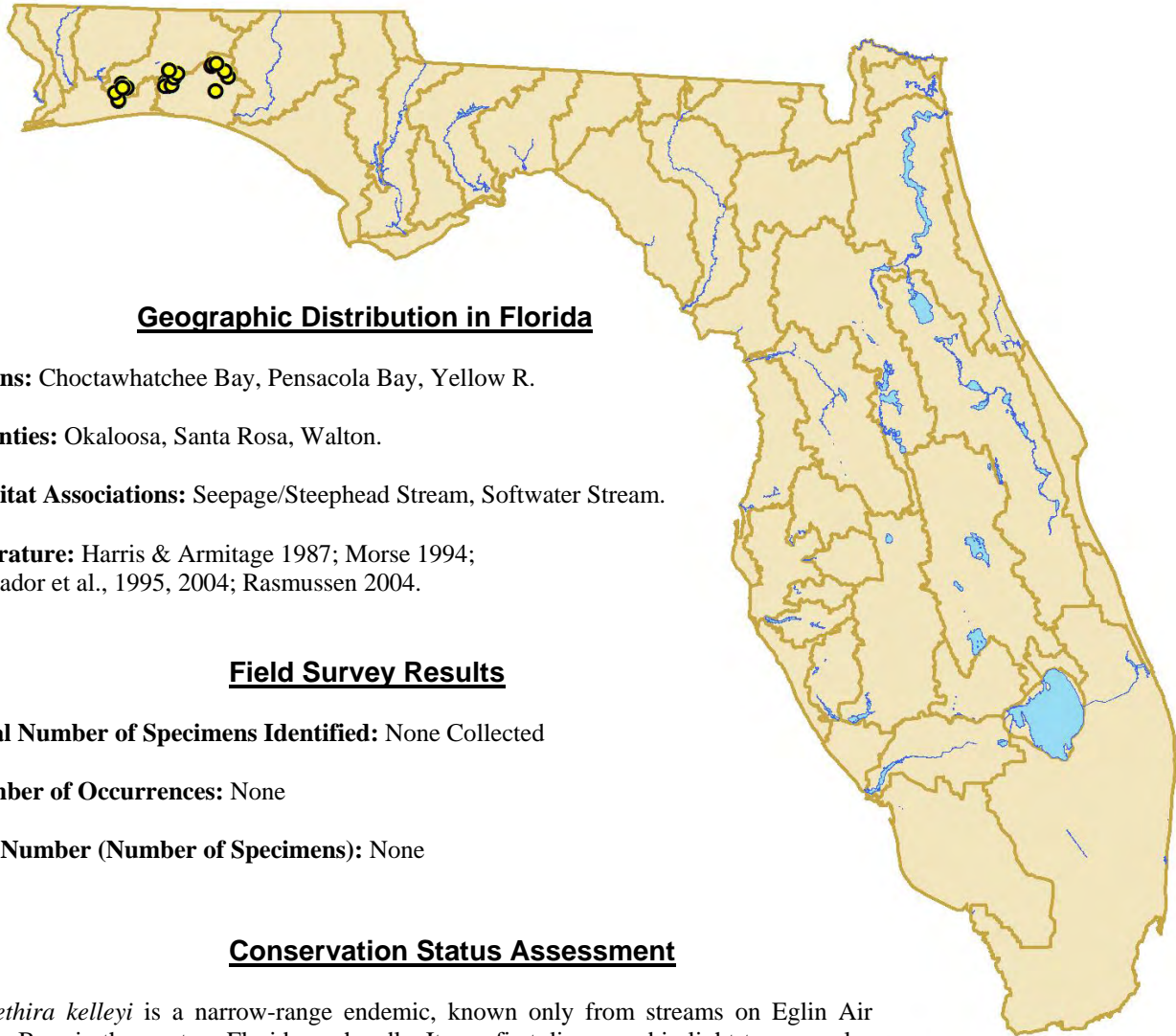


### Conservation Status Assessment

*Oxyethira janella* is a widespread and common species of running waters throughout much of the Southeastern U.S. Coastal Plain and Caribbean. In Florida, it is a widespread and common inhabitant of lotic habitats nearly state-wide. The field study for this project documents *O. janella* at 61 of 81 sites sampled. Due to the widespread and common occurrence of *O. janella*, we recommend its **removal** as a Species of Greatest Conservation Need.

*Oxyethira kelleyi* Harris, 1987

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Choctawhatchee Bay, Pensacola Bay, Yellow R.

**Counties:** Okaloosa, Santa Rosa, Walton.

**Habitat Associations:** Seepage/Steephead Stream, Softwater Stream.

**Literature:** Harris & Armitage 1987; Morse 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

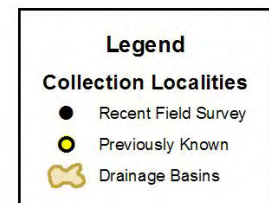
**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

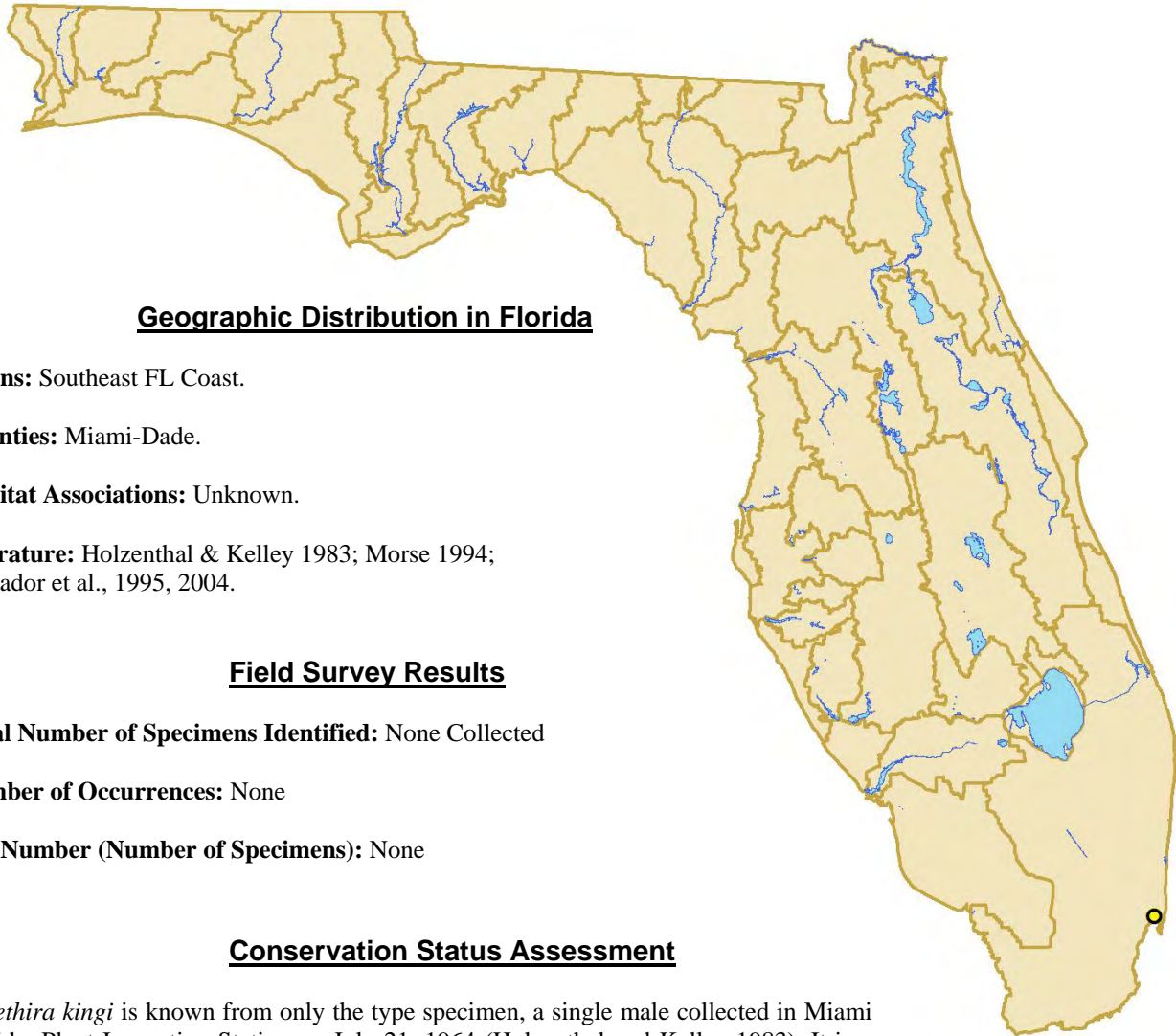
*Oxyethira kelleyi* is a narrow-range endemic, known only from streams on Eglin Air Force Base in the western Florida panhandle. It was first discovered in light-trap samples collected August 14, 1985 from streams within the Turkey Creek watershed on the western side of the base. The species was described by Harris in Harris and Armitage (1987). Subsequent light-trap surveys we have been conducting over the past ten years on Eglin has revealed that *O. kelleyi* occurs in many of Eglin's streams, although the species is most common and abundant in the seepage/steephead streams found in the central and western portions of the base. Some of these records were reported in Rasmussen (2004).



Because all known populations of this species exist within a very small geographic area, *O. kelleyi* is particularly vulnerable to extinction. Should the seepage/steephead streams on Eglin become degraded due to siltation, reduced flows, or other watershed disturbances it could spell the end for *O. kelleyi* and other species endemic to the area. Besides *O. kelleyi* there are other caddisfly species (e.g., *Cheumatopsyche gordonae*, *Ochrotrichia okaloosa*) which occur only in the clear, cool streams draining the Eglin sandhills. Given the geographic distribution and collection abundance values of *O. kelleyi*, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** reassigned from Unknown to **Stable**.

*Oxyethira kingi* Holzenthal and Kelley, 1983

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Southeast FL Coast.

**Counties:** Miami-Dade.

**Habitat Associations:** Unknown.

**Literature:** Holzenthal & Kelley 1983; Morse 1994; Pescador et al., 1995, 2004.

### Field Survey Results

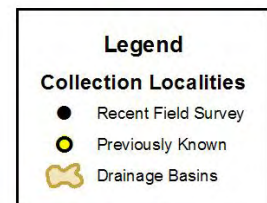
**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

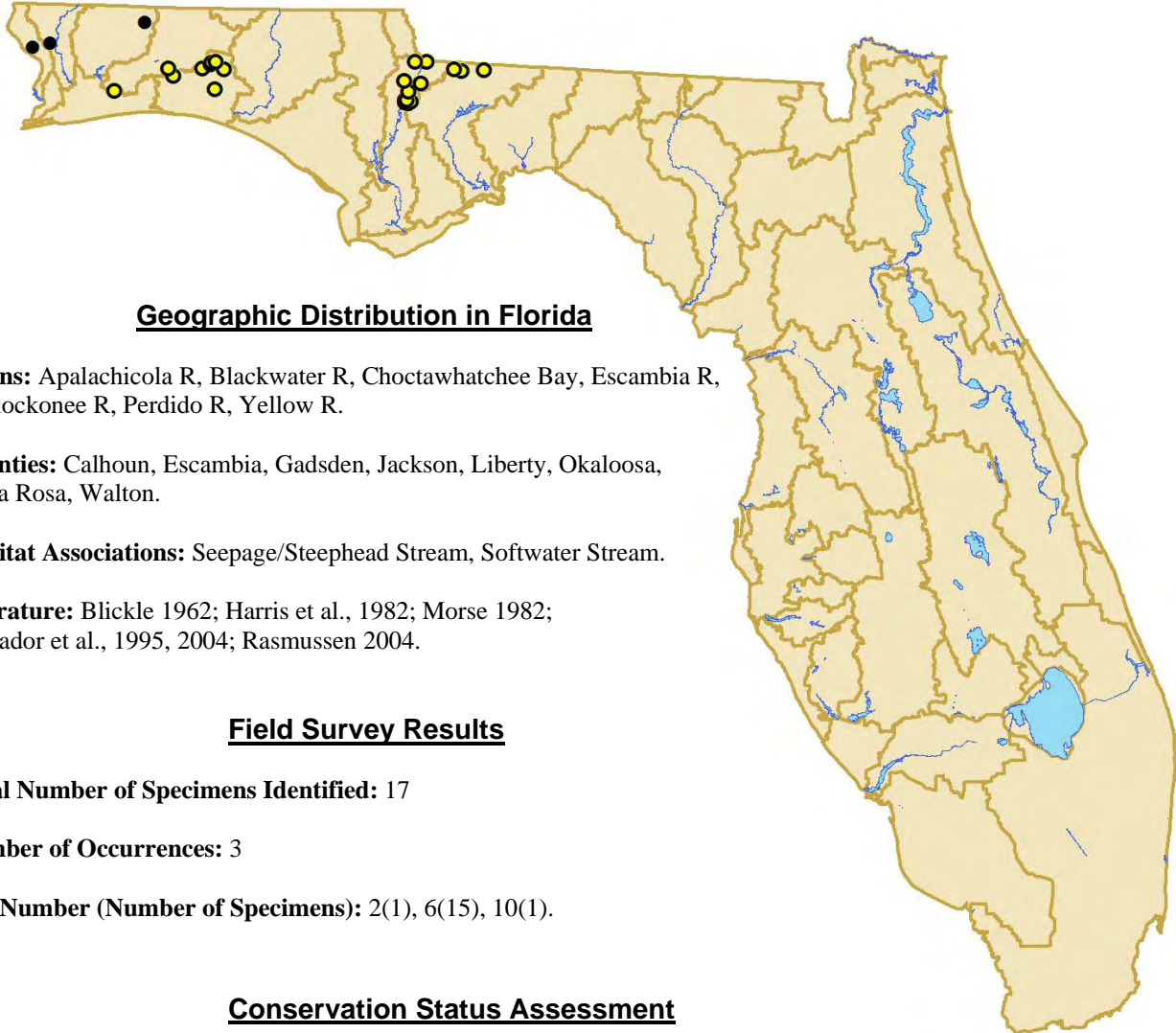
### Conservation Status Assessment

*Oxyethira kingi* is known from only the type specimen, a single male collected in Miami Florida, Plant Inspection Station on July 21, 1964 (Holzenthal and Kelley 1983). It is a member of the *Oxyethira santiagensis* Group whose members are primarily South American in distribution. The fact that the specimen was collected at an inspection station suggests that the species accidentally entered the United States on cargo from the tropics. Based on the lack of evidence of a past or present established breeding population in Florida, we recommend the **removal** of *O. kingi* as a Species of Greatest Conservation Need.



*Oxyethira novasota* Ross, 1944

Spicipalpia: Hydroptilidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Blackwater R, Choctawhatchee Bay, Escambia R, Ochlockonee R, Perdido R, Yellow R.

**Counties:** Calhoun, Escambia, Gadsden, Jackson, Liberty, Okaloosa, Santa Rosa, Walton.

**Habitat Associations:** Seepage/Steephead Stream, Softwater Stream.

**Literature:** Blickle 1962; Harris et al., 1982; Morse 1982; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 17

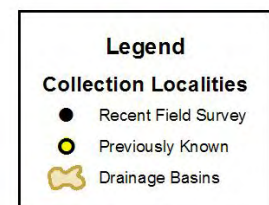
**Number of Occurrences:** 3

**Site Number (Number of Specimens):** 2(1), 6(15), 10(1).

### Conservation Status Assessment

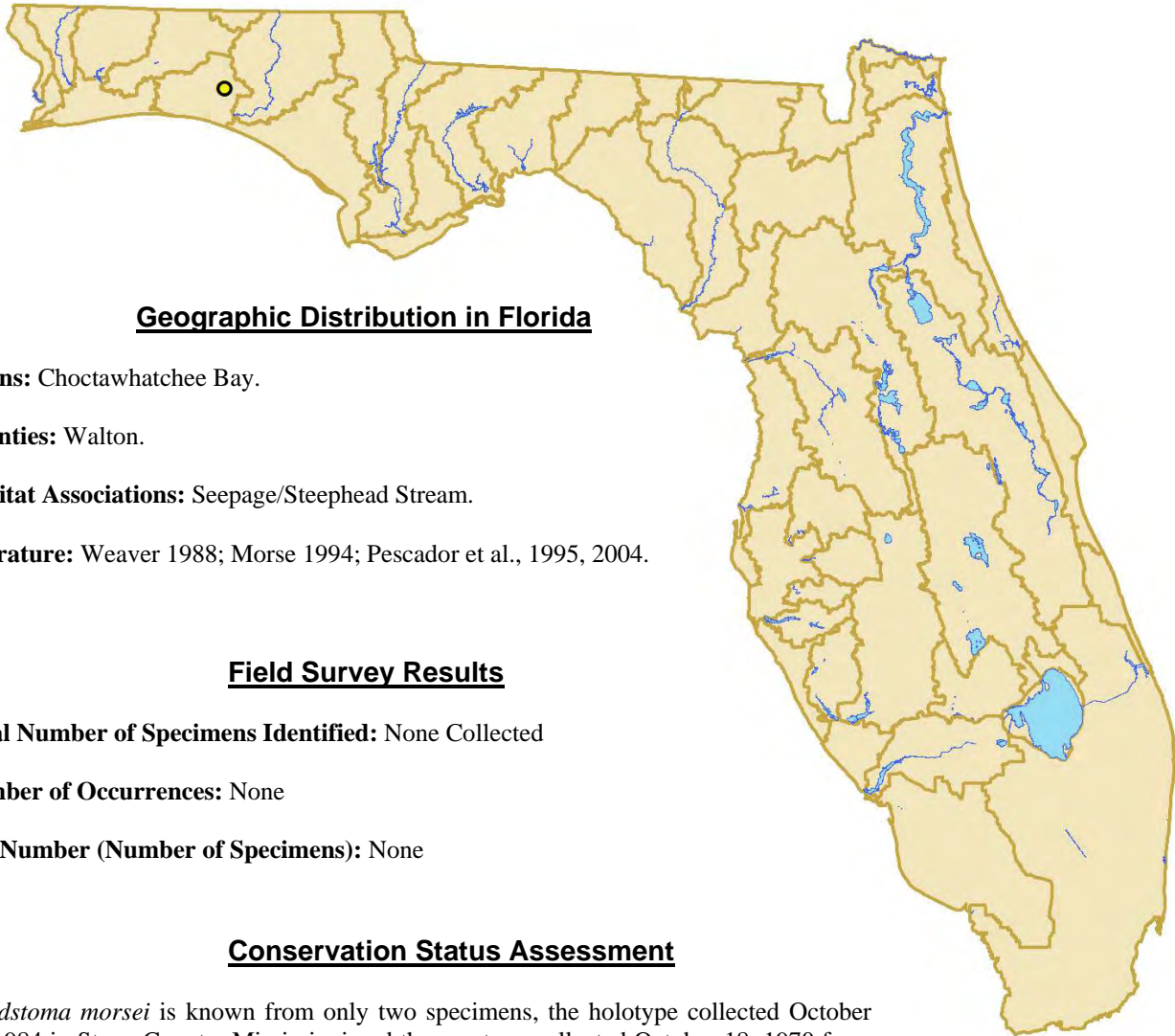
*Oxyethira novasota* is distributed across much of the southeastern United States and parts of Texas and Ohio. Harris et al. (1991) reported that within Alabama, *O. novasota* was the most commonly collected species within the genus. In Florida, *O. novasota* is restricted to the panhandle region, where it inhabits small and medium-size streams. Populations are common in tributaries of the upper Apalachicola River, but are conspicuously absent from streams below the Cody Scarp. In the western part of the panhandle, *O. novasota* is somewhat common in seepage/steephead streams on Eglin Air Force Base but appears to be sparsely distributed across the northern tier of the western counties. Protection of streams within stronghold areas (Apalachicola Bluffs and Ravines and Eglin Air Force Base) is critical to the long-term health of this species in Florida.

Based on the numerous occurrences from the Apalachicola Bluffs and Ravines Region and Eglin Air Force Base, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** be reassigned from Unknown to **Stable**.



*Lepidostoma morsei* Weaver, 1988

Integripalpia: Lepidostomatidae



### Geographic Distribution in Florida

**Basins:** Choctawhatchee Bay.

**Counties:** Walton.

**Habitat Associations:** Seepage/Steephead Stream.

**Literature:** Weaver 1988; Morse 1994; Pescador et al., 1995, 2004.

### Field Survey Results

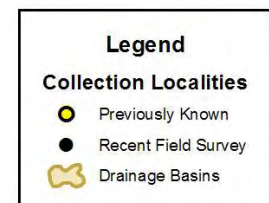
**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

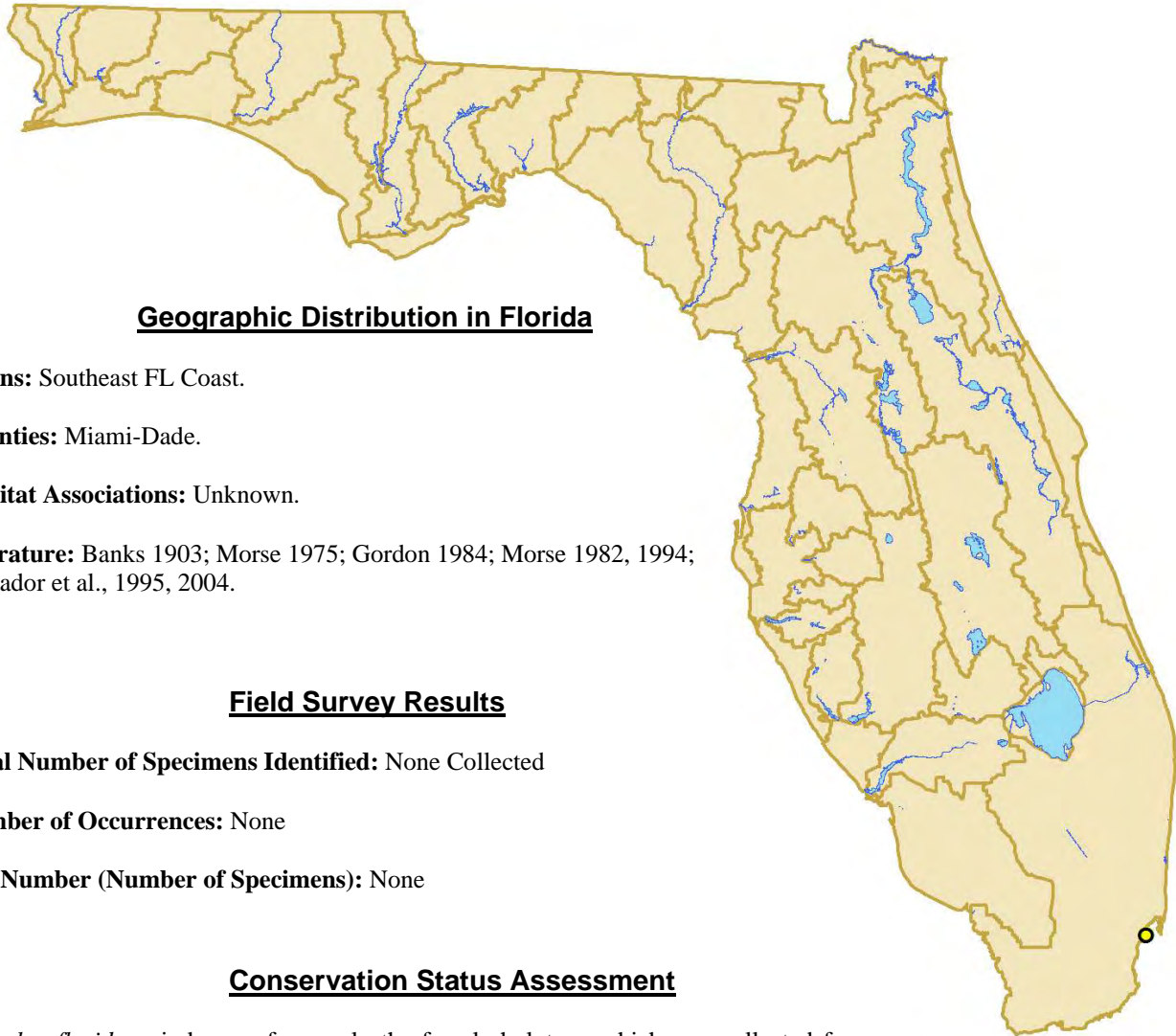
*Lepidostoma morsei* is known from only two specimens, the holotype collected October 19, 1984 in Stone County, Mississippi and the paratype collected October 18, 1970 from Little Alaqua Creek in Walton County, Florida, near Portland (Weaver 1988). To our knowledge, no other specimens have ever been collected. The species is a close relative of *Lepidostoma griseum*, which has been reported from most of the eastern United States as well as Nova Scotia. Interestingly, in recent light-trapping on Eglin Air Force Base, we collected a male of *L. griseum* on October 17, 2006 from Bear Bay Branch, a small stream not far from the paratype locality of *L. morsei*. Additional light-trapping at small spring-fed streams in the Alaqua Creek watershed during the Fall is needed to determine if *L. morsei* no longer exists in Florida, or if small populations still persist in and around the type locality.



Based on the single occurrence of *L. morsei* in Florida we recommend that the SGCN **Population Level** be reassigned from Unknown to **Low**. The fact the species is known from only 2 specimens makes it impossible to infer anything about population trends, therefore we recommend that the SGCN **Population Trend** remain **Unknown**.

*Ceraclea floridana* (Banks), 1903

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Southeast FL Coast.

**Counties:** Miami-Dade.

**Habitat Associations:** Unknown.

**Literature:** Banks 1903; Morse 1975; Gordon 1984; Morse 1982, 1994; Pescador et al., 1995, 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

*Ceraclea floridana* is known from only the female holotype which was collected from Biscayne Bay sometime prior to 1903 and described by Banks (1903). Morse reexamined the type specimen in his revision of the genus *Ceraclea*, and found that the abdomen was missing (Morse 1975). He also noted that, “white and brown setae occur on the forewings in small patches giving a salt and pepper appearance unlike any species now known from the southeastern United States”. Beyond this, nothing else is known of this species.

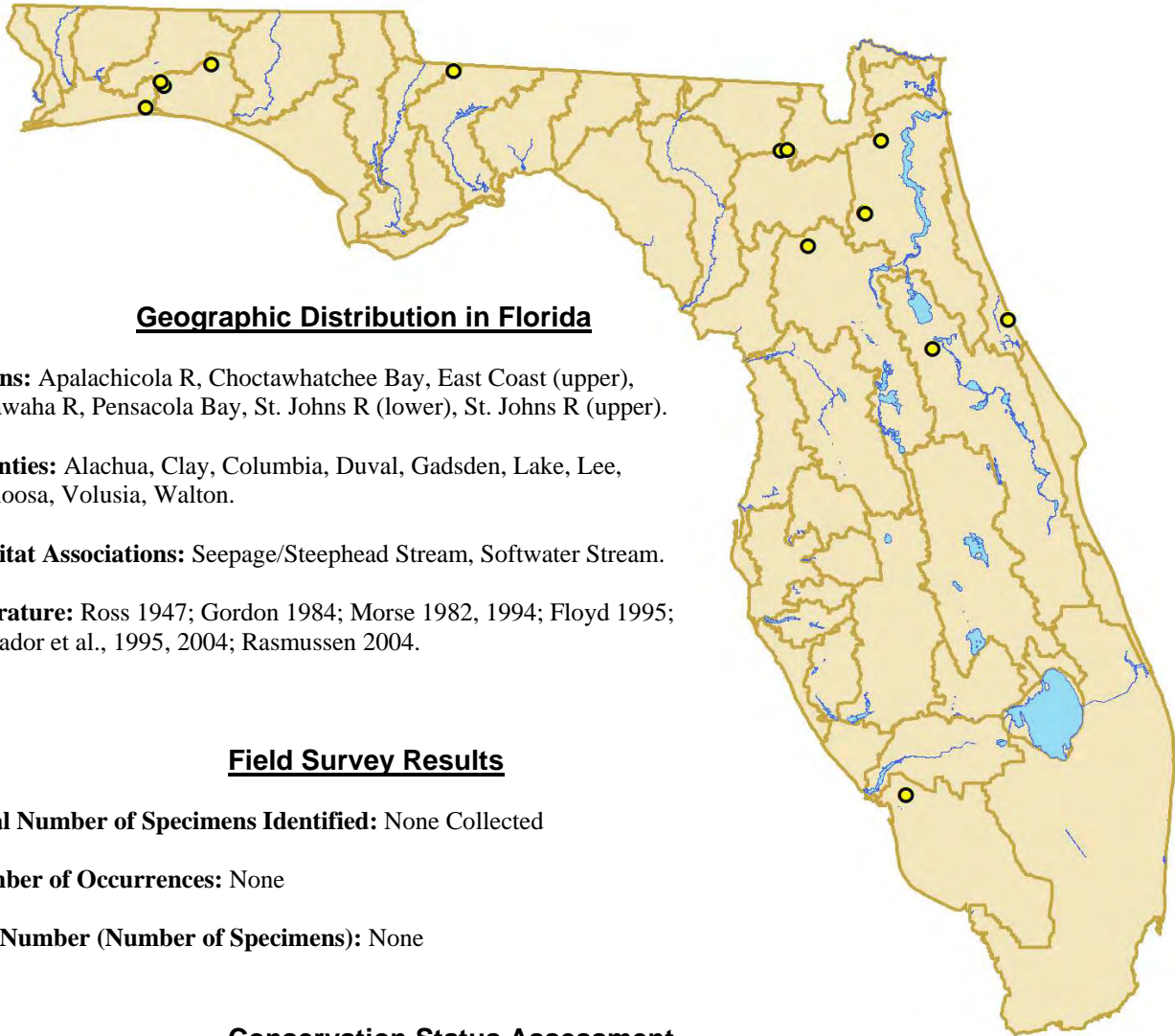
A species such as *C. floridana*, so poorly known and based on a single specimen collected more than 100 years ago, while of academic interest, is not an appropriate species to include on conservation listings. We recommend this species’ **removal** as a Species of Greatest Conservation Need.





*Oecetis daytona* Ross, 1947

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Choctawhatchee Bay, East Coast (upper), Oklawaha R, Pensacola Bay, St. Johns R (lower), St. Johns R (upper).

**Counties:** Alachua, Clay, Columbia, Duval, Gadsden, Lake, Lee, Okaloosa, Volusia, Walton.

**Habitat Associations:** Seepage/Steephead Stream, Softwater Stream.

**Literature:** Ross 1947; Gordon 1984; Morse 1982, 1994; Floyd 1995; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

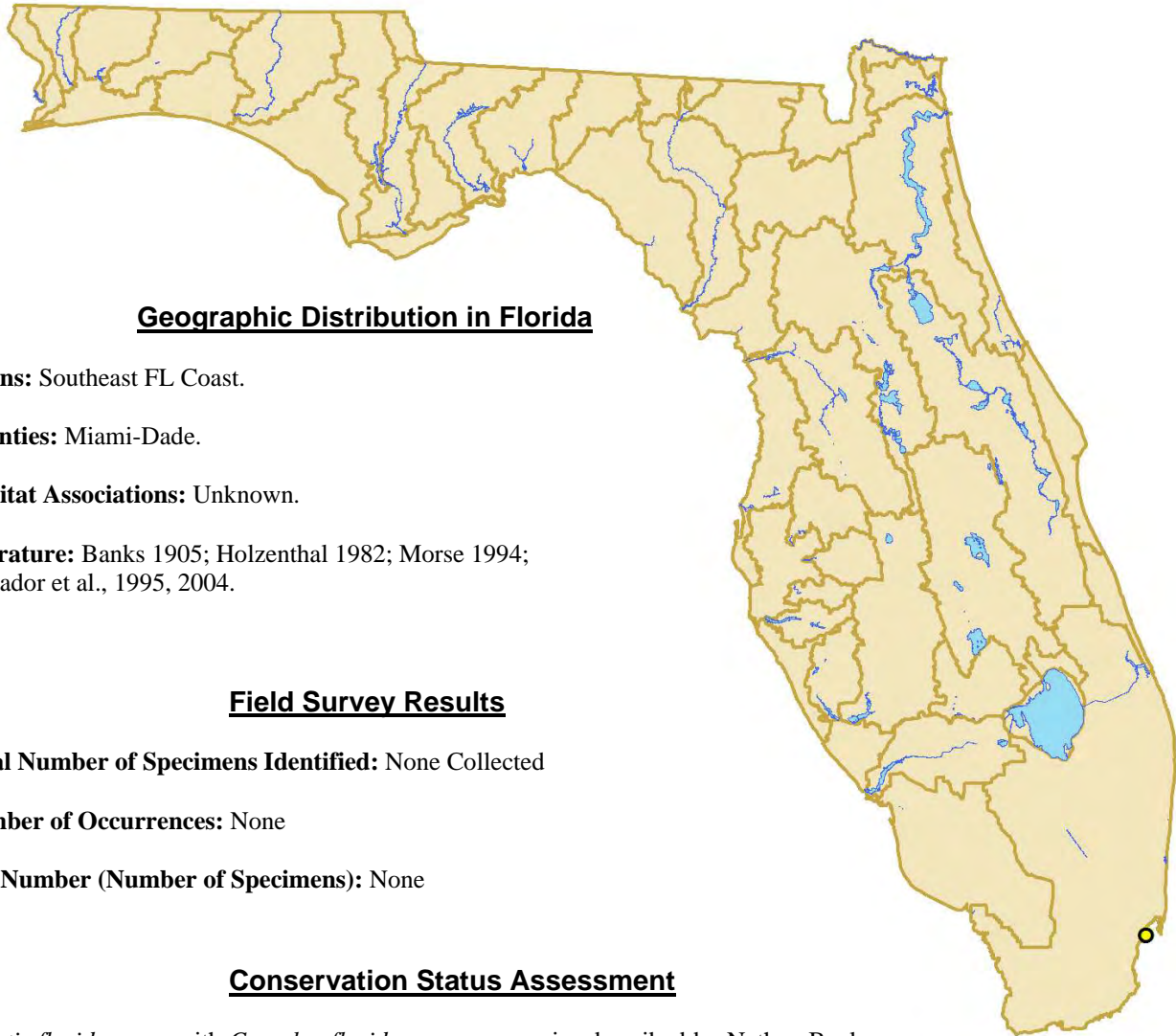
*Oecetis daytona* is a rarely encountered species that occurs sporadically across the Southeastern Coastal Plain from the Carolinas to Mississippi. The species was described by Ross (1947) from specimens collected in Volusia County at an unspecified location in, or near, Daytona Beach. Subsequent collections of adults in Florida have come from a variety of different streams, including steephead streams and small softwater (blackwater) streams. These collections have always consisted of small numbers of individuals, except for one collection of 20 males taken from Glenn Branch (Site 50) on June 13, 2005. This site was visited again on April 28, 2007 as part of this project's faunal survey, but no additional specimens were collected.

Research is needed to discover and describe the larval stage and its habitat. Once breeding habitats of *O. daytona* are determined, conservation could be better focused. The species' rare occurrence in light-trap samples suggests that it is vulnerable to local extirpations. We recommend the SGCN **Population Level** be reassigned from Unknown to **Low**, and given the low collection numbers and lack of collection data we recommend the **Population Trend** remain as **Unknown**.



*Oecetis floridana* (Banks), 1905, *Nomen Nudum*

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Southeast FL Coast.

**Counties:** Miami-Dade.

**Habitat Associations:** Unknown.

**Literature:** Banks 1905; Holzenthal 1982; Morse 1994; Pescador et al., 1995, 2004.

### Field Survey Results

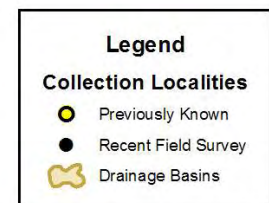
**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

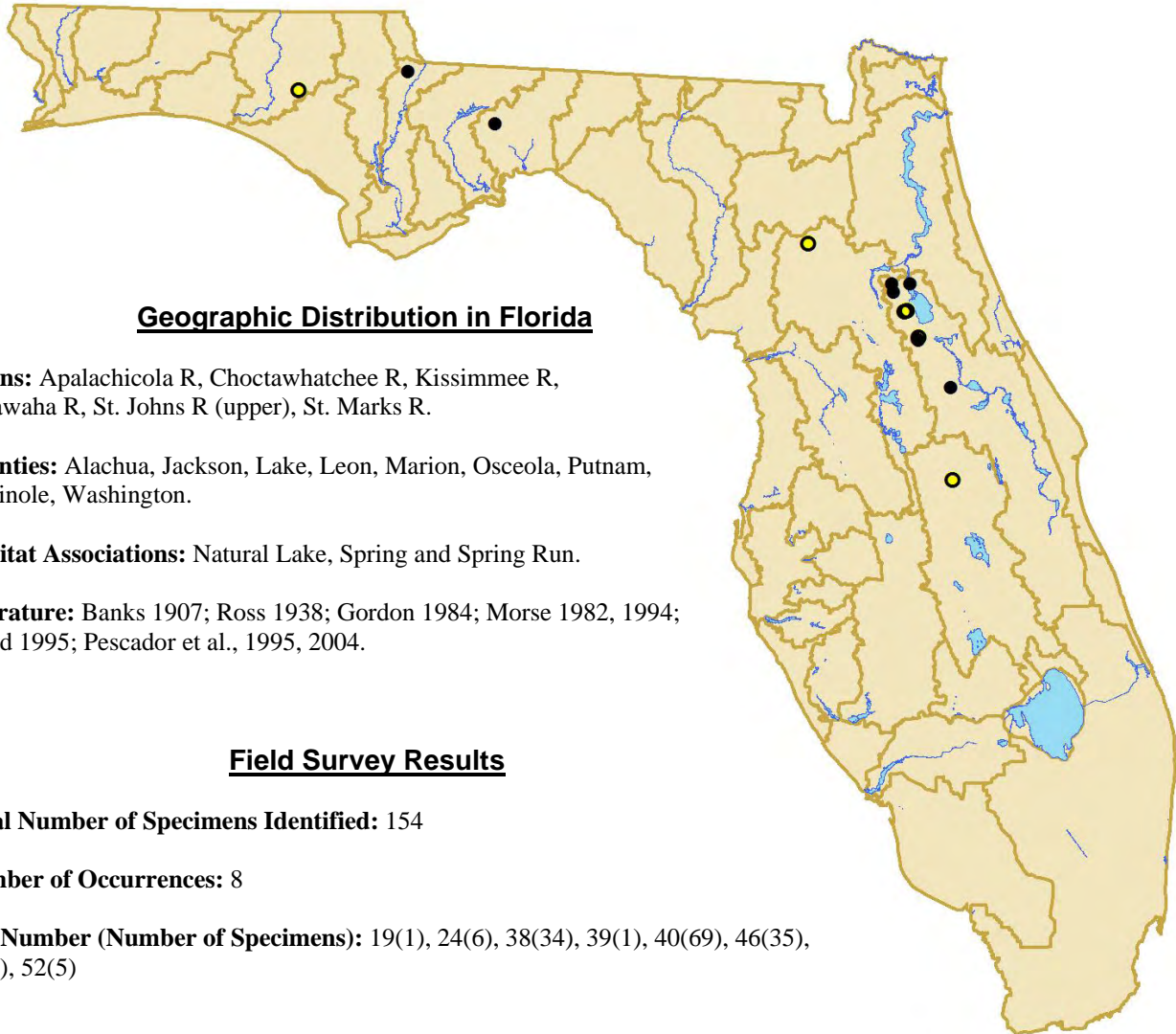
### Conservation Status Assessment

*Oecetis floridana*, as with *Ceraclea floridana*, was a species described by Nathan Banks in the early 1900s based on a single adult female collected from Biscayne Bay. The species was described under the name *Setodes floridana* by Banks (1905). Holzenthal's 1982 study of North American *Setodes* species included a reexamination of the type specimen in which he determined that the specimen belonged to the genus *Oecetis*. Transferring the species to *Oecetis* makes the name *Oecetis floridana* invalid because the name is a secondary junior homonym of *Oecetis floridana* (originally described as *Oecetina floridana*), which is itself a synonym of *Oecetis cinerascens*. No one, to our knowledge, has closely examined the type specimen to determine possible synonymies with other species. At this point, no valid name exists for the species, and based on the lack of information regarding the species identity we recommend the **removal** of this species as a Species of Greatest Conservation Need.



*Oecetis parva* (Banks), 1907

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Choctawhatchee R, Kissimmee R, Oklawaha R, St. Johns R (upper), St. Marks R.

**Counties:** Alachua, Jackson, Lake, Leon, Marion, Osceola, Putnam, Seminole, Washington.

**Habitat Associations:** Natural Lake, Spring and Spring Run.

**Literature:** Banks 1907; Ross 1938; Gordon 1984; Morse 1982, 1994; Floyd 1995; Pescador et al., 1995, 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 154

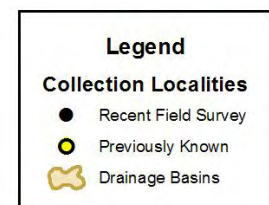
**Number of Occurrences:** 8

**Site Number (Number of Specimens):** 19(1), 24(6), 38(34), 39(1), 40(69), 46(35), 47(3), 52(5)

### Conservation Status Assessment

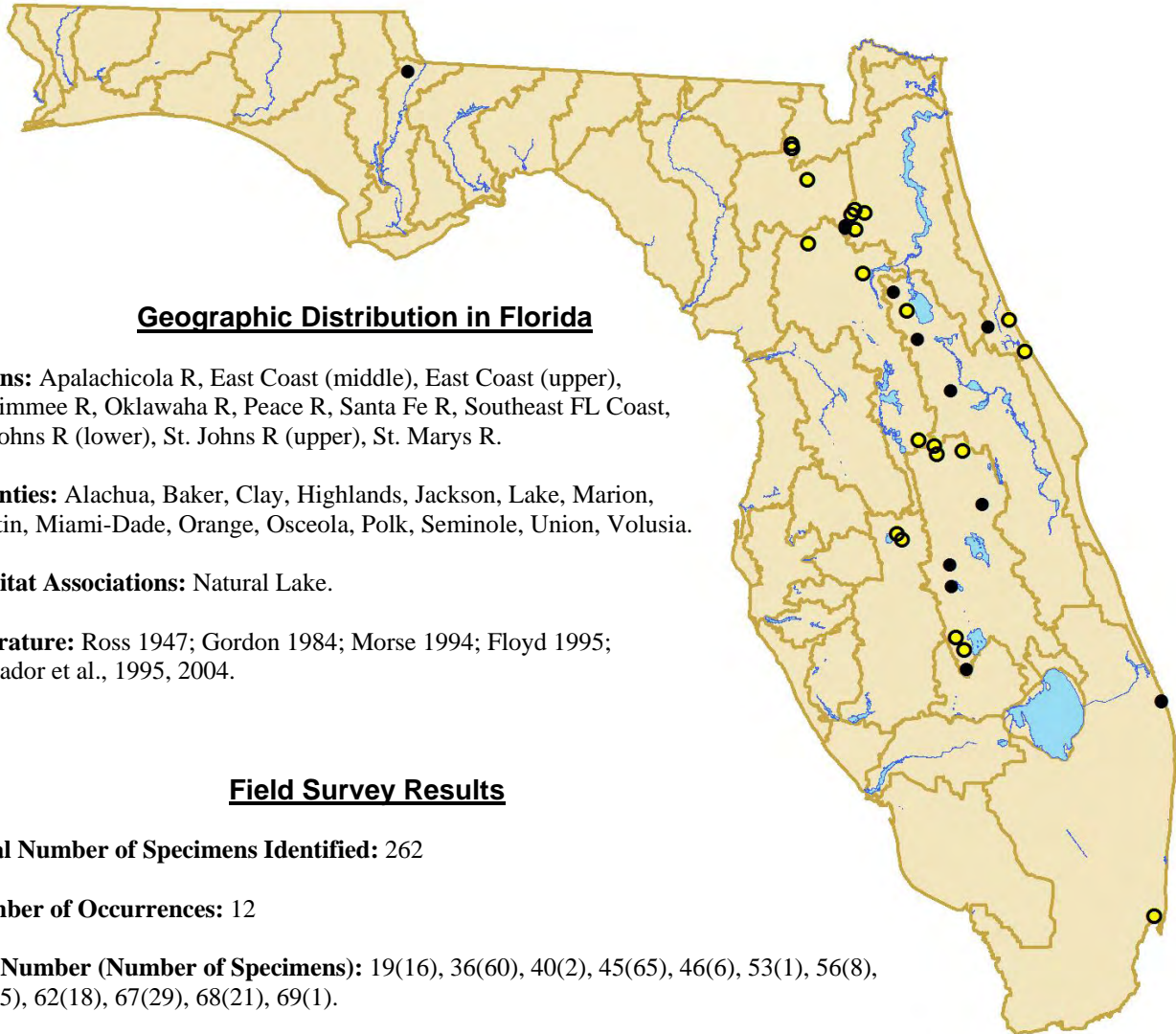
*Oecetis parva* is a minute caddisfly distributed throughout most areas of central and northern Florida where natural ponds and lakes occur. Only one record has been reported outside of Florida, and that was from extreme southern Alabama very near the Florida border. The species was originally discovered in Kissimmee and described by Banks (1907). A more thorough description of the lectotype was later provided by Ross (1938). Floyd (1995) provided a larval description of *O. parva* based on a larval/adult association from specimens collected in Lucas Lake, Washington County. Our recent light-trapping surveys have recovered *O. parva* at a number of lakes and ponds, as well as the Wekiva River in Seminole County. Populations of *O. parva* are especially abundant in some of the lakes and ponds within the Ocala National Forest.

Protection of Florida's natural lakes is essential to ensuring the long-term health of this species. Based on the species distribution and locally abundant populations in some of Florida's healthiest lakes, we believe *O. parva* is an excellent bioindicator of lake health in Florida. We recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** be reassigned from Unknown to **Stable**.



*Oecetis porteri* Ross, 1947

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, East Coast (middle), East Coast (upper), Kissimmee R, Oklawaha R, Peace R, Santa Fe R, Southeast FL Coast, St. Johns R (lower), St. Johns R (upper), St. Marys R.

**Counties:** Alachua, Baker, Clay, Highlands, Jackson, Lake, Marion, Martin, Miami-Dade, Orange, Osceola, Polk, Seminole, Union, Volusia.

**Habitat Associations:** Natural Lake.

**Literature:** Ross 1947; Gordon 1984; Morse 1994; Floyd 1995; Pescador et al., 1995, 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 262

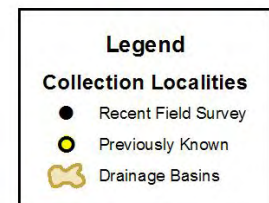
**Number of Occurrences:** 12

**Site Number (Number of Specimens):** 19(16), 36(60), 40(2), 45(65), 46(6), 53(1), 56(8), 60(35), 62(18), 67(29), 68(21), 69(1).

### Conservation Status Assessment

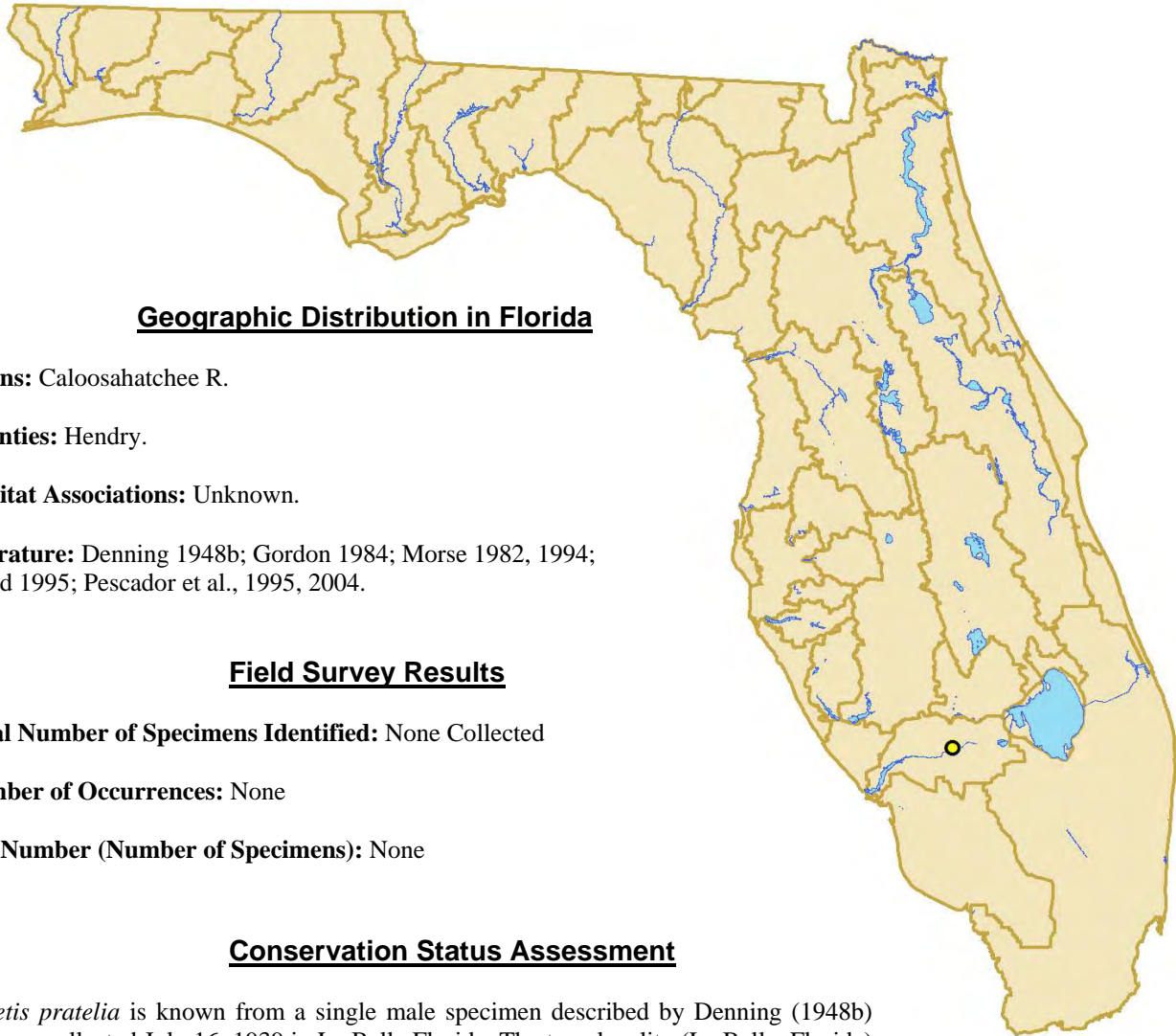
*Oecetis porteri* is found in natural lakes throughout much of the Southeastern Coastal Plain. Outside this region, it has also been reported from a lake in Nova Scotia (Floyd, 1995). The species was described by Ross (1947) based on adults collected from Miami, Daytona Beach, and New Smyrna. The larva of *O. porteri* was described by Floyd (1995) based on larval/adult rearings of specimens he collected in Alabama from Lake Jackson (which straddles the Alabama/Florida state line in Walton County), and in Florida from Ocean Pond (Baker County), and Lowry Lake (Clay County). The larva of *O. porteri* is quite distinctive, which makes using larval collection techniques suitable for monitoring this species.

The fairly common occurrence and abundance of populations in Florida lakes, suggest that this species is not particularly imperiled. Based on the current population distribution and abundance, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** be reassigned from Unknown to **Stable**.



*Oecetis pratelia* Denning, 1948b

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Caloosahatchee R.

**Counties:** Hendry.

**Habitat Associations:** Unknown.

**Literature:** Denning 1948b; Gordon 1984; Morse 1982, 1994; Floyd 1995; Pescador et al., 1995, 2004.

### Field Survey Results

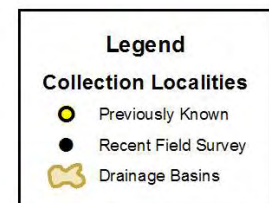
**Total Number of Specimens Identified:** None Collected

**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

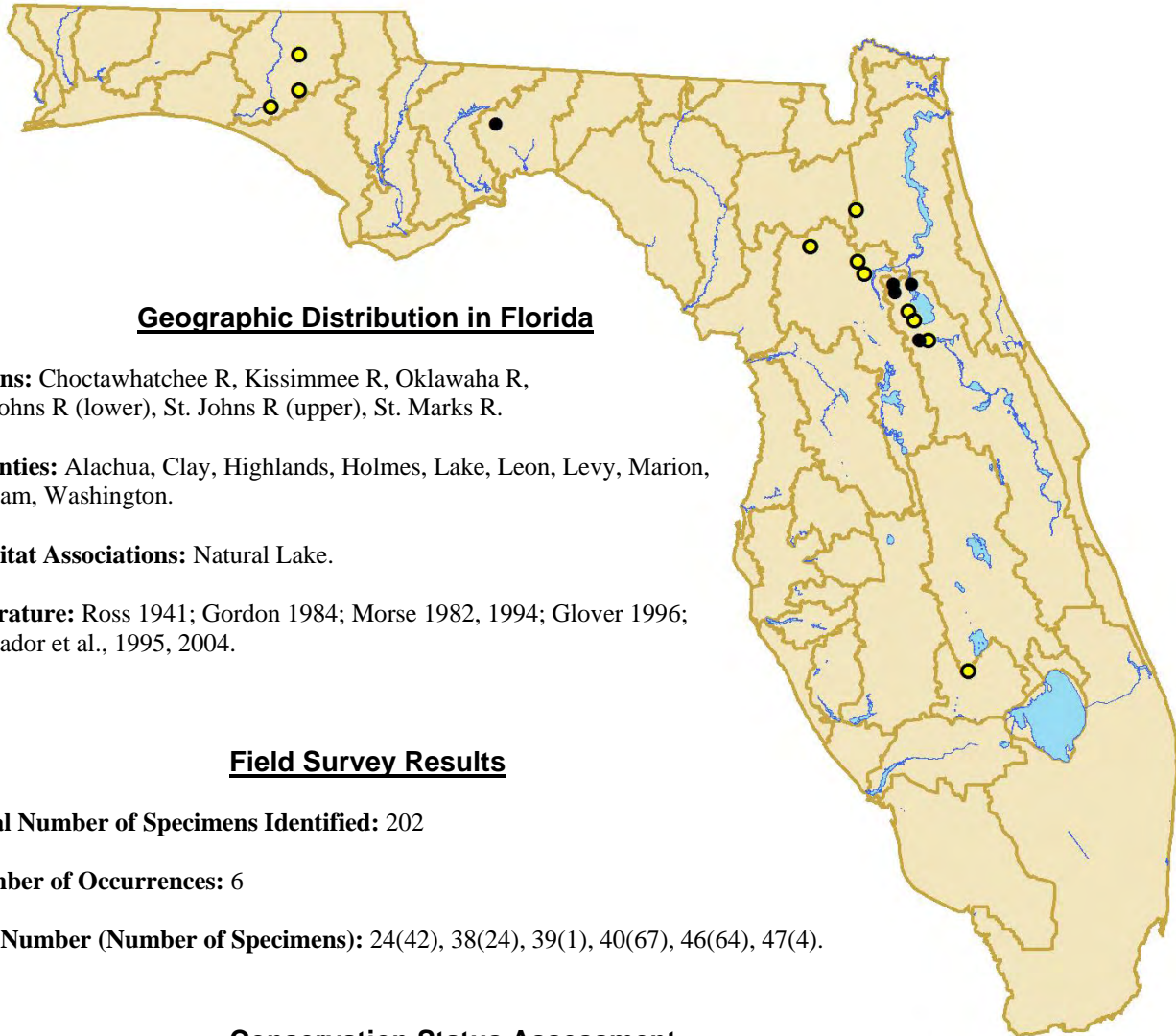
### Conservation Status Assessment

*Oecetis pratelia* is known from a single male specimen described by Denning (1948b) that was collected July 16, 1939 in La Belle Florida. The type locality (La Belle, Florida) is situated along the Caloosahatchee River, which suggests the type specimen may have come from the river. Unfortunately, our field survey, as well as Floyd's search for *Oecetis pratelia* (Floyd 1995), did not recover any additional specimens from near the type locality or elsewhere. The species very well could be extinct. The collection of only a single male suggests that it was rare at the time of its discovery in 1939. Based on a single occurrence nearly 70 years ago, we recommend the **removal** of *O. pratelia* as a Species of Greatest Conservation Need. If an extant population were to be discovered in the future, the species should be reassigned to the category. It should be noted that the species looks quite similar to *Oecetis inconspicua* and could potentially be misidentified as such.



*Triaenodes florida* Ross, 1941

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Choctawhatchee R, Kissimmee R, Oklawaha R, St. Johns R (lower), St. Johns R (upper), St. Marks R.

**Counties:** Alachua, Clay, Highlands, Holmes, Lake, Leon, Levy, Marion, Putnam, Washington.

**Habitat Associations:** Natural Lake.

**Literature:** Ross 1941; Gordon 1984; Morse 1982, 1994; Glover 1996; Pescador et al., 1995, 2004.

### Field Survey Results

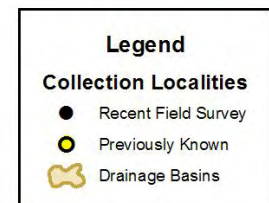
**Total Number of Specimens Identified:** 202

**Number of Occurrences:** 6

**Site Number (Number of Specimens):** 24(42), 38(24), 39(1), 40(67), 46(64), 47(4).

### Conservation Status Assessment

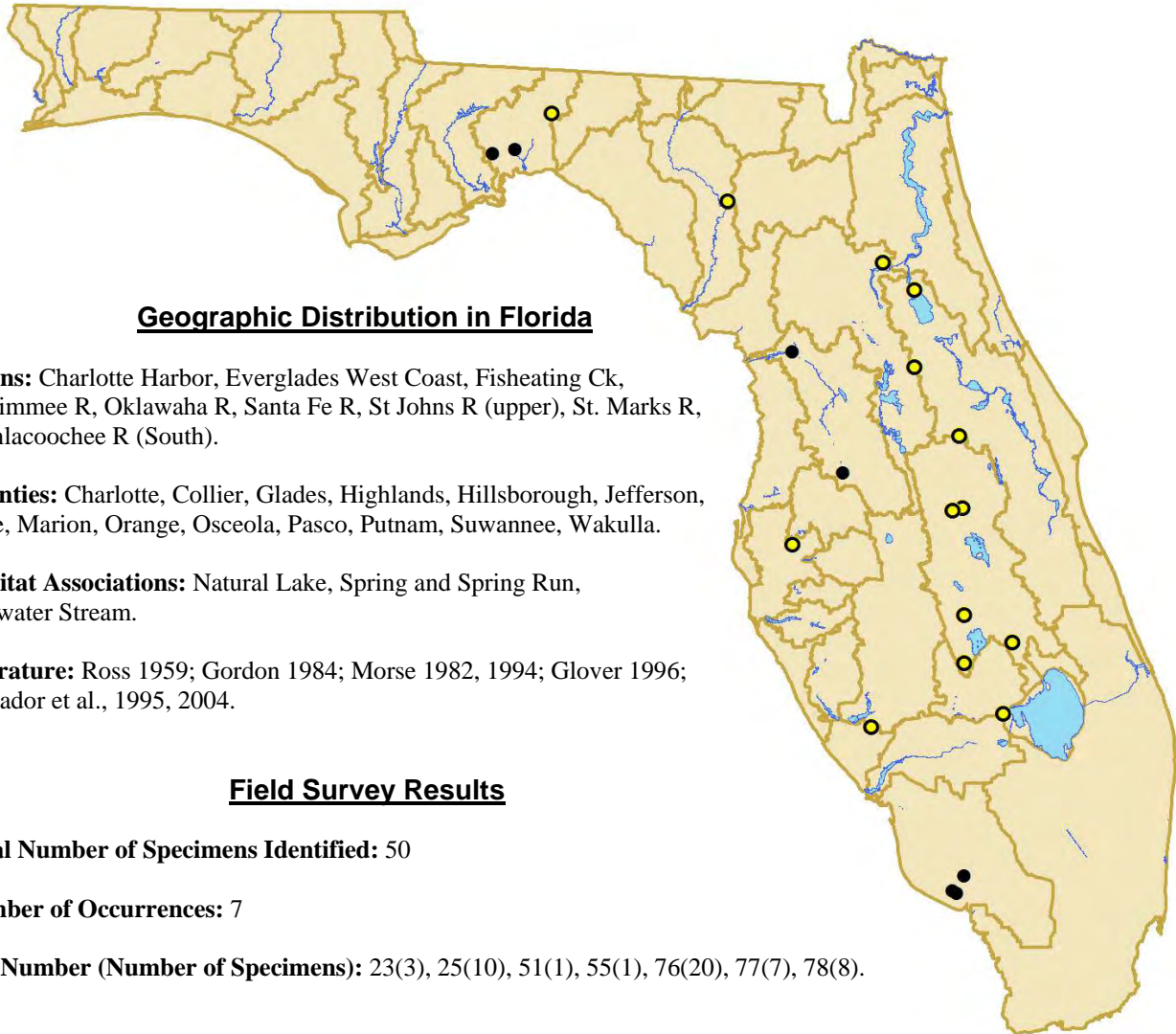
*Triaenodes florida*, as with *Oecetis parva*, is endemic to natural lakes of Florida and adjacent Alabama. The species was originally described by Ross (1941) using specimens Lewis Berner collected in 1939-1940 from Gainesville (Alachua County) and Ebro (Washington County). The larva of *T. florida* was described by Glover (1996) based on larval/adult associations of specimens he collected in Alabama from Lake Jackson (which straddles the Alabama/Florida state line in Walton County). Most of the sites where *T. florida* has been collected are clear sand-bottom lakes with emergent and submergent aquatic vegetation. The larvae and adults can be locally abundant in these habitats.



The long-term health of *T. florida*, as with *Oecetis parva*, depends on the conservation of Florida's natural lakes. Based on the distribution and local abundance of *T. florida* in some of Florida's healthiest lakes, we believe the species can serve as an excellent bioindicator of Florida lake health. We recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** be reassigned from Unknown to **Stable**.

*Triaenodes furcella* Ross, 1959

Integripalpia: Leptoceridae



### Geographic Distribution in Florida

**Basins:** Charlotte Harbor, Everglades West Coast, Fisheating Ck, Kissimmee R, Oklawaha R, Santa Fe R, St Johns R (upper), St. Marks R, Withlacoochee R (South).

**Counties:** Charlotte, Collier, Glades, Highlands, Hillsborough, Jefferson, Lake, Marion, Orange, Osceola, Pasco, Putnam, Suwannee, Wakulla.

**Habitat Associations:** Natural Lake, Spring and Spring Run, Softwater Stream.

**Literature:** Ross 1959; Gordon 1984; Morse 1982, 1994; Glover 1996; Pescador et al., 1995, 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 50

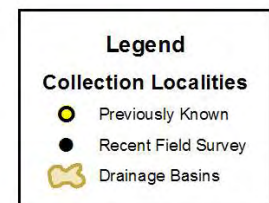
**Number of Occurrences:** 7

**Site Number (Number of Specimens):** 23(3), 25(10), 51(1), 55(1), 76(20), 77(7), 78(8).

### Conservation Status Assessment

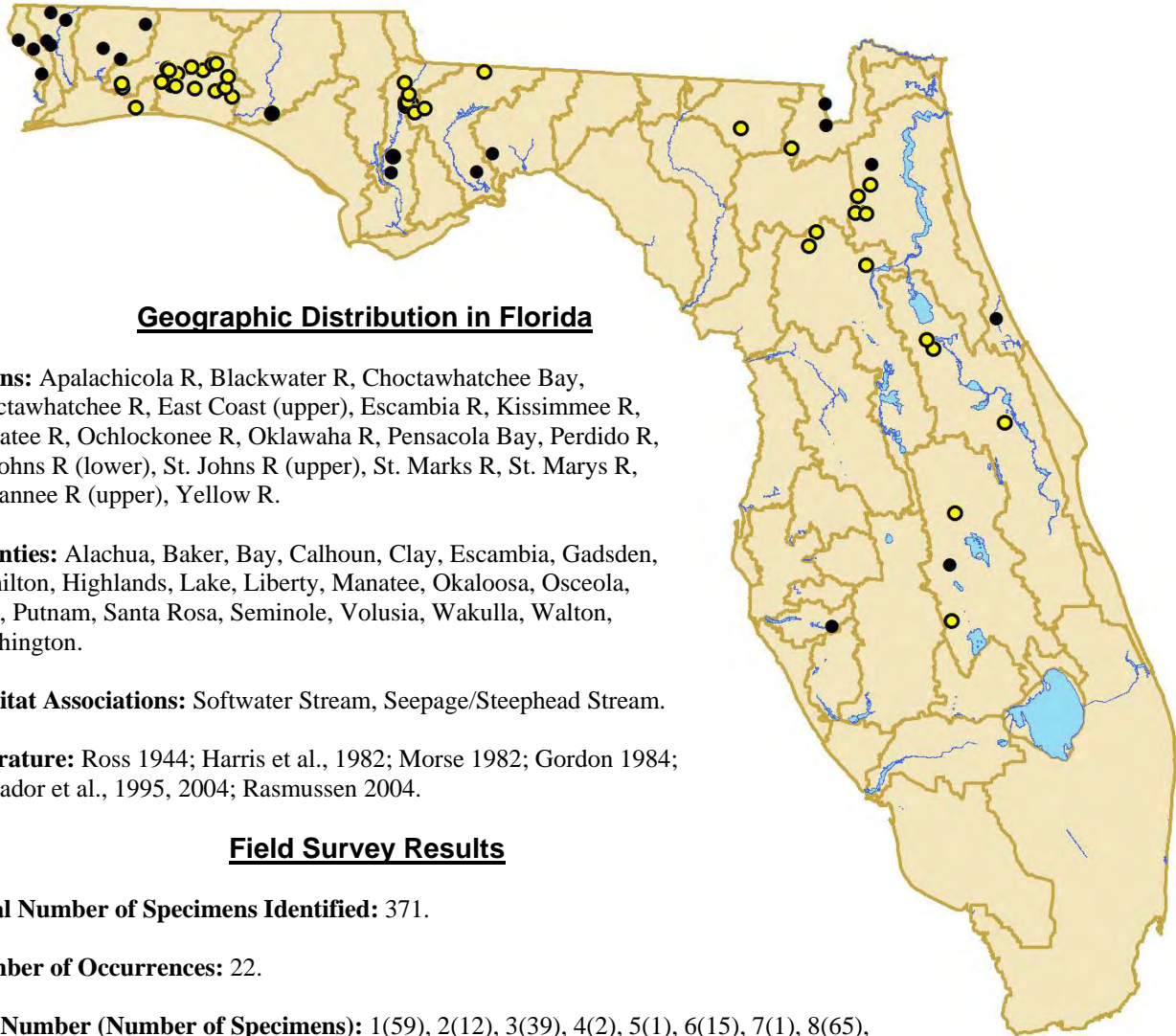
*Triaenodes furcella* is endemic to Florida, occurring throughout the peninsula and into parts of the eastern panhandle. It is a sister species to the morphologically similar *T. injustus* which is distributed across a large portion of North America. The Florida records of *T. furcella* indicate that the species is widespread throughout the peninsula where it occurs primarily in lakes and ponds, and to a lesser degree spring runs and softwater streams. The collection records from Lost Creek (Site 23), Wakulla River (Site 25) and Burnt Mill Creek in Jefferson County provide a northern and western range-extension into the eastern panhandle region of Florida. The three most southern records come from two small cypress ponds (Sites 76, 77) and a large borrow pit lake (Site 78), all within the Fakahatchee Strand State Park.

Populations of this warm-adapted species appear to be well adapted to the wide range of ecological conditions found in water bodies of the Florida peninsula. Based on the widespread occurrence of numerous populations, we recommend the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** be reassigned from Unknown to **Stable**.



*Chimarra florida* Ross, 1944

Annulipalpia: Philopotamidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Blackwater R, Choctawhatchee Bay, Choctawhatchee R, East Coast (upper), Escambia R, Kissimmee R, Manatee R, Ochlockonee R, Oklawaha R, Pensacola Bay, Perdido R, St. Johns R (lower), St. Johns R (upper), St. Marks R, St. Marys R, Suwannee R (upper), Yellow R.

**Counties:** Alachua, Baker, Bay, Calhoun, Clay, Escambia, Gadsden, Hamilton, Highlands, Lake, Liberty, Manatee, Okaloosa, Osceola, Polk, Putnam, Santa Rosa, Seminole, Volusia, Wakulla, Walton, Washington.

**Habitat Associations:** Softwater Stream, Seepage/Steephead Stream.

**Literature:** Ross 1944; Harris et al., 1982; Morse 1982; Gordon 1984; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 371.

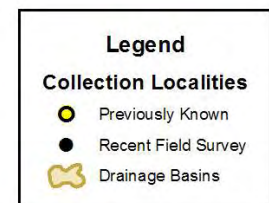
**Number of Occurrences:** 22.

**Site Number (Number of Specimens):** 1(59), 2(12), 3(39), 4(2), 5(1), 6(15), 7(1), 8(65), 9(45), 10(30), 13(5), 14(2), 17(19), 18(8), 21(1), 23(34), 27(23), 29(1), 31(2), 44(2), 60(4), 64(1).

### Conservation Status Assessment

Distributed across parts of the Southeastern and mid-Atlantic Coastal Plain, *Chimarra florida* is a widespread and fairly common species of healthy streams throughout much of Florida. In the 1982 Invertebrate Volume on *Rare and Endangered Biota of Florida*, *C. florida* was designated "Rare" (Morse 1982). However, in the 1994 volume the species had been removed from the list. The removal reflected new information showing the species was fairly common in Florida and neighboring states.

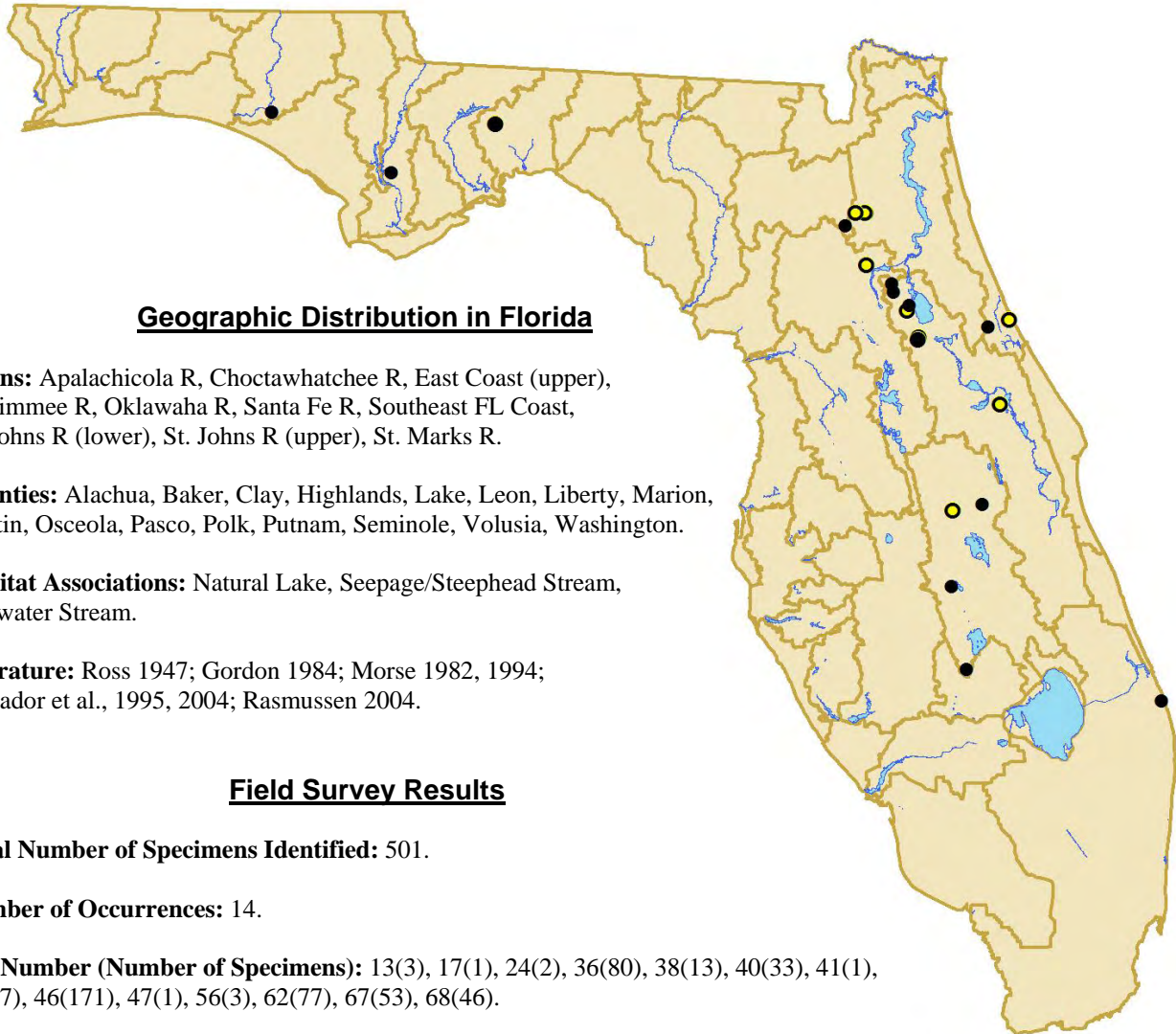
Currently, the SGCN **Population Level Status** is **Medium** and the **Population Trend** is **Stable**. We agree with the current designations. The inclusion of this species on the SGCN list can be justified under the "keeping common species common" argument. It is a Florida namesake species and an indicator of clean water. Declining population levels in the future should raise a red-flag warning of environmental degradation. Unfortunately, larvae of *Chimarra* cannot be identified to species, therefore monitoring *C. florida* will solely depend on adult surveys.





*Cernotina truncona* Ross, 1947

Annulipalpia: Polycentropodidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Choctawhatchee R, East Coast (upper), Kissimmee R, Oklawaha R, Santa Fe R, Southeast FL Coast, St. Johns R (lower), St. Johns R (upper), St. Marks R.

**Counties:** Alachua, Baker, Clay, Highlands, Lake, Leon, Liberty, Marion, Martin, Osceola, Pasco, Polk, Putnam, Seminole, Volusia, Washington.

**Habitat Associations:** Natural Lake, Seepage/Steephead Stream, Softwater Stream.

**Literature:** Ross 1947; Gordon 1984; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 501.

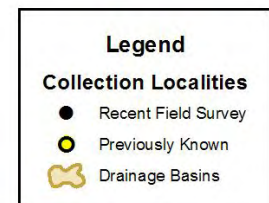
**Number of Occurrences:** 14.

**Site Number (Number of Specimens):** 13(3), 17(1), 24(2), 36(80), 38(13), 40(33), 41(1), 45(17), 46(171), 47(1), 56(3), 62(77), 67(53), 68(46).

### Conservation Status Assessment

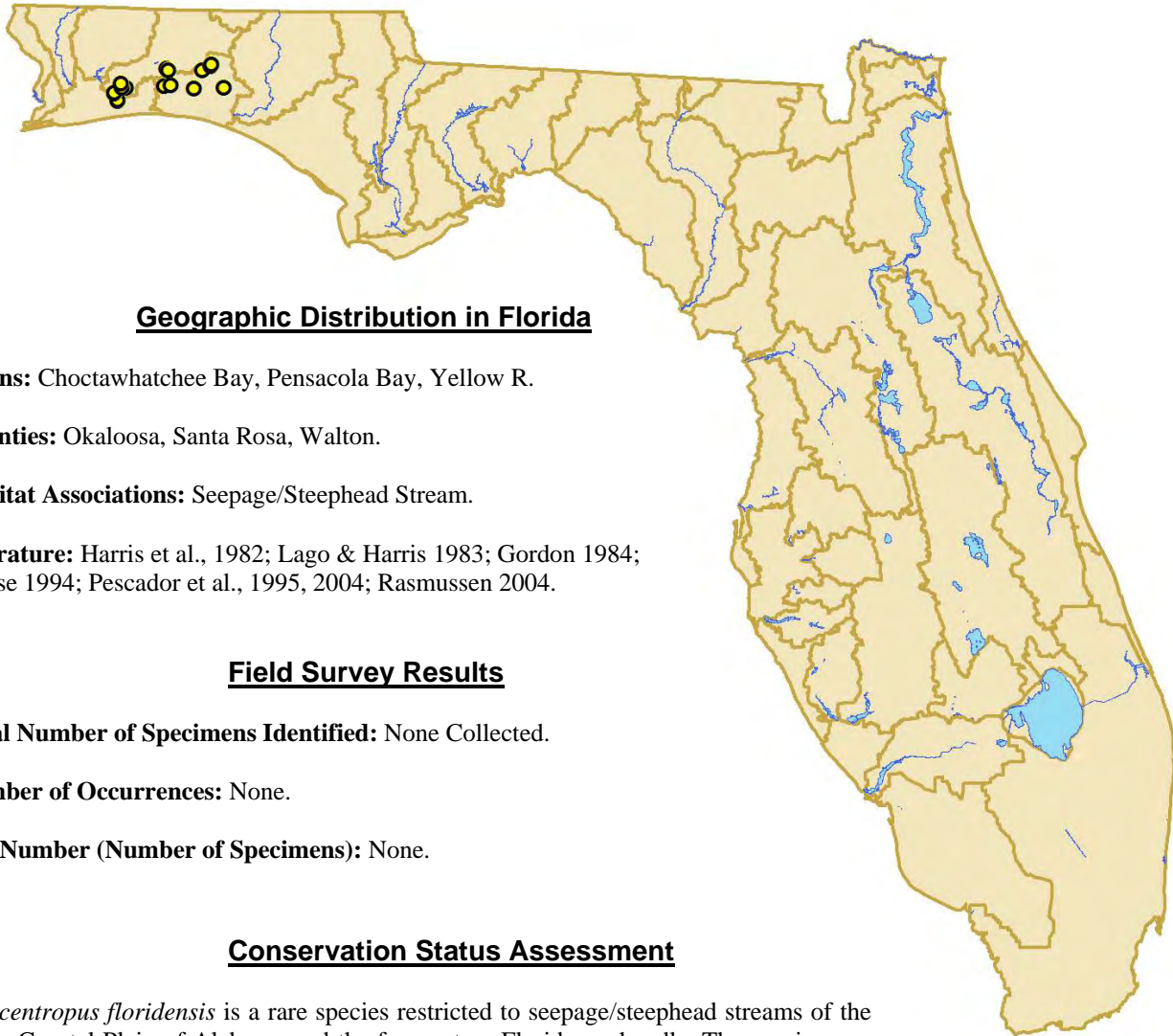
*Cernotina truncona* was first discovered and described from a single male collected in 1945 in a light-trap collection taken near the Welsh Hospital in Daytona Beach (Ross 1947). The species is southeastern in its distribution, and in Florida occurs across most of the state. *Cernotina truncona* apparently inhabits both streams and lakes, but stream collections have always been in small numbers. Lake collections, on the other hand, can be quite abundant. From the field survey results it appears that in peninsular lakes, population levels are very abundant in some cases.

*Cernotina truncona* along with several species of Leptoceridae and Hydroptilidae, represent a unique assemblage of caddisfly species found only in Florida lakes. The long-term outlook for *C. truncona* is favorable as long as the lake habitat that supports them is protected. Based on current information, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and the **Population Trend** reassigned from Unknown to **Stable**.



*Polycentropus floridensis* Lago & Harris, 1983

Annulipalpia: Polycentropodidae



### Geographic Distribution in Florida

**Basins:** Choctawhatchee Bay, Pensacola Bay, Yellow R.

**Counties:** Okaloosa, Santa Rosa, Walton.

**Habitat Associations:** Seepage/Steephead Stream.

**Literature:** Harris et al., 1982; Lago & Harris 1983; Gordon 1984; Morse 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected.

**Number of Occurrences:** None.

**Site Number (Number of Specimens):** None.

### Conservation Status Assessment

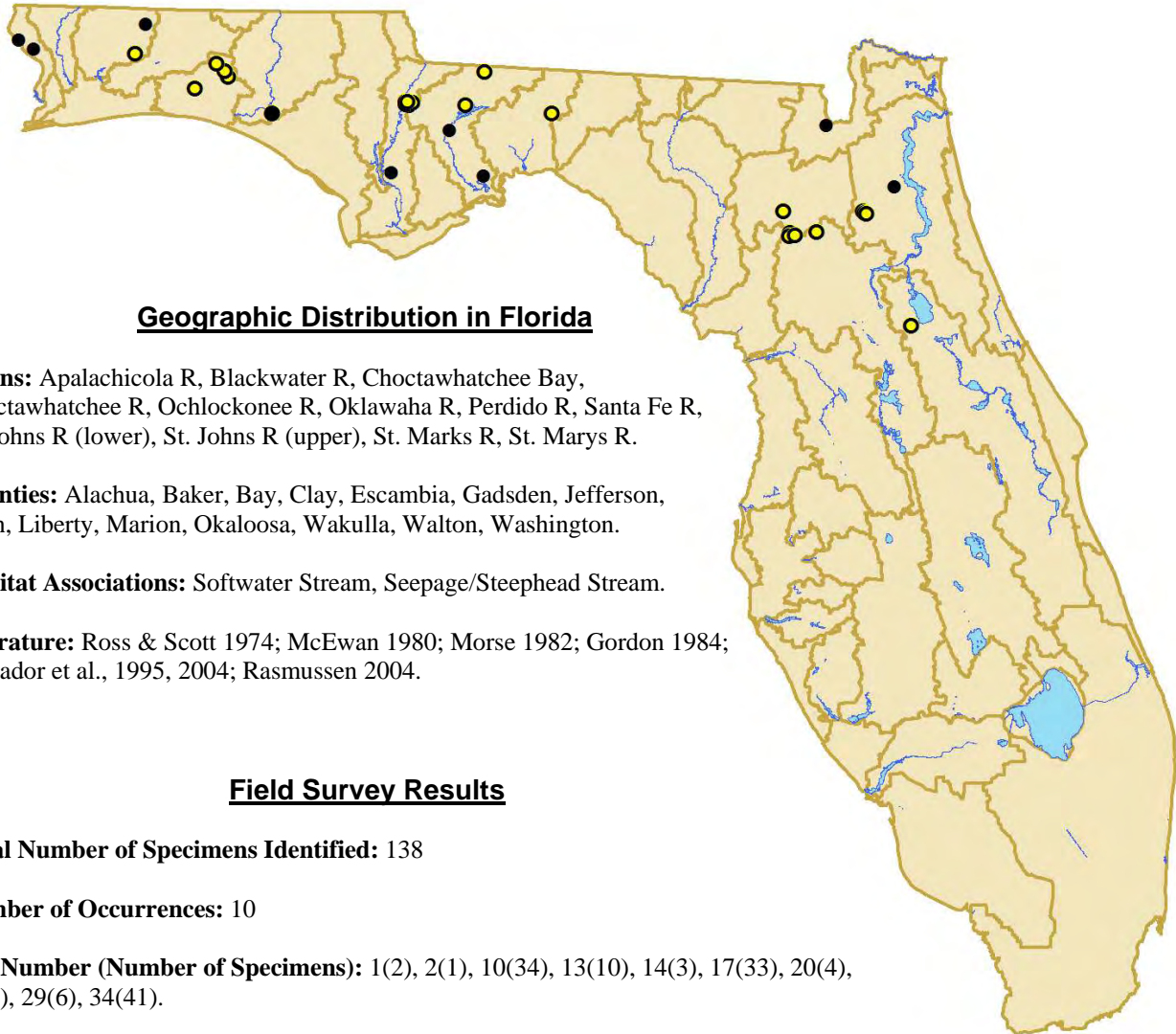
*Polycentropus floridensis* is a rare species restricted to seepage/steephead streams of the lower Coastal Plain of Alabama and the far-western Florida panhandle. The species was first reported by Harris et al. (1982) [as *Polycentropus* n. sp.] based on one male collected from the headwaters of Rocky Creek on Eglin Air Force Base in Walton County. The Eglin specimen, along with additional specimens collected by S.C. Harris from Pine Log Creek in Baldwin Co., Alabama were then used by Lago and Harris (1983) to describe the species. The only other locality records come from seepage/steephead streams on Eglin Air Force Base sampled during light-trap surveys we conducted over the past ten years. An unconfirmed report by Gordon (1984) from an unnamed locality in Hamilton County, Florida is probably erroneous and should be disregarded.

The long-term outlook of *P. floridensis* is favorable as long as stream habitats supporting populations on Eglin AFB are protected. We recommend the SGCN **Population Level** be reassigned from Unknown to **Low** and **Population Trend** reassigned from Unknown to **Stable**.



*Agarodes libalis* Ross & Scott, 1974

Integripalpia: Sericostomatidae



### Geographic Distribution in Florida

**Basins:** Apalachicola R, Blackwater R, Choctawhatchee Bay, Choctawhatchee R, Ochlockonee R, Oklawaha R, Perdido R, Santa Fe R, St. Johns R (lower), St. Johns R (upper), St. Marks R, St. Marys R.

**Counties:** Alachua, Baker, Bay, Clay, Escambia, Gadsden, Jefferson, Leon, Liberty, Marion, Okaloosa, Wakulla, Walton, Washington.

**Habitat Associations:** Softwater Stream, Seepage/Steephead Stream.

**Literature:** Ross & Scott 1974; McEwan 1980; Morse 1982; Gordon 1984; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** 138

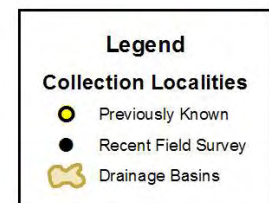
**Number of Occurrences:** 10

**Site Number (Number of Specimens):** 1(2), 2(1), 10(34), 13(10), 14(3), 17(33), 20(4), 22(4), 29(6), 34(41).

### Conservation Status Assessment

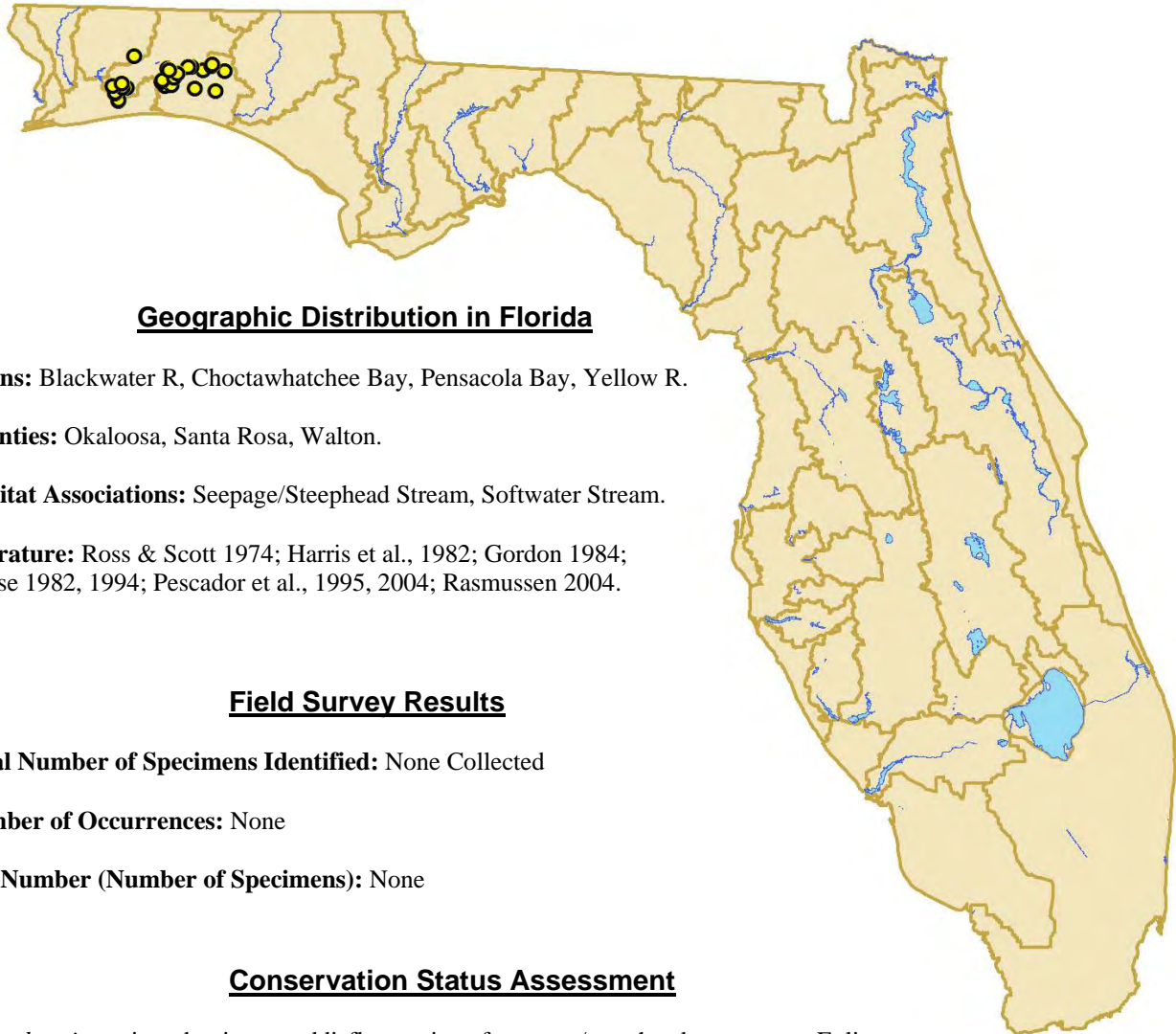
*Agarodes libalis* is primarily a southeastern species. In Florida it occurs in many undisturbed seepage/steephead streams and spring-fed softwater (blackwater) streams across the northern tier of the state. Because *A. libalis* has strict ecological requirements, protection of sensitive spring-fed headwater streams is vital to the species long-term conservation. *Agarodes libalis* was designated as "Rare" by Morse (1982). At that time, the species was known from only four locations. Subsequently, many additional populations were discovered, and the species was dropped from the list presented by Morse in the 1994 FCREPA edition.

Based on previous collection records and the occurrence of *A. libalis* at ten sites sampled in the field survey, it appears that populations of this species are faring well in Florida. Therefore, we recommend that the SGCN **Population Level** be reassigned from Unknown to **Medium** and **Population Trend** reassigned from Unknown to **Stable**.



*Agarodes ziczac* Ross & Scott, 1974

Integripalpia: Sericostomatidae



### Geographic Distribution in Florida

**Basins:** Blackwater R, Choctawhatchee Bay, Pensacola Bay, Yellow R.

**Counties:** Okaloosa, Santa Rosa, Walton.

**Habitat Associations:** Seepage/Steephead Stream, Softwater Stream.

**Literature:** Ross & Scott 1974; Harris et al., 1982; Gordon 1984; Morse 1982, 1994; Pescador et al., 1995, 2004; Rasmussen 2004.

### Field Survey Results

**Total Number of Specimens Identified:** None Collected

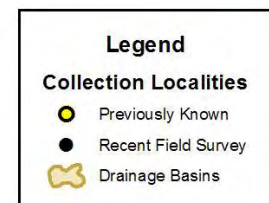
**Number of Occurrences:** None

**Site Number (Number of Specimens):** None

### Conservation Status Assessment

*Agarodes ziczac* is a dominant caddisfly species of seepage/steephead streams on Eglin Air Force Base. In light-trap surveys of Eglin steephead streams, *A. ziczac* was collected in large numbers from both upper and lower reaches (Harris et al., 1982; Rasmussen 2004). Outside of the Eglin sandhills however, only one occurrence is known, the holotype specimen collected April 24, 1970 from the Blackwater River, Okaloosa County, 2.5 miles W of Holt, Florida (Ross & Scott 1974).

Currently, populations of *A. ziczac* appear to be in good health based on the robust collection numbers from Eglin. Therefore, we recommend the SGCN **Population Level** be reassigned from Unknown to **Abundant** and **Population Trend** reassigned from Unknown to **Stable**. The long term health of *A. ziczac* depends heavily on the protection of steephead-stream watersheds on Eglin.



## SUMMARY AND CONCLUSIONS

The following table summarizes the modifications to the current SGCN list that were recommended in the preceding species accounts.

**Table 3.** Summary of recommended changes to the current SGCN.

Caddisfly Species of Greatest Conservation Need	Status				Trend			
	Low	Medium	Abundant	Unknown	Declining	Stable	Increasing	Unknown
<i>Cheumatopsyche gordonae</i>		▲				▲		
<i>Cheumatopsyche petersi</i>		▲			▲			
<i>Hydroptila molsonae</i>	▲				▲			
<i>Hydroptila wakulla</i>	▲					▲		
<i>Ochrotrichia okaloosa</i>	▲							▲
<i>Ochrotrichia provosti</i>	▲							▲
<i>Orthotrichia curta</i>	▲					▲		
<i>Orthotrichia dentata</i>	▲					▲		
<i>Orthotrichia instabilis</i>	▲							▲
<i>Oxyethira elerobi</i>		▲				▲		
<i>Oxyethira florida</i>	▲					▲		
<i>Oxyethira janella</i>	Recommend removal from SGCN list							
<i>Oxyethira kelleyi</i>		▲				▲		
<i>Oxyethira kingi</i>	Recommend removal from SGCN list							
<i>Oxyethira novasota</i>		▲				▲		
<i>Lepidostoma morsei</i>	▲							▲
<i>Ceraclea floridana</i>	Recommend removal from SGCN list							
<i>Oecetis daytona</i>	▲							▲
<i>Oecetis floridana</i>	Recommend removal from SGCN list							
<i>Oecetis parva</i>		▲				▲		
<i>Oecetis porteri</i>		▲				▲		
<i>Oecetis pratelia</i>	Recommend removal from SGCN list							
<i>Triaenodes florida</i>		▲				▲		
<i>Triaenodes furcella</i>		▲				▲		
<i>Chimarra florida</i>		▲				▲		
<i>Ceratotina truncona</i>		▲				▲		
<i>Polycentropus floridensis</i>	▲					▲		
<i>Agarodes libalis</i>		▲				▲		
<i>Agarodes ziczac</i>			▲			▲		

In conducting this study we came away with a greater appreciation and understanding of the diversity and distinctiveness of the caddisfly fauna of Florida, along with the realization that much more research is needed to fully characterize this diversity. For the most part caddisfly species diversity in Florida appears relatively secure due to the fact that a significant amount of freshwater habitat supporting these species lies within protected lands such as state parks, state forests, wildlife management areas, national forests, and military reservations. Were it not for this, we suspect many species populations would now be extirpated or entire species extinct.

If it were possible to travel back in time, say 100 or 200 years, and conduct a light trapping survey of Florida waters, we would probably find many species that are no longer present today. We don't know what species were present when Florida was first undergoing rapid population growth because there are very few baseline data available on the historical occurrence of Trichoptera species in the state. The taxonomy of the group was in its infancy during the early 20<sup>th</sup> century, and has matured only in the last 60-70 years through the pioneering work of H.H. Ross. Now with a solid taxonomic foundation in place, it is possible through continued survey efforts and descriptive taxonomy to further the understanding of this very diverse and challenging group of organisms.

Which species are most at risk? The most vulnerable species are those that have isolated populations that are adapted to very specific habitats and environmental conditions (e.g., large spring runs, small seeps, softwater streams flowing through intact forest). Damage to these systems poses the greatest threats to the state's native biodiversity. The rapid growth, especially residential development, into rural areas is a particularly troubling situation that is likely to further population fragmentation. Unfortunately, loss of invertebrate biodiversity can be difficult to detect, which highlights the importance of maintaining a large-scale environmental assessment program that assesses the ecosystem health of Florida's water bodies. Detecting impairment and enforcement of environmental regulations is critical to preventing further losses to biodiversity due to fragmentation.

The concept of species conservation through habitat protection is the most logical and cost-effective means to wildlife conservation. The development and assessment of conservation programs should take

into account a wide-range of native wildlife in the process, hence the Species of Greatest Conservation Need (SGCN) designation and the inclusion of invertebrate groups such as Trichoptera. Deciding which species to utilize is not a simple task. As it was in the development of the Florida “Strategy”, specialists of particular taxonomic groups and conservation organizations such as the Florida Natural Areas Inventory (FNAI) and The Nature Conservancy should be included in the process of determining the species which are most imperiled. Fortunately, FNAI is now working more than ever with invertebrate specialists and tracking many more species than before.

Because the knowledge of invertebrate groups is currently undergoing rapid growth, it is important that new information is incorporated into conservation listings and utilized in wildlife conservation management. We hope that the conservation status assessment of the caddisfly SGCN presented in this report will be of use in this process. Future updates to the FFWCC list of SGCN will require the inclusion of a number of additional caddisfly species which have been recently designated as S1 or S2 in Florida. The caddisfly species FNAI have added recently to their tracking list are primarily species that were discovered and described from Florida in the past ten years. The findings of ongoing and future studies of the state’s caddisfly fauna need to be used by conservation organizations, as well as environmental agencies, to designate, protect and conserve this diverse and unique biota.

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**APPENDIX A.** Species of Trichoptera (caddisflies) designated as Species of Greatest Conservation Need (SGCN) in Florida's Comprehensive Wildlife Conservation Strategy issued in 2005 by the Florida Fish and Wildlife Conservation Commission. Population status and trends are indicated for each species as it appears on the SGCN list. Common names are omitted.

Caddisfly Species of Greatest Conservation Need	Status				Trend			
	Low	Medium	Abundant	Unknown	Declining	Stable	Increasing	Unknown
<i>Cheumatopsyche gordonae</i>				•				•
<i>Cheumatopsyche petersi</i>				•				•
<i>Hydroptila molsonae</i>				•				•
<i>Hydroptila wakulla</i>				•				•
<i>Ochrotrichia okaloosa</i>				•				•
<i>Ochrotrichia provosti</i>				•				•
<i>Orthotrichia curta</i>				•				•
<i>Orthotrichia dentata</i>				•				•
<i>Orthotrichia instabilis</i>				•				•
<i>Oxyethira elerobi</i>				•				•
<i>Oxyethira florida</i>				•				•
<i>Oxyethira janella</i>				•				•
<i>Oxyethira kellei</i>				•				•
<i>Oxyethira kingi</i>				•				•
<i>Oxyethira novasota</i>				•				•
<i>Lepidostoma morsei</i>				•				•
<i>Ceraclea floridana</i>				•				•
<i>Oecetis daytona</i>				•				•
<i>Oecetis floridana</i>				•				•
<i>Oecetis parva</i>				•				•
<i>Oecetis porteri</i>				•				•
<i>Oecetis pratelia</i>				•				•
<i>Triaenodes florida</i>				•				•
<i>Triaenodes furcella</i>				•				•
<i>Chimarra florida</i>		•				•		
<i>Cernotina truncona</i>				•				•
<i>Polycentropus floridensis</i>				•				•
<i>Agarodes libalis</i>				•				•
<i>Agarodes ziczac</i>				•				•

**Appendix B.** Field site locations and dates when light-trap samples were collected during the field survey. Site code numbers were assigned to each sampling site and correspond to the numbers shown in Figure 1. Results of the faunal survey are presented in the species accounts within the Results section and in Appendix C, which is a complete listing of all species of Trichoptera collected in the field survey.

<b>Site ID#</b>	<b>Water Body</b>	<b>Sampling Location</b>	<b>County</b>	<b>Date mm/dd/yy</b>	<b>Latitude</b>	<b>Longitude</b>
1	Brushy Creek	Pineville Road, West of Enon	Escambia	6/14/07	30 47 48	87 33 24
2	McDavid Creek	CR-99	Escambia	6/14/07	30 44 56	87 27 31
3	Perdido River	above CR-184, along River Annex Road	Escambia	6/14/07	30 36 21	87 23 57
4	Blue Water Creek	Blue Water Creek Water Mgmt Area, Fire Break Rd 5	Escambia	6/15/07	30 47 45	87 22 26
5	Canoe Creek	above Bratt Road	Escambia	6/15/07	30 57 27	87 20 54
6	Pine Barren Creek	below US-29	Escambia	6/14/07	30 46 25	87 20 38
7	McCostill Mill Creek	Ebenezeer Church Road	Santa Rosa	6/15/07	30 55 06	87 14 50
8	Big Coldwater Creek	Adventures Unlimited, Tomahawk Landing Road	Santa Rosa	6/13/07	30 45 44	86 59 49
9	Blackwater River	above Deaton Bridge Road	Santa Rosa	6/13/07	30 42 21	86 52 49
10	Mare Creek	Blackwater River State Forest, below bridge	Okaloosa	5/19/07	30 54 29	86 43 02
11	Yellow River	about 100m above Hwy. 2 bridge	Okaloosa	5/18/07	30 55 31	86 33 33
12	Choctawhatchee River	Hwy. 20 at boat landing	Walton	5/11/07	30 27 01	85 53 57
13	Pine Log Creek	Pine Log State Forest, SR-79	Washington	5/11/07	30 25 07	85 52 21
14	Little Crooked Creek	Pine Log State Forest, above SR-79 bridge	Bay	5/11/07	30 24 48	85 52 04
15	Econfina Creek	Williford Springs	Washington	5/12/07	30 26 20	85 32 53
16	Kennedy Creek	Apalachicola National Forest, Cotton Landing	Liberty	5/9/07	30 02 49	85 05 15
17	Kennedy Creek	Apalachicola National Forest, FR-115	Liberty	5/9/07	30 04 43	85 05 35
18	Gregory Mill Creek	Apalachicola National Forest, CR-379	Liberty	5/9/07	30 10 26	85 04 04
19	Ocheesee Pond	boat ramp at south end of lake	Jackson	5/16/07	30 39 25	84 58 25
20	Black Creek	SR-375	Leon	5/23/07	30 19 28	84 41 31
21	Sopchoppy River	163 Persimmon Road, Craig Nelson property	Wakulla	5/6/07	30 05 05	84 30 49
22	Buckhorn Creek	St. Marks National Wildlife Refuge, Hwy. 372	Wakulla	5/6/07	30 03 47	84 28 12
23	Lost Creek	Apalachicola National Forest, CR-368 near Arran	Wakulla	5/6/07	30 11 19	84 24 31
24	Lofton Ponds	Apalachicola National Forest, off Sam Allen Rd	Leon	10/26/06	30 21 40	84 23 25
25	Wakulla River	CR-61 bridge	Wakulla	10/26/06	30 12 55	84 15 39
26	Alapaha River	CR-150 near Jennings	Hamilton	5/27/07	30 35 59	83 04 32

Site ID#	Water Body	Sampling Location	County	Date mm/dd/yy	Latitude	Longitude
27	North Prong St. Marys R	CR-120	Baker	6/1/07	30 27 52	82 12 25
28	Middle Prong St. Marys R	CR-125 near Taylor	Baker	6/1/07	30 26 13	82 17 16
29	Cedar Creek	below CR-125	Baker	6/1/07	30 20 33	82 11 57
30	Yellow Water Creek	Jennings State Forest at Long Branch Road	Clay	5/26/07	30 09 06	81 55 27
31	North Fork Black Creek	Jennings State Forest, Indian Ford RA	Clay	5/26/07	30 06 45	81 54 23
32	unnamed ravine stream	Black Creek Ravines Conservation Area	Clay	5/26/07	30 03 52	81 50 49
33	Black Creek, South Fork	SR-218, Middleburg	Clay	5/26/07	30 03 36	81 52 18
34	Peters Creek	SR-16	Clay	5/25/07	29 58 57	81 45 22
35	Gold Head Branch	Gold Head Branch SP above Little Lake Johnson	Clay	5/25/07	29 49 38	81 56 45
36	Little Lake Santa Fe	near public boat landing	Alachua	5/25/07	29 45 49	82 05 12
37	Ocklawaha River	Ocala NF, near Davenport Bluff off FR-77	Putnam	4/27/07	29 28 23	81 46 16
38	Lake Delancy	Ocala National Forest, at NW corner of lake	Marion	4/27/07	29 25 44	81 47 08
39	St. Johns River	Ocala National Forest, Ft. Gates ferry dock	Putnam	4/27/07	29 25 30	81 39 58
40	unnamed pond	Ocala National Forest, just north of Lake Kerr	Marion	4/27/07	29 22 47	81 46 28
41	Bills Branch	Ocala National Forest, below SR-19	Marion	4/27/07	29 18 07	81 40 22
42	Waccasassa River	at SR-19	Levy	6/8/07	29 16 33	82 44 13
43	Wekiva River	below SR-19	Levy	6/8/07	29 14 55	82 43 15
44	Tomoka River	downstream of LPGA Blvd., Ormond Beach	Volusia	6/22/07	29 13 03	81 06 32
45	Indian Lake	Tiger Bay State Forest	Volusia	6/22/07	29 10 05	81 09 46
46	Sellers Lake	Ocala National Forest, SE lobe of lake	Lake	4/28/07	29 06 29	81 37 39
47	Dillard Pond	Ocala National Forest, just W of SR-19	Lake	4/28/07	29 06 15	81 37 12
48	Sand Creek	above SR-415	Volusia	6/22/07	29 04 24	81 04 06
49	Alexander Springs Creek	Ocala National Forest, off FR-538A	Lake	4/28/07	29 03 51	81 33 22
50	Glenn Branch	Ocala National Forest, FR 539	Lake	4/28/07	29 03 05	81 31 32
51	Rainbow River	SR-484, Dunnellon	Marion	6/8/07	29 02 57	82 26 50
52	Wekiva River	Wekiva Park Lane at canoe launch	Seminole	5/9/07	28 49 46	81 24 45
53	Wekiva River	Wilson Landing Park off SR-46	Seminole	5/9/07	28 48 31	81 25 01
54	Withlacoochee River	Withlacoochee State Forest, Crooked River Camp	Hernando	6/8/07	28 33 54	82 12 14
55	Withlacoochee River	River Road bridge, east of Dade City	Pasco	4/2/07	28 21 09	82 07 34

<b>Site ID#</b>	<b>Water Body</b>	<b>Sampling Location</b>	<b>County</b>	<b>Date mm/dd/yy</b>	<b>Latitude</b>	<b>Longitude</b>
56	Lake Gentry	NE lobe of lake, boat ramp at end of Lake Gentry Road	Osceola	5/12/07	28 09 14	81 13 36
57	Crabgrass Creek	downstream of US-192 bridge	Osceola	5/12/07	28 07 47	81 00 04
58	Hillsborough River	Temple Terrace at Fowler Avenue	Hillsborough	4/3/07	28 03 19	82 21 53
59	Alafia River	Lithia-Pinecrest Road	Hillsborough	4/4/07	27 52 22	82 12 41
60	Tiger Creek	Walk-In-Water Road	Polk	3/31/07	27 48 44	81 26 39
61	Livingston Creek	Lake Wales Ridge State Forest, Rucks Dairy Road	Polk	3/31/07	27 42 32	81 26 49
62	Lake Godwin	Lake Wales Ridge State Forest, off Schoolbus Road	Polk	3/31/07	27 41 13	81 26 13
63	Carter Creek	downstream of Arbuckle Creek Road	Highlands	3/30/07	27 31 55	81 23 15
64	Manatee River	downstream of SR-64	Manatee	5/4/07	27 28 24	82 12 40
65	Charley Bowlegs Creek	Highlands Hammock State Park, Cottage Road Bridge	Highlands	3/30/07	27 28 15	81 33 09
66	Myakka River	Wauchula Road bridge	Manatee	5/4/07	27 21 57	82 08 57
67	Lake Annie	at outlet, north end of lake near SR-70	Highlands	4/11/07	27 12 37	81 20 56
68	unnamed lake	Jonathan Dickinson State Park, adjacent to bike trail	Martin	4/14/07	27 00 06	80 06 14
69	wetland prairie pond	Jonathan Dickinson State Park, nr Pine Grove Camp	Martin	4/14/07	26 59 57	80 06 12
70	Kitching Creek	Jonathan Dickinson State Park, deck at end of trail	Martin	4/14/07	26 59 41	80 09 18
71	Wilson Creek	Jonathan Dickinson State Park, Kitching Creek trail	Martin	4/14/07	26 59 32	80 08 57
72	Loxahatchee River	Jonathan Dickinson State Park, at end of small trail	Martin	4/14/07	26 59 16	80 08 40
73	Loxahatchee R, NW fork	Riverbend County Park near old river channel	Palm Beach	4/14/07	26 55 53	80 10 30
74	Fisheating Creek	near Palmdale at campground	Glades	4/11/07	26 55 40	81 18 40
75	Caloosahatchee River	Alva, public boat landing	Lee	4/11/07	26 42 50	81 36 22
76	pond	Fakahatchee Strand State Park, cabin, E Main Tram	Collier	4/12/07	26 01 44	81 23 50
77	small pond	Fakahatchee Strand State Park, Big Cypress Bend	Collier	4/12/07	25 56 39	81 28 13
78	borrow pit lake	Fakahatchee Strand State Park at East River, US-41	Collier	4/12/07	25 55 53	81 26 40
79	Oleta River	Oleta River State Park, at old quarry dock	Dade	4/13/07	25 55 26	80 08 14
80	mitigation pond	Oleta River State Park, FW mitigation pond	Dade	4/13/07	25 55 08	80 08 18
81	mangrove canal	Oleta River State Park, canal behind cabins	Dade	4/13/07	25 54 56	80 07 55

### APPENDIX C. Checklist of Trichoptera Species Collected in Field Survey

\* Denotes Species of Greatest Conservation Need

	<u>Collection Site (Number of Individuals Identified in Parentheses)</u>
Suborder ANNULIPALPIA	
Family Dipseudopsidae	
1 <i>Phylocentropus carolinus</i> Carpenter	2(2), 6(1), 13(2), 17(1)
2 <i>P. placidus</i> (Banks)	7(1), 12(1), 15(1), 17(3), 21(1), 22(32), 23(2), 27(1), 28(1), 29(12), 30(5), 31(1), 34(17), 36(16)
Family Hydropsychidae	
3 <i>Cheumatopsyche burksi</i> Ross	21(1), 23(3), 25(9), 37(5), 44(4), 49(13), 51(3), 52(134), 53(34), 54(3), 55(13), 57(11), 59(20), 60(83), 61(28), 63(1), 64(31), 65(1), 66(24), 70(3), 71(1), 73(2), 74(2)
4 <i>C. campyla</i> Ross	19(1)
5 <i>C. edista</i> Gordon	11(2), 15(47)
6 <i>C. pasella</i> Ross	11(8), 12(15), 13(3), 14(2), 26(24)
7 * <i>C. petersi</i> Ross, Morse, & Gordon	1(73), 2(3), 6(1), 8(46), 9(9), 10(5)
8 <i>C. pettiti</i> (Banks)	1(2), 21(1), 22(2), 28(2), 29(34), 34(1), 44(2), 48(1), 50(3), 55(1), 57(2), 59(12), 63(1), 64(7), 65(1)
9 <i>C. pinaca</i> Ross	1(3), 2(4), 5(3), 6(6), 10(12), 14(1), 17(4), 18(6), 20(1), 23(40), 26(28), 29(11), 30(36), 34(48), 41(5), 43(2), 44(4), 49(5), 50(9), 52(14), 53(6)
10 <i>C. virginica</i> Denning	9(3), 34(1), 57(1), 65(1), 67(28)
11 <i>Diplectrona modesta</i> Banks	5(9)
12 <i>Hydropsyche alabama</i> Lago & Harris	15(48)
13 <i>H. decalda</i> Ross	27(7), 67(23)
14 <i>H. elissoma</i> Ross	1(21), 2(25), 3(5), 4(5), 5(7), 6(2), 7(1), 8(14), 9(16), 10(13), 14(2)
15 <i>H. incommoda</i> Hagen	6(66), 8(9), 9(3), 11(33), 12(40), 14(2), 16(35), 17(21), 18(19), 19(1), 21(3)
16 <i>H. mississippiensis</i> Flint	1(44), 5(1), 6(35)
17 <i>H. rossi</i> Flint, Voshell, & Parker	6(26), 8(3), 9(5), 11(24), 16(25), 17(15), 18(5), 25(9), 26(63), 30(3), 37(9), 49(24), 51(2), 52(85), 59(49), 61(41), 63(6), 64(29)
18 <i>H. sparna</i> Ross	1(4)
19 <i>Macrostemum carolina</i> (Banks)	1(17), 2(11), 3(20), 4(4), 5(9), 6(20), 8(9), 9(21), 11(14), 12(8), 13(9), 14(2), 19(2), 23(1), 27(1), 28(1), 37(14)
Family Philopotamidae	
20 <i>Chimarra aterrima</i> Hagen	8(1), 13(2), 30(1), 32(2), 34(1), 35(1)
21 <i>C. falculata</i> Lago & Harris	4(2), 9(6), 13(3), 14(16)
22 * <i>C. florida</i> Ross	1(59), 2(12), 3(39), 4(2), 5(1), 6(15), 7(1), 8(65), 9(45), 10(30), 13(5), 14(2), 17(19), 18(8), 21(1), 23(34), 27(23), 29(1), 31(2), 44(2), 60(4), 64(1)
23 <i>C. moselyi</i> Denning	6(2), 8(1), 12(1), 26(61), 30(15), 31(1), 43(4)

24 <i>C. obscura</i> (Walker)	6(6)
25 <i>Wormaldia moesta</i> (Banks)	10(1)
Family Polycentropodidae	
26 <i>Cernotina calcea</i> Ross	3(1), 6(8), 8(5), 9(17), 11(53), 12(7), 13(15), 15(26), 17(6), 21(28), 22(34), 23(11), 26(4), 27(1), 29(2), 30(5), 31(88), 33(92), 37(1), 42(3), 44(90), 49(8), 51(3), 54(77), 57(5), 59(4), 61(35), 64(57), 66(2), 70(25), 73(16), 74(1), 75(19), 76(20)
27 <i>C. spicata</i> Ross	2(1), 8(1), 9(7), 12(2), 13(5), 19(22), 21(4), 22(3), 23(1), 27(1), 33(23), 37(10), 44(8), 4(93), 52(3), 53(1), 56(2), 57(1), 60(4), 64(1), 75(28), 76(3)
28 * <i>C. truncona</i> Ross	13(3), 17(1), 24(2), 36(80), 38(13), 40(33), 41(1), 45(17), 46(171), 47(1), 56(3), 62(77), 67(53), 68(46)
29 <i>Cyrnellus fraternus</i> (Banks)	6(3), 12(6), 18(1), 19(6), 21(19), 22(2), 23(9), 26(4), 33(8), 36(20), 37(6), 39(1), 43(1), 51(5), 52(4), 53(27), 54(3), 56(11), 57(2), 58(7), 59(1), 60(10), 61(6), 64(2), 67(30), 73(26), 74(25), 75(75)
30 <i>Neureclipsis crepuscularis</i> (Walker)	12(29), 13(6), 14(9), 18(1), 21(4), 23(1), 27(1), 37(5), 43(2), 52(1), 53(3)
31 <i>N. melco</i> Ross	1(1), 2(1), 4(1), 5(1), 6(7), 8(1), 9(3)
32 <i>Nyctiophylax affinis</i> (Banks)	6(3), 10(1), 19(4), 29(1), 34(2)
33 <i>N. celta</i> Denning	1(1), 3(5), 6(1), 9(3), 11(1)
34 <i>N. morsei</i> Lago & Harris	13(2), 14(31)
35 <i>N. serratus</i> Lago & Harris	1(1), 2(2), 3(1), 4(2), 6(1), 9(13), 10(13), 13(21), 14(3), 17(9), 18(6), 20(2), 21(6), 22(6), 23(1), 38(8), 40(27), 44(1), 46(22), 47(39), 63(1), 67(18)
36 <i>Polycentropus blicklei</i> Ross & Yamamoto	10(1), 31(1)
37 <i>P. cinereus</i> Hagen	5(1), 6(1), 10(1), 13(10), 14(3), 15(11), 18(5), 21(2), 22(10), 23(1), 34(1), 41(2), 43(3), 49(1), 50(1), 51(5), 56(1)
38 <i>P. nascotius</i> Ross	38(1)
Family Psychomyiidae	
39 <i>Lype diversa</i> (Banks)	10(1), 11(1), 15(2), 17(10), 18(2), 29(7), 30(27), 34(2)
Suborder Spicipalpia	
Family Glossosomatidae	
40 <i>Protoptila</i> nr. <i>palina</i>	15(2)
Family Hydroptilidae	
41 <i>Hydroptila alabama</i> Harris & Kelley	1(2), 2(3), 4(5), 5(8), 6(1), 7(1), 13(1)
42 <i>H. armata</i> Ross	21(1), 25(57), 42(9), 43(3), 51(2), 54(1)
43 <i>H. berneri</i> Ross	15(8), 26(22), 30(3), 31(28), 36(2), 37(1), 41(4), 42(6), 43(3), 46(1), 47(9), 49(46), 50(71),

- 52(4), 58(21), 59(85), 64(7)
- 44 *H. circangula* Holzenthal & Kelley 2(3), 8(1), 9(5), 14(14)
- 45 *H. disgalera* Holzenthal & Kelley 1(39), 2(24), 3(8), 4(15), 6(12), 8(6), 9(3), 10(12), 13(61), 14(87), 15(1), 21(1), 34(5), 35(1)
- 46 *H. latosa* Ross 8(3), 9(1), 14(3), 34(1)
- 47 *H. lloganae* Blickle 1(3), 2(2), 3(21), 8(2), 26(9), 27(13), 28(6), 29(11), 30(1), 55(1), 57(1), 60(18), 61(1), 63(5), 65(4)
- 48 *H. maculata* Banks 22(1), 33(9), 34(28), 35(1), 36(13), 38(2), 39(7), 41(1), 42(6), 43(2), 50(1), 51(15), 52(49), 53(11), 56(2), 57(1), 60(13), 75(8)
- 49 \* *H. molsonae* Blickle 3(1), 13(1), 17(10), 18(2)
- 50 *Hydroptila* n. sp. (nr. *hamiltoni/roberta*) 13(25), 14(4)
- 51 *Hydroptila* n. sp. (nr. *acadia*) 9(1)
- 52 *Hydroptila* n. sp. (nr. *bribriae*) 7(3)
- 53 *H. novicola* Blickle & Morse 1(1), 2(1), 4(2), 6(10, 10(7), 17(1), 21(2), 29(1), 30(10), 32(1), 34(51)
- 54 *H. paralatosa* Harris 4(3)
- 55 *H. parastrepha* Kelley & Harris 4(15), 5(1)
- 56 *H. quinola* Ross 1(3), 2(3), 3(1), 6(2), 11(4), 13(135), 14(13), 15(12), 16(5), 17(13), 18(35), 20(2), 21(27), 22(19), 23(48), 23(237), 29(1), 30(4), 31(1), 37(1), 38(1), 41(2), 57(1), 63(1)
- 57 *H. remita* Blickle & Morse 2(4), 3(2), 5(3), 6(4), 8(4), 9(2), 14(8)
- 58 *H. scheiringi* Harris 23(4)
- 59 \* *H. wakulla* Denning 21(1), 23(1), 25(14), 37(25), 47(1), 49(11), 50(2), 51(3)
- 60 *H. waubesiana* Betten 3(1), 12(2), 13(21), 14(6), 17(9), 18(10), 21(2), 22(4), 23(4)
- 61 *Mayatrachia ayama* Moselyi 1(48), 3(14), 6(6), 8(89), 9(52), 49(12), 50(7), 59(3)
- 62 *Neotrichia alabamensis* Kelley & Harris 1(18), 2(2), 4(4), 5(1), 6(14)
- 63 *N. armitagei* Harris 4(2), 10(1), 13(91), 21(17), 29(2), 34(3), 35(4)
- 64 *N. minutisimella* (Chambers) 1(46), 2(4), 4(3), 8(2), 9(55), 12(2), 13(1)
- 65 *N. rasmusseni* Harris & Keth 25(2), 35(5), 49(17)
- 66 *N. vibrans* Ross 6(4), 9(2), 11(28), 12(19), 13(16), 14(4), 15(7), 21(242), 22(2), 23(3), 26(3), 30(14), 31(49), 33(3), 37(2), 42(3), 43(15), 44(33), 50(1), 51(1), 52(3), 53(13), 54(3), 57(8), 59(21), 61(73), 64(18), 66(8), 74(1), 75(56)
- 67 *Ochrotrichia tarsalis* (Hagen) 49(6)
- 68 *Orthotrichia aegerfasciella* (Chambers) 1(5), 2(2), 3(1), 5(1), 6(2), 10(12), 16(3), 18(3), 19(15), 22(1), 26(1), 27(2), 28(1), 29(4), 30(1), 31(2), 33(4), 39(1), 44(8), 47(2), 48(5), 51(51), 54(9), 56(6), 57(3), 60(1), 64(26), 66(7), 70(5), 73(3), 81(1)
- 69 *O. baldufi* Kingsolver & Ross 23(4), 27(1), 38(8), 40(2), 45(1), 46(58), 67(2)
- 70 *O. cristata* Morton 6(2), 23(1), 27(5), 29(1)
- 71 \* *O. curta* Kingsolver & Ross 4(2), 6(1), 27(1), 62(100), 69(25)



- 72 \* *O. dentata* Kingsolver & Ross 4(1), 15(1), 33(1), 51(62)  
73 *Oxyethira abacatia* Denning 24(341), 25(1), 34(2), 35(5), 46(1)  
74 *O. arizona* Ross 64(1), 68(1), 69(3)  
75 *O. chrysocara* Harris 35(1)  
76 \* *O. elerobi* (Blickle) 1(31), 2(16), 3(10), 4(65), 5(3), 6(43), 8(91), 9(23), 10(45), 13(51), 14(54), 30(1)  
77 \* *O. florida* Denning 80(12)  
78 *O. glasa* (Ross) 6(5), 8(1), 9(12), 13(10), 14(1), 17(1), 22(5), 23(22), 26(2), 35(1), 38(26), 40(62), 46(1),  
47(15), 56(1), 57(1), 67(21), 68(4), 69(116)
- 79 \* *O. janella* Denning 1(44), 2(8), 3(97), 4(5), 5(9), 6(27), 8(12), 9(7), 10(1), 11(22), 12(29), 13(147), 14(1),  
15(86), 16(5), 17(12), 18(2), 19(1), 21(33), 22(78), 23(41), 25(36), 26(83), 27(3), 28(3),  
29(5), 30(175), 31(23), 32(1), 33(52), 34(2), 36(1), 37(26), 38(2), 39(1), 41(1), 42(262),  
43(39), 44(15), 47(1), 48(2), 49(14), 50(13), 51(8), 52(98), 53(39), 54(26), 55(94), 56(1),  
57(39), 58(27), 59(26), 60(28), 61(34), 63(15), 64(21), 65(13), 66(64), 70(2), 74(2), 75(4)
- 80 *O. lumosa* Ross 14(1), 15(1), 17(1), 18(2), 21(1), 23(2), 27(1), 28(1), 29(1), 35(1), 63(1), 65(8)  
81 *O. maya* Denning 13(1), 18(1), 21(2), 22(1), 23(3), 26(1), 28(2), 29(3), 30(6), 33(17), 36(2), 37(1), 38(2),  
41(1), 42(12), 44(9), 48(5), 51(1), 54(12), 55(6), 57(2), 58(3), 64(4), 67(1), 69(3), 70(5),  
72(1), 74(1), 75(6), 79(4), 80(42), 81(5)
- 82 \* *O. novasota* Ross 2(1), 6(15), 10(1)  
83 *O. pallida* (Banks) 1(2), 8(2), 11(1), 14(1), 15(1), 29(1), 35(3), 36(1), 46(1), 50(2), 55(1), 59(4), 66(1)  
84 *O. pescadori* Harris & Keth 1(3), 3(2), 6(21), 8(3), 9(4), 10(1), 11(1), 13(10), 14(1), 15(3), 17(4), 29(1), 30(22), 31(2),  
33(1), 34(12), 37(13), 52(4), 53(31), 57(1)
- 85 *O. roberti* Roy & Harper 29(1)  
86 *O. savanniensis* Kelley & Harris 8(1), 9(4)  
87 *O. simulatrix* Flint 42(5), 43(12), 44(18), 48(3), 51(1), 53(121), 55(1), 60(27), 61(2), 64(6), 65(1), 66(9), 67(7),  
75(1)
- 88 *O. sininsigne* Kelley 23(2), 24(1), 46(1), 67(5)  
89 *O. verna* Ross 23(1), 29(1), 33(1), 36(3), 41(1), 46(1), 56(6), 60(1), 67(34), 68(1)  
90 *O. zeronia* Ross 1(4), 2(2), 3(21), 4(6), 5(1), 6(5), 8(13), 9(19), 11(23), 12(11), 13(11), 14(8), 15(40, 19(30),  
22(2), 23(7), 24(57), 28(1), 29(2), 33(4), 36(6), 38(39), 40(153), 41(1), 44(1), 45(2),  
46(61), 48(1), 51(1), 52(85), 54(7), 55(3), 56(16), 60(1), 61(3), 66(4), 67(27), 68(32),  
69(43)
- Family Rhyacophilidae  
91 *Rhyacophila carolina* Banks 4(2), 7(2), 8(1), 10(9)
- Suborder Integripalpia  
Family Brachycentridae  
92 *Micrasema* n. sp. Chapin 1(21), 2(13), 4(9), 8(28)

93 <i>M. wataga</i> Ross	1(2), 34(1), 43(1)
Family Calamoceratidae	
94 <i>Anisocentropus pyraloides</i> (Walker)	7(3), 10(4), 13(8), 14(10), 17(4), 18(6), 20(1), 22(2)
95 <i>Heteroplectron americanum</i> (Walker)	14(1)
Family Helicopsychidae	
96 <i>Helicopsyche borealis</i> Hagen	25(53), 51(10)
Family Leptoceridae	
97 <i>Ceraclea cancellata</i> (Betten)	12(67), 13(1), 14(7), 16(1), 17(4), 18(1), 19(2), 21(9), 23(3), 26(2), 31(1), 33(3), 42(1)
98 <i>C. flava</i> (Banks)	11(2), 12(17), 16(1), 26(66)
99 <i>C. maculata</i> (Banks)	1(22), 2(4), 3(2), 6(17), 7(1), 8(14), 9(22), 10(53), 11(3), 12(12), 13(13), 14(19), 16(24), 17(7), 20(1), 21(51), 22(25), 23(3), 26(14), 27(11), 29(1), 33(5), 34(22), 36(19), 37(27), 39(1), 40(1), 46(6), 52(4), 53(14), 56(6), 59(1), 60(19), 61(1), 64(1), 67(27), 75(2)
100 <i>C. nepha</i> (Ross)	21(1)
101 <i>C. ophioderus</i> (Ross)	9(1), 11(24), 12(11), 13(1), 16(1), 17(1), 19(1), 23(6)
102 <i>C. protonepha</i> Morse & Ross	12(1), 13(9), 14(2), 16(3), 21(1), 23(1)
103 <i>C. tarsipunctata</i> (Vorhies)	11(1), 12(15), 13(14), 14(1), 16(6), 17(3), 21(1), 23(3), 26(4)
104 <i>C. transversa</i> (Hagen)	1(2), 16(26), 21(20), 22(5), 23(1), 25(15), 30(4), 31(23), 33(4), 37(13), 39(40), 40(1), 41(1), 47(1), 49(12), 50(1), 52(12), 53(3), 55(5), 56(1), 60(1)
105 <i>Leptocerus americanus</i> (Banks)	16(33), 17(20), 18(24), 19(103), 21(3), 22(1), 23(3), 37(9), 39(2), 40(3), 47(10), 49(25), 52(4), 55(49), 59(43), 64(3), 66(2), 67(9), 74(8), 75(3), 76(1)
106 <i>Nectopsyche candida</i> (Hagen)	26(6), 52(16), 59(4)
107 <i>N. exquisita</i> (Walker)	1(18), 5(6), 6(1), 8(24), 9(7), 11(2), 12(3), 13(10), 14(4), 15(2), 18(10), 21(4), 23(24), 29(1), 30(26), 31(1), 34(1), 42(1), 53(10), 60(9), 61(37), 63(2), 64(6)
108 <i>N. paludicola</i> Harris	4(1), 14(12)
109 <i>N. pavidata</i> (Hagen)	1(5), 2(9), 3(1), 4(2), 5(19), 6(4), 8(3), 10(2), 11(3), 12(46), 13(23), 14(11), 15(2), 16(2), 17(1), 18(11), 20(3), 21(7), 22(5), 23(11), 25(22), 26(16), 27(4), 28(2), 29(9), 30(33), 31(23), 33(21), 34(16), 36(40), 37(2), 38(2), 41(13), 42(11), 43(12), 44(26), 45(4), 46(1), 49(13), 50(2), 51(10), 52(17), 53(12), 54(30), 55(1), 56(3), 57(3), 58(1), 59(6), 60(5), 62(7), 63(4), 66(33), 67(9), 75(46)
110 <i>N. spiloma</i> (Ross)	3(1), 25(2), 43(1)
111 <i>N. tavara</i> (Ross)	39(26), 41(3), 42(1), 45(12), 47(1), 49(1), 52(3), 54(1), 56(7), 57(1), 60(2), 64(6), 67(4), 68(5), 73(21)
112 <i>Oecetis avara</i> (Banks)	25(44), 26(37), 31(29), 51(72)
113 <i>O. cinerascens</i> (Hagen)	6(2), 12(1), 16(8), 19(15), 22(30), 23(1), 25(1), 29(6), 33(1), 36(4), 39(5), 41(1), 47(1),

- 49(5), 51(6), 52(2), 53(3), 55(1), 56(19), 60(1), 62(18), 66(2), 67(6), 68(16), 69(1), 70(1), 73(8), 74(5), 75(2), 78(1), 80(2)
- 114 *O. ditissa* Ross 4(1), 6(1), 10(2), 12(3), 14(2), 15(1), 18(2), 20(2), 22(5), 23(4), 31(2), 52(1), 55(1)
- 115 *O. georgia* Ross 6(4), 9(9), 10(2), 14(1), 17(3), 27(43), 34(7), 67(6)
- 116 *O. inconspicua* (Walker) 1(23), 2(6), 3(18), 4(6), 5(2), 6(40), 8(5), 9(26), 10(7), 12(3), 13(39), 14(23), 15(74), 16(2), 17(36), 18(6), 19(6), 21(29), 22(17), 23(28), 24(17), 25(4), 26(10), 27(31), 28(9), 29(17), 30(16), 31(9), 32(11), 33(35), 34(7), 35(1), 36(4), 37(16), 38(64), 39(8), 40(9), 41(6), 42(1), 43(2), 44(13), 45(32), 46(22), 47(17), 48(6), 49(30), 50(13), 51(9), 52(26), 53(26), 54(49), 55(29), 56(9), 57(103), 59(15), 60(10), 61(8), 62(40), 63(1), 64(24), 65(52), 66(81), 67(1), 68(15), 69(67), 70(1), 71(1), 73(59), 74(111), 75(48), 76(1), 78(2), 80(4)
- 117 *Oecetis* n. sp. (nr. *cinerascens*) 38(15), 46(41)
- 118 *O. nocturna* Ross 1(42), 2(23), 3(25), 4(2), 5(2), 6(11), 8(7), 9(15), 10(15), 14(2), 16(1), 17(1), 21(1), 26(22), 31(3)
- 119 *O. osteni* Milne 3(5), 6(4), 9(21), 11(3), 16(1), 17(2), 19(36), 20(1), 21(2), 26(2), 27(2), 29(3), 31(1), 36(13), 38(1), 40(23), 42(1), 45(1), 46(159), 47(5), 48(1), 49(1), 56(118), 57(1), 62(21), 64(1), 65(2), 67(23), 74(3)
- 120 \* *O. parva* (Banks) 19(1), 24(6), 38(34), 39(1), 40(69), 46(35), 47(3), 52(5)
- 121 *O. persimilis* (Banks) 1(3), 6(2), 12(10), 13(3), 15(6), 16(1), 21(19), 22(1), 23(4), 25(8), 26(22), 29(1), 30(9), 31(14), 37(46), 41(3), 50(2), 51(1), 53(2), 59(15), 60(7), 61(5), 63(2), 64(1)
- 122 \* *O. porteri* Ross 19(16), 36(60), 40(2), 45(65), 46(6), 53(1), 56(8), 60(35), 62(18), 67(29), 68(21), 69(1)
- 123 *O. sphyra* Ross 1(59), 2(37), 3(61), 4(23), 5(49), 6(36), 8(68), 9(27), 11(27), 12(13), 13(14), 14(5), 15(41), 20(1), 23(27)
- 124 *Triaenodes aba* Milne 38(4)
- 125 \* *T. florida* Ross 24(42), 38(24), 39(1), 40(67), 46(64), 47(4)
- 126 \* *T. furcella* Ross 23(3), 25(10), 51(1), 55(1), 76(20), 77(7), 78(8)
- 127 *T. helo* Milne 6(1), 9(1), 16(1), 17(4), 21(7), 22(1), 26(91), 29(7), 30(25), 31(4), 44(2), 50(1), 57(1)
- 128 *T. ignitus* (Walker) 1(18), 2(9), 6(2), 7(2), 8(1), 10(7), 11(4), 13(5), 14(5), 15(2), 18(3), 20(1), 23(2), 30(4), 31(4), 34(5), 37(2), 41(4), 43(1), 44(9), 49(8), 50(3), 53(2), 59(1), 64(6)
- 129 *T. nox* Ross 21(1)
- 130 *T. ochraceus* (Betten & Mosely) 10(1)
- 131 *T. perna* Ross 13(1), 14(1), 35(1)
- 132 *T. smithi* Ross 22(1)
- 133 *T. tardus* Milne 16(1), 18(1), 23(1), 24(2), 27(2), 54(1)

Family Molannidae

134 <i>Molanna tryphena</i> Betten	2(1), 5(2), 7(2), 34(3), 41(3), 50(2)
135 <i>M. ulmerina</i> Navás	2(1), 6(7), 7(1), 8(1), 13(36), 15(1), 17(2), 18(1), 21(21), 22(9), 23(1), 28(1), 29(2), 33(5)
Family Phryganeidae	
136 <i>Ptilostomis ocellifera</i> Banks	32(1)
137 <i>P. postica</i> Ross	7(1), 17(1), 27(1)
Family Sericostomatidae	
138 <i>Agarodes crassicornis</i> (Walker)	8(2), 31(1), 32(1), 34(3), 35(3)
139 * <i>A. libalis</i> Ross & Scott	1(2), 2(1), 10(34), 13(10), 14(3), 17(33), 20(4), 22(4), 29(6), 34(41)