



# Williamsonia



Vol. 6, No. 1

Winter, 2002

A publication of the Michigan Odonata Survey

Welcome to the first issue of the sixth volume of Williamsonia. It is hard to believe that the MOS has been in existence for six years. When we first began the survey, I did not know how well we would fare with attracting volunteers, nor did I think we would have 25,000 records databased! I believe we have made some great strides in documenting the Odonata of Michigan, and I think the coming year will certainly be interesting. Taking a look at upcoming events, I know many of you will want to attend the 2nd Great Lakes Odonata Meeting at Higgins Lake. I am hoping that we have a good turnout, with folks from all over the Great lakes region in attendance. It will be a great time to meet other Ode watchers and swap stories. I am always appreciative of the knowledge that so many of you bring to such meetings. Many of you are well-rounded naturalists and know a great deal about the flora and fauna and ecology of the Great lakes region. At meetings - or really, gatherings such as GLOM 2002, we'll be in the field and it will be fun hearing comments about a lot more than just what odonates we are seeing. I encourage you to pre-register as early as possible so that enough spaces will be available for us. This issue also has descriptions of other meetings, and I encourage you to join the August field trip to Lost Nations State Game Area. It's a wonderful spot that will surprise you. I'll be giving a talk about Michigan Odonata on March 25 at the Kalamazoo Nature Center at 7:30 PM. It'll be the first time at the center for me, and if you live nearby, I hope to see you there.

This issue has a list of Benzie Co. species from Carl Freeman. He was the first to become a really active contributor (specimen-wise) to the MOS. I have only been in the field with him a couple of times, and he's always full of good questions that I can answer only half the time. He knows his area well, and I hope to get back up there again soon.

Stephen Ross went to Suriname this winter. His travelogue is a reminder that winter is in its last throes as I look out my office window. Maybe these trips need an entomologist to show the birders where the real animal diversity is...

I have been working on updating our checklists and adding new county records, etc. I will have a much more complete set of maps available by the time the flight season starts this year. John Douglass added about 16 new records for Alger and Grand Traverse Co.; Julie Craves collected at least 7 new records for Wayne Co.

Myles Willard keeps bringing in new trophies for Ogemaw, Tuscola, Arenac and Gladwin Co. In the next issue, there will be a new county records list that (hopefully) updates with all of the new records since 1999. Of course, I just know that some of you will be adding new records this year, and I hope the new list will be helpful. I have been busy with some other activities over the past few months, and have not devoted as much time to identifying specimens as I have in past winters. I think I'll be pretty much caught up with the backlog by the time the field season begins again.

I am proposing a system of regional coordinators for surveying Odonata within MI. Now that better guides and materials are available, I think that more of you can assume a prominent role in surveying Michigan. With the state divided into 10 regions, it should be more manageable in terms of recruiting assistants and deciding what areas to survey. After you read my proposal, please email me or write me with your comments on the idea.

I have been doing some cleaning of the Odonata Range, and realize that I have accumulated some items for the MOS, and now have some extra Epson dot-matrix printers that we have used for making Odonata cards (3x5") and alcohol labels. These printers work fine for the 3 x 5 cards that we use in continuous forms. That is what I still use, but I have more printers than I need. I would definitely like to place some of them in a new home. They are made to work with PC's, but Macintoshes can use them with a special adapter. I also have at least one Apple Imagewriter and Imagewriter LQ that are available, as well as one 486 PC that was dedicated to data-entry and label-making at one time. It certainly works great at those tasks as well for word-processing. If anyone would like any of these items, let me know and I'll reserve them for you. Unfortunately, I can't ship these items for free, so if you need a printer mailed to you, I would like to have the shipping paid for. Otherwise, drop by and pick up the item at the Museum.

I also have another huge accumulation of 35mm plastic film cans. If anyone would like a bunch, let me know and I'll mail them out free of charge. They are great for collecting exuviae!

I will be purchasing more glassine envelopes, field notebooks, and additional insect nets for the coming season. These will be available to MOS surveyors.  
Mark O'Brien, editor

# Checklist of Odonata of Benzie County

Carl Freeman

About four years ago I became interested in dragonflies. I was unable to find anyone locally to help me learn identification and frustrated by the lack of field guides, so I became the "local expert." With the help of Mark O'Brien, Walkers's Odonata of Canada, the wonderful Common Dragonflies of Wisconsin by Karl and Dorothy Legler and Dave Westover, I have documented 95 species for Benzie County.

For those unfamiliar with Benzie County it is located along Lake Michigan west of Traverse City and north of Manistee. Situated halfway up the lower peninsula and along the lake shore, Benzie County is ideally located geographically. In spite of being the smallest Michigan county it has a wide variety of habitats from temporary dune ponds, to deep cold lakes (Crystal Lake), sandy rivers (Betsie River) and lakes, gravelly rivers (Platte River), alkaline lakes, bogs, fens, beaver ponds, etc. The location and variety of habitats add up to a wide variety of Odonata.

Northern species are represented by species like *Gomphaeschna furcillata* and *Leucorrhinia glacialis*. Southern species are represented by *Aeshna mutata* and *Tramea lacerata*. My first summer of serious field work and beginner's luck resulted in two first state records, *Tramea onusta* and *Somatochlora tenebrosa*, both of which have been recorded elsewhere in the state since then. It helps that *S. tenebrosa* was in my "backyard" and the pond with *T. onusta* was only a mile away. This points out that you do not have to go traveling all over the state looking for good records, as the next state record might be in your backyard.

The following is my list for Benzie County.

## Calopterygidae

*Calopteryx aequabilis*  
*C. maculata*

## Lestidae

(a clean sweep for Benzie Co. of all species of *Lestes* recorded for the state)

*Lestes congener*  
*L. disjunctus disjunctus*  
*L. disjunctus australis*  
*L. dryas*  
*L. eurinus*  
*L. forcipatus*  
*L. inaequalis*  
*L. rectangularis*

*L. unguiculatus*  
*L. vigilax*

## Coenagrionidae

(I am indebted to Mark O'Brien for most of these identifications)

*Amphiagrion saucium*  
*Argia fumipennis violacea*  
*Chromagrion conditum*  
*Enallagma aspersum*  
*E. boreale*  
*E. carunculatum*  
*E. civile*  
*E. cyathigerum*  
*E. ebrium*  
*E. exsulans*  
*E. geminatum*  
*E. hageni*  
*E. signatum*  
*E. traviatum westfalli*  
*E. vesperum*  
*Ischnura posita*  
*I. verticalis*  
*Nehalennia gracilis*  
*N. irene*

## Cordulegastridae

*Cordulegaster diastatops*  
*C. maculata*

## Aeshnidae

*Aeshna canadensis*  
*A. clepsydra*  
*A. constricta*  
*A. interrupta*  
*A. mutata*  
*A. tuberculifera*  
*A. umbrosa*  
*Anax junius*  
*Basiaeschna janata*  
*Boyeria vinosa*  
*Gomphaeschna furcillata*  
*Nasiaeschna pentacantha*

## Gomphidae

*Arigomphus furcifer*  
*A. villosipes*  
*Dromogomphus spinosus*  
*Gomphus exilis*  
*G. lividus*  
*G. spicatus*  
*Hagenius brevistylus*  
*Hylogomphus adelphus*  
*Ophiogomphus rupinsulensis*  
*Progomphus obscurus*  
*Stylurus notatus*

### Macromiidae

*Didymops transversa*

*Macromia illinoensis* (historic record and sight record only by me)

### Corduliidae

*Cordulia shurtleffi*

*Dorocordulia libera*

*Epitheca canis*

*E. cynosura*

*E. princeps*

*E. spinigera*

*Somatochlora elongata*

*S. forcipata*

*S. tenebrosa* (1st state record)

*S. williamsoni*

### Libellulidae

*Celithemis elisa*

*C. eponina*

*Erythemis simplicicollis*

*Ladona julia*

*Leucorrhinia frigida*

*L. glacialis*

*L. hudsonica*

*L. intacta*

*L. proxima*

*Libellula incesta*

*L. luctuosa*

*L. pulchella*

*L. quadrimaculata*

*Nannothemis bella*

*Pachydiplax longipennis*

*Pantala flavescens*

*P. hymenaea*

*Plathemis lydia*

*Sympetrum corruptum*

*S. costiferum*

*S. danae*

*S. internum*

*S. obtrusum*

*S. rubicundulum*

*S. semicinctum*

*S. vicinum*

*Tramea lacerata*

*T. onusta* (new state record)

**[Editor's Note:** Carl is being very humble. He has done some excellent collecting and photographing the odes in his area. I have seen his "backyard" and I greatly envy his location! However, he has spent a great deal of time traversing the collecting spots in his county, and his hard work has paid off with an impressive list, as well as a lot of vouchered specimens in the UMMZ collection.].

# 2nd Great Lakes Odonata Meeting July 1 - 4, 2002

## PRE-REGISTER NOW!

The second Great Lakes Odonata Meeting will be held July 1-4, 2002 at the Ralph A. MacMullen Center (RAM Center) located at Higgins Lake, near Roscommon, MI. This event will be an opportunity for Odonata enthusiasts in the Great Lakes Region to meet and share information, as well as experience some of the habitats in northern Michigan and the Odonata species living there.

GLOM 2002 will begin in the evening of Monday, July 1, and end the morning of July 4. Participants staying at the RAM Center in double occupancy rooms can expect to pay approximately \$172.00 per person for three nights lodging, which includes meals. Our proposed schedule of activities includes day trips to selected sites within 1.5 2 hr radius of the RAM Center, evening programs and workshops.

I encourage anyone planning to attend to register well before June 1, 2002, as space is somewhat limited. For those not wishing to stay at the RAM Center, there are camping facilities close by as well as a number of motels within a short distance of the Center. However, note that this a prime time for camping, so you'd better reserve a site if possible, well in advance of July 1.

I welcome any submissions for evening programs, and one traditional event is to show slides of Odonata and we can all have a try to ID them. If you'd like to give a short presentation, please contact me. In addition, there seems to be some interest in having a larval ID workshop. Please let me know if that interests you as well.

For more information or to be put on the mailing list for a registration form, contact Mark O'Brien via email at: mfobrien@umich.edu or call 734-647-2199. You can also send mail to me at Insect Division, Museum of Zoology, University of Michigan, Ann Arbor, MI 48109-1079.

**Meeting registration, information, maps, and guest info are on the web at:**

**<http://insects.ummz.lsa.umich.edu/GLOM2002/>**

**Please use the online forms to pre-register, or write to me and I'll send you one.**

# Michigan Entomological Society and Michigan Odonata Survey Field Trip

Saturday, August 3, 2002

## Lost Nations State Game Area, Hillsdale County, MI

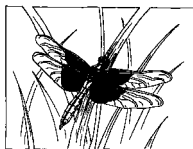
9:30 a.m. until we can't take it any longer!

The LNSGA is an interesting, yet seldom-visited area just north of the Indiana border. A large fen, small streams, ponds, marshes, old fields, lush woodlands and hilly terrain should provide us with potential for acquiring many interesting species and perhaps new county and state records. The Maumee River gets its start here, and the numerous glacial ridges make for some good hiking. The LNSGA is over 2,000 acres, but is not in one large block, so access points are not always easily seen. It is most easily reached by driving S (for most of us) to US-127. Take 127 to Hudson, MI and go W on M-34. About one mile after you go through Pittsford, turn S on Rumsey Road, and then turn W on Way Rd. About 0.4 mi later you'll come to a pulloff and park in a small gravelly lot. Bring a lunch and plenty of water.

There are numerous sites in this large area, so I encourage all of you to bring one of those small FRS radios and we can keep in touch while working our way around the Lost Nations. We don't want any lost entomologists, too.

This should be an excellent opportunity for us to try and collect *Somatochlora* species, especially *S. linearis*, *S. tenebrosa*, and perhaps even *S. ensigera*. Any of these would be tremendous records, and of course, we should see an assortment of Libellulidae and Aeshnidae. Little collecting has been done in this county, and the LNSGA has some very desirable habitats that may harbor some less-collected species.

For more information about the field trip, contact Mark O'Brien at mfobrien@umich.edu or call 734-647-2199.



# Dragonfly Society Of America Annual Meeting JUNE 21-23, Lewisburg, WV

For more information, contact Jennifer Wykle at [jwykle@mail.dnr.state.wv.us](mailto:jwykle@mail.dnr.state.wv.us)

[http://www.dnr.state.wv.us/wvwildlife/nongame/2002\\_dr\\_agonfly\\_society\\_meeting.htm](http://www.dnr.state.wv.us/wvwildlife/nongame/2002_dr_agonfly_society_meeting.htm)

The meeting will be held in Lewisburg, WV from June 20-23. Lewisburg is located in the mountains of southern West Virginia along the banks of the Greenbrier River, the longest undammed river in the eastern United States. It is along interstate 64 and is approximately 100 miles from Charleston's Yeager Airport (with no international flights but connections to almost all U. S. airports) and Roanoke, VA. It is four hours from Dulles International airport in DC. There is also a small airport in Lewisburg with many connecting flights. The group will gather on Thursday, June 20 and collect in the field both Friday and Saturday. On Sunday June 23, we will be leaving for the post-meeting trip to the Elkins area. We will have meetings on Friday and Saturday evenings at our main congregation point, the Brier Inn.

The Brier Inn (304-645-7722) is located off I-64 in Lewisburg. The rate is \$54 for a double room and 30 rooms have been blocked off until the first week of June. Other hotels and motels nearby are listed below.

Days Inn----(304) 645-2345  
Econo Lodge Fort Savannah Motel----(304) 645-3055  
Embassy Inn----(304) 645-7070  
General Lewis Inn----(304) 645-2600  
Super 8 Motel----(304) 647-3188  
The Greenbrier----1-800-453-4858

For those of you wishing to camp there is Greenbrier State Forest which is about a 10 minute drive from the Brier Inn. Reservations for campgrounds can be made by calling (304) 536-1944. The rates are \$17 per night for sites with electric hookup and \$13 per night for no electric hook-up.

## Odonata Activities

There are many different sites to choose from for collecting Odonata species all within an hour's drive. The Greenbrier is an attractive river for a variety of gomphid species. To most people, it the premiere river in West Virginia. Many of the river's cold water tributaries, such as Anthony's Creek, offer additional opportunities. Another special attraction in this area is Cranberry

Glades. It is a unique high elevation bog in which little odonate sampling has been conducted. Other attractions include the Meadow River wetlands (the second largest wetland in WV) and areas in Beckley, WV (45 minutes) such as Stephens Lake, Bluestone Lake, and Plum Orchard Lake Wildlife Management Area. There have been species collected in the Beckley area that are quite unique and this area needs to be sampled further.

Lewisburg is a quaint, old town loaded with antique shops and historic attractions. The Greenbrier is a world famous resort. There are commercial caves, and the Greenbrier Valley is full of many scenic areas for hiking and biking.

#### **POST MEETING FIELD TRIPS (June 23-28)**

Elkins, WV- June 23-26  
We will leave Lewisburg to drive (about 3 hours) to the Elkins area on Sunday June 23. June 24-25 will be spent searching Canaan Valley State Park, Canaan Valley National Wildlife Refuge or Dolly Sods Wilderness Area. These are both unique, high elevation wetlands that are surprisingly boreal for this latitude. There is also the Monongahela National Forest to explore. Just 45 minutes east of Elkins you cross the eastern continental divide in a different physiographic province, the Ridge and Valley. There are numerous rivers and streams to choose from, along with the highest point in West Virginia, Spruce Knob (4860 ft) which has a lake and other streams to search along the way. There is also Stonewall Jackson, Stonecoal, and Tygart Lakes just west of Elkins.

Accommodations  
The Super 8 (304-636-6500)- \$44-46 for double room. There are 15 rooms blocked. Other lodging options in Elkins:

Travelodge---- 304-636-7711  
Days Inn----- 304-637-4667  
Cheat River Lodge---- 304-636-2301  
Elkins Motor Lodge----304-636-1400  
Stuart's Recreation Area (camping)--1-877-444-6777  
Alpine Shores Campground-----304-636-4311

The Ohio River, Pt. Pleasant- June 26-28  
On Wednesday, June 26 we will drive approximately 3 hours to an area along the Ohio River. We will be located only 20 minutes from Greenbottom Swamp, one of the largest wetlands in WV, located in the floodplain of the Ohio River. Pt. Pleasant is minutes from the Kanawha River, a tributary of the Ohio. We are also an hour from the Ohio River Islands near Parkersburg. These islands should be interesting and have not been surveyed for Odonates.

Accommodations

We will be staying in a DNR cabin that sleeps 18-20 on McClintic Wildlife Management area- one of the places where we will be collecting Odonates. Towels and sheets are provided. These accommodations are free. There is a grassy area next to the cabin to pitch tents as well. For those of you wishing to stay in a hotel, the town of Pt. Pleasant, WV/ Gallipolis, OH is only 10 minutes away.

Lowe Hotel----304-675-2260  
Mason Hotel----304-773-9000  
Budget Inn----740-446-7071  
Holiday Inn----740-446-0090  
Super 8 Motel----740-446-8080

Odonata species of interest

West Virginia is an undersampled state. Since Paul Harwood's work in the 1960's, 70's and 80's there have not been extensive surveys for odonates in West Virginia. There is potential for many county records (even for some common species) and state records as well. Also, there are a few questionable records taken from West Virginia, and these areas need to be revisited. West Virginia is a unique state because it is at the periphery of many northern, southern, coastal, and mid western species ranges. If anyone wants to see a state list of odonates or a list of questionable species please contact me.

Jennifer Wykle---- jwykle@mail.dnr.state.wv.us

## **Northeastern DSA Meeting Tug Hill Plateau, New York July 12-14, 2002**

The NE DSA field meeting will be held in the Tug Hill Plateau, NY on 12-14 July, and the meeting HQ will be in Watertown, NY. The objective will be to explore a little-surveyed wilderness in north-central New York. The Tug Hill is a topographic extension of the Adirondack Mts., but it receives far more precipitation because of its proximity to Lake Ontario, which supplies it with "lake effect" snow and rain. Because of the phenomenal snow fall it has become a snowmobile mecca. The plateau abounds in aquatic habitats of all types, including bogs, marshy ponds and small to medium-sized streams.

Odonata activities will include at least one full day on the plateau, either Friday or Saturday, depending on the weather. The other day will be spent exploring the lower portions of one of the large streams that flow from the plateau. On Sunday, participants can stop at one of several inviting places on their way home, including St. Mary's Pond (near Parish) or the marshy inlets of Lake Ontario.

This trip will be an ideal opportunity for beginning Odonatists and we invite their participation.

For more information:

Nick Donnelly, tdonnell@binghamton.edu; 607-722-4939.

## Proposal for a System of Regional Coordinators in Michigan

Mark O'Brien

One of the bigger tasks of the MOS is to coordinate people and collecting and gathering/organization of data. A state the size of Michigan does not lend itself to quick single-day samplings and meetings or collecting trips where everyone can attend. My proposal is to have regional MOS coordinators where that person will be "in charge" of organizing local trips and volunteers. This also removes some of the responsibility from me having to the same thing state-wide, as well as gives regional people more chances to organize local events that fit their area and resources.

Each Regional Coordinator should be someone that has already demonstrated proficiency in identifying/collecting Odonata for the MOS. The regions will be divided up as follows:

**Metro** - four of the heaviest urbanized areas in Michigan-Wayne, Oakland, Macomb and St. Clair counties.

**Southeast** - 8 Southeastern Counties, including some of the most heavily suburbanized areas of the state, as well as large rivers, many lakes, large agricultural areas and many parklands.

**Southwest** - Southwestern Michigan - 9 counties in the lower SW part. A wide variety of habitats, from lakeshore dunes to large rivers and areas with seeps and fens.

**Saginaw** - 8 counties in the Saginaw Bay/Thumb region

**Central** - 13 Counties in the center of the state

**West Coast** - 9 counties predominantly along the Lake Michigan shoreline of Michigan

**Northern** - 17 counties encompassing the largest area, but much of the region is similar in habitat. However, the NE cluster of counties may account for a good deal of Hine's Emerald habitat in Michigan.

**Eastern UP** - 4.5 Counties in the Eastern Upper Peninsula, including all Islands in lake MI and Lake Huron, and the East half of Alger Co.

**Central UP** - 5 counties in the center of the UP, with the West half of Alger Co.

**Western UP** - 6 counties in the West half of the UP, including Isle Royale

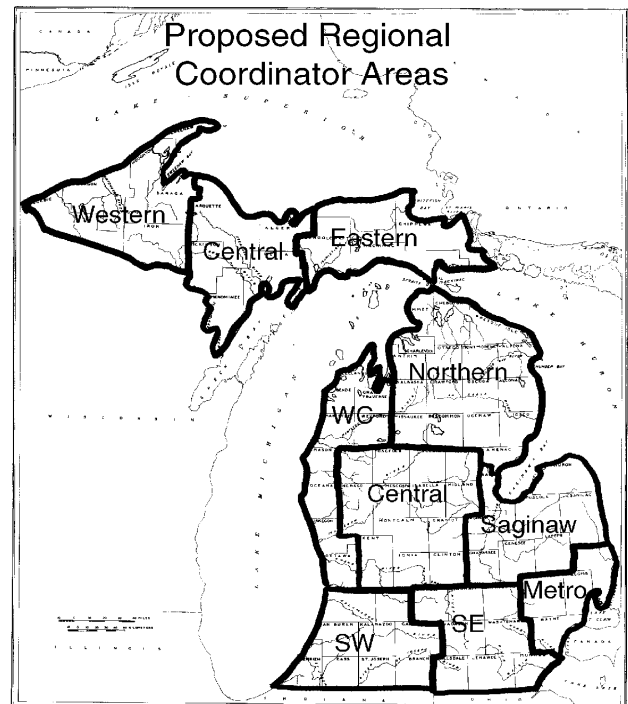
The duties of the volunteer coordinator for each region would be as follows:

- Identify critical habitats to be surveyed
- Recruit local volunteers to survey
- Preliminary ID specimens for region
- Work with local agencies/ conservancies for survey possibilities
- Summarize yearly activities for newsletter
- Send specimens/data to Ann Arbor for inclusion into database.

I see this as an excellent opportunity for some of you to become more active in the MOS, since this opens up individual initiative in organizing field trips to areas of local interest and for recruiting local volunteers. Nine people to step forward to be coordinators -- is this too much to ask?

I think dividing up the state this way makes a lot of sense, and welcome discussion on this topic. Obviously some of you may see the regions as needing to be redrawn in some way, but I think that overall, this is a workable solution to surveying a large area. Each RC (regional coordinator) would be furnished with the tools/references/resources to enable him/her to be an effective part of A larger goal.

Let's discuss this at Great lakes Odonata Meeting, since this would be an excellent opportunity for all of us to meet and lay the groundwork for a regional network of surveyors. I already have some of you in mind for a few of the regions, but that would only account for 4 of the regions. I look forward to your input on this!



# Checklist of Odonata Found in Michigan

Mark O'Brien

Common names follow the recommendations by the Dragonfly Society of the Americas.  
This is the list to use as a reference for 2002

## CALOPTERYGIDAE — BROAD-WINGED DAMSELS

*Calopteryx aequabilis* Say — River Jewelwing  
*Calopteryx maculata* (Beauvois) — Ebony Jewelwing  
*Hetaerina americana* (Fabricius) — American Rubyspot  
*Hetaerina titia* (Drury) — Smoky Rubyspot

## LESTIDAE — SPREADWINGS

*Lestes congener* Hagen — Spotted Spreadwing  
*Lestes disjunctus disjunctus* Selys — Common Spreadwing  
*Lestes disjunctus australis* Walker — Common Spreadwing,  
southern subspecies  
*Lestes dryas* Kirby — Emerald Spreadwing  
*Lestes eurinus* Say — Amber-winged Spreadwing  
*Lestes forcipatus* Rambur — Sweetflag Spreadwing  
*Lestes inaequalis* Walsh — Elegant Spreadwing  
*Lestes rectangularis* Say — Slender Spreadwing  
*Lestes unguiculatus* Hagen — Lyre-tipped Spreadwing  
*Lestes vigilax* Hagen — Swamp Spreadwing

## COENAGRIONIDAE — POND DAMSELS

*Amphiagrion saucium* (Burmeister) — Eastern Red Damsel  
*Argia apicalis* (Say) — Blue-fronted Dancer  
*Argia fumipennis violacea* (Hagen) — Variable Dancer  
*Argia moesta* (Hagen) — Powdered Dancer  
*Argia sedula* (Hagen) — Blue-ringed Dancer  
*Argia tibialis* (Rambur) — Blue-tipped Dancer  
*Chromagrion conditum* (Selys) — Aurora Damsel  
*Coenagrion interrogatum* (Selys) — Subarctic Bluet  
*Coenagrion resolutum* (Selys) — Taiga Bluet  
*Enallagma anna* Williamson — River Bluet  
*Enallagma antennatum* (Say) — Rainbow Bluet  
*Enallagma aspersum* (Hagen) — Azure Bluet  
*Enallagma basidens* Calvert — Double-striped Bluet  
*Enallagma boreale* Selys — Boreal Bluet  
*Enallagma carunculatum* Morse — Tule Bluet  
*Enallagma civile* (Hagen) — Familiar Bluet  
*Enallagma cyathigerum* (Charpentier) — Northern Bluet  
*Enallagma cyathigerum vernale* Gloyd — Vernal Bluet  
*Enallagma divagans* Selys — Turquoise Bluet  
*Enallagma ebrium* (Hagen) — Marsh Bluet  
*Enallagma exulans* (Hagen) — Stream Bluet  
*Enallagma geminatum* Kellicott — Skimming Bluet  
*Enallagma hageni* (Walsh) — Hagen's Bluet  
*Enallagma signatum* (Hagen) — Orange Bluet  
*Enallagma traviatum westfalli* Donnelly — Slender Bluet  
*Enallagma vesperum* Calvert — Vesper Bluet  
*Ischnura kellicotti* Williamson — Lilypad Forktail  
*Ischnura posita* (Hagen) — Fragile Forktail  
*Ischnura verticalis* (Say) — Eastern Forktail  
*Nehalennia gracilis* Morse — Sphagnum Sprite  
*Nehalennia irene* (Hagen) — Sedge Sprite

## PETALURIDAE – PETALTAILS

*Tachopteryx thoreyi* (Hagen) — Gray Petaltail

## AESHNIDAE – DARNERS

*Aeshna canadensis* Walker — Canada Darner  
*Aeshna clepsydra* Say — Mottled Darner  
*Aeshna constricta* Say — Lance-tipped Darner  
*Aeshna eremita* Scudder — Lake Darner  
*Aeshna interrupta* Walker — Variable Darner  
*Aeshna juncea* (Linnaeus) — Sedge Darner  
*Aeshna mutata* Hagen — Spatterdock Darner  
*Aeshna sitchensis* Hagen — Zigzag Darner  
*Aeshna subarctica* Walker — Subarctic Darner  
*Aeshna tuberculifera* Walker — Black-tipped Darner  
*Aeshna umbrosa* Walker — Shadow Darner  
*Aeshna verticalis* Hagen — Green-striped Darner  
*Anax junius* (Drury) — Common Green Darner  
*Anax longipes* Hagen — Comet Darner  
*Basiaeschna janata* (Say) — Springtime Darner  
*Boyeria grafiana* Williamson — Ocellated Darner  
*Boyeria vinosa* (Say) — Fawn Darner  
*Epiaeschna heros* (Fabricius) — Swamp Darner  
*Gomphaeschna furcillata* (Say) — Harlequin Darner  
*Nasiaeschna pentacantha* (Rambur) — Cyrano Darner

## GOMPHIDAE – CLUBTAILS

*Arigomphus cornutus* (Tough) — Horned Clubtail  
*Arigomphus furcifer* (Hagen in Selys) — Lilypad Clubtail  
*Arigomphus submedianus* (Williamson) — Jade Clubtail  
*Arigomphus villosipes* (Selys) — Unicorn Clubtail  
*Dromogomphus spinosus* Selys — Black-shouldered Spinyleg  
*Gomphus exilis* Selys — Lancet Clubtail  
*Gomphus fraternus* (Say) — Midland Clubtail  
*Gomphus graslinellus* Walsh — Pronghorn Clubtail  
*Gomphus lineatifrons* (Calvert) — Splendid Clubtail  
*Gomphus lividus* Selys — Ashy Clubtail  
*Gomphus quadricolor* Walsh — Rapids Clubtail  
*Gomphus spicatus* Hagen — Dusky Clubtail  
*Gomphus vastus* (Walsh) — Cobra Clubtail  
*Gomphus ventricosus* (Walsh) — Skillet Clubtail  
*Gomphus viridifrons* Hine — Green-faced Clubtail  
*Hagenius brevistylus* Selys — Dragonhunter  
*Hylogomphus adelphus* (Selys) — Moustached Clubtail  
*Ophiogomphus anomalus* Harvey — Extra-striped Snaketail  
*Ophiogomphus carolus* Needham — Riffle Snaketail  
*Ophiogomphus colubrinus* Selys — Boreal Snaketail  
*Ophiogomphus howei* Bromley — Pygmy Snaketail  
*Ophiogomphus rupinsulensis* (Walsh) — Rusty Snaketail  
*Progomphus obscurus* (Rambur) — Common Sanddragon  
*Stylogomphus albistylus* (Hagen) — Least Clubtail  
*Stylurus annicola* (Walsh) — Riverine Clubtail  
*Stylurus laurae* Williamson — Laura's Clubtail  
*Stylurus notatus* (Rambur) — Elusive Clubtail  
*Stylurus plagiatus* (Selys) — Russet-tipped Clubtail

*Stylurus scudderi* (Selys) — Zebra Clubtail  
*Stylurus spiniceps* (Walsh) — Arrow Clubtail

#### CORDULEGASTRIDAE — SPIKETAILS

*Cordulegaster bilineata* (Carle) — Brown Spiketail  
*Cordulegaster diastatops* (Selys) — Delta-spotted Spiketail  
*Cordulegaster erronea* Hagen — Tiger Spiketail  
*Cordulegaster maculata* Selys — Twin-spotted Spiketail  
*Cordulegaster obliqua* (Say) — Arrowhead Spiketail

#### MACROMIIDAE — CRUISERS

*Didymops transversa* (Say) — Stream Cruiser  
*Macromia illinoensis* Walsh — Illinois River Cruiser  
*Macromia taeniolata* Rambur — Royal River Cruiser

#### CORDULIIDAE — EMERALDS

*Cordulia shurtleffi* Scudder — American Emerald  
*Dorocordulia libera* (Selys) — Racket-tailed Emerald  
*Epitheca canis* (McLachlan) — Beaverpond Baskettail  
*Epitheca cynosura* (Say) — Common Baskettail  
*Epitheca princeps* Hagen — Prince Baskettail  
*Epitheca spinigera* (Selys) — Spiny Baskettail  
*Neurocordulia yamaskanensis* (Provancher) — Stygian Shadowdragon  
*Somatochlora cingulata* (Selys) — Lake Emerald  
*Somatochlora elongata* (Scudder) — Ski-tailed Emerald  
*Somatochlora forcipata* (Scudder) — Forcinate Emerald  
*Somatochlora franklini* (Selys) — Delicate Emerald  
*Somatochlora hineana* Williamson — Hine's Emerald  
*Somatochlora incurvata* Walker — Incurvate Emerald  
*Somatochlora kennedyi* Walker — Kennedy's Emerald  
*Somatochlora linearis* (Hagen) — Mocha Emerald  
*Somatochlora minor* Calvert in Harvey — Ocellated Emerald  
*Somatochlora tenebrosa* (Say) — Clamp-tipped Emerald  
*Somatochlora walshii* (Scudder) — Brush-tipped Emerald  
*Somatochlora williamsoni* Walker — Williamson's Emerald  
*Williamsonia fletcheri* Williamson — Ebony Boghaunter  
*Williamsonia lintneri* (Hagen) — Ringed Boghaunter

#### LIBELLULIDAE — SKIMMERS

*Celithemis elisa* (Hagen) — Calico Pennant  
*Celithemis eponina* (Drury) — Halloween Pennant  
*Celithemis fasciata* Kirby — Banded Pennant  
*Erythemis simplicicollis* (Say) — Eastern Pondhawk  
*Ladona julia* Uhler — Chalk-fronted Corporal  
*Leucorrhinia frigida* Hagen — Frosted Whiteface  
*Leucorrhinia glacialis* Hagen — Crimson-ringed Whiteface  
*Leucorrhinia hudsonica* (Selys) — Hudsonian Whiteface  
*Leucorrhinia intacta* (Hagen) — Dot-tailed Whiteface  
*Leucorrhinia proxima* Calvert — Red-waisted Whiteface  
*Libellula cyanea* Fabricius — Spangled Skimmer  
*Libellula incesta* Hagen — Slaty Skimmer  
*Libellula luctuosa* Burmeister — Widow Skimmer  
*Libellula pulchella* Drury — Twelve-spotted Skimmer  
*Libellula quadrimaculata* Linnaeus — Four-spotted Skimmer  
*Libellula semifasciata* Burmeister — Painted Skimmer  
*Libellula vibrans* Fabricius — Great Blue Skimmer  
*Nannothemis bella* (Uhler) — Elfin Skimmer  
*Pachydiplax longipennis* (Burmeister) — Blue Dasher

*Pantala flavescens* (Fabricius) — Wandering Glider  
*Pantala hymenaea* (Say) — Spot-winged Glider  
*Perithemis tenera* (Say) — Eastern Amberwing  
*Plathemis lydia* Drury — Common Whitetail  
*Sympetrum ambiguum* (Rambur) — Blue-faced Meadowhawk  
*Sympetrum corruptum* (Hagen) — Variegated Meadowhawk  
*Sympetrum costiferum* (Hagen) — Saffron-winged Meadowhawk  
*Sympetrum danae* (Sulzer) — Black Meadowhawk  
*Sympetrum internum* Montgomery — Cherry-faced Meadowhawk  
*Sympetrum obtrusum* (Hagen) — White-faced Meadowhawk  
*Sympetrum rubicundulum* (Say) — Ruby Meadowhawk  
*Sympetrum semicinctum* (Say) — Band-winged Meadowhawk  
*Sympetrum vicinum* (Hagen) — Yellow-legged Meadowhawk  
*Tramea carolina* (Linnaeus) — Carolina Saddlebags  
*Tramea lacerata* Hagen — Black Saddlebags  
*Tramea onusta* Hagen — Red Saddlebags

#### Recommended References

- Corbet, P.S. 1999. Dragonflies. Behavior and Ecology of Odonata. Cornell University Press, Ithaca, NY. 829 pp. [THE BOOK for anyone interested in Odonata biology!]  
Curry, J.R. 2001. Dragonflies of Indiana. Indiana Academy of Science, Indianapolis. 303 pp. [An excellent book!]  
Dunkle, S.W. 2000. Dragonflies Through Binoculars. Oxford University Press, New York. 266 pp.  
Kormondy, E.J. 1958. A catalogue of the Odonata of Michigan. Misc. Pub. Mus. Zool. Univ. Michigan. 104:1—43.  
Legler, K., D. Legler & D. Westover. 1998. Color Guide to Common Dragonflies of Wisconsin. 64 pp. [Privately published -- can be purchased for \$18.95 from the author: Karl Legler, 429 Franklin Street, Sauk City, WI 53583.]  
Needham, J.G., M.J. Westfall, Jr. & M.L. May. 2000. A manual of the dragonflies of North America. Scientific Publishers, FL. Xvii + 940 pp. ISBN 0—945417—94—2  
O'Brien, M.F., editor, 1997. Michigan Odonata Survey Collector's Handbook. Michigan Odonata Survey, Univ. of Michigan. 72 pp. (a new version is due in 2002).  
Paulson, D.R. and S.W. Dunkle. 1999. A checklist of North American Odonata. Slater Museum of Natural History, Univ. of Puget Sound. Occ. Paper No. 56. 86 pp.  
Silsby, J. 2001. Dragonflies of the World. Smithsonian Institution Press, Washington. 216 pp.  
Walker, E.M. 1953. The Odonata of Canada and Alaska. Vol. 1, Part I: general; Part II: Zygoptera — damselflies. Univ. Toronto Press, Toronto. p. 1—292.  
Walker, E.M. 1958. The Odonata of Canada and Alaska. Vol. 2: Anisoptera. Univ. Toronto Press, Toronto. p. 1—318.  
Walker, E.M. and P.S. Corbet 1975. The Odonata of Canada and Alaska. Vol. 3: Part 2, the Anisoptera — Three Families. Univ. Toronto Press, Toronto. p. 1—307  
Westfall, M. J., Jr. and M. L. May. 1996. Damselflies of North America. Scientific Publishers, Gainesville, FL. 650 pp.



## Some Dragonflying in Suriname, South America

Stephen B. Ross

First off, I wouldn't go to Suriname just to be looking for dragonflies. Even when deliberately searching for them, there weren't many to be found. However, where they were, there were usually a lot of one species and a few of others. This may have been due to the season and it may have been the habitats our tour visited. Here, I was rather limited in choice of locations as I was on a Victor Emanuel Nature Tour – which means big time birding and not much else. When the birding was slow or I had my chance at the bird while others tried their turn in the scope, I was looking for dragons and butterflies. Another reason for so few dragonflies may have been the water, which I'll get to in a minute.

Our tour group arrived in Paramaribo, Suriname late on January 7 and rolled out of bed on the 8<sup>th</sup> at some ungodly birding hour like 5:30 am or so to stand on the edge of a road in the dark listening to Limpkins call in the nearby marsh and watch some little bats whiz by in the twilight. This site proved to have too much traffic so we moved on to a nearby two-track; perfect dragonfly territory, damp weedy edge, sunny dry roadside, and nearby ponds. We were on the Suriname coastal plain only a few feet above sea level and near the brackish and tannin rich Suriname River, not really good breeding waters. We spent a good deal of the morning here and I was able to pick up on several dragonflies. Unfortunately for photography, I found my new digital camera could not focus on the small size of even the larger dragonflies and thus focused on leaves in the background – nor were the dragons particularly cooperative. I did find several, though. One appeared to be something of a red version of our Blue Dasher. Another was along the line of a clubtail/darner mix. There were several of these flying around and a distinctly Aeshnid-like monster was working its way through our legs for quite a while but would not come to rest. The common species here almost certainly was the Wandering Glider (*Pantala flavescens*); it was certainly a Pantala. The Wandering Glider ranges from Michigan all the way to Brazil. Oddly there were no damselfly at all here.

After a lunch back at the hotel and in the afternoon heat, we visited a location near the seacoast. We did an hour or two of birding along a tidal drainage ditch about a half-mile from the ocean. This was rather open country along a good paved road. Not particularly prime dragonfly habitat but there were more Wandering Gliders and a black-bodied libellid that was not the least bit interested in being photographed despite several attempts venturing into the chigger infested roadside grasses.

On the 9<sup>th</sup>, we headed south (it's weird to have main water body to the north instead of east or west and north flowing rivers; several of us were disoriented for several days) into the next to of the three main biogeographic zones of Suriname. This is the White Sand Plains, a band of white sand soil about 10 to 50 miles wide across Suriname just back from the coastal mud and mangroves. As the sun burned off the morning fog, we found ourselves in open grassy-sedgy fields edged by Mariche Palms (a characteristic plant of the area) and various impenetrable woodlots. There was one peculiar damselfly that I flushed from the grass but quickly lost sight of in the weeds and couldn't find again. It was about as colorful as a Rainbow Bluet but had a sawed-off shape. More Pantalas were working the fields and a couple of the big aeshnids also. This area also held many small ponds that I can best describe as small inter-dunal pools one might find in Michigan. These pools were also heavily tannic and the surrounding soil was acid for there were several obvious sundews on the sand and some bladderworts (*Utricularia* ?) flowering right out of the moist sand. The pools were coffee brown and filled with weeds that appeared to be in the same families that we'd expect in such pools in Michigan.

After several hours of birding this place and other several roadside stops, one stop at which there was one woodland dragonfly very similar to an Eastern Amberwing in shape, we moved on to the third biogeographic zone; the lowland tropical forest. This area is called the Brownsberg Nature Park and is preserved to be the rainforest catchment for the huge hydroelectric dam lake below the park. Despite being at about 1500 feet, this was still lowland forest and said to be still virgin; very impressive. Numerous mud puddles were in the roads in the preserve, about which there were a number of butterflies and a few dragonflies. At one puddle, mostly in shade, were several spiketail or cruiser-like shaped and colored dragonflies that were not interested in cooperating either. I followed them around while everyone else was birding but they were quite nervous and I barely got a good look. In some of the damper sunny glades of the virgin woods, there were several bluet-like and dancier-like species, but the woods were characteristically skimpy for Odes.

That effectively ended the dragonflying in Suriname except for one location near the Saramacca River on our way to the Coppename River. Along the roadside edge, in a small riverside village, there were a number more of the Wandering Gliders, one of which I came very close to finger catching. Both the Saramacca and Coppename Rivers are blackwater rivers like what drain the bogs of the Upper Peninsula and not particularly conducive to life in general (and the birding along them was thin also).

This trip was with Victor Emanuel Nature Tours (800-328-8368, [www.ventbird.com](http://www.ventbird.com)) and is offered next year from January 6-17. The tour was fantastic, well paced,

laid out and this group was the best one I have traveled with in my ten or so trips. It had enough discomfort to make it interesting but not enough to make it miserable. Plan to sweat and walk a lot. Our accommodations ranged from good hotel to scout camp-like buildings to sleeping in the open air (under a roof) in hammocks. Food was good but a bit repetitive. All our water was bottled (there may actually be a reason for that ridiculous commodity after all) as drinking tap water is not safe anywhere in Suriname. If interested in this BIRDING trip (if you are interested in other things, you're pretty much on your own, though the local guides, who were excellent, were reasonably well versed in plants, mammals and some other animals). We saw about a dozen snakes, including the Fer-de-Lance, which is an outstanding number for a trip to the tropics, some dozen species of mammals, and well over 300 species of birds.

## Join the Michigan 2002 Bioblitz

### John Legge

The Nature Conservancy, West Michigan Office, 456 Plymouth Ave. NE, Suite A, Grand Rapids, MI 49505. E-mail: jlegge@tnc.org

The Michigan Chapter of The Nature Conservancy is sponsoring a "Bioblitz" at the 4,500-acre Camp Owasippe in the Blue Lakes region of Muskegon County, Michigan. Over the course of two 3-day periods this spring and summer, teams of ecologists, natural resource professionals, and highly qualified amateurs will conduct targeted, rapid, and detailed field inventories in areas likely to support high quality plant and animal populations, exemplary natural communities, and their associated ecological processes. We will focus on specific areas of Camp Owasippe that have been prioritized for field work through map and aerial photograph landscape analysis.

**Goals and Purpose.** Targets for inventories will include high quality, representative and restorable oak-pine barrens, dry sand prairies, coastal plain marshes, and other areas likely to support biodiversity "hotspots" and wildlife habitat. Although we are most interested in locating populations of rare reptiles, plants, and insects (particularly lepidopterans associated with prairie and barrens communities), we are very interested in documenting as many species as possible from all taxonomic groups. The long-range purpose for the *Bioblitz* is to provide much-needed baseline data on the natural features of Camp Owasippe, so that the Nature Conservancy can advise and assist the Camp in managing their lands to benefit biodiversity. (TNC does not own the Camp.)

**Where.** Camp Owasippe covers 4,500 acres in north-central Muskegon County, Michigan. It borders Big Blue Lake and the White River as well as the Manistee National Forest. The camp includes large areas of white oak-white pine forest and barrens and numerous small wetlands. Many of the latter appear to have the characteristics of coastal plain marshes. There are also stretches of other wetlands and forest communities.

**When.** Two Bioblitzes are planned: 16-18 May 2002 (Thursday -- Saturday) and 18-20 August 2002 (Sunday -- Tuesday). Participants may choose to come for only part of a Blitz.

**Housing.** We anticipate having cabins available for participants, and hope to be able to accommodate all volunteers. More details to follow.

**Food Provided:** All food will be provided during the Blitzes.

**You Provide.** Your incredibly valuable time, expertise, and knowledge. Of course we'd love for you to come for both 3-day events, but we would appreciate your assistance for even a single day. We are counting on you to help us collect field data, including species lists, site descriptions, and natural resource data for our site conservation plans and long-term management and monitoring. We will provide field data forms and protocols, but we are also relying on your expertise to help us in this regard.

**What you do next.** RSVP: E-mail John Legge (jlegge@tnc.org), or call John Legge or Lara Kramarz (616-776-0230). Whichever way you choose, please let us know which days you can attend. We will follow up with more details.

**Additional Information.** Any specimens collected during the Bioblitzes may remain with the collector, subject, of course, to any Michigan Department of Natural Resources permitting requirements for state-listed species. Specimens that are federally protected, such as the endangered *Lycaeides melissa samuelis*, cannot be collected.

We would welcome formal participation by the Michigan Lepidoptera Survey and the Michigan Odonata Survey.



## Williamsonia



A quarterly newsletter of the  
Michigan Odonata Survey  
Vol. 6, No. 1, Feb., 2001

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If you like *Williamsonia*, and would like to contribute towards its operating expenses, make your \$10/year contribution payable to the University of Michigan Museum of Zoology.

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