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Michigan Odonata Survey

Williamsonia

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Spring-Summer 2008

From the MOS Coordinator

By Mark O'Brien

I apologize, first off, for the delinquent status of the Williamsonia newsletter. It's been hard to stay focused and get things written, and I plead guilty to being somewhat unfocused lately. However, looking back at 2007, it is obvious that some really nice gains were made in the data and some significant additions were made to county lists and the Michigan list. In addition, I have made some significant upgrades to the MOS database. It is now totally live and updated as necessary. I'll explain more about that later. IN 2007, a Bioblitz took place at the UM Biological Station at Douglas Lake in Cheboygan County. This year marks the station's 100th anniversary, and it has played an important role in the history of Odonata research in Michigan. Julie Craves and Darrin O'Brien once again got a new State Record with *Erythrodiplax umbrata* in Wayne Co. In addition, the dynamic duo have been generating some good data from the new Detroit River International Wildlife Refuge in Wayne Co., and it's been amazing to see what they have been finding in a former industrial site, showing that nature will prevail when given a chance. Stephen Ross's exploits in the UP again produced some important records from that region, and I welcome a new face to our small band of collectors -- Bob Marr, from Houghton, who is situated in a much under-collected part of the UP. Hopefully, we will see some wonderful additions to our database from his fieldwork. This summer's Great Lakes Odonata Meeting was held in Munising, and it was a well-attended and productive event.

Burt Cebulski (L) and Ken Tennessen (R) show off their umm, nets at GLOM. See p.10 for more!

Below—*Sympetrum corruptum.*

MOA?

I have been asked a few times about when people will see a publication on the Michigan Odonata. Fear not, there will be an Atlas of Michigan Odonata. I have been asked by the editor of the UMMZ Publications if we would consider them as an outlet. Since

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2007 Michigan collection records in database

All 2007 adult specimen records of Michigan Odonata have been cataloged in the MOS database – 254 of them. Many thanks to Julie Craves, Darrin O'Brien, Bob Marr, Stephen Ross, and Myles Willard for their contributions and dedication. Over the years, we have amassed a great deal of information from different corners of the state. From the urban areas of Wayne County to the woods of Houghton and Gogebic counties, these records document the Odonata fauna from a variety of habitats. As we enter into the 2008 flight season, one has to wonder what new records will turn up for this year? In 2007, Julie and Darrin collected a new state record, Band-winged Dragonlet, *Erythrodiplax umbrata* (Linn.), making them the State Record champs. Of course, new county records are no less desirable, and I hope more of them show up this year. For some of these new additions, it is desirable to know whether or not they have

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From the Coordinator (cont.)

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there has already been a Michigan fish atlas, I think a Michigan Odonata Atlas would be a good fit.

Changes at UMMZ

Some of you may have heard rumors about changes at the UMMZ. At this point, I have no further news to relate, except that we do not know if part (just the fluid collections) or all of the collections will be moving next to the Herbarium on Varsity Drive. Several scenarios have been proposed, but I hope to know more in the fall. Until then, I am just assuming that nothing is happening.

2007 Records

Since we are going to a semi-regular schedule for Williamsonia, I am including the records from 2007 in this issue, as they indicate what was collected last year, and by whom. The MOS database currently stands at a little over 26,000 records, and I did a recent count to see how many records were collected since 1996 and added to the database – nearly 10,000 specimens! That is just an amazing number, and shows how just a few people can contribute to the goals of the MOS.

Get out and look!

Lastly, I encourage everyone to commit to one more summer of record-gathering and to get outside and explore the wetlands of Michigan for Odes. You don't have to be in a pristine wilderness to find exciting new additions to the fauna. Sometimes we easily overlook the obvious because it's familiar. Repeated observations at a site or periodic visits to key areas gives several benefits – the accumulation of seasonal data on species, and the increased likelihood of spotting something new. With some of the warming trends and other climatic factors, species reaching their northern limits just south of Michigan may start showing up, as illustrated by *Archilestes grandis*, *Eythrodiplax umbrata*, and *Libellula vibrans*.

2007 Michigan collection records (cont.)

(Continued from page 1)

expanded their range in the way that Double-striped Bluet, *Enallagma basidens* Calvert, has done. The continued collection of Great Spreadwing, *Archilestes grandis* (Rambur), in Wayne County gives some hope that that large spreadwing will expand into other counties in southeast Michigan.

This past winter has been a long and snowy one, and hopefully, that will result in higher water levels in ponds and lakes throughout Michigan, and especially in the drought-stricken eastern Upper Peninsula. How that will affect the populations this year is really hard to say, but may certainly improve things for some species such as Hine's Emerald (*Somatochlora hineana* Williamson), which is probably impacted to a higher degree from droughts than species that occur in areas with more open water. A higher water table will definitely benefit a lot of species, so hopefully, the UP will recover from several years of drought conditions.

You can now browse the much-improved MOS database online, as the data is immediately updated as records are added, and you can see that we now have over 26,000 records. As I start working on the MOS Atlas, I will need some help in geo-referencing localities, and will have a special view of the database for those that would like to assist. To visit the MOS Database, go to: http://insectsdataserver.ummz.lsa.umich.edu/mos/home.php

First state record: Band-winged Dragonlet

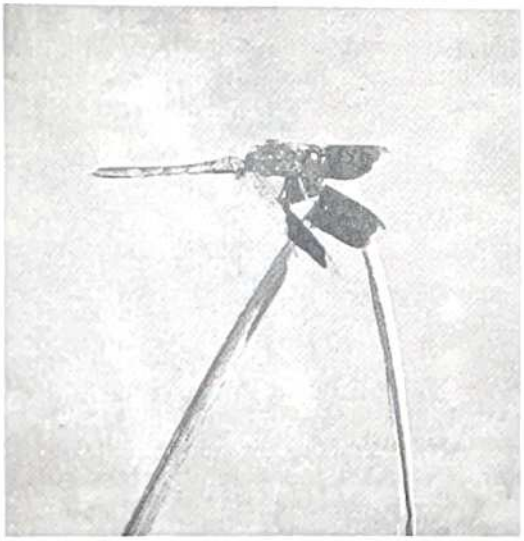
Julie Craves and Darrin O'Brien

There is something unsettling about doing field work with the sun obviously autumnal -- low in the sky -- fallen leaves underfoot...and sweating in 86F temperatures and high humidity. In spite of the fact that the calendar page flipped days ago to October, we couldn't pass up heading out to do one last survey at the Detroit River International Wildlife Refuge Humbug Marsh Unit, where I had been awarded a grant from the USFWS to do a baseline Odonata survey.

Last year, we were on the lookout for vagrants that had showed up in Ohio. One of them was Band-winged Dragonlet (*Erythrodiplax umbrata*), a species most common in the U.S. in Texas and south Florida.

This species is known to wander, although Ohio seemed quite far-flung. And once again this year, Band-winged Dragonlets were found in Ohio, this time in the northeastern part of the state in Lake and Geauga counties. Band-winged Dragonlets are found in temporary ponds and marshes, and the Ohio subjects were found in shallow scrapes with only a little water.

This thought was in our minds as we entered the Refuge. The front third of the large brownfield portion is undergoing restoration, and had been scraped clean in the spring. Now, it is mostly uneven sandy soil with sparse weedy vegetation. It rained several days ago, and there were perhaps a half dozen depressions with a few inches of water in them.



Darrin was ahead of me, and passed by the first glorified puddle. As I approached it, I saw a patrolling dragonfly that had black on its wings. I automatically called out "Twelve-spotted Skimmer," as this would be a late fall date for that species. Almost as soon as I said it, I noticed this ode was smaller than a skimmer, had a dark blue body, and not enough "spots." Darrin was heading back my way. "This could be a dragonlet!" I called out. He got closer and took a look, and agreed. North America's northernmost record of this species!

This wet spot was only a few yards square, but the dragonlet rarely landed. It seemed reluctant to leave, but flew around busily. It perched briefly several times, but would take to the air as soon as we moved. Both of us managed to fire off a few photos -- Darrin with a point-and-shoot, and me with my good camera, but a macro lens.

Suddenly, *another* male dragonlet flew to the puddle. They circled each other, and flew to the treetops. It was only moments before one returned. Not wanting to chase it off for good, we quickly explored the other nearby puddles. There was a dragonlet at the closest one. Perhaps 15 minutes passed without us being able to get a good swing at either one. With Darrin near one puddle, I went back to the first. Both dragonlets appeared, and while they were preoccupied with each other, I was able to scoop both of them up. The first and second Michigan records in one net swing.

We found very little the rest of the day. Some Familiar and Tule bluets, Common Green Darners, Wandering Gliders, a couple of Black Saddlebags, some Eastern Forktails, and a handful of *Aeshnas*, probably Shadow Darners. Band-winged Dragonlet was the 35th species we have recorded at the Refuge under our survey grant this year. It also represents our fifth state record, and something like the 45th county record, bringing the Wayne County total to 94 species. It was a fine way to end the field season. A full report has been accepted by *Great Lakes Entomologist* and will appear in a future issue.

The 2007 BioBlitz

Mark O'Brien

On July 4, Adrienne and I went north to participate in the University of Michigan Biological Station's (UMBS) "Bioblitz." No, it wasn't a bunch of blitzed biologists, but an endeavor to inventory the flora and fauna of the station over a couple of days. Generally, bioblitz events are helpful in garnering interest in biodiversity of a given place, and it gets people all excited about looking for species. They are useful for some taxa, but can only tell you so much, since these events take place only over a short period. What makes it fun is the bit of competition between people working on different groups. In the end, the lepidopterists often win by sheer numbers of specimens. A place like the UMBS has been sampled repeatedly for years for some organisms, and probably very rarely for others. However, in my search of our cataloged Odonata, I discovered that while there were records of 62 species from the vicinity of Douglas Lake, some species that should be more commonly represented in the database, are in fact, single specimens. I expected that we would add some more numbers to the data, and possibly some additional species.

Located at the south end of Douglas Lake, the UMBS celebrates its 100th year of operation in 2008. Comprised of a variety of habitats around the lake, and south to Burt Lake, the station has been an excellent place for various classes in natural history, ecology, and evolution. It has attracted many biologists, and spawned many more. When I had the chance to look over the Odonata collection at the UMBS, it was interesting to see that some names on the labels that are quite familiar to me.

Abigail O'Brien published a short list of Odonata from the UMBS in 1910, and a few years later, Arthur T. Evans published a more comprehensive paper on the UMBS Odonata, listing 43 species, including the only known northern Michigan locality for American Rubyspot, *Hetaerina americana* (Fabr.), on the Maple River (Evans 1915). The photographs that accompany Evans' paper leave no doubt that *H. americana* was collected there. The UMBS property would become a familiar place to a series of students interested in Odonata, such as C. Francis Byers (Byers 1925), J. W. Leonard, and E. J. Kormondy.

Douglas Lake isn't without some biotic changes. In recent years, several people have reported an alarming number of larval Odonata with zebra mussels attached to their backs, including Dragonhunter (*Hagenius brevistylus*) and Stream Cruiser (*Didymops transversa*) (Chriscinke 2001, Weihrauch & Borcherding 2002). I think that UMBS certainly offers a good place for someone to study this phenomenon.

Adrienne and I arrived at UMBS just in time for a nice picnic dinner on the shore of the lake. After checking in and getting settled, I went out collecting along the beach in the early evening. The most common dragonfly there at the time was Prince Baskettail (*Epitheca princeps*), which were hawking gnats near the trees and bushes. I also collected the only specimens of Vesper Bluet (*Enallagma vesperum*) that I encountered during our visit.

On July 5, Adrienne and I started out right after breakfast, walking the beach of Douglas Lake to Pine Point and back. As the day got sunnier and warmed up, Common Sanddragons (*Progomphus obscurus*) and Dragonhunters appeared along the beach and were basking in the sun. I don't think I have ever seen so many *P. obscurus* at one time. The beach debris line was littered with their exuviae, so they must have all emerged within the previous week. I also found an Illinois River Cruiser (*Macromia illinoiensis*) exuvia with two attached zebra mussels.

After lunch, Ola Fincke accompanied us to Carp Creek across the road from the Station. Carp Creek is a cold stream, fed by springs at the base of a hill. The water for those springs is apparently provided by Douglas Lake. I did not see any odonates at all in the shaded upper part of the creek, but as it grew and meandered towards an old beaver

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BioBlitz 2007 (cont.)

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meadow downstream, they became abundant. Eastern Red Damsel (*Amphiagrion saucium*) and Elfin Skimmer (*Nannothemis bella*) were found in the sedge mat near the open water, and Sedge Sprite (*Nehalennia irene*) was abundant. Typical skimmers were found in the impounded area, such as Twelve-spotted Skimmer (*Libellula pulchella*), Four-spotted Skimmer (*L. quadrimaculata*), and Common Whitetail (*Plathemis lydia*). Black-shouldered Spinylegs (*Dromogomphus spinosus*) and Dragonhunters were found on branches overhanging the creek. We did not follow Carp Creek all the way to Burt Lake.

After the excitement of Carp Creek, we headed over to the Maple River off Douglas Lake Road, where we found a lot of Ebony Jewelwings (*Calopteryx maculata*) and River Jewelwings (*C. aequabilis*). The ubiquitous *D. spinosus* and *H. brevistylus* were also in abundance there. There is something about wading a creek on a hot day, watching jewelwings flutter back and forth across the water to their roosts, and thinking that all is right with the world at that moment.

Adrienne and I got an early start on July 6, and headed over to the north shore of Burt lake, near Reese's Swamp and came up with only a few sightings/specimens. Carp Creek runs through this area and into Burt Lake. The surrounding wetlands are spruce-cedar dominated with birch and alders. I think this could be a good spot for some *Somatochloras*, but I did not see any -- and we may have been a bit early. I was not prepared to go slogging through a wooded swamp, so we walked the road and picked up odes along the edges. Not too much was flying, but we did get *Amphiagrion saucium*. We then took a tote road that also led to the shore of Burt Lake, and there was not much diversity there, either – Black-shouldered Spinylegs, Dragonhunters, and Tule Bluets (*Enallagma carunculatum*)were common.

In the afternoon, I joined Steve Pruett-Jones' class, and we motored over on pontoon boats to Sedge Point, then to Marl Bay. The students were a lively bunch, and had a great time swinging nets to try and catch some odes. The small sandy-bottomed ponds at Sedge Point reminded me a bit of some of the interdunal ponds along the shore of Lake Michigan in the UP. We were too early for any *Aeshna* species, but the Sedge Point area was great, as the small shallow ponds had lots of emergent vegetation. It provided great *Lestes* habitat, and we did catch a number of Emerald Spreadwings (*Lestes dryas*) and Northern Spreadwings (*L. disjunctus*). I also found some holdout Red-waisted Whiteface (*Leucorrhinia proxima*), and Ruby Meadowhawk (*Sympetrum rubicundulum*) was beginning its flight season. Marsh, Hagen's, and Tule Bluets (*Enallagma ebrium, hageni* and *carunculatum*) were common, too.

I thought we might see some different species at Marl Bay, and we did. However, we had to get off the boats in about two feet of water and slosh around towards the shore. The bottom was mucky, and one had to be careful about stepping into deeper muck. However, it was the only place that I found Calico Pennant (*Celithemis elisa*) and Widow Skimmer (*Libellula luctuosa*) while we were at the UMBS. I found the trip back to the station rather humorous, as the students on my boat kept trying to moon the students on the other pontoon boat. I guess things haven't hanged much since I was a student at Cranberry Lake in the Adirondacks in the 70s, though I don't recall the women mooning anyone then.

In the evening, I wandered over to the lab where Brian Scholtens, Dave Wagner, and Dave Cowan were sorting their catches from the various light and malaise traps. They had piles and piles of bugs, and I have to admit that they really had the easier time collecting, but much more work sorting and identifying.

The morning of July 7 wasn't the most productive in terms of adding more species to the Bioblitz lists, but I did manage to go into the UMBS collection and gather data from the specimens there to add to the MOS database. In the process, I was able to add Amber-winged Spreadwing (*Lestes curinus*) to the UMBS list, collected at Smith's Fen in 1999. I did not find the *Hetearina* specimens listed in the Evans paper, but I did see one labeled "Cheboygan Co., MI, July 1962." Since no specimens have been collected on the Maple River since the Evans paper, I have to assume the population has since vanished. The collection has specimens collected by Justin Leonard, Ed Kormondy, Bruce Kennedy (son of C.H. Kennedy), H.B. Hungerford, and C.F. Byers.

In the afternoon, Adrienne and I trekked out to Grape-

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BioBlitz 2007 (cont.)

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vine Point. However, it was quite windy, and the bluets were clinging to the grass, and we only saw a few *Dromogomphus* and *Hagenius* flying.

I had it pretty easy... I think we ended up with 30 species of Odonata for the three days, and when I peeked in at the moth sorting by Brian Scholtens and David Wagner, I knew that they must be tired from being up late and sorting and identifying all day...which means they will probably have the biggest species list for any single group.

2007 Bioblitz List

Coenagrionidae:
Amphiagrion saucium, Enallagma carunculatum, Enallagma hageni, Enallagma exsulans, Enallagma ebrium, Enallagma vesperum, Nehalennia irene

Calopterygidae:
Calopteryx aequabilis, Calopteryx maculata

Lestidae:
Lestes dryas, Lestes disjunctus

Gomphidae:
Hagenius brevistylus, Dromogomphus spinosus, Progomphus obscurus, Gomphus spicatus, Gomphus ventricosus

Aeshnidae:
Aeshna canadensis, Boyeria vinosa, Basiaeschna janata

Macromiidae:
Macromia illinoiensis

Corduliidae:
Epitheca princeps, Epitheca cynosura

Libellulidae:
Celithemis elisa, Leucorrhinia frigida, Libellula luctuosa, Libellula pulchella, Libellula quadrimaculata, Plathemis lydia, Nannothemis bella, Sympetrum rubicundulum

Species List from UMBS, based on 2007 data, MOS database, and UMBS Collection

There are records for 68 species of Odonata recorded from the UMBS in the UMMZ database, new accessions, and previously unidentified specimens in the UMBS collection.

The following list is based upon specimens cataloged for the Michigan Odonata Survey, as well as new records from the UMBS collection and the Bioblitz of 2007. I examined the UMBS Insect Collection and found a number of specimens that were either unidentified or mis-determined. I have added that data to the MOS database.

Bioblitz additions are marked with an asterisk.

Calopterygidae

Calopteryx aequabilis - early July
Calopteryx maculata - late June - early July

Lestidae

Lestes disjunctus - early July - August
Lestes dryas - June-July
Lestes eurinus (new) – late June
Lestes forcipatus - July-August
Lestes rectangularis - July-August
Lestes unguiculatus – July- August

Coenagrionidae

Amphiagrion saucium - 1 record, early July.
Coenagrion resolutum - early - late June
Enallagma boreale - 2 records, late June
Enallagma carunculatum - common - late June - late August
Enallagma cyathigerum - late June, 1 record
Enallagma cyathigerum vernale - late May
Enallagma ebrium - late June - early September
Enallagma exsulans - early July
Enallagma hageni - late June - late July
Enallagma signatum - early July, 1 record
Enallagma vesperum (new)*
Ischnura posita - late June - July
Ischnura verticalis - mid-June - August
Nehalennia irene - late June - late July

Aeshnidae

Aeshna canadensis - early July - mid-September
Aeshna clepsydra - late June - mid-August
Aeshna eremita - 1 record, late July
Aeshna tuberculifera - 1 record, early July
Aeshna umbrosa - mid July - August
Anax junius - August
Basiaeschna janata - early June - mid-July
Boyeria vinosa - 1 record

Gomphidae

Dromogomphus spinosus - late June - mid-August - abundant
Gomphus exilis - late June
Gomphus fraternus - late June - mid-July
Gomphus lividus - ealy June - mid-July

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BioBlitz 2007 (cont.)

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Gomphus spicatus - late May - early July
Gomphus ventricosus - late June - early July
Hagenius brevistylus - late June - mid-August
Hylogomphus adelphus - late June - late July
Ophiogomphus colubrinus - early July
Ophiogomphus rupinsulensis - mid-June
Progomphus obscurus - late June - late July
Stylurus scudderi - early August

Cordulegastridae
Cordulegaster maculata - 3 records, July

Macromiidae
Didymops transversa - late June - early August
Macromia illinoiensis - mid-June - mid-August

Corduliidae
Dorocordulia libera (new)
Epitheca cynosura - late May - late June
Epitheca princeps - late June
Epitheca spinigera - mid-June - early July
Neurocordulia yamaskanensis - late June (2 exuviae)
Somatochlora kennedyi - 1 record, late June
Somatochlora minor - 1 record, no date

Libellulidae
Celithemis elisa (New)*
Ladona julia - late May - late June
Leucorrhinia frigida - late June - early July
Leucorrhinia glacialis - late June - late July
Leucorrhinia hudsonica - 1 record, late June
Leucorrhinia intacta - mid-June - mid-July
Leucorrhinia proxima - July - 1 record
Libellula luctuosa (new)*
Libellula pulchella - late June - mid-July
Libellula quadrimaculata - mid-June - mid-July
Nannothemis bella (new)*
Plathemis lydia - mid-June
Sympetrum corruptum - 1 record, late June
Sympetrum costiferum - August - September
Sympetrum internum - late June
Sympetrum obtrusum - late June - mid-August
Sympetrum rubicundulum - late June - late July

There are a number of species for which we have fewer than three records, and in several instances, only a single record. Some of those are what I consider to be common and widespread species. Others, such as *Neurocordulia yamaskanensis* seem to be rare in any collection, but most likely it is an artifact of collection methods and timing. *Neurocordulias* fly at dusk, low to the water, so I don't expect anyone to just casually pick one up during the day. Evans' 1915 list has several species which we have no specimens recorded in our MOS database from UMBS: *Hetaerina americana, Epiaeschna heros, Celithemis eponina, Tramea lacerata, Libellula cyanea*, and *Gomphus vastus*.

Acknowledgments

I thank Brian Sholtens for organizing the 2007 UMBS Bioblitz, and the UMBS staff for making it a great couple of days for us.

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Andromorphic female Eastern Forktail

Julie Craves

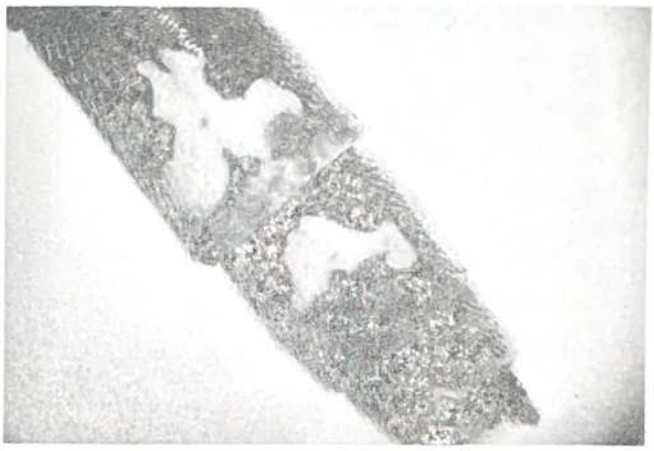
During an Odonata census at the Detroit River International Wildlife Refuge Humbug Marsh Unit, in Trenton, Wayne County, MI, a slightly odd forktail caught my eye. It resembled a male Eastern Forktail (*Ischnura verticalis*) with a bright green thorax and mostly black abdomen, but the tip of the abdomen had a very reduced blue pattern different from any species of forktail that I could recall. Netting it, I was surprised to see it was a female. I put it in an envelope to examine later.

At home I gave it a close look. It had a vulvar spine [1] and what I could 'read' of the prothorax and mesostigmal plates [2] under my microscope indicated it was an Eastern Forktail. However,I'd never seen an illustration of one so strongly male-like and the bright blue pattern on the dorsal abdomen tip was unlike any I'd seen -- on any forktail.

Many species of damselfly have a female morph that is colored like a male. They are not only the minority morph in populations, but also very rarely seen. First, once they get older and more pruinose, they look just like typical females. And of course, not too many people look at enough inch-long insanely abundant insects in the grass to pick them out.

I solicited comments on my photos. Both Nick Donnelly and Dennis Paulson confirmed that this was a rare andromorphic female Eastern Forktail (Dennis has seen only one in his long career). In fact, the incidence of andromorphs in this species is under 1%.

It has been proposed that male-like morphs in female Odonata serve to protect females from being harassed by males. This theory was supported by the fact that female polymorphism occurs more often in species where males search for mates, versus families in which males are territorial (whereby females can avoid harassment by avoidance). The situation is actually somewhat more complicated than that -- beyond the scope of this post. A paper reviewing female andromorphs, various explanations, and evolutionary history is listed below. It cites a study (done in Michigan, coincidentally) giving the frequency of andromorphs in Eastern Forktails as 2% of 553 individuals and 0 out of 386 others. My specimen will be housed at the University of Michigan's Museum of Zoology Insect Collection.



The odd pattern on the tip of the abdomen of an andromorphic female Eastern Forktail. Photo by Julie Craves.

Fincke, O. M., Jödicke, R. and D. R. Paulson. 2005. The evolution and frequency of female color morphs in Holarctic Odonata: why are male-like females typically the minority? *International Journal of Odonatology*: 183-212.

[1] Vulvar spine = point on the underside of the 8th abdominal segment in some damselflies; Eastern Forktails have one, Fragile Forktails (*I. posita*, the other common forktail in my area) do not.

[2] Prothorax and mesostigmal plates = structures behind the head of female Odonata that enable the male claspers to fit and lock on when the pair are in a mating wheel.

RFI: *Stylurus plagiatus* habitat

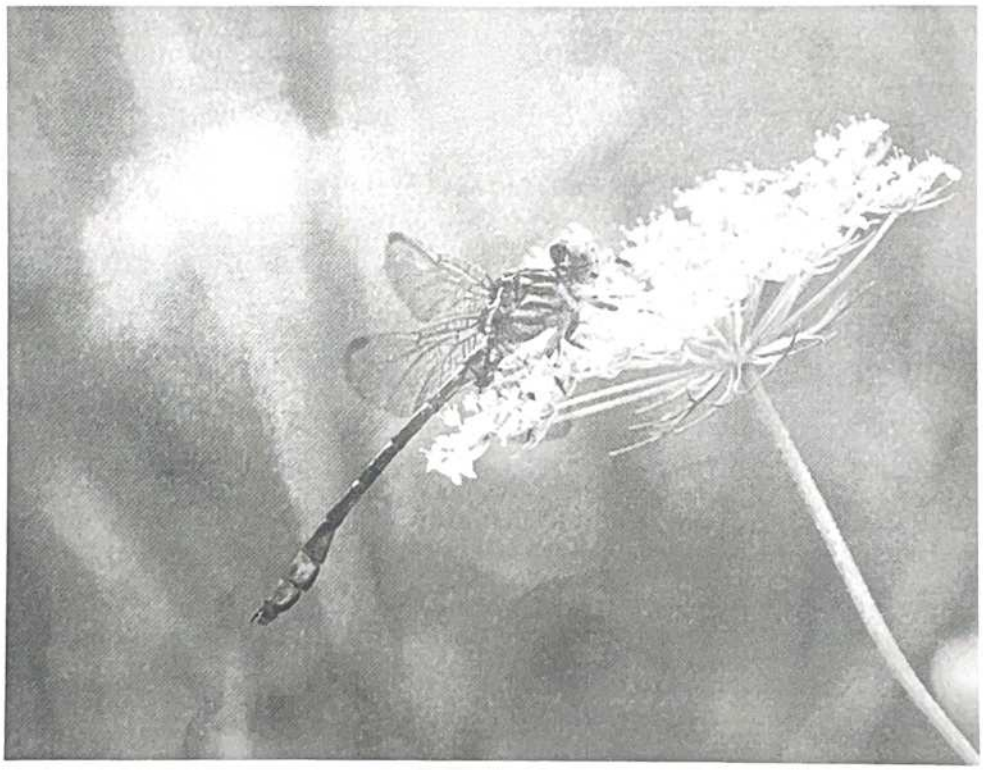
Russet-tipped Clubtail (*Stylurus plagiatus*) is a gomphid associated with silty-bottomed, slow-moving rivers. So far, populations found in southeast Michigan seem to also require fairly riparian specific upland habitat consisting of tall trees adjacent to the river, bordered by low shrubs which are in turn next to open, weedy fields. However, it may be coincidental that the places they've been found here are similarly configured.

I'd like to hear from anybody who has experience with this species, especially in the Midwest/Upper Great Lakes/southwestern Ontario region. Where are there sizeable populations? What type of river substrate to they seem to require? What are the characteristics of upland and riparian habitats associated with the adults?

Stylurus plagiatus is a species of special concern in Michigan, so I will be doing further work with them. There is a large population on the lower Detroit River on property managed by the USFWS through the Detroit River International Wildlife Refuge. Some of this property is slated for substantial alteration through restoration. Information will go to guide restoration and contribute to the habitat management plan.

I can be contacted at jcraves@umd.umich.edu. Any information, even anecdotal, is much appreciated!

— Julie Craves



Male Russet-tipped Clubtail, Detroit River International Wildlife Refuge, Humbug Marsh Unit, Trenton, MI. Photo by Julie Craves.

GLOM 2008 Review

by Mark O'Brien

The eighth Great Lakes Odonata Meeting (GLOM) was held in Munising, Michigan this June 20-22, and the return of this event to Michigan was a resounding success. Nearly 40 people from MI, WI, IL, MN, and Ontario gathered to experience the wonderful Upper Peninsula and especially, the environs around Pictured Rocks National Lakeshore. Lucas Langstaff, the event organizer, is a wildlife biologist at the Munising office of the Hiawatha National Forest, and he orchestrated a fun event, and more importantly, secured excellent weather for the duration of GLOM. Quite a few of the attendees were GLOM veterans, and there were newbies (tenerals?) as well. For some unknown reason, MI was under-represented, as WI and IL people were the majority. The mix of various levels of experience is one of the hallmarks of the GLOM event.

I arrived in Munising on the afternoon of the 19th and spent my time photographing Munising falls and some nearby areas. Early Friday morning, I checked in at the Falling Rock Cafe, which was the morning meeting spot for the GLOM. Luke was there, fresh-faced and well-caffeinated, ready to get people started that arrived early in the day. I met up with Joan Berkopec and her husband Ron Eichhorn, from Wisconsin. I first met them when I hosted GLOM 2002 at Higgins Lake, and it was wonderful seeing these two very good naturalists once again. We decided to meet at Cedar Lake Bog a bit later that morning and see what Odes were there. Cedar Lake Bog is a few miles W of Munising, and an ORV trail follows an old railroad grade right through the bog. We walked the grade for quite a distance, and encountered several Harlequin Darners (*Gomphaeschna furcillata*), *Epitheca spinigera and cynosura, Ladona julia, Plathemis lydia, Libellula quadrimaculata,* and *Gomphus spicatus*. I think the spot should definitely be sampled in early to mid-July for Somatochlora.

Everyone met Friday afternoon at Sydney's Restuarant for dinner and presentations. The upstairs meeting place was very nice, and spacious. On top of that -- it had a bar! It was nice being able to down a cold brew while recounting the day's events. Bob DuBois of the Wisconsin DNR gave a really good presentation on Dragonfly Basics to get the beginners up to speed, and though there were not many beginners that first night, it was a good icebreaker before dinner. After the buffet dinner, and a few beers, I gave my talk, "The history of Odonatology in Michigan, 1876 to the present." It went

well, and there were some good questions and exchanges afterwards. Luke handed out door prizes to six people that won copies of Dragonflies of the Northwoods or Damselflies of the Northwoods -- excellent books for the UP!

Saturday morning dawned brilliantly sunny and though a bit cool, was a perfect start to our day in the field. Most of us ate breakfast at the Falling Rock Cafe and by 8:30-ish we were ready to split into two groups - one for Seney National Wildlife Refuge, and the other to Pictured Rocks National Lakeshore and Legion Lake. Ken Tennessen and Bob DuBois rode with me, so it was a great time for the three old hands to reminisce about previous field trips and talk dragonflies, etc. The Seney trip started slow, as it needed to warm up a bit for the odes to get active - there were thousands of teneral *Enallagma hageni* and *ebrium* along the pathway that we first started on by the visitor's center - and not much else, so we drove the Marsh Loop and encountered some better spots along the way. It wasn't until near the very end of the loop road that we were able to explore some bog habitat and there, we probably had our best catches of the day to that point. We caught/observed a total of 23 species, with a *Somatochlora incurvata* being the best catch. I didn't get a tally from the Pictured Rocks group.

On the way back from Seney, we went back to Munising and then NE to road H58 where we stopped at a bog that was filled with pitcher plants, sundews, and *Nannothemis bella*. Ken Tennessen photographed a surprise on the N side of the road - a female *Sympetrum corruptum*, which I then caught. She must have been feeding there, as we certainly didn't see pools of water. We also recorded *Leucorrhinia hudsonica, Nehallenia irene and Nehallenia gracilis*. It looks like a possible *Williamsonia* site, too.

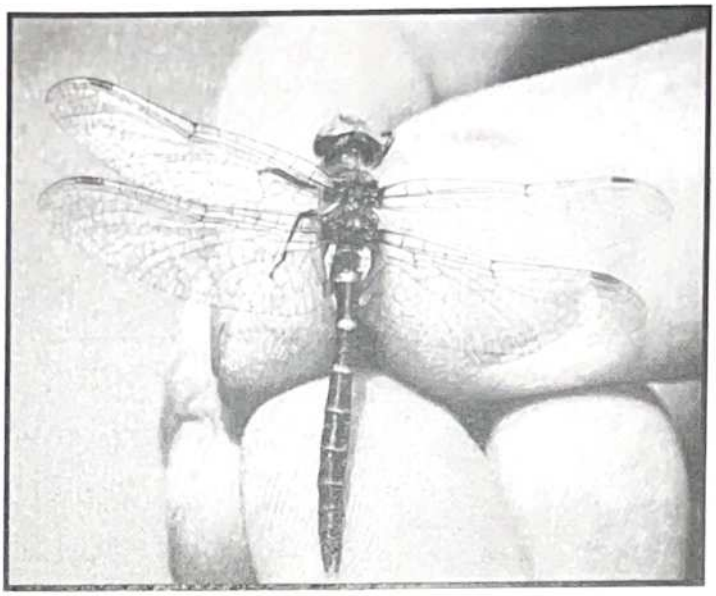
That evening, we gathered at Sydney's again. Most of the group ate upstairs at the buffet, but a few of us wanted burgers and beer, so Ken and I went downstairs for that, and rejoined everyone upstairs after we ate. John Douglass gave a presentation of effectiveness of different sampling techniques, and Ken Tennessen's talk about the diversity of

Odes in Ecuador was a real treat for those of us that have never been in the Neotropics. Bob DuBois gave the final

presentation on Dragonflies of nortern peatlands, which considering our location and focus, was really well-targeted. I think he's onto something with recording emergence sites for *Williamsonia* and Somatochloras at a site for several years and then looking for any plant community characteristics that might be indicators for the best places to search for these peatland species.

On Sunday, we drove out as a single group to Scott's Marsh in Schoolcraft Co, off USFS Rd 2253. The day started out cool, but warmed up as the morning pro-

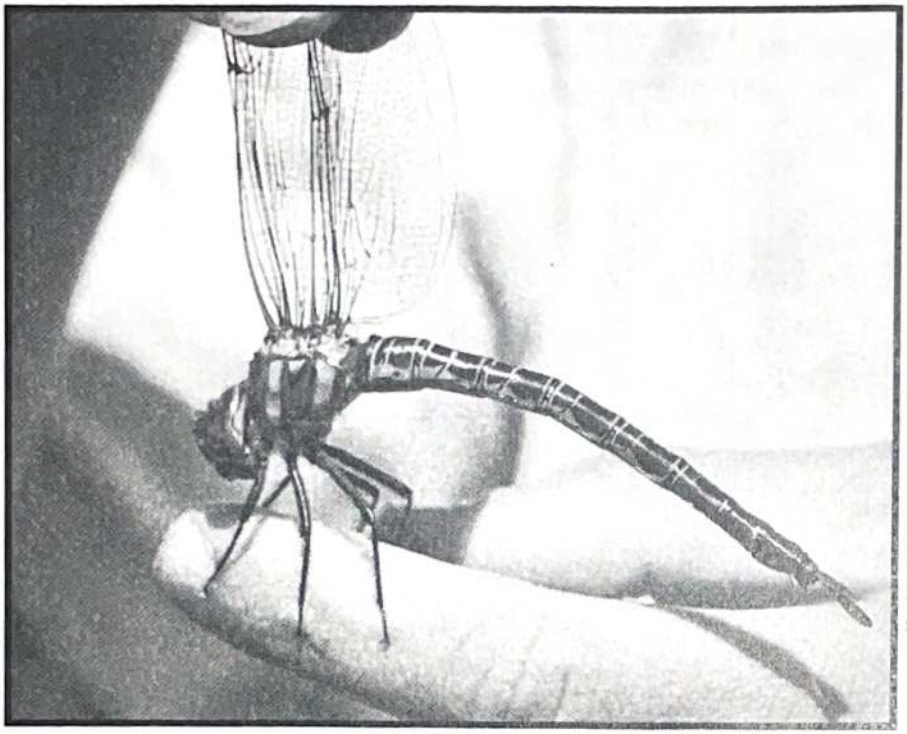
A male *Nannothemis bella*



Williamsonia lintneri, at Scott's Marsh

gressed, so it took a while for the odes to get going. However, we found several Harlequin darners sunning themselves on the dirt road that cuts through the marsh. The ones I spotted were females, and were easy to get close to for photographs. The road cuts through some spruce-bog areas, and it was there that Bob DuBois found a male *Williamsonia lintneri* (ringed bog-haunter) sunning himself! There went my prediction that we were too late in the season for that species. Not long after, Ken Tennessen photographed an ebony bog-haunter (*Williamsonia fletcheri*) in a small opening in the wooded bog. On the way out, Ryne Rutherford captured a female *Epiaeschna heros* that was flying along the margins of a pool near the road. The swamp darner turns out to be a new record for the Upper Peninsula! Another highlight of the 22 species from that site was *Somatochlora elongata*. After we had lunch, we drove over to AuTrain Falls in Alger Co. AuTrain Falls is a series of wide limestone ledges that eventually end in a cascade of boulders as the water runs toward AuTrain Lake. There volume of water running over the ledges isn't great, because most of the water is captured upstream and flows through penstocks into a hydroelectric station, and then rejoins the water from the falls a bit downstream. As a result, one can easily walk across the falls as the water at the ledges is only a few inches deep. We saw a number of species there, the most numerous being *Basiaeschna janata* flying back and forth across the water. *Cordulegaster maculata* was rocketing up and down the river, and *Ophiogomphus carolus* was taunting my net, and I never did catch one. I had to leave before everyone else assembled back at the parking lot, so I missed Marla photographing *Cordulegaster diastatops* in a seep leading into the AuTrain.

GLOM 2008 was a great event, and I'm glad that so many people from outside the area were able to experience Yooper hospitality, and some of the wonderful habitats that are so abundant in the UP. Everyone got to see some interesting Odes, and the highlight of seeing the swamp darner plus both species of *Williamsonia* at Scott's Marsh was a real treat for this veteran. I never grow tired of seeing *Nannothemis bella*, either, and it was great seeing it at the bog off H58. One of the best things about GLOM is that many eyes and many nets ensure that everyone gets a chance to be a "hero." It doesn't matter who nets what - everyone gets to participate, and learn - which is what GLOM is all about - sharing our passion for odes in the Great lakes region. I thank Luke Langstaff for doing the hard work of planning and making it all work in the end. I thank Ken Tennessen, Bob DuBois and John Douglass for their presentations and leadership, and Lora Loope for leading the Pictured Rocks segment of the field trip. Thanks also goes to the Seney National Wildlife Refuge manager for allowing a bunch of people with nets to wander around and collect/observe. Finally, a thank-you to the staff at the Falling Rock Cafe and Sydney's Restaurant for such great hospitality and service.



Epiaeschna heros at Scott's Marsh—a new UP record!

The attendees at GLOM 2008 – or at least, most of them. A few were not able to be there Sunday morning, and I forgot how to set the self-timer on my camera...

Indiana seemed to be the choice for next year's GLOM. Hmmm. Maybe we should go and revisit E.B. Williamson's hometown of Bluffton, IN? Any takers?

SPECIES LISTS

SENEY NATIONAL WILDLIFE REFUGE, Schoolcraft Co., June 21

Calopteryx maculata, Coenagrion resolutum, Chromagrion conditum, Enallagma cyathigerum, Enallagma ebrium, Enallagma hageni, Ischnura verticalis, Nehallenia irene, Anax junius, Basiaeschna janata, Gomphus spicatus, Cordulia shurtleffi, Didymops transversa, Dorocordulia libera, Epitheca spinigera, Somatochlora incurvata, Somatochlora kennedyi, Ladona julia, Plathemis lydia, Libellula quadrimaculata, Leucorrhinia frigida, Leucorrhinia intacta, Leucorrhinia proxima

Alger Co., Bog off Rt. 58, June 21

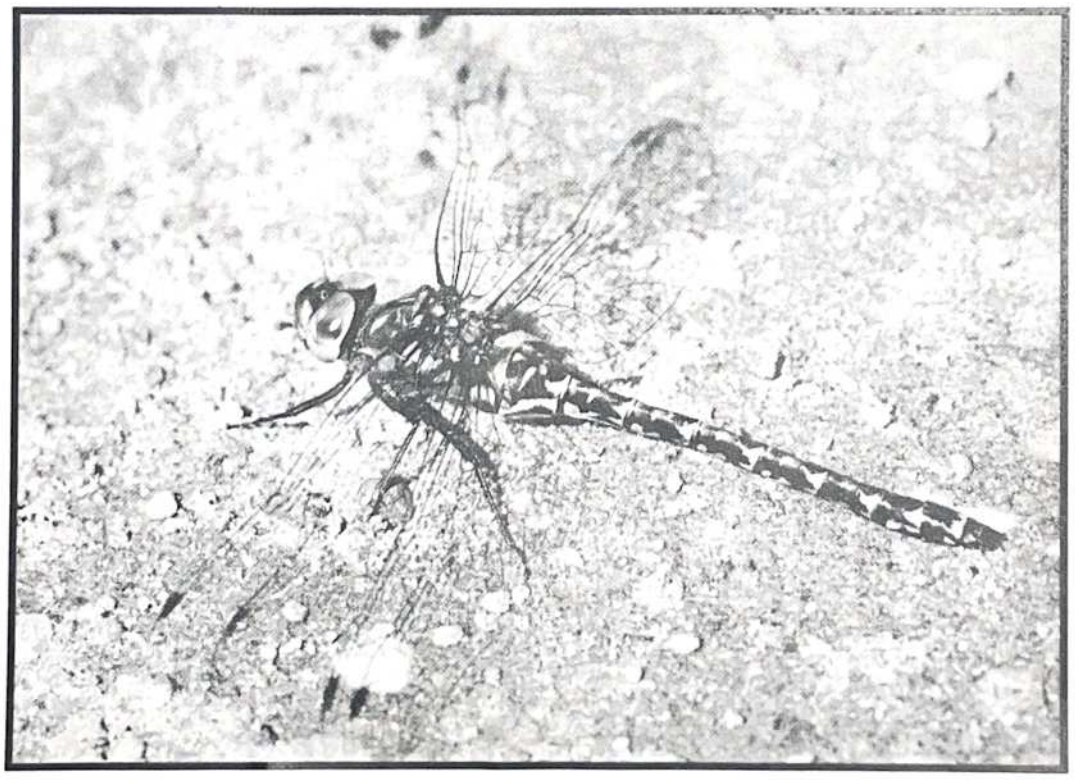
Nehallenia irene, Nehallenia gracilis, Leucorrhinia hudsonica, Nannothemis bella, Sympetrum corruptum

SCOTT'S MARSH, Schoolcraft Co. June 22

Calopteryx maculata, Chromagrion conditum, Enallagma ebrium, Enallagma hageni, Epiaeschna heros, Gomphaeschna furcillata, Gomphus spicatus, Macromia illinoiensis, Dorocordulia libera, Epitheca canis, Epitheca cynosura, Epitheca spinigera, Somatochlora elongata, Somatochlora williamsoni, Williamsonia fletcheri, Williamsonia lintneri, Ladona julia, Leucorrhinia frigida, Leucorrhinia intacta, Libellula pulchella, Plathemis lydia, Libellula quadrimaculata

AuTrain Falls, Alger Co., June 22.

Calopteryx maculata, Cordulegaster diastatops (from seep downstream from falls), *Cordulegaster maculata, Basiaeschna janata, Anax junius, Gomphus spicatus, Ophiogomphus carolus, Didymops transversa, Macromia illinoiensis, Epitheca spinigera, Cordulia shurtleffi, Plathemis lydia, Libellula quadrimaculata, Leucorrhinia frigida, Leucorrhinia hudsonica, Libellula pulchella*



Female Harlequin Darner, *Gomphaeshna furcillata*, at Scott's Marsh.

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A Cause Of Wing Wear In Dragonflies

by Ken Tennessen (ktennessen@centurytel.net)

Wear and tear of dragonfly wings, especially when the flight season of any particular species is nearing its end, is quite common. Some individuals are able to fly with very little of the membranous portion of their wings left. Much speculation has been offered concerning the cause of wing damage, including attempts at predation by birds and other dragonflies, clashes among male territorial battles, and general abrasion and tearing caused by flying amongst plants. I recently found a striking example of the latter type of damage, which can be described as a puncture.

On June 30, 2008 at Hartford Lake, in Waushara County, central Wisconsin, a tandem pair of *Anax junius* pair flew down into the grass and sedges along the edge of the lake, probably so the female could oviposit. I approached slowly, took a few photos, and when I got really close the pair tried to fly up but couldn't lift up out of the grass. They appeared to be stuck, and I couldn't make out what had them caught. I touched the male several times, and he tried to pull the female upward but couldn't get lift her out of the vegetation. It was obvious then that the female was stuck (he wasn't letting go of her, much to his credit). After several more tries, she freed herself and the pair went careening out of sight. Later, while examining my photographs at home, I saw that a small, sharp-tipped rush had poked through the female's left hind wing, near the triangle (see accompanying photo), undoubtedly when the pair was settling down there to lay eggs. This spearing created great difficulty in trying to get her wing free. It must have torn a hole in the basal part of that wing. This is just one example of wing damage: as the season wears on, the wings wear out.