



# Williamsonia



Vol. 4, No. 2

Spring, 2000

A publication of the Michigan Odonata Survey

## Special Beginner's Issue!

This issue of *Williamsonia* is aimed at getting you out in the field, exploring new sites, watching for new arrivals, taking notes, collecting, etc. There are a lot of "new" people that have joined the MOS in the past few months, and I have made this issue to be as full of information for new dragonflies as possible.

Work does progress on the "Handbook." Ethan Bright is making new maps using ArcView that will supplement the spreadsheet listing of county records. I have been busily updating a lot of facets of the newer version, and expect to have a near-final copy ready by the end of May at the latest. No price has yet been set for the new MOS Surveyor's Handbook, but I expect it will be approximately \$10. It is intended to be a useful reference for anyone working with Odonata, not just Michigan people. With that in mind, the chapters on collecting, preservation and storage will be extensive. I had hoped for getting more specific keys done for the Zygoptera, but that will have to wait until I have more time.

So, you have decided to help out with the Michigan Odonata Survey. Now, you are probably wondering, "What CAN I do?" First of all, the MOS is a volunteer-based organization, so I can't really TELL you what to do, but I can ASK if anyone is interested in doing specific tasks or collecting in certain places. Don't be scared off by the latin names of these critters, or by collecting procedures. Everyone has to start somewhere, and some of our most ardent state record-producers are relative newcomers to Odonata, having only 2 full seasons of collecting under their belts.

Your eyes are your best piece of equipment, so use them to observe the species found locally. Using a guide such as the one on Wisconsin Dragonflies, start to familiarize yourself with the local fauna. A pair of ultra-close focusing binoculars with 8 or 10x magnification are ideal for watching. The idea here is to get acquainted with the LOCAL fauna before you start wildly swinging a net (though nearly everyone I know has wildly swung a net on occasion). Start out in early May, and watch the progression of species at a local pond or marsh. At first, nearly everything appears to look alike, but that's because in May,

you are most likely to find 2 or 3 species of *Epitheca* flying at the same time and place, depending on where you are located. Next, you are likely to see a number of *Gomphus spicatus*, a widely-distributed and common club-tail. Although in the case of *G. spicatus*, it does not really have a "club." Also common in the spring is *Ladona julia*, which is often seen "basking" in the sun along the road and on rocks. You are likely to see the damselfly *Chromagrion conditum* (Aurora damselfly is a good name) if you find a slough or backwater along a stream, *Enallagma boreale* in almost any pond, and *Ischnura verticalis* nearly everywhere! The spring damselfly, *Basiaeschna janata* is also widespread, and is often found near streams. Don't forget to watch for those incoming *Anax junius* adults as they seek out oviposition sites while travelling North in the spring.

Of course, there are other species out there at the same time. The above examples are what the typical beginner will see in the field. As the season progresses, the diversity literally explodes, and identification becomes more complex. Take time to learn the names associated with the species you are seeing out there. Look at web sites, too, as many post a large number of excellent photos that help with identification.

Okay, so you are itching to get out there to collect, too. It doesn't take too much equipment, but it does take practice, as you'll find out when you are humiliated by an insect with a brain mass infinitesimally smaller than yours. With nearly 360° vision and 4 independently-moveable wings, dragonflies can fly upside down, sideways and backwards. Station yourself at a spot where the dragonflies are flying past you, and swing the net from behind the dragonfly. That way, you are less likely to sever the head as is often the case with a direct frontal assault. The dragonfly also is less likely to see the net in time for it to make an escape.



Illustration by John Megahan

Now that you have netted a dragonfly or damselfly, you'll want to place it in a glassine envelope. The MOS provides them free of charge to people collecting for the survey. Just contact me and I'll send out a supply to you. I strongly urge anyone that will be collecting adults to read the MOS web pages for instructions on using acetone to kill and preserve the adults. A plastic or metal Band-Aid® box is a good container for keeping the enveloped specimens intact while in the field. Make sure you have adequately labelled the envelopes with locality data or have coded them so that the numbers correspond to notes in your field notebook. You are probably thinking, "Field Notebook!!! What the heck is that? This is starting to get complex!" Well, calm down. A field notebook is something that everyone should jot down any observations while in the field.

Memories are faulty, and using a notebook to record your sightings and collecting activities is the best way to keep a permanent record. You can buy small blank books (often on sale at Borders) for less than \$6. The bound types with hard covers are much better than spiral-bound notebooks. Use pencil or a "Pigma-Pen" or other ink that does not run if wetted. The MOS can also supply field notebooks for anyone collecting for the survey. Record the following information where you collect:

Date: MICH: County, Locality, Twp., Rge., Sec. (if known), specific information on collection site with type of habitat, time, weather conditions, how you collected the specimens, other species seen, and if you are collecting aquatic samples, any information on water quality is good. After a while, keeping a field notebook will become second nature.

There are a lot of little tips and methods to pass along, and those will be in the forthcoming handbook, and many are also on the web site. Most people getting started with dragonflies need some field guides. I have included a list of suppliers as well as publications currently in print and where to obtain them. The Legler book on Dragonflies of Wisconsin is the primary source for most people in the Great lakes region, and I recommend that you purchase a copy if you don't already have one.

## Entomological Suppliers Index

**Acorn Naturalists** -- 18821 East 17th St, #103, PO Box 2423, Tustin, CA 92781-2423. Phone:800-422-8886. Acorn Naturalists has an extensive catalog of items for the classroom as well as the field. Great resource for K-12.

**Ben Meadows Co.** - 3589 Broad St., Atlanta, GA 30341. Phone: 800-241-6401. [www.benmeadows.com](http://www.benmeadows.com). Ben Meadows has the Rite-in-the-Rain® weatherproof field notebooks, as well as many useful items for fieldwork.

**Benz Microscope Optics Center**-- 749 Airport Blvd. S1A, Ann Arbor, MI 48107. Phone:313-994-3880; Fax: 313-994-9090 Excellent selection of low-cost microscopes for hobbyists, schools, and professionals.

**BioQuip Products**-- 17803 LaSalle Avenue, Gardena, CA 90248-3602. Phone: 310-324-0620; Fax: 310-324-7931 Entomological & Botanical equipment, books, software - the best!

**Carolina Biological Supply**-- 2700 York Road, Burlington, NC 27215. Phone: 800-334-5551; Fax: 919-584-3399 full line of living and preserved biological materials, supplies, etc.

**Cornell University Press**-- 124 Roberts Pl., Ithaca, NY 14850. Phone: 607-257-7000; Fax: 607-257-3552, A good selection of entomology texts, including Corbet's 1999 big book.

**Dragonfly Society of the Americas** -- c/o T. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903. The DSA publishes *Argia* and the *Bulletin of American Odonatology*.

**Entomological Information Services** -- P.O. Box 4350 Rockville, MD 20849-4350. Phone: 301-762-2612. Publisher of *Nomina Insecta Nearctica* series, as well as offering other information-based services to the entomological community. E-mail: [eis@ix.netcom.com](mailto:eis@ix.netcom.com)

**Forestry Suppliers, Inc.**-- P.O. Box 8397, Jackson, MS 39284-8397. Phone: 601-354-3565; Fax: 800-543-4203. Full catalog of field supplies & equipment

**Gilbert Insect Light Traps**-- 5611 Krueger Drive, Jonesboro, AR 72401. Phone: 800-643-0400; Fax: 501-932-5609. IPM supplies, insect traps

**Ianni Butterfly Enterprises**-- P.O. Box 81171, Cleveland, OH 44181. Phone: 216-888-2310. Best source for Imperial and Elephant brand insect pins; insect specimens, too.

**International Odonata Research Institute (IORI)**-- IORI, c/o Division of Plant Industry, P.O. Box 147100, Gainesville, FL 31614. email: [iori@afn.org](mailto:iori@afn.org),

IORI sells many Odonata books as well as 3x5 clear envelopes for specimen storage. Check out their web site at <http://www.afn.org/~iori/>

**John Johnson Books**-- 301 Murphy Hill Road, North bennington, VT 05257-9400. 802-442-6738. email: [johnsbks@together.net](mailto:johnsbks@together.net) -- natural history bookseller

**LANIUS Software** -- 1470 Creekside Drive #23. Walnut Creek, CA 94596. Phone: 510-932-4201. LANIUS sells database software for birders and also Odonata enthusiasts. Expert database consultation services also available.

**Museum of Zoology Publications Office**-- 1109 Geddes Avenue, Ann Arbor, MI 48109-1079. Phone: 313-764-0476; Fax: 313-763-4080. Sells Occasional Papers and Miscellaneous Publications of the Univ. of Michigan Museum of Zoology, incl. back issues.

**Pterostigma** - Quality Insect Collecting Nets — Molly Hukari, 3618 N. Mason, Tacoma, WA 98407; mhukari@sprynet.com; 253-759-3728.

**University Products**-- P.O. Box 101, 517 Main St., Holyoke, MA 01041. Phone: 800-532-1912; Fax: 413-532-9281. archival supplies, label paper; source for Resistall-treated ledger paper

**Ward's Natural Science Establishment**-- P.O. Box 92912, Rochester, NY 14692-9012. Phone: 716-359-2502. all kinds of supplies for biology/entomology

**Wildlife Supply Company**-- 301 Cass St., Saginaw, MI 48602. Phone: 517-799-8100; Fax: 517-799-8115. Aquatic collecting equipment & supplies.

**William C. Brown Publishers**-- 2460 Kerper Blvd., P.O. Box 539, Dubuque, IA 52001. Phone: 319-589-2954; Fax: 319-589-2955. Videos, software, CD-ROM for biology, etc.

## PUBLICATIONS SOURCES

### Color Guide To Common Dragonflies of Wisconsin

This full color illustrated guide to the Wisconsin dragonflies is a book that all MOS participants should purchase. The photos are excellent, and the book covers much of the fauna that occurs in Michigan. If you have not yet obtained a copy, here is the pertinent information:

Color guide to Common Dragonflies of Wisconsin - \$19.95 (make check out to Karl Legler). Send order to: Karl Legler, 429 Franklin Street, Sauk City, WI 53583. email: karlndot@bankpds.com



### **DAMSELFLIES OF NORTH AMERICA**

by Minter J. Westfall, Jr., and Michael L. May, July 1996. 650pp. Scientific Publishers, ISBN: 0-945417-94-4.

The first monographic treatment of the smaller Odonata, the damselflies, of North America, including northern Mexico and the West Indies, covers 161 species. Keys to species and precise descriptions allow identification of all adults and larvae of these important aquatic insects. Written by two well-known experts, this work is the companion volume to a similar book on the dragonflies of North America, by Needham and Westfall. Numerous illustrations are included, plus 8 pages of color plates. The work includes a checklist to species, an extensive bibliography, glossary and index. Price \$69.50 Add shipping and handling (Library rate) \$5.00 for US addresses,

Canada \$12.50\*, \$7.50 for all others. All funds are US and must be PAID IN ADVANCE by check or money order made payable to "International Odonata Research Institute" or I.O.R.I. Shipment will be within a week of the receipt of your order. All profits will go to the International Odonata Research Institute.. Send Order to: I.O.R.I. c/o Division of Plant Industry, P.O. Box 147100, Gainesville, FL 32614-7100 USA Attn: Bill Mauffray

### **Dunkle's Florida Guides:**

Dunkle, Sidney W (1989) "Dragonflies of the Florida Peninsula, Bermuda and the Bahamas", x,155p. Scientific Publishers Nature Guide # 1. Gainesville FL. ISBN 0-945417-23-3

Dunkle, Sidney W (1990) "Damselflies of Florida, Bermuda and the Bahamas", x,148p. Scientific Publishers Nature Guide # 3. Gainesville FL. (softback) ISBN 0-945417-85-3

### **Price \$14.95 each**

Add shipping and handling (Library rate) \$3.00, \$5.00 for pair. All funds are US and must be PAID IN ADVANCE by check or money order made payable to "International Odonata Research Institute" or I.O.R.I. Shipment will be within a week of the receipt of your order. All profits will go to the International Odonata Research Institute..

Send Order to: I.O.R.I. % Division of Plant Industry, P.O. Box 147100, Gainesville, FL 32614-7100 USA Attn: Bill Mauffray

### **Toronto Entomologists Association:**

1. The North American Dragonflies of the Genus *Somatochlora* by E.M. Walker (1925) (In Canada-\$55 Can. (includes gst and S&H via surface post); In USA \$43 US (includes S&H via surface post; add \$3 US for airmail).
2. The North American Dragonflies of the Genus *Aeshna* by E.M. Walker (1912) (with colour plates) (In Canada-\$65 Can. (includes gst and S&H via surface post); In USA \$50 US (includes S&H via surface post; add \$3 US for airmail).
3. 3-volume set "The Odonata of Canada & Alaska by Walker & Corbet"; cost for 3-vol set: In Canada- \$196 Can. (includes gst and S&H via surface post); In USA \$145 US (includes S&H via surface post; add \$5 US for airmail).

These are NOT photocopies but are high quality scans by University of Toronto Press - the interior pages are on acid-free paper; the cover is a deluxe-quality hardcover but is not the same as the original. Orders must be PREPAID (personal cheques accepted for US or Canadian orders; money or postal orders only for others). Please send your order (please be sure to specify which book(s) and to give your address!) to T.E.A. c/o Alan Hanks, 34 Seaton Drive, Aurora, Ontario Canada L4G 2K1, (905) 727-6993; or e-mail inquiries to nmg.vanderpoorten@sympatico.ca

### **Pocket Flora Press- A Great Lakes Wetland Flora.**

Chadde, Steve W. 1998. A Great Lakes Wetland Flora. Pocketflora Press, Calumet, MI 569 pp. \$44.95. May be obtained via mail from PocketFlora Press, RR1 Box 206A, Calumet MI 49913; email:pocketflora@yahoo.com; phone: (906) 296-0506.

### **Checklist of North American Odonata**

A Checklist of North American Odonata, by D. R. Paulson and S. W. Dunkle. This 86-page document includes all 435 species presently recorded from north of the Mexican-US border, with

scientific and English names, original citations, etymologies of both scientific and English names, type localities, and a brief description of distribution. Complete literature citations are included for all original descriptions. This publication is available from the museum for \$7.50, which includes postage and handling. If you want a copy, send a check to Dennis Paulson made out to the University of Puget Sound.

Dennis Paulson, Director  
Slater Museum of Natural History  
University of Puget Sound  
Tacoma, WA 98416  
<http://www.ups.edu/biology/museum/museum.html>

### **Dragonflies of Washington**

Dennis Paulson's 32-page booklet is a full-color treatment of the 76 species found in the state of Washington, and covers damselflies and dragons. The booklet does a nice job with introducing terms and illustrating anatomy. Many species are shown in excellent photos. The guide does introduce you to the different families and provides diagnostic features of the taxa. price - \$6.50, and it's a good addition to any Odonata enthusiast's library. To purchase a copy, make your check out to the Seattle Audubon Society, 8050 35th Avenue NE, Seattle, WA 98115 (ph: 206-523-4483). Add \$1.00 for postage!

**The Dragonflies and Damselflies of Algonquin Provincial Park**, by Matt Holder. 1996. Algonquin Park Tech. Bull. No. 11. A nice colorful guide -- really quite pertinent for the UP. Order from: The Friends of Algonquin Park, P.O. Box 248, Whitney, Ontario K0J 2M0, Canada.

### **Dragonflies and Damselflies of Cape Cod**

This little book has become a legend, as it has introduced many newcomers to the world of Odonata. It's still available, in a second edition, dated 1997. Order Dragonflies and Damselflies of Cape Cod, by Virginia Carpenter, The Cape Cod Museum of Natural History Series No. 4, 97 pp., \$10.95, from: The Cape Cod Museum of Natural History, Box 1710, 869 Route 6A, Brewster, MA 02631. Call for shipping/handling, credit card at 508-896-3867.

### **Checklist of Kansas Dragonflies/ Damselflies**

These colorful 16-page publications by Roy Beckemeyer and Don Huggins are still very useful for us Great Lakes folks, since the photos feature some of our species.

Checklist of Kansas Dragonflies, The Kansas School Naturalist, Vol. 43 No. 2

Checklist of Kansas Damselflies, The Kansas School Naturalist, Vol. 44 No. 1

It says that the publications are free, but I suggest sending \$5.00 to cover the cost of them when you ask for a copy from: Kansas School Naturalist, Box 4050, Emporia State University, 1200 Commercial Street, Emporia, KS 66801-5087

<NOT YET OUT!>

**Dragonflies Through Binoculars** - Sidney W. Dunkle, expected publication date, May, 2000. Princeton Univ. Press. This book promises to fill the vacant niche on our shelves and in our backpacks. I expect this book to be a most useful and welcome addition to any naturalist's collection. You can buy via Amazon.com, or through the IORI website as listed above.

## **GLIDERS ON THE MOVE**

Mark O'Brien

1999 had an amazing number of *Tramea* and *Pantala* sightings - it seemed that whenever I went by any pond or open field, I would see either a wandering glider or a mantled glider. These two genera are often associated with semi-permanent ponds and human-made pools resulting from excavations or impoundments. The larvae of both genera develop quite rapidly under ideal conditions, and may complete their larval stage in less than 60 days. Therefore, it is quite conceivable that an early migrant could produce two generations in a single season. With the early warm springs we have had the past few years, it looks like this could be one cause for the above-average numbers of the gliders. One could also argue that we are seeing more because more people are looking, and that certainly may be correct. I also think that human influences play a role, too. The new housing and business developments usually require retention ponds of some sort, and these often create ideal habitats for glider oviposition sites -- usually unshaded pools with no fish and lots of aquatic vegetation and small morsels to eat. The resulting food supply of invertebrates and sometimes tadpoles creates a real nice place for sprawling *Tramea* or *Pantala* larvae to feed in. These additional ponds, warm spring temperatures, weather patterns, and in the case of this past year, long warm periods in the fall, might have resulted in us seeing more gliders all over the state.

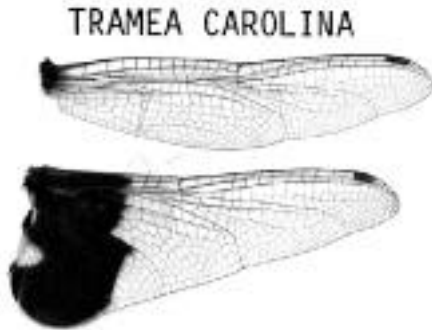
Michigan has two species of *Pantala* (*flavescens* and *hymenea*) and three of *Tramea* (*carolina*, *lacerata* and *onusta*). In 1999, *Tramea onusta* was first confirmed from Benzie Co. by Carl Freeman -- a long way from Wayne Co., where others were seen and photographed several times late in the summer by Alan Chartier. In addition, I collected an exuvia of *T. onusta* at a temporary pond in Washtenaw Co.

My first sighting of *Tramea lacerata* was on June 7 in Washtenaw Co. at a small farm pond in Pittsfield Twp. Alan Chartier saw *T. lacerata* in Wayne Co. as late as October 30 at Lake Erie Metropark! Our MOS database has specimens listed from June 9 to October 6. *Tramea carolina* has an early record of May 20, 1918, but all other records for it are from Sept. 1-10, and all within the last 5 years. However, the specimen database points out one flaw -- for odonates like *Tramea* and *Pantala*, sight records are more likely to be more numerous than specimens. Therefore, it might be a good idea for someone to coordinate a "Glider Watch" to record the arrivals of these species throughout Michigan over a couple of years.

So, as this year unfolds, be on the lookout for the earliest arrivals of the gliders at local ponds. Note when you first see teneral throughout the season, too. It might be worthwhile to try and mark some of the early arrivals and see if they get recaptured farther North or even again at the same pond. Likewise, marking later-emerging individuals

and keeping track of their whereabouts may be a good project for someone.

Perhaps the rather recent appearance of the more southerly species is telling us that weather patterns are changing. Is the climate getting warmer? Are more habitats being formed that favor these vagabond species? Questions like these are begging to be answered.



*Tramea lacerata* by Allen Chartier

### Records from MOS Data and Various Observations

Species	Earliest	Latest	No. of records				
			Jun	Jly	Aug	Sep	Oct
<i>Pantala flavescens</i>	06/16	09/07	2	2	16	8	
<i>Pantala hymenaea</i>	06/17	09/18	3	2	2	1	
<i>Tramea carolina</i>	05/20	09/01		2	1	5	
<i>Tramea lacerata</i>	06/04	10/30	14	5	9	17	3
<i>Tramea onusta</i>	06/25	08/01	2		3		

### UPCOMING MEETINGS

**June 1** – Odonata Slide show and field trip to be held at the Traverse Area District Library, Woodmere Library-east corner of Boardman Lake, Traverse City, MI from 10-2. Contact Jody Clark at 4900 Greenhill Ct., Traverse City, MI 49684. email:etc@traverse.com

**June 2** – 46th Annual Meeting, Michigan Entomological Society, Kellogg Biological Station, Hickory Corners, MI. The feature this year will be on insect photography, so it should be a visual feast! Check the web site for more information and maps at: <http://insects.ummz.lsa.umich.edu/mes/meeting.html>

**June 3** – Field trip to Cass and Berrien Co. Bill Westrate's Farm (nice fen and wetlands as well as the Cass River) and possibly a trip to search for *Tachopteryx thoreyi* at seeps in Warren Woods or in Cass/St. Joseph Co. Contact Mark O'Brien for more information. Westrate's farm is located at 21406 McKenzie Street, Cassopolis, MI.

### NEW PUBLICATIONS

- Brunelle, P. 2000. A new species of *Neurocordulia* (Odonata: Anisoptera: Corduliidae) from Eastern North America. *Canadian Entomol.* 132:39-48.
- Ross, S. 2000. The occurrence of a male-male tandem pair of *Enallagma* damselflies in Mecosta County, Michigan. *Argia* 12(1):20.
- Ross, S. and M.F. O'Brien. 2000. *Williamsonia lintneri* (Odonata: Corduliidae) – A first Michigan record with additional notes on *W. fletcheri*. *Great Lakes Entomol.* 32(3):201-205.

### ANNOUNCEMENTS

LARVAL Dragonflies and Damselflies of the Northeast - MAY 28 - June 3, 2000

This seminar will give an introduction to the order Odonata, its basic lifestages, morphology, behavior, and temporal and geographical distribution in the region. Current regulations, references, and sampling techniques will be reviewed. The principal emphasis will be field work on larvae in a range of habitats. They will be sampled for taxonomic study and

rearing. Reference specimens of larvae and adults will be available for study. Determination to species using morphology and appearance will be the emphasis of lab work, with consideration given to preservation and record-keeping methods.

---

ADULT Dragonflies and Damselflies of the Northeast - July 2 - 8, 2000

This seminar will give an introduction to the family Odonata, its basic lifestages, morphology, behavior, and temporal and geographical distribution in the region. Current regulations, references, and sampling techniques will be reviewed. The principal emphasis will be field work on adults in a range of habitats. In addition, larvae will be sampled for taxonomic study and rearing. Reference specimens of larvae and adults will also be available for study. Determination to species using morphology and appearance will be the emphasis of lab work, with consideration given to preservation and detailed record-keeping methods.

---

Instructor: Paul-Michael Brunelle has been studying Odonata of the Atlantic Provinces of Canada for the last ten years and recently published with respect to their distribution in that area. He has been retained by the Maine Department of Inland Fisheries and Wildlife to plan a 5-year survey of the order Odonata, which was begun in 1999. He has been retained by Parks Canada to study the order in the Cape Breton Highlands and has received a grant from the Themadel Foundation to study the behavior of a new species of *Neurocordulia* discovered in New Brunswick as well as grants from the Nova Scotia Museum and the New Brunswick Museum. He is the founder of the Atlantic Dragonfly Inventory Program (ADIP).

---

The Humboldt Field Research Institute is pleased to announce another fine series of professional seminars for aquatic entomologists at its facility on the coast of Maine, just east of Bar Harbor and Acadia National Park. The seminars include field studies in the pristine habitats of Maine's easternmost county. Lectures, labs, and reviews of the current literature make these unusually interesting and important seminars. They are offered for aquatic entomologists and consultants who are keenly interested in systematics and biomonitoring issues.

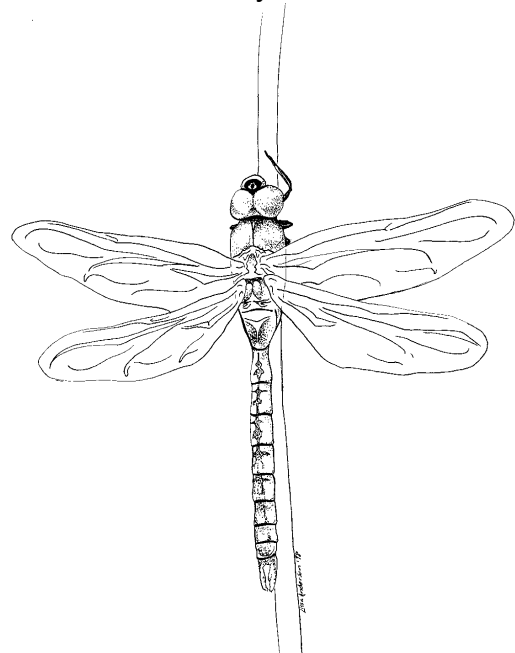
Three other seminars focus on the systematics and biomonitoring of mayflies, chironomids, and caddisflies. A brochure is available at the address below.  
Humboldt Field Research Institute  
Northeastern Naturalist  
PO Box 9, Dyer Bay Road  
Steuben, ME 04680  
Phone: 207-546-2821, FAX: 207-546-3042  
humboldt@nemaine.com  
<http://maine.maine.edu/~eaghill>

## FIELD TRIP CHECKLIST

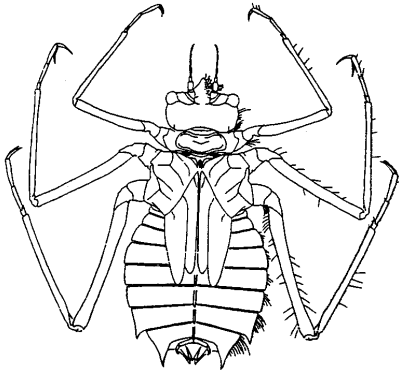
Did you bring?

Notebook and writing instrument  
binoculars  
knee-high boots or waders  
aerial net  
aquatic net  
white sorting tray  
glassine envelopes  
sample vials  
DeLorme or MUCC maps  
wide-brimmed hat  
scarf  
insect repellent  
drinking water  
field guides  
lunch  
2-way radios  
GPS unit  
forceps  
10x magnifier  
light jacket  
change of clothes  
camera

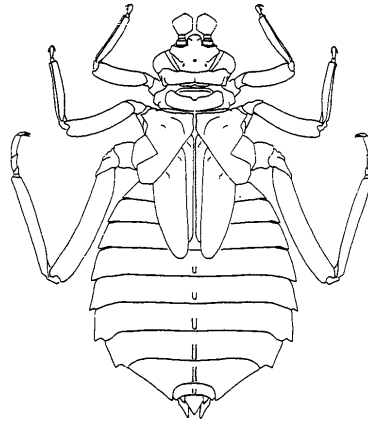
several friends to carry all this stuff!!



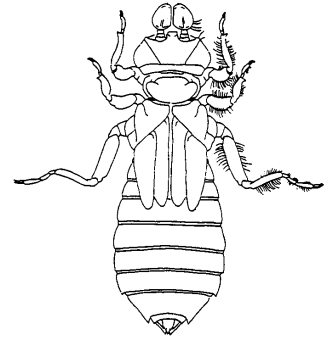
## Some Examples of Michigan Odonata Larvae



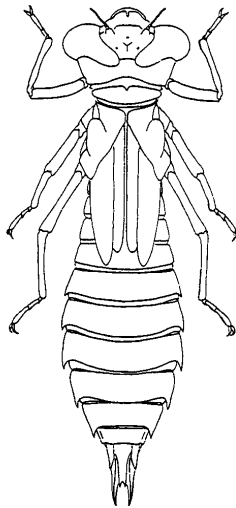
*Didymops transversa*



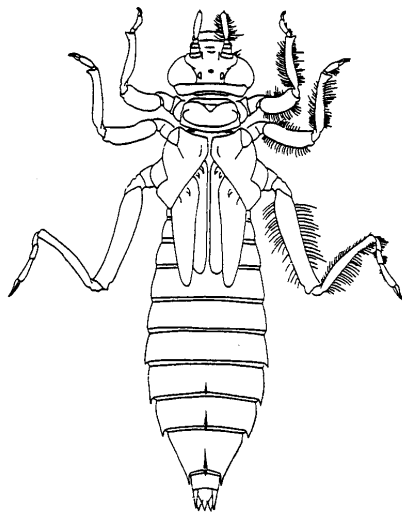
*Hagenius brevistylus*



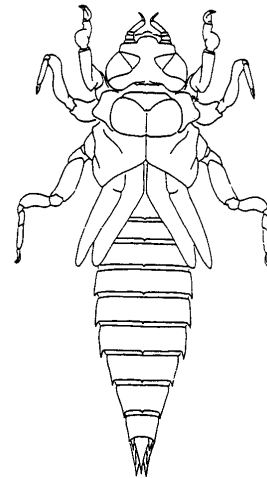
*Stylogomophus albistylus*



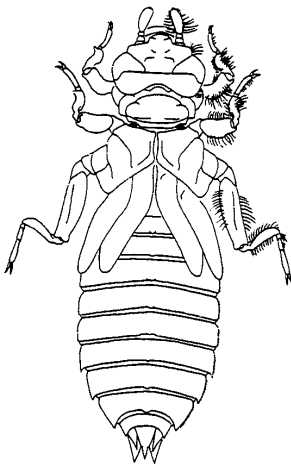
*Basiaeschna janata*



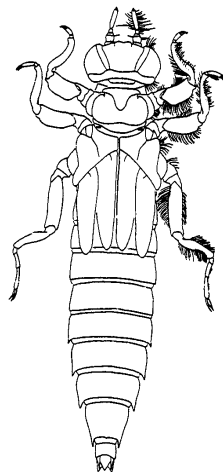
*Dromogomphus spinosus*



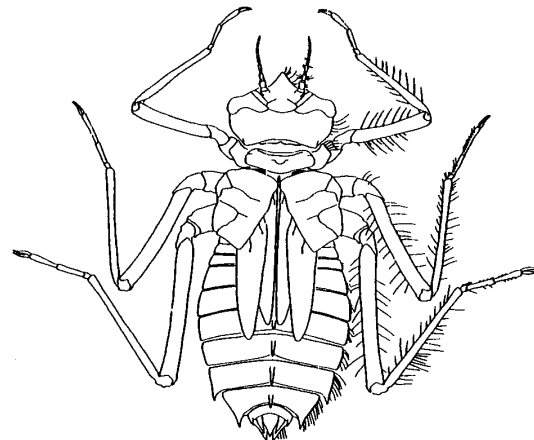
*Progomphus obscurus*



*Ophiogomphus rupinsulensis*



*Stylurus laurae*



*Macromia illinoiensis*

