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MINNESOTA ODONATA GAZETTE

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Minnesota Odonata Survey Project

The 2008 Dragonfly Season Has Begun!

…sort of…

OK, so at the time and place that I write this, in early June near Finland, MN, the season has not really begun. The southern portions of the state are seeing dragonflies and damselflies, as we witnessed during the May 16th workshop at Ney Nature Center near Henderson, MN. I think that if we had arrived one day earlier we would have found very little flying. As it was, all of the Dot-tailed Whitefaces and unidentified female Bluet damselflies had just emerged that day.

The pond at which we found these teneral Odonates was the pond at which the first deformed frogs were found by school kids. Our host for the day, Becky Pollack, director of Ney, was one of the students that found those first frogs all those years ago. The 37 participants of the workshop were mostly wildlife professionals from public agencies such as MN DNR, National Park Service, US Fish and Wildlife Service, US Department of Agriculture and Anoka County Parks. We also had a couple of Master Naturalists and a few enthused citizens as well.

We held one of these "professional" workshops at Deep Portage Learning Center near Hackensack, MN, on May 30th and the emergence story, there, was about the same.

There are five free MOSP workshops throughout the state this summer. Dianne Rowse, the MOSP Interim Coordinator, will be conducting those workshops. Included in that list of workshops is the 3rd Annual MN Dragonfly Gathering: a weekend-long event at Audubon Center of the North Woods filled with field trips, a workshop and lots of social time to meet others with similar interests.

The 2008 Summer Calendar is posted at the MOSP website: www.mndragonfly.org.

Check it out! Kurt✳

Anyone interested in submitting records to the MOSP should do some or all of the following:

1. Check out the MOSP at www.mndragonfly.org for general info and specifics on how to conducts surveys and submit records and specimens.

2. Attend one of the five MOSP training workshops to be held throughout Minnesota. Dates and locations are posted on the website.

3. Contact us at the email address on the website to get on our database of volunteers. There will be email announcements, newsletters, etc, periodically.

4. Brush up on your dragonfly and damselfly ID skills, then gather in packs of similarly-minded folks and head out into the wilds (or your backyard). Teach each other what you know and figure the rest out. Be resourceful with field guides and the internet and ask questions of those with more experience.

5. Go to the OdonataCentral website at www.odonatacentral.com (there is a link to this on the MOSP website) and look up the list of known species for your county. I have printed out the data for all Minnesota counties (no small task) and I carry them around in a large three-ring binder. Consider doing so for any and all counties to which you regularly visit, as well as some of the surrounding counties, just in case. ⁂

Do Baskettails Play Basketball?

By Kathy Heidel, Senior Interpretive Naturalist Emeritus, Three Rivers Park District

Yes, female baskettail dragonflies all play slam-dunk basketball at least once before they die. Their playing court is the surface water of a pond, marsh or slow stream that has a mucky bottom and some vegetation. The hoop features plants floating at or just beneath the surface. Mrs. Baskettail aims for these plants and with a quick double-dip of her abdomen, she releases a ball of eggs into the water. This very quick maneuver means a female is less likely to be caught by aquatic predators. The ball quickly unravels in the water into a gelatinous string of 500 or more eggs, which become entangled among the aquatic plants near the water surface where there is more heat and oxygen to speed egg development. When the eggs hatch, the larvae drop to the bottom where they sprawl in the muck and debris. Here they wait for a moveable feast of small crustaceans and other tiny critters. Next May they will emerge as new baskettails to start another year of dragonflies.

Adult baskettails (Beaver pond, Spiny, or Common) are so much alike that they are called the "sparrows" of the dragonflies. Except for the structure of their abdominal appendages, they look identical, just as native sparrows do. Members of the Emerald family Corduliidae, the baskettails are mostly brown medium-sized dragonflies with clear wings, green or blue eyes, and orange spots along the sides of their abdomens. Adults are agile fliers; they seldom land or hover as they patrol along their 3 to 5 yards of shoreline or over a land area about 50 ft in diameter. If you see one hovering it is usually over water. They hawk mosquitoes, midges, and winged ants along garden beds, paths, roadways and sunny

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Dragonflies Throughout the Season

Subarctic Darner – *Aeshna subarctica*

In the middle of the summer many birders are taking a bit of a break between the spring and the fall surges in bird activity. July can be pretty humdrum. What to do? What to do?

The middle of the summer is actually one of the exciting times to look for Odonates as there are new species showing up then. In my opinion, one of the exciting aspects of dragonflying is that there are new species showing up all summer long. It's tricky to define distinct seasons with distinctly different species throughout the summer, although some people do split the season into early and late seasons, other people see three separate seasons. Either way, there is a spectrum of species emergence dates throughout the flight season.

Spring/early summer sees our largest explosion of both species and in numbers of individual dragonflies on the wing. Makes sense, doesn't it? This is also the time of largest Odonate prey numbers (I'm specifically thinking black flies and mosquitoes, here). The early season, especially around ponds and lakes, is dominated by many of the Skimmers including the Common Whitetail, Twelve Spotted Skimmer, Dot-tailed Whiteface and the Chalk-fronted Corporal. In the north we seem to have unbelievable numbers of any of the Baskettail species in June. They have been so thick in my driveway that I collide with them while walking to my garage.

Riverine habitats in June provide exciting Odonating due to the large variety of Clubtails flying then. Many of these species are uncommon to rare and, like trout, can be devastated by erosion, siltation and increased water temperatures. The majority of the dragonflies of "special concern" in Minnesota are river denizens and not much is known about which species are living where in the state.

During the middle of June I observe a relative lull in new emergences. By the start of July, though, we have started to see new species trickling in such as the Canada Darner, many of the rarest Emerald species, the fearsome Dragonhunter and the White-faced Meadowhawk.

For me the most exciting of these midsummer groups are the Emeralds. Other more common Emeralds such as the American Emerald, the Racket-tailed Emerald and the Baskettails have been around for a month or more and will still be around for a few more weeks. The Striped Emeralds, genus *Somatochlora*, have a bit of a cult following and provide many surprises for those willing to get off the beaten path. These bugs are often found flying back in the boggier, buggier areas which are often avoided by less-hardy humans. None of the 15 species of North Woods Striped Emeralds are considered to be common and some of them are considered rare or very rare. The Quebec Emerald has only been found at only one site in Minnesota and is otherwise only known from British Columbia, the Canadian Atlantic Seaboard and a few locations in Maine. The Emeralds are known to mix it up in feeding swarms giving a net-swinger an opportunity to see many different species in one location. A friend claims to have pulled nine different Striped Emerald species out of one swarm.

Please see *Seasons* continued on page 4

Seasons from page 3

Late summer is dominated by two groups of dragonflies: the Meadowhawks, genus *Sympetrum,* and the Blue Darners, genus *Aeshna*. Meadowhawks are the little yellow or red dragonflies which are so common in late summer. There are eight species of these little critters in the North Woods and some of them can be very challenging to ID to species. Don't be deterred from looking at them, just know that a little concentration goes a long way. The very tough Autumn Meadowhawk (aka Yellow-legged Meadowhawk) is the last species of dragonfly to be found flying in the fall and some folks in Michigan have been known to have competitions to see who can find the latest flying individuals.

The Blue Darners are the large dragonflies seen cruising, sometimes at high speeds, along just about any shoreline in the late summer. As their name implies most of the Blue Darners do indeed sport quite a bit of blue in them, although there are exceptions as some of these species can have yellow or greener forms. There are 11 species of *Aeshna* in the North Woods and some of them are considered to be fairly rare. The Subarctic and the Zigzag Darners are two that are very exciting to find as Minnesota is located at the southern edge of their ranges in the Upper Midwest.

As the summer progresses and you are getting out to find and to learn about dragonflies and damselflies you can be assured that as soon as you get them all figured out there will be new species to challenge and excite you. ⁜

SNF Field Trips in NE MN

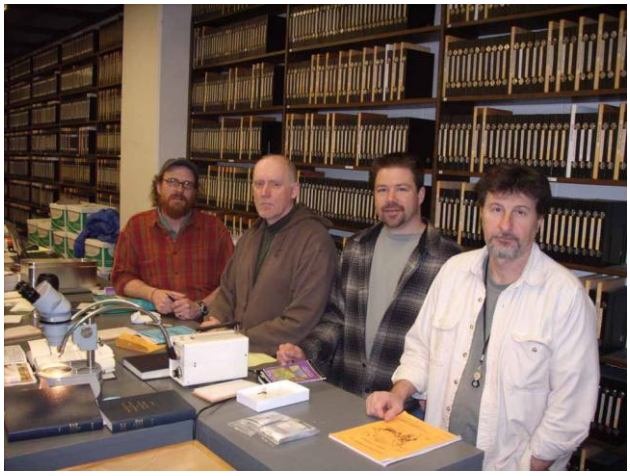
Two more Superior National Forest (SNF) expeditions are planned for this summer. This is a great opportunity for folks to look for some of the really rare, northern Odonata species, meet some really great people and camp in and visit one of the premier National Forests.

Led by SNF biologist, Dave Grosshuesch, these trips are part of a larger, long-term effort that will survey much of the vast SNF. It is known that there are some very rare species living in the SNF as well as the likelihood that Dave and his crew of MOSP volunteers will uncover species currently unknown in Minnesota. Check out the MOSP Calendar for more info on these free trips. ⁜

Jim Lind (L) and Dave Grosshuesch (R) look for larvae during the first of three SNF expeditions.

Suggested tiles for this photo include:
"Keeping our work at arms' length."
Or
"I Don't Know What Smells Worse,
My Armpits or This River Muck."

Large Bug Collection Defeated by the U of M Odonate Cataloguing Team



The University of Minnesota Odonate Cataloguing Team: Kurt, Bob, Jim and Ken

Although I continually rail against the dearth of Odonate information in Minnesota, there has been work done here in the past. Although anything resembling a thorough look at dragonfly and damselfly populations in Minnesota has never happened, there is a large collection of Odonates at the University of Minnesota in St. Paul.

In the center of Hodson Hall (located next to the water tower) is housed one of the largest university collections of insects in North America. There are millions of dead, dried insects stored in cabinets well-stored there. They come from all over the world, but the collection that we are interested in is the dragonflies and damselflies of Minnesota.

That collection, which has specimens that date back to 1891, has never been catalogued so when I asked Ralph Holzenthal, the collection curator, how many specimens he had there, he had no way to know for sure , but he guessed that they had about 5,000 specimens from Minnesota. As it turns out he was right on the money.

In March of this year a team of four spent one week going through all 5,000 Minnesota specimens in order to verify that each specimen was correctly identified. In addition we attached a small barcode to the pin or envelope of each specimen.

Besides myself, Kurt Mead, the team consisted of:

Bob Dubois, author of *Damselflies of the North Woods*, Odonatologist with the WI DNR, and the head of the Wisconsin Odonata Survey.

Jim Lind, a well-known Minnesota birder who has recently jumped head-first into the world of Odonates. Jim did a pretty thorough survey of the Chippewa National Forest, recently, therein extending the ranges of several species.

Ken Tennessen, retired Odonatologist who has described many new dragonfly species (especially in the Snaketail genus, *Ophiogomphus*) and who is currently writing a new key and manual for the identification of North American Odonate larvae.

I was lucky to have such competent people to enlist for this task. Not only did we get a heck of a lot work done, we had a great time doing it. Our 9-10 hour days flew past and we were all surprised when 6pm rolled around. Despite the generally dour faces in the photo, above, we had a lot of fun and a lot of laughs.

Ken plans to return in the fall of this year to identify all of the larval and exuvial specimens that are stored in alcohol.

This summer a fifth member of the team, UM graduate student, Roger Blahnik, is entering the data on these 5,000 specimens on the database that was built by Dr. Terry Brown of the NRRI in Duluth.

Since we visited the U of M collection it has been brought to our attention that there are several other Odonata collections at other colleges and universities in Minnesota. We hope to get the opportunity to comb through those collections in the future.

When this project is completed we will have a better understanding of the historical ranges of some of Minnesota's dragonflies and damselflies, which is a good place to be as we add many more records to Minnesota's history. ⁜

Baskettails and Basketball from page 2

openings. Their hunting flights are straight-lined and purposeful, with quick directional changes. Trying to follow a baskettail's flight with binoculars nearly made me seasick. On cool mornings, adult baskettails perch vertically on low vegetation as they soak up the sun's rays.

Perhaps the most exciting thing about baskettails is when the nymphs emerge en masse from the pond on a May morning. As soon as the sun's rays touch the shoreline, all the nymphs crawl out of the 60° to 70°F water and up onto the nearby stems of grasses and shrubs. Lined up nose-to tail, hundreds of the ugly little critters grip the stems tightly with their feet as their backs split open. In just a few minutes a soft pale crumpled dragonfly pushes its way out backwards and upside down. It hangs in that awkward position for about 20 minutes as its legs harden. White threads connect from its thorax to the abdomen still partially in the nymphal skin. These are breathing tubes that will fall away when the dragonfly's abdomen is finally pulled out and fully expanded in a couple of hours. As the weak dragon clings to the skin, its wings are pumped up to full size. During this time, when they are too soft to fly, the young tenerals are extremely vulnerable to predation. Kingbirds, blackbirds, crows, jays, raccoons, mink, herons, shrews, and green darners all gather to claim their share of dragonflies-for-brunch. By noon, the predators are sated, and the tenerals are hardened enough to fly to places where they can hide and hunt for food in relative safety. After one or two weeks of feeding, resting, and maturing, the adult baskettails return to their aquatic breeding habitats to mate and begin another girls-only game of hoops. Plan to catch the show this spring---it's incredible. ⁂

Kurt's Strong Opinions About Dragonfly Poetry

There is a lot of dragonfly-related poetry out there and, in my personal opinion, much of it is not very good. A clichéd dragonfly poem contains gratuitous use of such words as "glistening", "shimmering", "gossamer" and "diaphanous". Check it for yourself. Find me a dragonfly poem without such descriptors and I will read it.

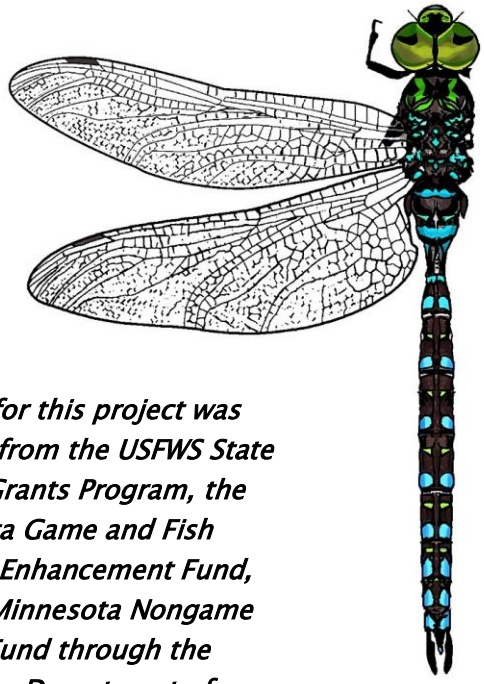
My apologies if I have offended any poets out there. Please send me any acceptable Odonate poems that you find or write and we may print more of them in the future. ⁂

LUNCHTIME

The heat stalls the clock at noon. The land vibrates in alarm.
A full load of hay remains hitched to a tractor in the field and stands there, motionless.
Dragonfly nymphs labor to leave the water of the nearby lake,
crawling up rocks, ascending the green stems of bulrushes.
They prepare to leave escape their own bodies to gain
the blue freedom wings give over the green world.
Two young men, sitting in the shade of the hay wagon,
pause for a moment, then continue eating their lunch.
Suddenly, one of them feels a light tapping
at the back of his head, just at the base of the skull.

Scott King, from *Leftover Ordinary*

Poet and MOSP Volunteer
www.reddragonflypress.org



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The old saying, “Many hands make light work” applies directly to our situation. Our hope is that there will be many hands, in Minnesota, all adding a little bit to our knowledge of the Odonata of Minnesota. The result, hopefully, will be a better understanding of these charismatic insects in Minnesota.