

2005 Collecting Summary

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The past year was an exciting one, with collections of some species that have not been captured more than a few times; a new state record; establishment of species as being resident, and lots of good records to "fill in the dots."

For starters, I have catalogued over 400 adult specimens from 2005. The MOS on-line database should be updated by the time you get the newsletter. The collectors that contributed this year were: Margi Chriscinske, Julie Craves, Carl Freeman, Derek Heubner, Luke Langstaff, Doug Munson, Adrienne O'Brien, Darrin O'Brien, Mark O'Brien, and Stephen Ross.

Allow me to fawn a bit. Stephen Ross gets credit for probably having traveled more miles across the state than anyone in search of Odes. He collected in various State game areas, and of course, hit his home county. His contract work for the Forest Service in Ontonagon County certainly put him farthest west and north in the state. Doug Munson and Derek Huebner, doing survey work for the Forest Service in Hiawatha National Forest, found many good records in Mackinac, Chippewa, and Delta counties. Julie Craves and Darrin O'Brien scoured the wilderness of Wayne County and came away with many excellent finds. I am amazed at their dedication and ability to find some great little habitats. The fact that they keep finding a new state record nearly every year is due

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Great Spreadwing: First State Record

Julie Craves and Darrin O'Brien
Dearborn, Wayne Co., MI

We had been looking for Great Spreadwing (*Archilestes grandis*) in Michigan for several years. It is a southwestern species that has been expanding its range since the 1920s, first being found in southwest Ontario in 2002 (although it has been present in Ohio since 1925). Many walks along sluggish ditches and slow streams did not yield one of these brawny bugs.

On 27 September 2005, we met in northwestern Wayne Co. for dinner;

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Male Great Spreadwing, *Archilestes grandis*, Livonia, Wayne County, MI, 28 September 2005. Photo by Julie Craves

2005 Collecting Summary., cont.

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to their persistence and knowledge of the area.

An earlier report detailed the Hine's trip with Margi, Carl, Stephen, and I in Mackinac County, but afterwards Stephen, Carl, and I went to Presque Isle and Alpena counties on July 15 and did more surveys for Hine's Emerald. That was a successful trip, as we found Hine's Emerald at Thompson's Harbor State Park, and saw some really excellent coastal fen habitat there.

The records that follow are of course, presented in abbreviated fashion to document the year's activities and to show the counties that specimens were collected from. Every one of those collections has its own story... miles of roads traveled, boots stuck in muck, uncountable mosquito bites, aggressive deer flies, wheels stuck in sand, beautiful sunsets, wonderful habitats, sweat-soaked clothes, and water-soaked sneakers. I have previously said that a bad day in the field is better than a good week in the office, and I still hold to that. I know that every one of the collectors has an interesting story about fieldwork, and those stories are hidden behind a list like this.

Here is the list of records at the county level. These are all of the specimens that were catalogued from 2005, arranged alphabetically by family, genus, species.

AESHNIDAE

Aeshna canadensis - Chippewa, Mackinac
Aeshna clepsydra - Chippewa, Montcalm
Aeshna eremita - Chippewa
Aeshna interrupta - Chippewa
Aeshna tuberculifera - Alpena, Chippewa, Mecosta
Aeshna umbrosa - Cheboygan, Chippewa, Mecosta, Washtenaw
Aeshna verticalis - Chippewa, Delta
Anax junius - Wayne
Basiaeschna janata - Washtenaw, Mecosta
Boyeria vinosa - Cheboygan, Kent, Mecosta, Missaukee, Presque Isle
Epiaeschna heros - Wayne
Gomphaeschna furcillata - Chippewa
Nasiaeschna pentacantha - Wayne

CALOPTERYGIDAE

Calopteryx aquabilis - Mackinac, Missaukee, Ontonagon
Calopteryx maculata - Chippewa, Mackinac
Hetaerina americana - Montcalm

COENAGRIONIDAE

Amphiagrion saucium - Delta, Mackinac, Presque Isle, Wayne
Argia apicalis - Mecosta, Missaukee

Argia fumipennis violacea - Kent, Missaukee, Van Buren
Argia moesta - Ontonagon, Presque Isle
Argia sedula - Wayne
Argia tibialis - Missaukee
Enallagma anna - Barry, Mecosta, Montcalm
Enallagma antennatum - Wayne
Enallagma aspersum - Hillsdale, Wayne
Enallagma basidens - Kent, Lenawee, Mecosta, Montcalm, Wayne
Enallagma boreale - Chippewa, Delta, Mecosta, Otsego
Enallagma carunculatum - Alger, Kent, Mecosta, Montcalm, Wayne
Enallagma civile - Mecosta, Wayne
Enallagma ebrium - Alpena, Missaukee, Montcalm, Ontonagon, Wayne
Enallagma exsulans - Kent, Mecosta, Missaukee, Montcalm, Presque Isle, Van Buren, Wayne
Enallagma geminatum - Kent, Mecosta, Montcalm, Wayne
Enallagma hageni - Alger, Delta, Kent, Mackinac, Ontonagon, Presque Isle
Enallagma signatum - Mecosta
Ichnura kellicotti - Mecosta
Ichnura posita - Cass, Wayne
Ichnura verticalis - Alger, Kent, Wayne
Nehallemia irene - Delta, Ontonagon, Washtenaw

CORDULEGASTRIDAE

Cordulegaster diastatops - Cheboygan, Chippewa, Schoolcraft
Cordulegaster maculata - Chippewa, Ontonagon
Cordulegaster obliqua - Alpena, Chippewa, Ontonagon

CORDULIIDAE

Cordulia shurtleffi - Chippewa, Ontonagon
Dorocordulia libera - Chippewa, Kent, Mackinac, Presque Isle, Washtenaw
Epitheca canis - Chippewa
Epitheca cynosura - Lenawee, Montcalm, Wayne
Epitheca princeps - Kent, Montcalm, Presque Isle
Epitheca spinigera - Keweenaw, Mackinac, Ontonagon, Washtenaw
Somatochlora cingulata - Chippewa
Somatochlora elongata - Ontonagon
Somatochlora forcipata - Chippewa, Delta, Mackinac, Ontonagon
Somatochlora franklini - Chippewa, Mackinac
Somatochlora hineana - Mackinac, Presque Isle
Somatochlora incurvata - Chippewa, Mackinac
Somatochlora kennedyi - Chippewa
Somatochlora minor - Mackinac, Ontonagon
Somatochlora walshii - Chippewa, Mackinac, Missaukee, Presque Isle

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2005 Collecting Summary., cont.

Somatochlora williamsoni - Alpena, Cheboygan, Chippewa, Mackinac, Mecosta, Presque Isle

Williamsonia fletcheri - Chippewa, Mecosta

Williamsonia lintneri - Mecosta

GOMPHIDAE

Arigomphus cornutus - Cheboygan, Chippewa, Mackinac, Ontonagon

Arigomphus furcifer - Mecosta, Montcalm

Arigomphus villosipes - Kent, Wayne

Gomphus exilis - Lenawee, Mackinac, Montcalm, Wayne

Gomphus fraternus - Chippewa, Delta, Wayne

Gomphus graslinellus - Wayne

Gomphus lividus - Mackinac, Mecosta, Ontonagon, Wayne

Gomphus spicatus - Chippewa, Mackinac, Montcalm, Otsego, Wayne

Hagenius brevistylus - Missaukee, Ontonagon

Hylogomphus adelphus - Delta

Ophiogomphus carolus - Ontonagon

Ophiogomphus rupinsulensis - Mecosta, Ontonagon, Osceola

Stylogomphus albistylus - Ontonagon

Stylurus notatus - Mecosta

Stylurus scudderi - Mackinac

Stylurus spiniceps - Missaukee

LESTIDAE

Archilestes grandis - Wayne (NEW STATE RECORD -- see article)

Lestes disjunctus - Mackinac, Mecosta

Lestes dryas - Alpena, Missaukee, Wayne

Lestes eurinus - Mecosta, Montcalm

Lestes forcipatus - Mecosta

Lestes rectangularis - Mecosta, Montcalm, Presque Isle, Wayne

Lestes vigilax - Missaukee, Montcalm, Van Buren

LIBELLULIDAE

Celithemis elisa - Berrien, Chippewa, Kent, Mackinac, Mecosta, Montcalm, Presque Isle, Washtenaw, Wayne

Erythemis simplicicollis - Kent, Montcalm

Ladona julia - Chippewa, Otsego, Presque Isle

Leucorrhinia frigida - Alpena, Chippewa, Ontonagon, Presque Isle

Leucorrhinia glacialis - Chippewa

Leucorrhinia hudsonica - Chippewa, Ontonagon

Leucorrhinia intacta - Chippewa, Kent, Mecosta, Montcalm, Ontonagon, Otsego, Presque Isle

Leucorrhinia proxima - Delta, Mackinac, Ontonagon

Libellula cyanea - Washtenaw

Libellula incesta - Kent, Montcalm

Libellula luctuosa - Kent, Wayne

Libellula pulchella - Kent, Mackinac, Montcalm

Libellula quadrimaculata - Chippewa, Delta, Montcalm

Libellula semifasciata - Wayne

Libellula vibrans - Wayne

Nannothemis bella - Mackinac, Mecosta

Pachydiplax longipennis - Berrien, Montcalm, Wayne

Pantala hymenaea - Mackinac, Wayne

Perithemis tenera - Mecosta, Wayne

Plathemis lydia - Chippewa, Kent, Mackinac

Sympetrum costiferum - Berrien, Chippewa

Sympetrum danae - Delta

Sympetrum obtrusum - Kent, Montcalm

Sympetrum rubicundulum - Mackinac, Wayne

Sympetrum vicinum - Chippewa, Mecosta, Montcalm, Wayne

Tramea carolina - Wayne

Tramea lacerata - Delta, Wayne

Michigan Odonata Survey celebrates 10 years!

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It's hard to believe, but 2006 marks 10 years since three people decided to initiate an effort to catalog and survey the Odonata of Michigan. In June of 1996, I started a survey of the Odonata of the Huron Mountains in Marquette Co., and had Mike Kielb and Ethan Bright as assistants for that first week of survey work. It was a wonderful week of field work, and one of my most memorable trips to the Huron Mountain Club. Some highlights from that trip were the three of us picking emeralds from trees in an opening along the shore of Lake Superior; wading through a flooded cranberry bog and watching an 8 inch leech swim past me; all of us walking up the trail of Mountain Stream and watching *Cordulegaster maculata* females lay eggs by doing their pogo-stick movement into the water, and then later seeing hundreds of *Stylogomphus albistylus* emerging from the banks farther upstream.

We had such a good time working together that we decided that maybe a state-wide survey could be doable. How to proceed was the question. We had the Ohio Odonata Survey as a model, and set about to form a survey that fall. One of the first things we did was catalog all of the Michigan Odonata in the UMMZ collection, and that formed the nucleus of the survey data in the first few years.

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Great Spreadwing., cont.

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odonata observation was not on the agenda. We chose a fairly new restaurant in Livonia, part of a 15 hectare (~35 acre), as-yet unfinished development. A small creek emerged from a metal culvert under the busy road out front and went right between the restaurant and the parking lot, heading off to the rear of the development. The creek is perhaps one meter across, and the "protected natural wet land" (according to the sign; sic, and sick) is about four meters wide, full of weeds, trash, etc. As we crossed over the decorative little bridge, a flash of odonata wings caught our attention. We literally skidded to a stop, thinking it might be a late ovipositing *Aeshna* working the creek. But no, perched on a poorly planted (and therefore mostly dead) shrub was an enormous female spreadwing.

We immediately considered *Archilestes grandis*, but it just seemed so unlikely. Of course, we both had nets in our cars, and I went ahead and caught the female. No doubt, here it was: Michigan's first Great Spreadwing.

Dinner abandoned for the time being. We walked along the creek for about a quarter-mile. The swath of green was never more than five meters or so wide, bordered by erosion cloth and then denuded ground with a covering of opportunistic weeds. The creek itself was rarely visible. Along most of the length were piles of twisted brush, thick growths of thistles, burdocks, buckthorn, and pioneering patches of Purple Loosestrife: an excellent example of Michigan's fantastic wetland protection and mitigation laws in action. There were five or so places where bridges leading to nowhere (but soon, office buildings) had been built over the creek, offering glimpses on either side of various types of garbage, and about five or six other Great Spreadwings. We caught a male for a second voucher.



I returned the following afternoon; it was still fairly warm but a strong cold front was approaching. I returned to try to census the population along the creek and take some photos. By the time I arrived it was cloudy with a strong wind. Hunkering low in the vegetation I located two pairs of *Archilestes* in tandem, and another six solo males. I would say that there are probably at least two or three dozen individuals along the creek, and that this is likely an established population. How long it will persist as

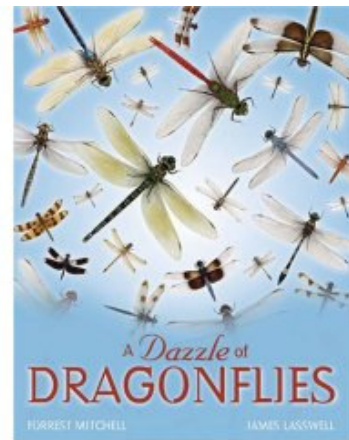
the area becomes more degraded is anybody's guess. This species is tolerant of disturbed areas, but if the creek gets completely overgrown, polluted from runoff from the parking lots, full of algae from fertilizer or other nutrients such as abundant goose poop from the retention basin feeding it, or the flow gets obstructed from all the trash, then it may not longer be suitable habitat for this very grand Great Spreadwing.

Vouchers are in the Insect Division collection at the UMMZ.

Due the development of the surrounding habitat and the ongoing degradation of the creek, this population of Great Spreadwings may not survive.

Book Review: A Dazzle of Dragonflies

A Dazzle of Dragonflies, by Forrest L. Mitchell and James L. Lasswell, Texas A&M University Press, College Station, TX. 224 pp, ISBN- 1-58544-459-6. 2005.



It is refreshing to stumble upon a book that I didn't know existed, and to be so pleased with the contents. *A Dazzle of Dragonflies* (perhaps equal to a squadron of skeeters, a flock of gulls, or an encampment of entomologists?) is dazzling, as the authors have incorporated a LOT of beautiful images from their work with scanning live Odonata, field-based images, and wonderful abstractions of dragonfly morphology. This is a book by, and for, lovers of Odonata (ouch, that sounds a bit kinky). Whether you are a long-time odonatologist or a beginner, this book will appeal to you. Besides presenting a lot of information, ranging from dragonfly folklore (something that I have been wanting to see), to natural history, and to digital scanning, the images accompanying the text are simply wonderful. The many large and colorful photographs in this book say "PUT ME ON THE COFFEE TABLE" – and if there was ever a "coffee table" insect book, this one is it. To see several pages pleasingly bordered with full-color scans of the butts of skimmers is something to behold.

A Dazzle of Dragonflies is pleasingly laid out, with lots of useful and interesting information on biology, life history, folklore, evolution, collecting, and rearing, with the experiences of the authors well-intertwined into the text. This is obviously not a field guide, nor does it purport to be one. However, the authors do survey the various families and genera of dragonflies in the U.S., particularly those found in Texas. They provide information of collecting and preservation, as well as how to study them. You can read on how to plan a water garden for Odonata, based upon the authors' own experiences. You can read on how to photograph them, and you can find out how they do their incredible scans. This is not a run-of-the-mill Odonata book—on a cold winter day in December, the vivid photos almost seemed to fly off the pages.

If you are looking for the perfect gift for the Odonata enthusiast, something for a library for a nature center, or heck, to splurge on yourself (why not?) – I recommend that you buy a copy of *A Dazzle of Dragonflies* before it becomes some rare book that nobody has in stock! For \$39.95, you will be rewarded with some of the finest dragonfly imagery that I have seen in book form. You can order it online at <http://www.tamu.edu/upress/BOOKS/2005/mitchelldragonflies.htm>. — Reviewed by Mark O'Brien.

Request for Williamsonia specimen material

I am writing to ask for some assistance. In the course of working with *Williamsonia lintneri* and *W. fletcheri* in Maine, Mark Ward and I have grown increasingly skeptical of the differences in morphological characters between the exuviae of these two species as outlined by Charlton and Cannings in their important 1993 paper (The Larvae of *Williamsonia fletcheri* Williamson (Anisoptera: Corduliidae). *Odontologica* 22: 335-343). The ranges of these two species overlap in Maine, which has increased the complexity of surveying for *W. lintneri* (the rarer of the two species here). The inability to reliably identify exuviae of this genus to the species-level has made it nearly impossible to utilize exuvial counts to estimate population size, as is often done in states where only one of the species is found.

We have collected several exuviae of *W. lintneri* and *W. fletcheri* in Maine (confirmed by association with teneral adults) and have been examining the morphological characters of these known specimens. Our preliminary findings suggest that the differences proposed by Charlton and Cannings do not consistently hold up. Our specimens, however, come from a very narrow portion of the two species ranges, and in the case of *W. lintneri*, from only a few sites. We would like to make similar measurements on specimens of these two species from other areas to see whether the patterns that we think we are seeing hold up across the species ranges. This is where you can help!

We are asking that you help by loaning us some collected exuviae of *W. lintneri* and/or *W. fletcheri* from your jurisdiction (if you have both species please provide the basis for species confirmation). Our preference would be for 10-20 exuvia of each species, but we appreciate any material you can spare. We hope to make these measurements this winter, so it would be most appreciated if we could receive the material before January 1st. Please be sure to let us know if or when you need the material returned.

Thank you for your participation and let us know if there is another contact in your state that is better suited for this request.

Phillip deMaynadier, Maine Department of Inland Fisheries and Wildlife, 650 State Street, Bangor, ME 04401, Ph. 207-941-4239
phillip.demaynadier@maine.gov

MOS 10 years., cont.

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Since then, we have added an average of 500 specimens a year in the MOS database over the past few years. At the moment, we have close to 25,000 records, and the majority of them are in the UMMZ collection. Our specimen-based approach has been successful in allowing us to accurately document the odonate fauna in our state, and many new state records have resulted from our efforts. Some areas of the state have been extensively sampled, and still yield new records. Persistence has definitely paid off.

Over the last 10 years, I have met many interesting and enthusiastic volunteers. Some of you started out with no prior entomology experience, others are avid birders, and some of you accomplished naturalists. I believe that I have been greatly enriched by knowing you, and of course, the MOS has been a success because of your enthusiasm. It's a fairly low-budget approach, but in the end, I think we have greatly exceeded my expectations, and 2006 should be a great year.

What's in the future? Now that Federal and State agencies have recognized the value of Odonata surveys, we have seen several initiatives towards sampling for rare species in some of the National Forests located in the Upper Peninsula. These surveys will likely continue and add to our knowledge-base of Michigan Odonata. In addition, funds targeted towards Hine's Emerald work will likely yield information on other species in fen habitats, as well as to increase the awareness of Odonata among residents where Hine's Emeralds are found. Repeated sampling keeps turning up new populations of what were thought to be "rare" species, and work in suburban southeast Michigan keeps turning up more records. Our work is not over yet. An atlas of Michigan Odonata is not far off, and after 10 years of effort, I believe that we will have largely achieved our original aims when the MOS was formed. So, let's look forward to the coming year and see what new discoveries will take place.

One thing I would like to know from any of you is how your perception and appreciation of Odonata has changed in the last 10 years. I know for me, I am far more knowledgeable about Odonata than I was 10 years ago, when I was really getting started on them in a serious manner. But in addition, I have made many new friends and discovered many interesting places along the way. Here are Stephen Ross's comments.—Mark O'Brien

I began with the MOS on a chance meeting early in 1998. I know the professor of pharacognacy at Ferris reasonably well and happened to be at his house while his daughter was home from UM. She was involved with the early MOS and she suggested I look up Mark. At the time I was working on a birds-of-Mecosta-County book and beginning to expand it into what became the *Natural History of Mecosta County*. Working dragonflies in with the butterflies seemed a natural progression. I made contact with Mark and it snowballed to a near obsession from there, so much so I have almost given up birding.

What I have learned has been life changing. I get out more in many more of the nooks and crannies of Mecosta County and the state I'd never have reached staying strictly to birds. I am more observant of smaller life forms and of detail, both foreign and domestic. While on my world "birding" tours, I now find myself searching for odes more than birds. While I have been aware of the larger odes for years, discovering the smaller dragonflies and the whole of the damselflies was enlightening.

One of my major annoyances with the birding community is the obsession many birders have with actually seeing a bird; they will trample habitat into oblivion to see a bird, check it off, and move on as if they saw nothing else about them. I haven't observed that with ode chasers. Along the way, I've made numerous new friends.

Some of the accomplishments have been reaching 100 ode species for Mecosta County (2005), confirming all prior records from the county still having extant populations, one state record, several second state records, and numerous surprising range extensions. Elsewhere, I've provided numerous other county records around the state as well and have had the opportunity to do four week-long surveys in the Ottawa NF for the Forest Service. — Steve Ross, Mecosta County.



Illustration by A.W. Andrews of Detroit, in letter to E.B. Williamson.

Checklist of Michigan Odonata

This list is as current and accurate as possible. Voucher specimens are required for any new County or State records. 48 genera, 164 species are known from Michigan. ** = historical record, not recollected since 1950.

ZYGOPTERA

Calopterygidae

River Jewelwing, *Calopteryx aquabilis* Say
 Ebony Jewelwing, *Calopteryx maculata* (Beauvois)
 American Rubyspot, *Hetaerina americana* (Fabr.)
 Smoky Rubyspot, *Hetaerina titia* (Drury)

Lestidae

Great Spreadwing, *Archilestes grandis* (Rambur) [new 2005]
 Spotted Spreadwing, *Lestes congener* Hagen
 Northern (Common Spreadwing), *Lestes disjunctus disjunctus* Selys
 Southern Spreadwing, *Lestes disjunctus australis* Walker
 Emerald Spreadwing, *Lestes dryas* Kirby
 Amber-winged Spreadwing, *Lestes eurinus* Say
 Sweetflag Spreadwing, *Lestes forcipatus* Rambur
 Elegant Spreadwing, *Lestes inaequalis* Walsh
 Slender Spreadwing, *Lestes rectangularis* Say
 Lyre-tipped Spreadwing, *Lestes unguiculatus* Hagen
 Swamp Spreadwing, *Lestes vigilax* Hagen

Coenagrionidae

Eastern Red Damsel, *Amphiagrion saucium* (Burmeister)
 Blue-fronted Dancer, *Argia apicalis* (Say)
 Powdered Dancer, *Argia moesta* (Hagen)
 Blue-ringed Dancer, *Argia sedula* (Hagen)
 Blue-tipped Dancer, *Argia tibialis* (Rambur)
 Variable Dancer, *Argia fumipennis violacea* (Hagen)
 Aurora Damsel, *Chromagrion conditum* (Hagen)
 Subarctic Bluet, *Coenagrion interrogatum* (Hagen)
 Taiga Bluet, *Coenagrion resolutum* (Hagen)
 River Bluet, *Enallagma anna* Williamson
 Rainbow Bluet, *Enallagma antennatum* (Say)
 Azure Bluet, *Enallagma aspersum* (Hagen)
 Double-striped Bluet, *Enallagma basidens* Calv.
 Boreal Bluet, *Enallagma boreale* Selys
 Tule Bluet, *Enallagma carunculatum* Morse
 Familiar Bluet, *Enallagma civile* (Hagen)

Northern Bluet, *Enallagma cyathigerum* (Charp.)

“Springtime” Bluet, *Enallagma cyathigerum vernale* Gloyd

Turquoise Bluet, *Enallagma divagans* Selys

Marsh Bluet, *Enallagma ebrium* (Hagen)

Stream Bluet, *Enallagma exsulans* (Hagen)

Skimming Bluet, *Enallagma geminatum* Kellicott

Hagen’s Bluet, *Enallagma hageni* (Walsh)

Orange Bluet, *Enallagma signatum* (Hagen)

Slender Bluet, *Enallagma traviatum westfalli* Donnelly

Vesper Bluet, *Enallagma vesperum* Calvert

Citrine Forktail, *Ischnura hastata* (Say)

Lilypad Forktail, *Ischnura kellicotti* Williamson

Fragile Forktail, *Ischnura posita* (Hagen)

Eastern Forktail, *Ischnura verticalis* (Say)

Sphagnum Sprite, *Nehalennia gracilis* Morse

Sedge Sprite, *Nehalennia irene* (Hagen)

ANISOPTERA

Petaluridae

Gray Petaltail, *Tachopteryx thoreyi* (Hagen)

Cordulegastridae

Brown Spiketail, *Cordulegaster bilineata* Carle

Delta-spotted Spiketail, *Cordulegaster diastatops* (Selys)

Tiger Spiketail, *Cordulegaster erronea* Hagen

Twin-spotted Spiketail, *Cordulegaster maculata* Selys

Arrowhead Spiketail, *Cordulegaster obliqua* (Say)

Aeshnidae

Canada Darner, *Aeshna canadensis* Walker

Mottled Darner, *Aeshna clepsydra* Say

Lance-tipped Darner, *Aeshna constricta* Say

Lake Darner, *Aeshna cremita* Scudder

Variable Darner, *Aeshna interrupta* Walker

Sedge Darner, *Aeshna juncea* Linn.

Zigzag Darner, *Aeshna sitchensis* Hagen

Subarctic Darner, *Aeshna subarctica* Walker**

Black-tipped Darner, *Aeshna tuberculifera* Walker
 Shadow Darner, *Aeshna umbrosa* Walker
 Common Green Darner, *Anax junius* (Drury)
 Comet Darner, *Anax longipes* Hagen
 Springtime Darner, *Basiaeschna janata* (Say)
 Green-striped Darner, *Aeshna verticalis* Hagen
 Ocellated Darner, *Boyeria grafiana* Williamson**
 Fawn Darner, *Boyeria vinosa* (Say)
 Swamp Darner, *Epiaeschna heros* (Fabr.)
 Harlequin Darner, *Gomphaeschna furcillata* (Hagen)
 Cyrano Darner, *Nasiaeschna pentacantha* (Rambur)
 Spatterdock Darner, *Rhionaeschna mutata* (Hagen)

Gomphidae

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

Arrow Clubtail, *Stylurus spiniceps* (Walsh)

Macromiidae

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

Corduliidae

American Emerald, *Cordulia shurtleffi* Scudder
 Racket-tailed Emerald, *Dorocordulia libera* (Selys)
 Beaverpond Baskettail, *Epithea canis* MacLachlan
 Stripe-winged Baskettail, *Epithea costalis* (Selys) [new 2004]
 Common Baskettail, *Epithea cynosura* (Say)
 Prince Baskettail, *Epithea princeps* (Hagen)
 Spiny Baskettail, *Epithea spinigera* Selys
 Stygian Shadowdragon, *Neurocordulia yamaskanensis* (Provancher)
 Lake Emerald, *Somatochlora cingulata* (Selys)
 Ski-tailed Emerald, *Somatochlora elongata* (Scudder)
 Forcinate Emerald, *Somatochlora forcipata* (Scudder)
 Delicate Emerald, *Somatochlora franklini* (Selys)
 Hine's Emerald, *Somatochlora hineana* Williamson
 Incurvate Emerald, *Somatochlora incurvata* Walker
 Kennedy's Emerald, *Somatochlora kennedyi* Walker
 Mocha Emerald, *Somatochlora linearis* (Hagen)
 Ocellated Emerald, *Somatochlora minor* Calvert
 Clamp-tipped Emerald, *Somatochlora tenebrosa* (Say)
 Brush-tipped Emerald, *Somatochlora walshii* (Scudder)
 Williamson's Emerald, *Somatochlora williamsoni* Walker
 Ebony Boghaunter, *Williamsonia fletcheri* Williamson
 Ringed Boghaunter, *Williamsonia lintneri* (Hagen)

Libellulidae

Calico Pennant, *Celithemis elisa* (Hagen)
 Halloween Pennant, *Celithemis eponina* (Drury)
 Banded Pennant, *Celithemis fasciata* Kirby
 Eastern Pondhawk, *Erythemis simplicicollis* (Say)
 Chalk-fronted Corporal, *Ladona julia* Uhler
 Frosted Whiteface, *Leucorrhinia frigida* (Hagen)
 Crimson-ringed Whiteface, *Leucorrhinia glacialis* Hagen
 Hudsonian Whiteface, *Leucorrhinia hudsonica* (Selys)
 Dot-tailed Whiteface, *Leucorrhinia intacta* (Hagen)
 Red-waisted Whiteface, *Leucorrhinia proxima* Calvert
 Spangled Skimmer, *Libellula cyanea* Fabr.

Slaty Skimmer, *Libellula incesta* Hagen
Widow Skimmer, *Libellula luctuosa* Burmeister
Twelve-spotted Skimmer, *Libellula pulchella* Drury
Four-spotted Skimmer, *Libellula quadrimaculata* Linn.
Painted Skimmer, *Libellula semifasciata* Burm.
Great Blue Skimmer, *Libellula vibrans* Fabricius
Elfin Skimmer, *Nannothemis bella* (Uhler)
Blue Dasher, *Pachydiplax longipennis* (Burmeister)
Wandering Glider, *Pantala flavescens* (Fabr.)
Spot-winged Glider, *Pantala hymenaea* (Say)
Eastern Amberwing, *Perithemis tenera* (Say)
Common Whitetail, *Plathemis lydia* Drury
Blue-faced Meadowhawk, *Sympetrum ambiguum* (Rambur)
Variegated Meadowhawk, *Sympetrum corruptum* (Hagen)
Saffron-winged Meadowhawk, *Sympetrum costiferum* (Hagen)
Black Meadowhawk, *Sympetrum danae* (Sulzer)
Cherry-faced Meadowhawk, *Sympetrum internum* Montgomery
White-faced Meadowhawk, *Sympetrum obtrusum* (Hagen)
Ruby Meadowhawk, *Sympetrum rubicundulum* (Say)
Band-winged Meadowhawk, *Sympetrum semicinctum* (Say)
Autumn Meadowhawk, *Sympetrum vicinum* (Hagen)
Carolina Saddlebags, *Tramea carolina* (Linn.)
Black Saddlebags, *Tramea lacerata* Hagen
Red Saddlebags, *Tramea onusta* Hagen

For more information on Michigan Odonata:

Michigan Odonata Survey (Attn: Mark O'Brien)
Museum of Zoology, 1109 Geddes Avenue
University of Michigan, Ann Arbor, MI 48109

MOS web pages: <http://insects.ummz.lsa.umich.edu/michodo/mos.html>

Michigan Odonata Blog: <http://michodo.blogspot.com/>

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First Michigan specimens of Great Blue Skimmer

Julie Craves and Darrin O'Brien
Dearborn, Wayne Co., MI

Great Blue Skimmer (*Libellula vibrans*) was first recorded in Michigan in 1995, described in a paper published (in Japanese) in the journal *Aeshna* by Tokihiro Nishida. He had one on 22 June 1995, and photographed a male 10 July 1995, at a small wooded wetland in Westland, Wayne Co. If he obtained a specimen, it is not in the University of Michigan odonata collection.

On 30 August 1999, Hudson et al. (1999) reported a single male *L. vibrans* at Lake Erie Metropark in southeastern Wayne Co., but did not indicate if it was collected. We have also done quite a bit of surveying at this park, but have never encountered Great Blue Skimmer.



Male Great Blue Skimmer, *Libellula vibrans*, Westland, Wayne Co., MI, 10 July 2005. Photo by Julie Craves.

In 2004, JAC went to what she figured HAD to be the swamp Nishida described in Westland, an extremely built-up community. It could only be at Holliday Nature Preserve, a county park. Although we returned again and again, finding other species he noted there, there was no sign of *L. vibrans*. The swamp also appeared to be filling in with button bush and fallen trees. Accessible wooded ponds are hard to come by in this county. One other looked promising, but repeated visits in 2004 did not turn up this species. Perhaps Nishida's Great Blue Skimmers were just wanderers, and would not be found again without luck, and a year when conditions, perhaps drought in the southeast, brought *L. vibrans* north to Michigan.

We thought perhaps this might be the lucky year. The Northeast Odes listserv noted an influx of Great Blue Skimmers in New York state. Mark O'Brien reported sightings in Washtenaw Co. in late June.

On 9 July 2005, we went to Holliday NP in search of the Great Blue Skimmer. Within five minutes of arrival, JAC located a male, behaving exactly as reference books described, returning to his perch in the dappled sunlight after looping out over the swamp. Because it was perched out over very mucky water, criss-crossed with fallen trees and branches, and did not offer an unobstructed netting opportunity, this male was observed well by both of us, but we were unable to catch it.

The next day we arrived at Holliday at about 1:30 PM, wearing rubber boots in 90 degree weather. Within half an hour we were able to locate several males in the accessible parts of the swamp, obtain mediocre photos, and a voucher for Michigan's first state record -- 10 years to the day that Nishida had one in the exact same place. Since the habitat is perfect, at least some of the water is permanent, and the area is protected, we presume that this is an established population that has persisted over the ten years since Nishida first found this species at Holliday. Our inability to find them in 2004 was most likely due to the difficult access to the majority of the swamp.

Later in the summer, we explored an area new to us located on the north end of Willow Metropark, along a biking trail, in southern Wayne Co. Remarkably, on 28 August, we found another small group of male *L. vibrans* in a mucky pond surrounded by woods adjacent to the Huron River. We took one voucher. This habitat also seemed great, but appears that it could completely dry up in some years. It will be an area we check in the future to determine if there is an established population of Great Blue Skimmer there, as well.

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Great Lakes Odonata Meeting (GLOM) 2005

Close to fifty dragonfly enthusiasts gathered on July 15, 2005 to listen to several speakers kick off GLOM 2005 in Fort Frances, Ontario. After welcoming the participants from as far away as California and as young as 6 years old (Noah Berg), Bill Morgenstern turned the meeting over to Darren Elder, a biologist with the Ontario Ministry of Natural Resources, who presented an introduction to odonates of Northwestern Ontario and the Rainy River District. Elder emphasized the diversity of species in the district caused by the diverse habitat ranging from boreal forest to prairie fringe, with wetlands present in large numbers.

Next, the group heard about a bio database being designed and implemented by Steve Kingston of Ontario Parks in Thunder Bay. After a small mix-and-mingle social and opportunity to peruse and purchase Bob DuBois' new book, *Damselflies of the North Woods*, the participants split into field trip groups of 12-14 to view route maps and plan their strategies for the Saturday field trips across the central portion of the Rainy River District.

Saturday dawned with clear blue skies and the promise of increasing temps for a day in the field searching for dragons and damselflies. Three groups spread across the district led by Colin Jones, Marjorie Hughes, Darren Elder, and Kurt Mead. At the end of the day 48 odonate species were counted including nine damselfly and 39 dragonfly species. Most notable were new district records of *Somatochlora ensigera* (Plains Emerald) and *Somatochlora minor* (Oscellated Emerald). It really turned out to be an "Emerald Day" with *Somatochlora williamsoni* (Williamson's Emerald), *Somatochlora walshii* (Brush-tipped Emerald), *Somatochlora forcipata* (Forcipate Emerald), *Somatochlora franklini* (Delicate Emerald) and *Dorocordulia libera* (Racket-tailed Emerald) added to the day's count.

Saturday evening GLOM participants enjoyed a fine Ojibwe traditional meal of walleye filets, wildrice and bannock prepared and served at Kay-Nah-Chi-Wah-Nung Historical Centre along the banks of Rainy River near Stratton, Ontario. After the meal Colin Jones of the Ontario Natural Heritage Information Centre spoke to the group about rare odonates in Ontario and why they are rare. Colin also spoke about the Ontario Odonate Atlas and encouraged participants to become annual contributors to the database.

Emo's Lions Park along the bank of the Rainy River was the scene of Sunday's Dragonfly Community Day. Here local residents met Kurt Mead and learned the basics about dragonflies, enjoyed looking under the microscope with Marjorie Hughes, watched an Elusive Clubtail emerge from its larval stage under the protective supervision of Colin Jones and Darren Elder and enjoyed making dragonfly art provided by Pam Hawley and the Fort Frances Museum. Young and old alike picked up a net and

experienced catch and release along the river bank. It was at this point that 10 year old Adam VanAel captured the yet unrecorded *Enallagma clausum* (Alkali Bluet) and the district had another record.

Early Sunday morning Colin Jones and Darren Elder visited a promising site north of Pinewood and came back with another district record, *Cordulegaster obliqua* (Arrowhead Spiketail). This beautiful dragon drew lots of interest when it was displayed at the community day. Later in the day GLOM participants took a short field trip north of Stratton, Ontario and enjoyed an hour lead by Darren Elder chasing a variety of *Somatochlora* species around an open hayfield at the forest edge. Colin Jones tickled several people in the group with his speedy net work as he lured a cruising emerald in with a small tossed pebble. Colin was lightening fast, the emerald was not.

Sunday evening the group enjoyed another fine meal, this time at the Barwick Community Hall and heard Marjorie Hughes speak on dragonflies of Manitoba including work on *Gomphus fraternus manitobanus*, a unique Manitoba subspecies.

Monday the weather turned and so did most of the out-of-town participants that had to head home. Those that did stay searched under cloudy skies with blustery winds for whatever brave dragonfly may be out. Finally the small group found a spot out of the wind with a variety of *Sympetrum* species and watched as Noah Berg climbed into his net to pick them out. This six year old just never stops. Oh to be young again!

At the end of the day GLOM 2005 counted 50 odonate species during field trips, one new damselfly record and four new dragonfly records for the Rainy River District. The event was a huge success with a significant number of new people introduced to the enjoyment of odonates. Requests for nets and field guides are still being received. Participants went home feeling satisfied with their experience and are in the field on their home turf. The local planning committee worked hard and plans for GLOM 2006, possibly in Wisconsin, are in the works.

Thanks to all the participants that came to the Rainy River District to Make GLOM 2005 the success that it was. Thanks also to our speakers and group leaders that came from Ontario, Manitoba and Minnesota to help out. And thanks to the local planning committee that spent countless hours to ensure that GLOM 2005 was a rewarding event. — Submitted by - Bill Morgenstern

2005 in Wayne County

Julie Craves and Darrin O'Brien
Dearborn, Wayne Co., MI

Dragonflying in 2005 was a great improvement over 2004 with regards to numbers and diversity in Wayne County (Detroit), Michigan. Spring and early summer provided sufficient rain, but the latter half of summer was dry. The best part, however, was that it was often HOT, and warm temperatures continued into November.

We collected 73 vouchers of 45 species this season in Wayne County. Six species were new county records and two were new state specimens. In order of decreasing interest/importance/fascination:

Great Spreadwing (*Achilestes grandis*): New state record. Several individuals were found at a rapidly developing retail/restaurant area in Livonia on two dates in September, and a pair were collected. See article elsewhere in this issue of *Williamsonia*.

Great Blue Skimmer (*Libellula vibrans*): First state voucher. This species was previously reported in literature at the Holliday Nature Preserve and we had checked this location several times in recent years but had no luck. We finally found multiple males in June and collected two. In late August, we found several more males at Willow Metropark. See article elsewhere in this issue of *Williamsonia*.



A face only a mother could love: Cyrano Darner. Photo by Julie Craves.

Cyrano Darner (*Nasiaeschna pentacantha*): New county record. Several patrolling the Huron River at Oakwood Metropark in early June at a location we frequently visit. How do you miss one of these?

Painted Skimmer (*Libellula semifasciata*): A single individual was collected mid-June as part of intensive baseline surveys of the recently acquired Humbug Marsh Unit of the Detroit River International Wildlife Refuge (DRIWR). There are only four specimen records of *L. semifasciata* for Michigan; the dates are 1892, two from 1908, and one 'recent' record from 1936. Sight records have been noted (Kielb 1996), but without verification. Frustratingly, we saw another Painted Skimmer in Brownstown Township on 18 June, wooded wetland complex slated for development. It quickly flew over a fence, so we were unable to photograph it or examine it.

Lancet Clubtail (*Gomphus exilis*): Initially observed in late May with a specimen captured in June at Sherwood Park in western Wayne County, a nice location for interesting odonata.

Blue-ringed Dancer (*Argia sedula*). New county record (oddly enough). Individual collected at Hines Park, Livonia, July.

Since 2001, we have added 41 new species, by means of voucher specimens, to the Wayne County list, which now stands at 91 species.

Another species that has eluded us yet another year is the **Comet Darner** (*Anax longipes*). Single individuals were observed on two different dates at DRIWR, one in late June in Northville, and one over several weeks at Sherwood Park in 2004. So far, they've always avoided the net. To date there are no specimens for Wayne County.

Literature Cited

Kielb, M.A. 1996. The occurrence of Libellulid dragonflies in southeastern Michigan and adjacent Ontario. *Great Lakes Entom.* 29:1-9.

Garfield Park, Grand Traverse County — Jody Clark could use some help

One of the early MOS beginners, Josephine M. Clark (Jody), is collecting observations at a new park in Grand Traverse County. For three years, Jody has been making observations at Garfield Township Park, located on the west side of the north end of East Silver Lake Road. The park is nearly 85 acres of grassland and woodland (20 hilly acres), with over two miles of trail (0.7 mi paved). The Township owns ten acres of shallow bottom land at the north end of Silver Lake (groundwater inflow from the north) and the nearby five-acre hidden "silt lake".

Clark documented that the depth of Hidden Lake is at least six feet. With hundreds of dragonflies skimming the water and the large numbers in the *Anax junius* hatch, Clark is fairly sure there are no fish in the small lake, although there are healthy populations of water beetles and spiders on and under the surface. Although the central grassland of the old orchard is developing into a well-used community park, about five acres to the north and south are left as natural hill/grassland.

Clark's goal is to create a record of species from the opening of the Park, to document any changes as forty acres are mowed (two years to date) and the blocked south end of the wetland is opened as a meander (possible in the future). For the past four years, Clark's focus has been Hidden Lake and the grasslands. Four Anisoptera families are present: The darner species haven't been completely sorted out yet. A few clubtails have been noted with the potential for more discoveries. Emeralds have also been recorded. The largest populations are skimmers, with a marvelous confusion of *Sympetrum* present. Although Clark has just begun to identify the Zygoptera, she has created a basic record of size, color, and wings to document a strong and varied population.

In mid-July 2005, Carl J. Freeman (MOS collector and field leader) and E. Terry Clark (photographer) joined Clark for a walk. Within two hours they documented thirteen of the twenty-seven Anisoptera species Clark has recorded. Although Clark has done no collecting, she presently has permission from the Township to do so. In the near future Clark would appreciate anyone with experience collecting to join her in formally documenting the Odonata of Garfield Township Park. She can be contacted at jodylark@traverse.com

MOS Donation Update

A special thank-you to those of you that gave to the MOS during our fall fund-raising campaign. The Michigan Odonata Survey relies on donations for expenses that we incur for the newsletter and supplies, such as field notebooks and glassine envelopes that participants use to collect for the survey work.

I feel fortunate that we have so many supportive people, whether it's by collecting in the field, providing data, identifying specimens, writing articles, or donating cash to further the cause. The MOS would not have lasted without your support.

Thanks to : Richard S. Taylor, Doris Applebaum, Doug Munson, Larue Wells, Ellie Shappirio, Roy Beckemeyer, Delora Loope, Bob Glotzhober, Sid Dunkle, Chip Francke, Greg Swanson, Clark Schiffer, Margi Chriscinske, Carl Freeman, and Barbara Taylor. We came very close to raising \$1,000, which will definitely ensure the newsletter's continuity, and will enable further purchases of supplies. Of course, if you were not able to contribute at that time, you can certainly do so for 2006. Thanks again for your support!

Ohio Odonata Society Meeting Notice

The Ohio Odonata Society will have their annual meeting on Saturday, February 11, 2006. It will take place at the Spring Hollow Lodge within the Sharon Woods Metro Park (of the Columbus Metro Parks) in Westerville, Ohio (north side of Columbus). The address is Spring Hollow Lodge: 1069 W. Main St., Westerville, OH 43081 and a link to Sharon Woods is: <http://www.metroparks.net/ParksSharonWoods.aspx>

Program agenda is still under development, but you can get more information by contacting VP/Program Chair Steve Chordas at: SCHORDAS@odh.ohio.gov or Pres/ Bob Glotzhober at: bglotzhober@ohiohistory.org or by phone at 614/ 297-2633. Or visit the website of the Ohio Odonata Society at: <http://www.marietta.edu/~odonata/index.html> Admission is free and all are invited. There will be a short business meeting and a variety of talks.

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This 22-inch dragonfly hood ornament was made by sculptor Jud Turner (www.judturner.com). It's sure to catch flies!