



## Michigan's unique opportunity to illuminate North American Odonata taxonomy problems

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**B**ecause of its location, Michigan, especially the Lower Peninsula, is in a nearly unique position to throw light on several problems in the taxonomy of North American odonates. I hope field investigations this coming season can contribute to these problems.

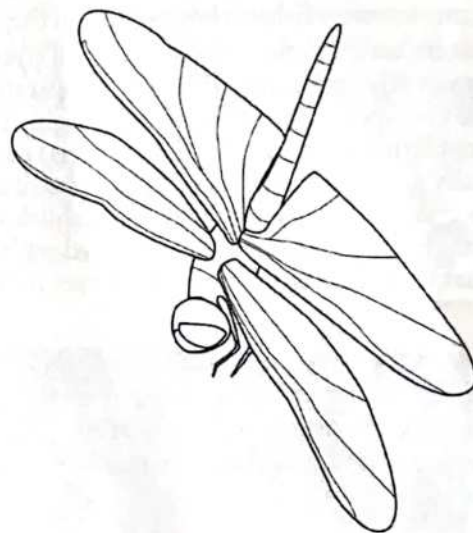
### *EPITHECA CYNOSURA* and *COSTALIS*

(Common Baskettail and Slender [Stripe-winged] Baskettail)

Until recently *Epitheca costalis* had not been recorded for Michigan, but thanks to Mark O'Brien's loan of specimens from southeastern Michigan (up to the Thumb) the species is firmly established. More interesting, the intergradation with *cynosura* (originally found throughout Ohio and is also present in southern Indiana) seems to be present. Last year Julie Craves sent me some specimens which seemed to confirm intergradation. Intergradation, for me, is hybridization producing fertile offspring. Thus intermediate specimens are themselves fairly variable and numerous, especially when compared to sterile hybrids, which are less variable and rare. To establish the phenomenon of intergradation, we need further observations (flying behavior, habitat, etc.) and specimens. Fairly long series (a dozen or more) would be very desirable.

### Another *EPITHECA* problem

While we are on *Epitheca*, Muttkowski's mysterious species *morio* (type locality LP Michigan) comes to mind. This was described as similar to *cynosura*, but with the cerci parallel, not divergent, in dorsal view. I have seen several specimens like this in Michigan (mainly Lower Peninsula) and Wisconsin, and can't presently decide whether they represent a distinct species or not. Please look at *cynosura* carefully, especially ones with reduced or absent wing markings. Most *cynosura* at this latitude have generous-sized dark wing markings, but I have seen a few clear-winged specimens with parallel cerci. Keep looking!



### INSIDE:

Michigan Taxonomy Problems—	1
Williamson's Files Moved —	3
Upcoming Meetings—	5
Seney Ringed Boghaunter—	6
Book review—	7

(Continued on page 2)

## Michigan Taxonomy Problems

(Continued from page 1)

### *ENALLAGMA CYATHIGERUM* and *VERNALE* (Northern Bluets and Vernal [Springtime] Bluets)

Originally described from Michigan, *Enallagma vernale* has had a troubled existence as a real species. In the U.S. west of Wisconsin, *cyathigerum* lives in all aquatic habitats. From Michigan to New England, *cyathigerum* seems to prefer fishless bog ponds. In this same northeastern area, *vernale* is a lake and small river species, apparently coexisting with fish. In upstate New York the two species intergrade so thoroughly that large populations (several dozen specimens) show an essentially gaussian (bell-shaped curve) distribution of cerci morphology. This is difficult to establish with a hand lens, because the cerci are so covered with tiny hairs that the morphology is not easy to see in the field.

A complication is that in upstate New York there are numerous instances of *cyathigerum* temporarily occupying fishy lakes, and we have seen stray specimens of *vernale*, also representing apparently temporary populations.

I am curious to know whether intergradation is widespread (I know from a few specimens that it does occur) in Michigan. In New England it seems to be less prevalent than in New York. Again, we need specimens and observations, especially of habitat.

This could present a wonderful study for someone.

### *LEUCORRHINIA PROXIMA*: YELLOW versus RED (Belted [Red-waisted] Whiteface)

From Wisconsin to southern New England, the *Leucorrhinia proxima* seem to have yellow rather than red pale markings. They are also more pruinose and seem to display different behavior. They seem to lurk in the bushes behind ponds, while the more northern and wider ranging red form seems to be more territorial and is found at the water's edge. Although I have not examined a large number in detail, a few specimens seem to show slightly different morphologies of the hamules.

Some specimens from the area of overlap show yellow to reddish coloration, suggesting hybridization or simply the mixing we expect from the boundaries of two subspecies. But the situation remains unclear, and we need both more specimens, and especially, more habit observations. The only form I have seen in the Upper Peninsula is the red form, and I have never taken (and my total collections are sparse) it in the Lower Peninsula.

### *SYMPETRUM INTERNUM* and *JANEAE* (Cherry-faced Meadowhawk and Jane's Meadowhawk)

I have expressed doubt that these are two distinct species. But the problem of speciation in this genus is difficult, and this is not a closed case. Michigan should be the place where the two species come together, if there are two species. Along the Atlantic seaboard, and again in the Hudson Valley, there is widespread intergradation of *rubicundulum* and *internum/janeae*. So even without the complication of *janeae* we have a messy problem. And *internum/janeae* also hybridizes with *obtrusum*. DNA studies have contributed nothing to our understanding (not a reflection on the researcher, of course).

Please keep your eyes out for either of these forms in the LP. If you can, please collect a generous sample.

### *CORDULEGASTER DIASTATOPS* versus *BILINEATA* (Delta-spotted Spiketail and Brown Spiketail)

The distinction between these two species is difficult. Many (most?) people distinguish them by ground color (brown versus black) or the width of the thoracic stripes, both of which are very dubious methods. I once doubted their distinction, but having seen many in West Virginia, where they co-occur over small distances in several cases, I now consider them distinct. The southern species *bilineata* has been recorded for the LP of Michigan. Mark O'Brien loaned me a batch from the UM collection, and all were *diastatops*, using a morphological character (ventral view of epiproct of male). The furthest north that I have seen a specimen I would confidently call *bilineata* is in southern Ohio. *Cordulegaster bilineata* could occur in Michigan, but I would not bet on it. Still - keep looking.

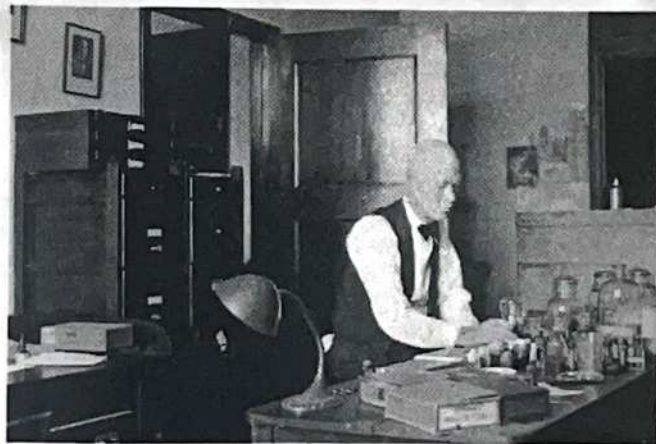
## E. B. Williamson moves to the Bentley

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Well, he's not actually moving anywhere, but all of E. B. Williamson's correspondence files and associated (non-specimen) materials will be moving to the University of Michigan's Bentley Historical Library in April. We are doing this for several reasons: his files will be catalogued and available for researchers, they will be searchable, and the Bentley is far better suited for curating this material than the UMMZ. I also worry that when I finally leave the UMMZ, nobody here will really know much about E. B. Williamson, and the significance of the materials will be forgotten.

EBW's correspondence files date from 1899-1932, and take about eight shelf feet of space. Letters from all the prominent odonatologists of his time are in there – P. Calvert (including Williamson's letters TO Calvert), Needham, Kennedy, Ris, Howe, Forster, Schmidt, DeSelys, and many, many others. Some people were prominent in EBW's life -- such as Fred Gaige and Alexander Ruthven, who persuaded Williamson to come to the University of Michigan Museum of Zoology. Unfortunately, Williamson suffered a stroke and subsequent pneumonia infection, and died too early at 55. He had been at the UMMZ for only a few years, and although he had published far more on new species of Odonata than most anyone in North America, his life's work on the genus *Argia* was never completed. His assistant, Leonora D. (Dolly) Gloyd, was a young woman at the time of his death. Her husband, Howard Gloyd, was a herpetologist. Fast forward to 1981. Dolly Gloyd was an adjunct curator when I arrived at the UMMZ, and had been working on a revision of the genus *Argia* for many years, vowing to continue the work that Williamson never had the chance to finish. Unfortunately, she never finished the *Argia* project, either. However, she was a personal link to the past history of the Odonata collections here, and I wish I had been able to get her to write down more of her experiences with Williamson.

Williamson's move of his collection and library to Michigan did not result in any significant work being done on Michigan Odonata. EBW's focus was on Neotropical species, as well as southeastern U.S. gomphids and *Macromias*. The only Michigan collecting that I am aware of was the time that Williamson vacationed in Oden (Emmet County) in 1906-1909, Berrien Co. in 1914, Branch Co. in 1925, Jackson Co. on a trip with Gaige and Jesse Williamson, and with Jesse Williamson to Luce, Mackinac and Schoolcraft counties, in 1927. In all, we have 165 Michigan specimens from E. B. Williamson. I can't even begin to estimate how many of his specimens we have in all, but I'll bet more than 50,000. Aside from his Odonata work, he was an accomplished iris breeder, and at one point, A. G. Ruthven asked if EBW might not mind making some money from his "hobby" and sell a bunch of iris to him for his garden. It's my understanding that the iris farm kept food on the table after the 1928 banking collapse.



E. B. Williamson in his UMMZ office, about 1930.

While reading through some of EBW's correspondence with Fred Gaige (curator of insects at UMMZ), I found that the widow of Friedrich Forster wanted to sell all of her husband's collection for at least \$3,000 (in the 1920s). Apparently, Williamson and the Museum really only wanted the Odonata part of the collection, which contained a lot of type material. Gaige thought that from what he had seen of the rest of the collection that it should be thrown out because of the dermestid damage, poor labeling, etc. Eventually, a fellow named Manis from Detroit talked to Forster's widow, and the UMMZ ended up purchasing the Odonata collection for \$750, with the rest of the stuff thrown in. From what I have seen of the Forster material, Gaige had it right. Excerpted here is a bit of Gaige's letter to Williamson (24 January 1927):

"I think progress has been made on the Forster Odonata. I finally got Mr. Manis out here last Sat. p.m. He is a nice old chap, and as he years ago collected material in Asia Minor for Staudinger he knew a lot about insects, also what constitutes fine specimens, good ones, and what is worthless, and why, what happens to collections if neglected and as he

(Continued on page 4)

## Williamson's files go to the Bentley

(Continued from page 3)

seems to have collected butterflies is pretty critical of condition of specimens. He is Orientalist in the Detroit Library, and a cultured gentleman... I wish very much Mrs. Forster had had him handle the matter instead of Harscher. He could have come out here when you and the others were working the Odonata, and I believe we could have settled the affair immediately.

As it is, before he came out I went over to the bank and on the strength of my bald head and general manly beauty and unquestioned integrity borrowed \$750 for six months, gave it to him in form of a New York draft payable to Mrs. Elise Forster, got a receipt from him saying it was in full payment for that section of the collection consisting of all the Odonata and no more, gave him a similar one for Mrs. Forster's signature combined with a contract that utterly dissociated the Odonata from the rest and gives us a chance to bid on that if we will, otherwise to assist Mrs. Forster to dispose of it in this country, failing in this to return it to Germany.

Mr. Manis had visited the Forsters, a good deal, apparently and knew the confusion in which the old man worked. Told me of the room, crowded with insects, plants, and stones, etc. and said that often he could find nothing that he looked for so went on to something else. He died of cancer of the stomach, probably aggravated by bad food and too little of that. Two sons are living in New York. Manis knew all about you, that you were god-father to one of his children, etc. etc."

To me, the most interesting aspect of this letter is that the UMMZ had all of Forster's material here before the Museum purchased it. Apparently, no other museum wanted the non-odonata, as we ended up with boxes and boxes of dermestid-eaten specimens that were largely untouched when I came to the museum in 1981.

Another letter from Gaige to EBW, dated 12 September 1927, mentions collecting in the U.P. by Hubbs (UM Fish Division):

"It was tough that Jess [Jesse Williamson] and I lost out on the U.P. trip, but it was unavoidable this season. Better luck next time. We did enjoy your trip up here, and next summer shall plan a much longer one. There are several *Somatochlora* in a few



Williamson correspondent C. H. Kennedy (right) and two companions sitting streamside, perhaps near Ithaca, NY, circa 1914-1918.

bugs that Hubbs took up in the Huron Mts. That was early July. I'll bet a fellow could make a killing, as he caught his things without a net and just took what was sitting under his nose when he was not fishing. When you get *Somat. [ochlora]* in that kind of collection, they must have been thickernhell [sic]."

I can attest to taking *Somatochloras* by hand in the Huron Mountains, as it was 71 years later that I was engaged in the survey of Odonata in the Huron Mountain Club.

Williamson's correspondence files will likely prove to be a valuable resource for future biographers and anyone researching the history of odonatology. It's fitting that they will reside in the Bentley Historical Library and University Archives, where they'll be easier to access than if they were sitting on a shelf in the UMMZ.

## Upcoming meetings

### 2007 GLOM (Great Lakes Odonata Meeting), 8-10 June

Yvette Liautaud <whymode@sbcglobal.net> The meeting will be held at Volo Bog State Natural Area which is located 45 miles northwest of Chicago in Ingleside, IL. The address is 28478 W. Brandenburg Rd, Ingleside, IL 60041 (Google this address to obtain directions).

**Housing:** There are 12 motel double non-smoking rooms reserved for out-of-town participants at the Super 8 Motel in McHenry at the cost of \$44.99 for double occupancy. These rooms will be held until June 1<sup>st</sup> - after the 1<sup>st</sup> there is no guarantee. I have reserved these rooms for 7-11 June and when registering please mention GLOM and talk to Cassandra at (815) 344-9200. For other nearby lodging check out Volo Bog's website. Be careful, the less expensive hotels/motels are of lesser quality. If you're interested in camping, Illinois Beach State Park is the place to be. There are cabins available and reservations are required. Contact Concessions at (847) 662-4811, extension 209. Call early, they fill up fast.

**The Meeting:** The sites chosen represent some of the most diverse wetlands in the Chicago Wilderness area. Sites include fen, sedge meadow, bog, and sands. Many of the sites contain state firsts while others are under restoration and show potential. This year we are combining GLOM with education and are looking for two to three speakers willing to discuss dragonfly basics, habitats, or *Somatochlora hincana* (Hine's Emerald). Other suggestions are welcome. Our keynote speaker this year is Dr. Tim Cashatt PhD, Chair and Curator of Zoology at the Illinois State Museum. The tentative schedule for Friday night is a discussion of sites and a buffet dinner at Volo Bog. Saturday: breakfast, guest speakers, followed by field trips. Sunday is unknown. The final schedule will be posted 20 May. We look forward to seeing everyone.

### 2007 Northeast Regional DSA Meeting, 21-24 June

The meeting will be held at the EconoLodge in Newton, NJ. Sussex county has the longest list of dragonflies of any county in the U.S. with 145 species. Details and registration can be found on the New Jersey Odes website at <http://www.njodes.com/DSA/default.htm>

### 2007 Southeast Regional DSA Meeting, 5-8 July

The meeting will be held in Bainbridge, GA. Targeted species will include *Somatochlora* (Emeralds) and *Ophiogomphus* (Snaketails). Lodging will be at The Jameson Inn <[www.jamesoninns.com/Hotel\\_Detail.asp?ID-9](http://www.jamesoninns.com/Hotel_Detail.asp?ID-9)>. The rate is \$67/night for DSA. Contact Giff Beaton at [giffbeaton@mindspring.com](mailto:giffbeaton@mindspring.com) or (678) 428-2328 if planning to attend.

### Ohio Dragonfly Symposium, 21-22 July

Ohio Agricultural Research and Development Center, Wooster, OH

#### **SPEAKERS:**

Bob Glotzhober. Bob is curator of Natural History for the Ohio Historical Society, and one of the Midwest's leading experts on the Odonata (damselflies and dragonflies). He is a co-author of the book *The Dragonflies and Damselflies of Ohio*, and co-author of the newly released booklet *Common Dragonflies and Damselflies of Ohio*, published by the Ohio Division of Wildlife.

Dave McShaffrey. Dave is a biology professor at Marietta College, and was Bob Glotzhober's co-author on the above two publications. Dave has authored numerous other scientific publications, and has spent countless hours afield studying dragonflies and damselflies. He is an expert on their ecology and identification, and has mastered the art of using digital photography to capture their beauty.

Dennis Paulson (KEYNOTE). Dennis is an authority on both birds and dragonflies. Many birders are familiar with his wonderful book *Shorebirds of North America: The Photographic Guide*. He has also written or contributed to ten other books, and is at work on a new book covering North America's dragons and damsels. He is certainly qualified; Dennis has published over 40 scientific papers on the Odonata over the past four decades. His research interests are broad; dragonfly papers include titles like *Why do some zygopterans (Odonata) perch with open wings?* and *Recent Odonata records from southern Florida - effects of global warming?* Dennis has spent countless hours observing these fascinating insects all over the globe, and has been spending more of his time educating the public about the natural world through his writings and speaking.

(Continued on page 6)

## Upcoming Meetings

(Continued from page 5)

Larry Rosche. Larry is one of Ohio's preeminent authorities on dragonflies, and spends many hours afield observing them and working out new field identification techniques. He is particularly interested in their distribution and ecology, and has found many new populations of rare species during his field studies. He is author of *Dragonflies and Damselflies of Northeastern Ohio*. Like Dennis, Larry is also an ornithologist and authored the book *Birds of the Cleveland Region*.

### FIELD TRIPS:

Most field trips are within a short drive of Wooster. This region – Ashland, Richland, and Wayne counties – harbors some of the richest dragonfly diversity in Ohio. Diverse marshes, swamps, and high-quality streams provide outstanding habitat, and 98 species have thus far been recorded in this area – about 60% of all the Ohio species. There is plenty of other biodiversity, too, including birds, plants, butterflies, and other animals. Many of our guides are well-versed in other aspects of natural history, and the field trips will be interesting.

#### Funk Bottoms Wildlife Area

A sprawling 1,422-acre mosaic of wetlands, including buttonbush swamps, emergent marsh, ponds, and wet meadows. Dragonfly diversity and numbers should be outstanding. This is one of few sites in Ohio that supports nesting Sandhill Cranes.

#### Killbuck Marsh Wildlife Area

At 5,521 acres, this is one of the largest wetland complexes in Ohio. Killbuck contains an extraordinary diversity of wetland types, and great plant assemblages. Dragonfly diversity is tremendous, and numbers can be staggering. Many interesting birds occur here, too, including lots of nesting Prothonotary Warblers.

#### Mohican State Forest

Ohio's newest scenic river, the Mohican, forms the centerpiece of the 4,525-acre Mohican-Memorial State Forest, and its outstanding water quality supports many interesting stream-dwelling dragonflies and damselflies. The rare Tiger Spiketail occurs in the area, and the steep-sided hemlock ravines support many interesting birds and plants.

#### Wooster Memorial Park

This scenic park covers nearly 300 acres, and is bisected by Rathburn Run. Buffered by mature forest, the stream supports numerous interesting dragonflies and is an easy place to observe and study them. Large upland meadows will also have many dragonflies, and possibly uncommon field-nesting birds like Henslow's Sparrow. This is an area ripe for new and interesting discoveries, as the site has not been well-studied for Odonata.

### LODGING:

The Best Western (330-264-7750) in Wooster has given a special rate to conference attendees. Mention the Ohio Dragonfly Conference when registering to receive the rate.

For more information, as well as the registration form, go to: <http://www.gmasohio.org/odes>

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## *Williamsonia lintneri* (Ringed Boghaunter) sighting at Seney

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Seney National Wildlife Refuge is a huge place, and one that I have felt ought to have populations of both species of boghaunters (*Williamsonia*). Of course, the tricky part is getting to Seney at the appropriate date to look around, and May isn't usually the time when most of us are in the Upper Peninsula. I recently received an email from Joan Berkopec:

(Continued on page 7)

## Seney Ringed Boghaunter

(Continued from page 6)

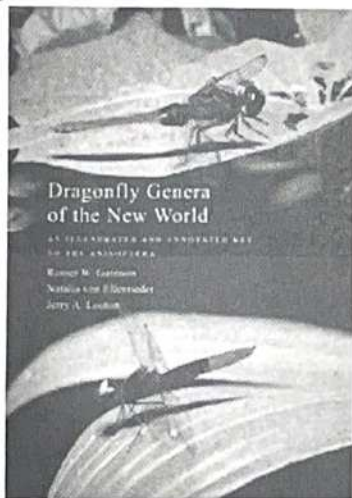
Hi Mark,

My husband, Ron, and I met you several years ago at a Great Lakes Odonata Meeting in Michigan (at Higgins Lake). We have never lost our interest in dragonflies and wanted to share with you a sighting way back in May of 2006. Each year at the end of May we make a trip to Whitefish Point in the UP. Along the way, we usually stop at Seney Nat'l Wildlife Refuge. Last year, we found a squashed Ringed Boghaunter on the path leading to the visitor's center. We checked the parking lot and saw two more flying -- this was on the 26th. On our way home to Green Bay (on the 29th) we stopped again to see if we could get any photos. No boghaunters were flying around the parking lot that day, but we found a nice population on a "nature trail" loop that begins and ends at the center. We did get our pics!

Are they commonly seen at Seney? They had no idea at the visitor's center. If you are interested in photos -- or a squashed specimen -- let me know.

Thanks for your time,  
Joan Berkopec

So, there looks to be an opportunity for someone to check out the boardwalks around the visitor's center in late May (unless of course, it is snowing!). If any of you do go, please check in with the Refuge Office and tell the manager that you are there representing the MOS and would like to survey for the ringed boghaunter. A voucher would be appreciated.



**BOOK REVIEW: Dragonfly Genera of the New World - An Illustrated and Annotated Key to the Anisoptera.** Rosser W. Garrison, Natalia von Ellenrieder and Jerry A. Louton. 2006. John Hopkins University Press. 368 pp. ISBN 0-8018-8446-2.

The Western Hemisphere's rich odonate diversity and lack of a modern key to the genera has stymied many of us when trying to sort out specimens in our collections. In addition, the often arcane descriptions and terminologies, accompanied by less-than-helpful illustrations in the older works did nothing to enthruse the non-specialist. For years, many of us have been seeking an authoritative reference to identifying Western Hemisphere Odonata. Something with well-illustrated keys, modern treatment of the groups, and generic keys that make sense out of the chaos that Needham and others created. This book fills that void, as well as enthuses and educates.

*Dragonfly Genera of the New World* is a fantastic resource, and I see it as a standard to which other works should emulate, not just for Odonata, but other groups of insects. Rosser, Natalia, and Jerry deserve a big thanks for the production of such a fabulous work. The excellent drawings and associated maps along with the concise text really make this a very useable resource. In addition, anyone looking for a group that needs revision will be steered to the groups that are poorly studied, as the authors point out in the text under "Status of Classification."

I did not find any obvious flaws in this book, and it looks like this will be the standard reference for years to come. The book is well-illustrated - perhaps the best that I have seen to show the necessary features in context. The authors included a very helpful list of figures - very handy when I just need to compare something quickly. The Distribution Table is a nice touch, and something that I have not seen with treatments of other groups. The few plates of color photographs of the adults are somewhat superfluous, and my opinion is that if one were to include them, an example from each genus would be better. They don't detract from the book, though. Overall, *Dragonfly Genera of the New World* is a book that sets a new standard in the odonatological world. I can just imagine someone like E.B. Williamson seeing this book and saying, "Finally!"

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## A publication of the Michigan Odonata Survey

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### Editor's Note:

We'd love to publish the *Williamsonia* four times a year, but to do that we need YOUR input. If you aren't inclined to write an article, perhaps you can let us know what topics you'd like to see another author tackle, or burning questions you'd like answered (keep it to Odonata, please!). Maybe you just have some great photos to submit. Drop one of us an email... this is your publication.