



Minnesota Dragonfly Society

Newsletter Issue #4
June 2015

*Ensuring conservation of
Minnesota's dragonflies and
damselflies through
research and education.*

Transitions

By Ron Lawrenz, MDS President

This seems like a great time to say a few things about change and new beginnings. As I look out my office window I note that the trees are just starting to show that wonderful fresh green color of spring, my computer screen is lighting up with the first reports of the emergence of local dragonflies, and then there's a new role for me to ponder. I've just accepted the privilege of representing the Minnesota Dragonfly Society (MDS) as its new President.

My interest in dragonflies and aquatic environments isn't new. I've been poking around streams and ponds since I was a child. As I worked my way through college I followed that interest by earning degrees in fisheries biology and limnology, and aquatic ecology. I like fish and aquatic plants, but it was always the "bugs" that drew me back to the water. As I studied, and then taught classes about, aquatic insects, I became more and more fascinated with dragonflies. That fascination was tweaked in the early 1990s when two odonatologists, Bill Smith and Tim Vogt, from the Wisconsin DNR, were using the facilities of the St. Croix Watershed Research Station (SCWRS) near Marine on St. Croix, Minnesota, as a base for conducting a dragonfly survey of the St. Croix River. I was the SCWRS Director at that time and I spent hours watching them sort, identify, and preserve the specimens that they had collected. I also witnessed their discovery of the St. Croix Snaketail (*Ophiogomphus susbehcha*), a dragonfly species new to science. That's all it took to turn my fascination into an obsession.



photo by Kurt Mead

While the MDS has not yet celebrated its first full year of operation as a 501(c)(3), its roots go back more than a decade to the Minnesota Odonata Survey Project (MOSP) founded by Kurt Mead. It was Kurt's leadership and MOSP's solid legacy that led to the formation of the MDS. In fact, Kurt knew that it was time to take that next step so he initiated the transition from MOSP to MDS, and served as

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Board Members:

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Secretary: Ami Thompson
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Angela Isackson
Rachel MaKarrall
Kurt Mead
Vanessa Strong

Newsletter Editor:

Rachel MaKarrall

Membership:

The Minnesota Dragonfly Society welcomes everyone! Annual Memberships are \$25 for individuals and \$30 for families.
Contact: info@mndragonfly.org

Who We Are:

The Minnesota Dragonfly Society is a 501(c)(3) organization that facilitates Odonata (dragonfly and damselfly) research, surveys, and education.

Public events include survey outings, identification and citizen science trainings, family education events, and board meetings. Other events include professional development workshops for educators and research outings for trained members.

Currently the best way to reach us is to request to join our Minnesota Dragonfly Society Facebook Page or through our website:
www.mndragonfly.org.

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the first President of MDS. His efforts have led to the development of a growing database of Minnesota state and county records where practically none had existed before, and that data is now tied to the international Odonata Central database. Don't get me wrong— our knowledge of the dragonfly fauna of Minnesota started from almost zero, so we still have a long way to go, but we now have a great foundation to build on for the future. MDS also inherited a wonderful legacy of educational advocacy. In fact, we are currently witnessing a fast growing slate of public workshops, events, and surveys guided by members of MDS. Finally, we are now becoming more actively engaged in proposing and conducting research that addresses known gaps in our knowledge rather than just reacting to opportunities offered by other institutions.

I'm not MDS; you are, and MDS leadership doesn't rest just in my hands. I see my role as providing a nexus for a very passionate, dedicated, and knowledgeable group of individuals that constitute the MDS Board and membership. I have an immense trust and respect for this talented group of people, and I know that you will too. By the way, Kurt Mead may have stepped down as President, but he continues to provide leadership and perspective as an active MDS Board member. I hope that all of you consider becoming an MDS member, an MDS committee member, or even joining us someday on the MDS Board. I look forward to getting to know you and sharing our interest in dragonflies and dragonfly conservation. In the meantime, I wish all of you good ode-ing.

Welcome and Thanks to Our New Members!

Barbara Andersen
Oakley Biesanz
Eric and Suzanne Burkness
Douglas Hall
Wayne Johnson
Scott King

The Dragonflies Are Here!

It's one of spring's greatest pleasures: watching people post their first dragonfly sightings of the year! First come the migrants; Common Green Darners (*Anax junius*) and Variegated Meadowhawks (*Sympetrum corruptum*). Then we start seeing our resident dragons emerging from south to north. Here's a sprinkling of 2015 first sightings from around the state, with some reports of sightings a week or more earlier than normal. Join the fun each spring and throughout the season on the Minnesota Dragonfly Society Facebook page!

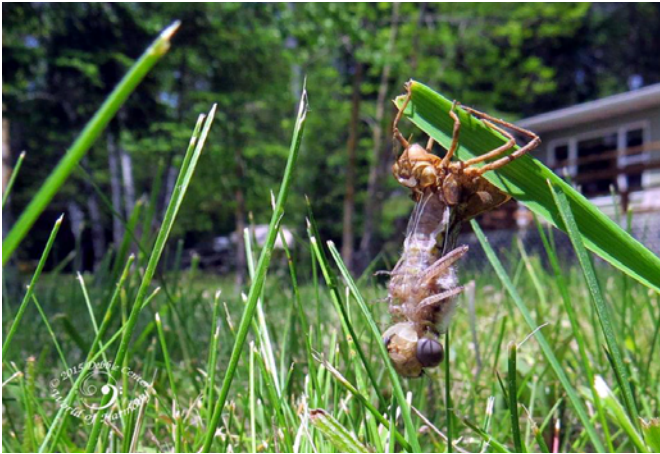


photo by Debbie Center

April 1- Scott King reported Common Green Darners (CGDs) at St. Olaf Natural Lands in Northfield.

April 2- Mitch Haag reported CGDs ovipositing in the Elm Creek Park rain garden in Maple Grove. The same day, Scott King saw Variegated Meadowhawks at Esker Wildlife Management Area in Webster.

April 3- Daryl Hrdlicka reported CGDs at Lake Shetek State Park in Currie.

April 11- Jeff Fischer reported CGDs at Fort Snelling State Park in St. Paul.

April 12- Mark Wheeler saw CGDs flying in tandem at a pond in Oakdale, while Curt Oien reported seeing both CGDs and Variegated Meadowhawks at Rebecca Lake Park Reserve in Rockford.

April 13- First 2015 sighting by Ron Lawrenz of CGDs in huge numbers at Warner Nature Center in Marine on St. Croix. The next day Ron also saw Variegated Meadowhawks at Warner.

April 14- Wayne Johnson spotted a single CGD at Richardson Nature Center in Bloomington.

April 16- CGDs made it to northcentral Wright County, reported by Arne Myrabo. The same day Courtney Kearns photographed a Variegated Meadowhawk on Prairie Lake near Grand Rapids.

April 28- Wayne Johnson photographed a Variegated Meadowhawk at Richardson Nature Center, the first time this species has been recorded at the center!

May 4- Carl Bublitz reported baskettails emerging in Stearns County at Mississippi River County Park.

May 5- Ron Lawrenz photographed Warner Nature Center's first Dot-tailed Whiteface of the year. Curt Oien also saw Dot-taileds along with

Four-spotted Skimmers and Eastern Forktails at Murphy-Hanrehan Park Reserve in Savage. Meanwhile Arne Myrabo was busy watching a big bluet emergence in northcentral Wright County.

May 9- Lynn Crotty photographed a Hudsonian Whiteface in eastern Morrison County.

May 13- Mitch Haag spotted Dusky Clubtails at Crow Hassan Park Reserve near Prairie Lake.

May 18- Marti Starr saw Dot-tailed Whitefaces in her yard in St. Paul.

May 19- Ron Lawrenz photographed multiple emergences at Waner Nature Center, including Spiny Baskettails, Dusky Clubtails, Four-spotted Skimmers, Dot-tailed Whitefaces, Chalk-fronted Corporals and Springtime Darners. A few days later he added a Lilypad Clubtail to the list.

May 21- Arne Myrabo photographed a River Jewelwing at Wayside County Park in Wright County.

May 25- Dan Tallman photographed a Common Whitetail in his yard in Northfield.

May 28- Molly Stoddard spotted Four-spotted Skimmers at Prairie Wetlands Learning Center in Fergus Falls.

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**bright red bookmark
placed on the first page of spring—
the migrant dragonfly.**

Scott King

Birth Announcements

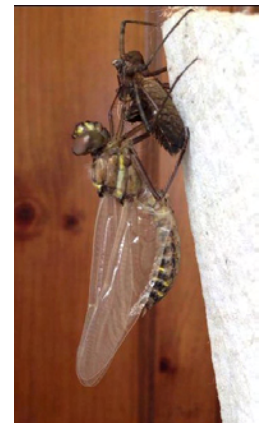
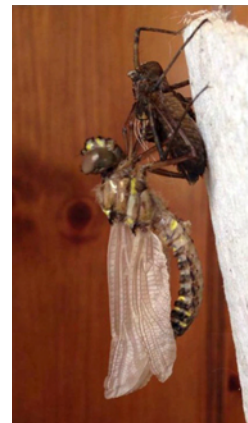
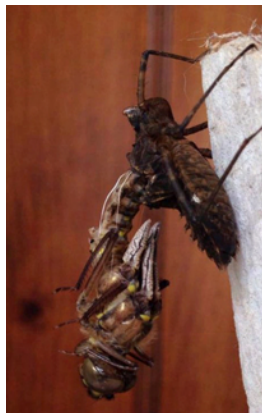
After a long winter of carefully feeding and tending to nymphs in their tanks, our cadre of dedicated dragonfly rearing are proud to report these spring “births!” Look for more about why and how we rear dragonfly nymphs in the next issue of the MDS newsletter.



Curt Oien raised this Elusive Clubtail (*Stylurus notatus*), above, from a nymph collected at the Zumbro River. This specimen represents a new county record for Wabasha County. Photo by Curt Oien.



Mitch Haag hatched this beautiful Brush-tipped Emerald (*Somatochlora walshii*), above, from a nymph collected in Sibley County during a U.S. Fish and Wildlife bioblitz. He says, “We were exploring a wet meadow on our way to the Minnesota River and just happened to stumble across a really nice seep coming from the wet meadow to a smaller creek which then flowed into the river. This was one of the largest populations of Brush-tipped Emeralds I have ever seen. It took Bob DuBois ten years to find a breeding site for this species. Really cool stuff and a county record for Sibley!” Photo by Mitch Haag.



Ron Lawrenz wasn't home when this male Swift River Cruiser (*Macromia illinoensis*) decided to make its move into adulthood. Luckily his wife Sylvia was on the scene with her camera; she captured this fantastic series documenting its emergence. Fully formed adult at left. This one came from a nymph collected in Wisconsin by Curt Oien. Photos by Sylvia Crannell.

Join us for the
Tenth Annual

Minnesota Dragonfly Gathering!

August 7 - 9, 2015
Tettegouche State Park

Every summer the Minnesota Dragonfly Society holds a weekend-long dragonfly and damselfly immersion and this year it will be held at Tettegouche State Park. Come for a day or camp with the group at the Tettegouche State Park Group Camp for the whole weekend. Beginners are very welcome at this event!

Different regions of the park will be surveyed each day in an attempt to create a list of the dragonflies and damselflies of the park. Northeastern Minnesota is home to many boreal dragonfly species that are not found elsewhere in the state.

In addition to the extensive field surveys throughout the park, MDS will be offering a variety of drop-in events at the Tettegouche State Park Visitor's Center for children, families, and adults throughout the weekend.

Although the group camp will be shared with other dragonfly-minded folks, you are on your own for meals. There will be some loaner dragonfly equipment available for beginners and travelers.

Pre-registration is required for camping at the Group Campground. To register, email your name and contact info to Park Naturalist Kurt Mead at kurt.mead@state.mn.us. Pre-registration is NOT required to attend this event if you will not be staying in the group campground.

If you prefer a regular campsite (for an RV, camper, etc) it might be a challenge, as all of the reservable sites are already full for the weekend. The park has some first-come, first-served sites that may be open. Also, nearby Eckbeck and Finland State Forest campgrounds may have campsites open, but the North Shore is a busy place in the summer and campsites may be hard to find. There are several hotels in the area and a list can be obtained by contacting the park. Plan ahead!

Hope to see you there!

Tentative Schedule of Events:

Friday, August 7

9:00 a.m. Sign up and park welcome
9:30 a.m. Beginner session- Intro to Dragonflies
Advanced- Strategy, habitats, mapping
11:00 a.m. Field day begins, various locations
Bring your lunch!
4:00 p.m. Return from field
7:30 p.m. Day's overview, Evening presentation

Saturday, August 8

9:00 a.m. Strategy session and field work
1-4 p.m. Dragonflies of the North Shore program
for park guests
5:00 p.m. Travel to Camp 61 in Beaver Bay for
supper and MDS Board Meeting
7:30 p.m. Day's overview, Evening presentation

Sunday, August 9

9:00 a.m. Field work
12:00 p.m. Final recap and data coordination

Check for updates online at <http://www.mndragonfly.org/docs/2015Gathering.pdf>

Tools of the Trade

By Ami Thompson

You don't need any tools to get outside and enjoy dragonflies — a stroll on a wetland trail watching dragonflies dart about is an excellent way to enjoy these insects. However, if you are interested in identifying Odonata, or just want a closer look, you will need some tools. Here are my recommendations to get you started:

1. Odonata Nets

To catch dragonflies you will need a net! Large-diameter deep aerial nets with a long handle are best for catching dragonflies and damselflies. BioQuip (www.bioquip.com) sells a sturdy student net, with a wood handle, for a reasonable price of about \$15 (item number 7615NA). Make sure to order a net 15 inches in diameter or larger.



photo by Rachel MaKarrall

If you'd like something a little fancier, BioQuip also sells "professional series" insect nets with aluminum handles and collapsible nets (see item number 7315NA for example). These are much lighter and break down for easy packing but are nearly double the price of the student nets, about \$28.

2. Identification Guides

A few books will give you all the information you need to start identifying dragonflies and damselflies. (See also the book reviews by John Arthur, p. 7.) When out in the field, I like to bring along *Dragonflies of the North Woods* by Kurt Mead, and *Damselflies of the North Woods* by Bob DuBois. Both are excellent pocket-sized guides. *Dragonflies of the North Woods* is available through Adventure Publications (www.adventurepublications.net) or Amazon.com.

Damselflies of the North Woods is sadly out of print for now. According to the publisher a reprint of *Damselflies of the North Woods* is in the works, but until then it can occasionally be found in state park or nature center gift shops. Keep your eyes open: if you find one, grab it! *Damselflies of the Northeast*, by Ed Lam, is a the best field-ready alternative and only available through his website: www.edlam.net/book.html. *Dragonflies and Damselflies of the East* by Dennis Paulson (Princeton University Press) is a fantastic addition to an identification guide collection. It's a larger book than the others so not as easy to carry along in the field. I usually leave my copy of this book in the car and use it as reference for tricky specimens.

3. Hand Lenses

Hand lenses are very helpful when you need to get a close look at small features for identification. Bioquip has many hand magnifier options at a variety of prices. Item number 1129N 10x folding magnifier (with two 5x lenses), is my favorite inexpensive option at about \$7.



photo from BioQuip.com

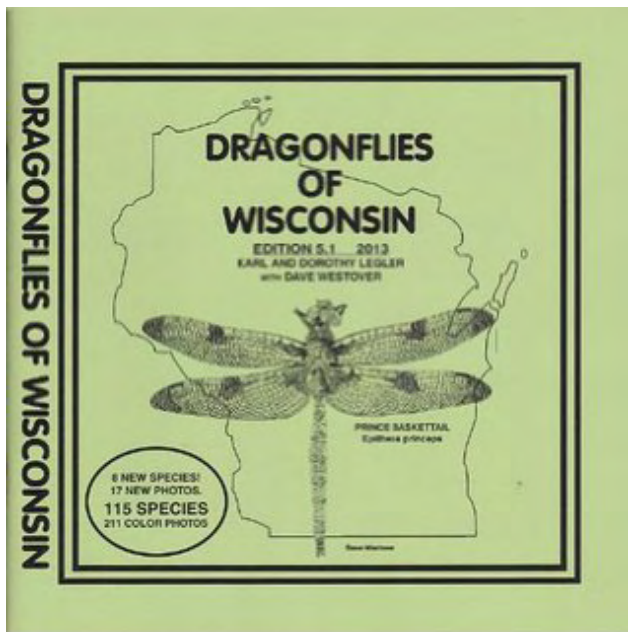
You can test out equipment before you invest! The Minnesota Dragonfly Society has nets and identification books you can use at any of our events, or borrow for your family or classroom. Contact info@mndragonfly.org for details.

Dragonfly Book Recommendations

By John Arthur

I have been asked several times at programs, “What are some good books for dragonfly ID?” It’s an easy question to answer as I have five basics that are used most often.

First on my list is the one that started my interest in dragonflies, and that is *Dragonflies of Wisconsin* by Karl and Dorothy Legler, with Dave Westover. Our earliest copy was from 1998 when it had a green cover. Later editions featured an orange cover and then a blue cover on the current edition. Copies can be purchased from the University of Wisconsin bookstore. Before looking through that book, I thought there were only dragonflies and damselflies and had no idea that there were so many species! Words like “snaketail,” “meadowhawk,” and “darker” entered my vocabulary. A world of insects opened up for me. Until then, I was unaware that dragonflies were primarily aquatic insects, living most of their lives under water until emerging as adults.



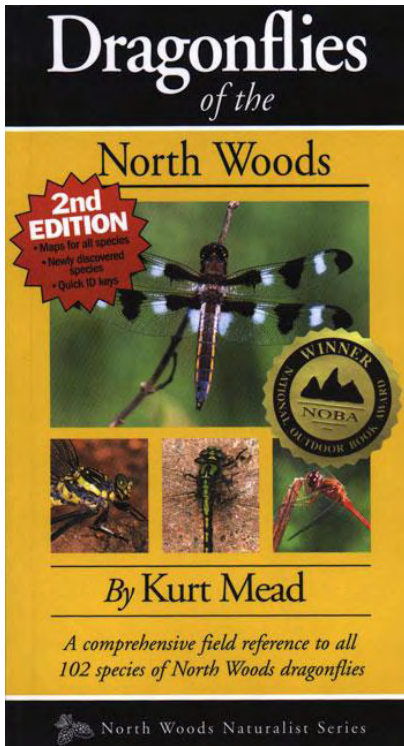
Aside from my gushing about this book as an eye opener, its photos are great and drawings at first were confusing. Later, with some help from others, I learned what they were talking about when hamules were discussed (look at meadowhawks). I wasn’t

even sure where to look! Wing vein patterns made sense and I started looking at the whiteface species (genus *Leucorrhinia*) a lot closer. Who knew that finding two rows or three rows of cells would mean a different species? (Those of you reading this article, who already know how to identify dragonflies, know what I’m talking about.)

Just a few years after getting this book, I bought a digital camera (let the games begin!). Now the book really had a good workout. We took photos of lots of dragonflies and pored over the book to learn what we were looking at. Each time we opened the book a new aspect of dragonfly lore was revealed. Why are eyes important? What do the stripes on the thorax tell us about darners? Why do I care about the markings on each abdominal segment? What is an abdominal segment? Even tips on photographing dragonflies are included in this book.

Now that the interest had been awakened, it was 2002 and Three Rivers Park District in the Twin Cities was having “Year of the Dragonfly” events at various parks. We went to a few events and shared our photographs and entered their photo contests. We also heard about a new book that was in the works, called *Dragonflies of the North Woods* by Kurt Mead, the next book on our list.

We ordered *Dragonflies of the North Woods* as soon as it became available. Wow, this book was better than the Wisconsin book. BUT, we found a few species were notably absent, such as Eastern Amberwing and Plains Clubtail. I had photographed both of these species and identified them from the Wisconsin book. We met Kurt at the first Minnesota Dragonfly Gathering in 2006 and he admitted that at least eight species were missing, but they were not usually found in the “North Woods.” The illustrations by Rick Kollath are the best feature of the book, and drawings of male dragonfly claspers match what is seen through a hand lens or microscope extremely well (at that



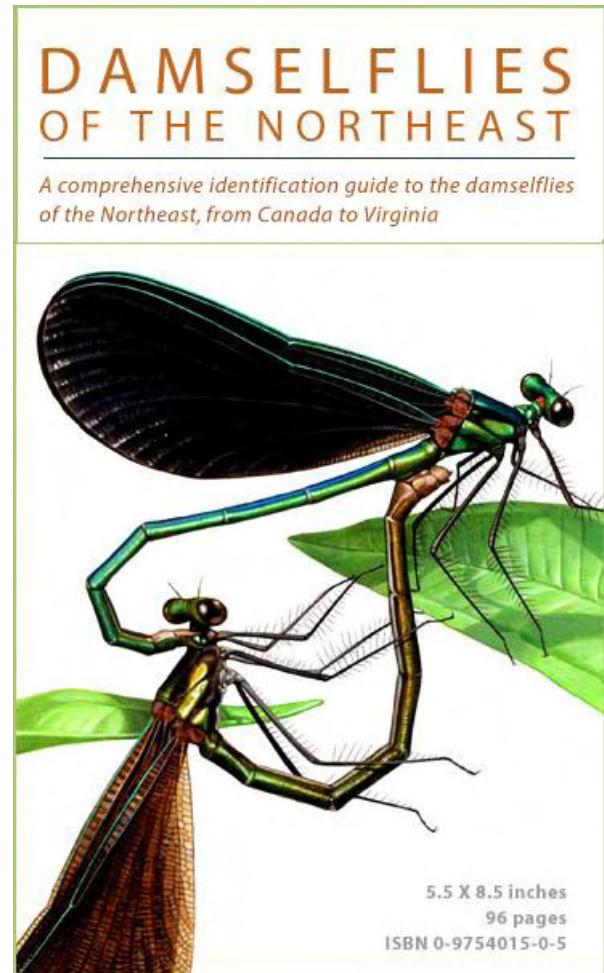
time, we were not using hand lenses or microscopes yet, but later...) The book is well laid out and having one species per page (or more than one page) makes it a little easier to use than the Wisconsin book. Having more than one book is very important as one book will cover something not covered in the other. An analogy

to evolution could be made here as each new field guide will improve on the past. Dragonflies of the North Woods is now in its second edition, with more species added. This book just keeps getting better and is a great place to start.

After buying these first two books, damselflies were entering our field of vision. We had purchased a copy of Beginner's Guide to Dragonflies by Blair Nikula, Jackie Sones, and Donald and Lilian Stokes. This has a very few damselflies, but was not very comprehensive as it tried to cover the entire U.S. in 155 pages (note the word "beginner" in the title). We kept looking.

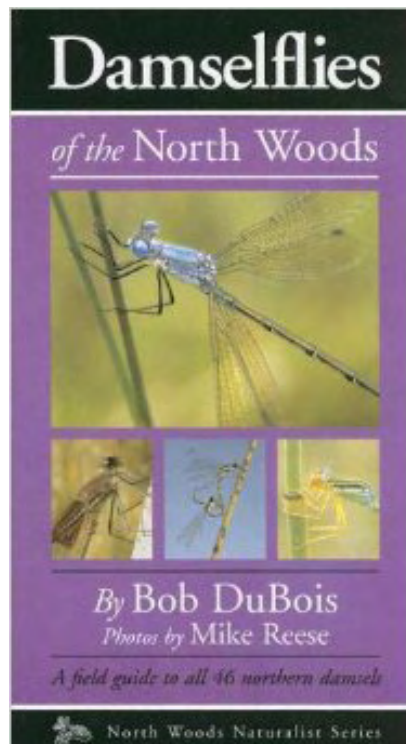
We found Damselflies of the Northeast by Ed Lam. This book brought to mind the great debate in bird field guides. Do we use photographs, or paintings/drawings? Ed chose paintings/drawings instead of photos. His paintings are excellent and allow him to show details that might be omitted by a photo. Also, he could (and did) position the insect to greatest advantage, which is not always possible with a camera. (However, in defense of photos, they show the insect in a natural setting, most of the time.) One helpful feature of this book is a symbol in the upper right of each page that indicates how easy or difficult it is to identify each species. A symbol of binoculars indicates easy to identify

while perched. A microscope symbol means have specimen in hand and be prepared to look close. Also included are drawings showing the damselfly life size. One thing to watch for using this guide is to remember that this is a guide for the Northeast U.S. and includes species not found in Minnesota. Conversely, some species in Minnesota are not found in the book (for example, the Eastern Red Damsel; Minnesota has the Western Red Damsel as well, although there is some debate here). He has range maps, but they do not go as far west as Minnesota.



Our quest for more field guides continued. Our next purchase was Damselflies of the North Woods by Bob DuBois. An excellent continuation of the "North Woods" series (there are now a lot of "North Woods" guides out including spiders, orchids, lichens, and moths). As with each new guide, this one improves on earlier books. Once again, Rick Kollath's drawings shine! Page 37 (for spreadwings)

and Page 58 (for other damselflies) are an essential reference. Now instead of paging through the book trying to match up details of segment 10, the details are on one or two pages. Also, each species gets two



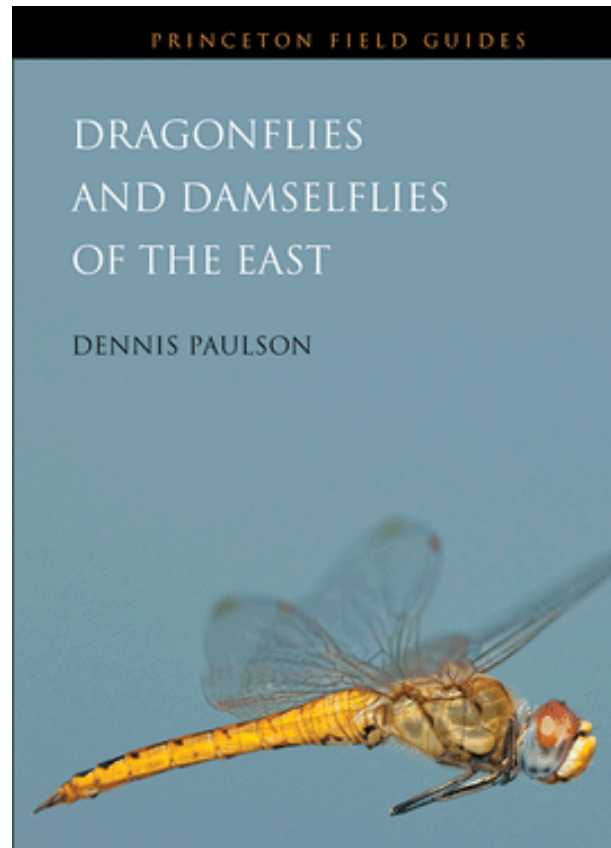
pages. The photos are great; there is at least one each for male and female.

As with all regional guides, it does not include damselflies found outside of the North Woods, but some are mentioned in the back that could be found here. The downside of this book is that it is out of print (Bob DuBois is

recommending using Ed Lam's book these days, but there is a rumor that Damselflies of the North Woods may be reprinted.). Copies can sometimes be found in state park bookstores, and other similar venues. Used copies can be found on the internet, but sometimes, they want outrageous prices.

All of the previous field guides reviewed here are a good start, but what about a more detailed and less regional guide? Many are available on a state by state basis, and as with the "North Woods" series, are regional. Not to say that these are "bad" books, just that these do not cover a larger portion of the U.S. Short of buying Dragonflies of North America, and Damselflies of North America, which cost over \$100 each and are very scientific, two books came out in 2009 by Dennis Paulson, called Dragonflies and Damselflies of the West, and Dragonflies and Damselflies of the East. Now there are guides that cover the entire U.S.! These books have pages of drawings grouped together by family (darners, broad-winged damsels, clubtails, and so on). Dragonflies and damselflies are together in one book.

Are these good field guides (emphasis on "field")? They are, if you like carrying larger books that contain more information than what one would or could find in an area. Do I want to find information on a Flame Skimmer that is common in Colorado, but never found in Minnesota? The point is, regional guides serve a purpose and larger guides are useful as well.



The five books reviewed here are a great start, but beware, the collection might not stop here. For the birders reading this, how many field guides do you have?

If you were to get only two books, get "Dragonflies of the North Woods", and "Damselflies of the Northeast". "Damselflies of the North Woods" is a good substitute for the Northeast book, but is harder to find.

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Upcoming MDS Events

We are everywhere this summer! Come and join us for some fun with dragonflies!

June 6, 10:00 a.m. - 2:00 p.m. The Annual Warner Nature Center Dragonfly BioBlitz. Lee and Rose Warner Nature Center, Marine on St. Croix, free. Dragonfly program followed by field walks. Equipment provided, but bring insect nets if you have them. For more information visit www.warnernaturecenter.org.

June 19, 9:00 a.m. - 12:00 p.m. Plant and Wildlife Survey Bonanza. Trout Brook Nature Sanctuary, Jenks Entrance, St. Paul, free. Help researchers collect and identify dragonflies, aquatic invertebrates, and wetland plants. Get an up-close view of the critters that live in this new park! Appropriate for all ages. This is a drop-in event - show up and take off when it is convenient for you. Brought to you by Saint Paul Natural Resources with the Minnesota Dragonfly Society and Capitol Region Watershed District. More information at www.meetup.com/hiking-177/events/223181715/

June 20, 1:00 p.m. Dragonfly Outing. Springbrook Nature Center, Fridley, free. We will begin with a short dragonfly 101 introduction, followed by a walk through the center's trails and finishing up with a return to the center to download cameras and look at details of what we observed. Beginners are encouraged, and bring your digital camera! Led by John Arthur.

June 26-28, Red Lake Wildlife Management Area Odonata Survey. Historic Norris Camp, near Roosevelt, free. Join the survey crew and experience two full field days odonating in this fantastic place! You are encouraged to drive up Friday night and stay at historic Norris Camp. Dragonfly presentations and potluck dinner on Saturday night. Supplies provided for cleaning everyone's gear to prevent the spread of invasive species. Led by Curt Oien and Mitch Haag. Lodging and camping available. Contact Curt.Oien@mndragonfly.org for more information and to RSVP.

June 27, 10:00 a.m. - 12:00 p.m. Dragonfly Survey and Drop-In Discovery. Tamarack Nature Center, White Bear Township, free. A super-concentrated bioblitz extravaganza of fun! Led by Vanessa Strong, vanessa.strong@vlawmo.org.

June 27, 1:00 p.m. - 5:00 p.m. St. Croix BioBlitz Interstate State Park, Taylors Falls, free. Join insect experts and enthusiasts for an afternoon of exploration as we discover the insects that call Minnesota Interstate State Park home. This first-ever bioblitz along the St. Croix National Scenic Riverway is sponsored by the National Park Service, Minnesota Department of Natural Resources, and the Bell Museum of Natural History. <http://www.nps.gov/sacn/learn/nature/bioblitz.htm>



photo by Curt Oien

July 1, morning and afternoon session, times TBD. Dragonfly Camps for Kids. Tamarack Nature Center, White Bear Township, cost depends on program. Two programs available: Backyard Bugs (1st/2nd grade), and Naturally Scientific (3rd/4th grade). Must register with Tamarack Nature Center at <https://parks.co.ramsey.mn.us/tamarack/Pages/day-camps.aspx>. Led by Vanessa Strong, vanessa.strong@vlawmo.org.

(events continued on p. 11)

July 10 -11, 12:00 p.m. - 12:00 p.m. Simon Lake BioBlitz. Sheepberry Fen preserve, Pope County, free. MDS volunteers will be surveying dragonflies as part of a larger BioBlitz. The Sheepberry Fen preserve includes a mix of dry upland prairie and oak savanna and a large groundwater-fed wetland complex called a calcareous fen. Begins at noon on the 10th, with evening observations and an evening program, early Saturday morning observations, and a wrap up at noon on the 11th. Contact Robin Moore, rmoores@landstewardshipproject.org.

July 17, 3:00 p.m. - 4:00 p.m. Free Family Fun Day: Dragonfly Collecting and Survey. Richardson Nature Center, Bloomington, free. All ages, under 17 must be accompanied by an adult. Sponsored by Three Rivers Park District. Contact Lead Naturalist Valerie Quiring for more information at VQuiring@threeriversparkdistrict.org.

July 21-22, 9:00 a.m. - 3:00 p.m. Dragonfly Survey Camp. Eastman Nature Center, Dayton, camp fee \$120. Learn how to identify and survey dragonflies, damselflies, and their nymphs, including the rare Plains Emerald Dragonfly found only in Elm Creek and a handful of other places in Minnesota. Perform surveys in the prairie, pond, and Rush Creek. All data is reported to scientists. Sponsored by Three Rivers Park District. Reservations required. Contact Christy Bishop at CBishop@threeriversparkdistrict.org. More information at <http://www.threeriversparks.org/events/D/dragonfly-survey-camp.aspx>.



photo by Douglas Hall

July 25, 10:00 a.m. - 12:00 p.m. Dragonfly Survey and Drop-In Discovery. Tamarack Nature Center, White Bear Township, free. A super-concentrated bioblitz extravaganza of fun! Led by Vanessa Strong, vanessa.strong@vlawmo.org.



photo by Ami Thompson

July 26, 1:00 p.m. - 2:30 p.m. Dragons Among Us. Lowry Nature Center, Victoria, free. Visit a dragonfly wetland and see where they hatch. Scoop in the pond for their larvae, then try to catch adults in a prairie. Children 17 years and younger must be accompanied by an adult. Sponsored by Three Rivers Park District. More information at <http://www.threeriversparks.org/events/D/dragons-among-us.aspx>.

July 29, times TBD. Hug a Bug Dragonfly Camp for Kids. Tamarack Nature Center, White Bear Township, cost depends on program. Two sessions available: morning (PreK/K), and afternoon (PreK/K/1st/2nd grade). Must register with Tamarack Nature Center at <https://parks.co.ramsey.mn.us/tamarack/Pages/day-camps.aspx>. Led by Vanessa Strong, vanessa.strong@vlawmo.org.

August 1, 10:00 a.m. - 12:00 p.m. Dragonfly Collecting. West Coon Rapids Regional Park, Brooklyn Park side of Mississippi, free. Grab a net and search for dragonflies. Contribute to the Minnesota Dragonfly Society surveys! Sponsored by Three Rivers Park District. More information at <http://www.threeriversparks.org/events/F/first-saturdays---summer-series.aspx>.

(events continued on p. 12)

August 7 - 9, Tenth Annual Minnesota Dragonfly Gathering. Tettegouche State Park, Silver Bay, free. Starting at 9:00 a.m. on 8/7, with various events throughout the weekend. See page 5 of this newsletter for more details, or go to <http://www.mndragonfly.org/docs/2015Gathering.pdf>.

August 29, 1:00 p.m. - 2:30 p.m. Dragonfly Survey. Eastman Nature Center, Dayton, \$5.00. Collect dragonflies for a Minnesota Dragonfly Society survey. Learn biology and identification of other insects, too. Children 17 years and younger must be accompanied by a registered adult. 20% discount for groups of four or more. Sponsored by Three Rivers Park District. More information at <http://www.threeriversparks.org/events/D/dragonfly-survey--.aspx>.



photo by Rachel MaKarrall

September 12, 1:00 p.m. - 4:30 p.m. Mississippi Riverfest and Heritage Day. Carl Kroening Interpretive Center, Minneapolis, \$5.00. Celebrate Minnesota's greatest resource and its history. Meet live animals and participate in river-themed activities and crafts. Solve a history mystery and visit with Jacques the Voyageur. Learn how to make

popcorn over the fire, rope, wood shingles, and apple cider. Take a horse-drawn wagon ride and watch a puppet show by Z Puppets Rosenschnoz. Walk along the National Park Services giant River Map and visit the Department of Natural Resources FiN tank of river fish. Fishing poles available for children to use. Bike to the event and save \$1. Children 17 years and younger must be accompanied by a registered adult. 20% discount for groups of four or more. Sponsored by Three Rivers Park District. Cosponsored by the Lind Bohanon Neighborhood Association. More information at <http://www.threeriversparks.org/events/M/mississippi-riverfest-and-heritage-day--.aspx>.

September 19 - 20, 9:00 a.m. - 5:00 p.m. Advanced Odonata Nymph Identification Workshop.

Eastman Nature Center, Dayton, \$20. Learn nymph identification, aquatic habitats, rearing techniques and preservation methods. Primary instructor is Bob DuBois, Wisconsin DNR Endangered Resources Bureau Aquatic Ecologist and author of *Damselflies of the North Woods*. Specimens, references, lab tools provided. Three Rivers Park District will supply microscopes, but feel free to bring your own. The nymph collection part of the workshop will be conducted in the creeks, lakes and wetlands of Elm Creek Park Reserve and led by Curt Oien, Mitch Haag, and Ron Lawrenz. Dress accordingly. Hip boots or waders are recommended, or plan on getting wet. Bring whatever nymph collection equipment you have. MDS will secure the required permits and will also supply equipment for cleaning boots and collection equipment to prevent the spread of invasive species. Pre-registration required. Contact Curt.Oien@mndragonfly.org.

Do you have a great dragonfly photo or an awesome story from the field?

We'd be happy to include it in the next MDS newsletter! The deadline to submit content for the September newsletter is August 15. Please email original articles, photos, artwork, news and events to Rachel.MaKarrall@mndragonfly.org.