

Dragonflies & Damselflies

By Dennis Skadsen

Dragonflies and damselflies belong to a group of insects called Odonata. Larvae of these insects, called nymphs, are aquatic, and depending on species, can be found in several types of aquatic environments that include streams, wetlands, and lakes. Adults are terrestrial, and some species fly far from water while others remain over water and can only be captured by wading.

Bick et al. (1977) listed several species of dragonflies and damselflies collected in Day Grant, Marshall, and Roberts Counties. The author has collected sporadically in these counties since the mid-1990s. In 2002 and 2003, the author and Dave German (with SD State University's Water Resources Institute) completed a study of aquatic macro-invertebrates occurring in Enemy Swim and Pickerel Lakes located in Day County including Odonata. Steve Hummel (2012) collected several specimens in this area from 2010-2012. Currently odonata larvae are being collected from several northeast South Dakota wetlands, lakes, and streams. A preliminary list of species found to date are given on page 7.

To date, twenty-five species of adult dragonflies and twenty-three species of adult damselflies have been recorded in the counties of Day, Grant, Marshall, and Roberts. An additional six species have been identified only by larvae. Further fieldwork is needed. Some species, like the Plains clubtail, have yet to be documented in these northeast South Dakota counties.

There are two ways to identify Odonata. Adults can be observed through binoculars; however, some species like the darners and many of the damselflies are better identified in-the-hand by capturing with a net. Dragonfly and damselfly larvae or nymphs can be collected in wetlands and other waterbodies by using dip or kick nets. However, without specialized taxonomic keys and a microscope you'll probably be only to identify to the genus level. You may also find shed exoskeletons. These exoskeletons are left behind when nymphs emerge as adults and can be found on emergent vegetation like the stems of bulrushes and cattails in wetlands, lakes, and along streams.



Shed exoskeleton of a dragonfly nymph on cattail leaf (photo by Dave German)

An interesting way to document dragonfly occurrences without killing specimens is to use a flatbed scanner. Collect the dragonfly and carefully place in a large (1 gallon) Ziploc plastic bag with plenty of air. Place in a refrigerator until the dragonfly becomes torpid (do not freeze). Quickly spread the dragonfly on the scanner bed. You must use

a piece of foam board with a hole in the middle to prevent the scanner lid from crushing or injuring the specimen.

For more information on this process visit the *Digital Dragonfly* website at;

<https://agriflife.org/dragonfly/specimen-handling/hardware/>

The best time to observe adult dragonflies and damselflies is from mid-July through September. During these months, adults of most of the species found in our area have emerged. Some species like the Common green darner are present from late spring through fall. Sica Hollow State Park, Hartford Beach State Park, Enemy Swim and One Road Lakes are just a few sites with public access that have diverse populations of Odonata.

The following list of dragonflies and damselflies is compiled from the sources and additional observations and collections of the author. Common and scientific names used follow Odonata Central (2007).

Dragonflies and Damselflies Observed in Day, Grant, Marshall, and Roberts Counties, South Dakota.

❖ Dragonflies

Darner Family

Variable darner (*Aeshna interrupta*)
Lance-tipped darner (*Aeshna constricta*)
Shadow darner (*Aeshna umbrosa*)
Common green darner (*Anax junius*)



Variable darner (photo by Dennis Skadsen)



Darner nymph (photo by Dennis Skadsen)

The Darners are the largest dragonflies found in this area. They're seemingly on the wing constantly and often found flying far from water. In late summer, mixed swarms of darners are often observed feeding together in the early evening hours. All the above species, except for the Common green, will need to be captured to correctly identify to species. Paulson (2009) provides a good diagnostic table for identifying this group of dragonflies.

Clubtail Family

Pronghorn clubtail (*Phanogomphus graslinellus*)

Emerald Family

Plains emerald (*Somatochlora ensigera*)
Common baskettail (*Epitheca cynosura*)

Skimmer Family



Common whitetail - male (photo by Dennis Skadsen)

This family of dragonflies includes some of the most colorful species. Skimmers are commonly observed flying above quiet waters or perched on vegetation. Most species in this group are easily identified. The Eastern amberwing is one of our smallest dragonflies. The Calico and Halloween pennants (pg. 4) are two of our most colorful dragonflies. These two species are somewhat rare in northeast South Dakota and always a treat to find. Also rare are the two saddlebags, Red and Black. The Red saddlebags is most often observed in the Whetstone Valley along Big Stone Lake. The meadowhawks are most often observed, as the name implies, in grassy meadows.

Common whitetail (*Plathemis lydia*)
Four-spotted skimmer (*Libellula quadrimaculata*)
Twelve-spotted skimmer (*Libellula pulchella*)
Widow skimmer (*Libellula luctuosa*)

Eastern amberwing (*Perithemis tenera*)



Four-spotted Skimmer (photo by Dennis Skadsen)



Twelve-spotted skimmer - male (photo by Doug Backlund)



Widow Skimmer - female (photo by Doug Backlund)



Calico pennant – male (digital scan by Dennis Skadsen)



Dot- tailed whiteface (photo by Dennis Skadsen)



Halloween pennant – female (digital scan by Dennis Skadsen)



Eastern pondhawk - male (photo by Doug Backlund)

- Calico pennant** (*Celithemis elisa*)
- Halloween pennant** (*Celithemis eponina*)
- Dot-tailed whiteface** (*Leucorrhinia intacta*)
- Eastern pondhawk** (*Erythemis simplicicollis*)
- Variegated meadowhawk** (*Sympetrum corruptum*)
- White-faced meadowhawk** (*Sympetrum obtrusum*)
- Ruby meadowhawk** (*Sympetrum rubicundulum*)
- Cherry-faced meadowhawk** (*Sympetrum internum*)
- Saffron-winged meadowhawk** (*Sympetrum costiferum*)



Eastern pondhawk – female (photo by Dennis Skadsen)



Ruby meadowhawk – male (photo by Doug Backlund)



Black saddlebags (scan by Dennis Skadsen)



Blue dasher - male (photo by Dave German)

Blue dasher (*Pachydiplax longipennis*)

Red saddlebags (*Tramea onusta*)

Black saddlebags (*Tramea lacerata*)

Wandering gilder (*Pantala flavescens*)

Possible Species Occurring in NESD:

Horned clubtail (*Arigomphus cornutus*)

Plains clubtail (*Gomphus externus*)

Band-winged meadowhawk (*Sympetrum semicinctum*)

❖ Damselflies

Broad-winged Damselfly Family



River jewelwing – male (photo by Dennis Skadsen)

River jewelwing (*Calopteryx aequabilis*)

Ebony jewelwing (*Calopteryx maculata*)

American rubyspot (*Hetaerina americana*)

Broad-wings are the largest damselflies found in northeast South Dakota. Adults and nymphs are only found in streams and rivers, adults rarely if ever observed flying farther away from the water than the adjacent banks vegetation. Of the three-species found in this area, the River

jewelwing appears to be the most common. The author has only observed the Ebony jewelwing in the small headwater streams located along the eastern escarpment of the Prairie Coteau, like Sica Hollow. The American rubyspot has only been observed along the lower reaches of the Little Minnesota, Yellowbank and Whetstone rivers in eastern Grant and Roberts counties.



Broadwing damselfly nymph (photo by Dennis Skadsen)



American rubyspot –male (photo by Dennis Skadsen)



Ebony jewelwing – male (photo by Dennis Skadsen)

Spreadwing Family

Spotted spreadwing (*Lestes congener*)

Northern spreadwing (*Lestes disjunctus*)

Lyre-tipped spreadwing (*Lestes unguiculatus*)

Slender spreadwing (*Lestes rectangularis*)

Emerald spreadwing (*Lestes dryas*)



Emerald spreadwing (photo by Dennis Skadsen)

Pond Damsel Family

Prairie bluet (*Coenagrion angulatum*)

Taiga bluet (*Coenagrion resolutum*)

Familiar bluet (*Enallagma civile*)

Tule bluet (*Enallagma carunculatum*)

Alkali bluet (*Enallagma clausum*)

Northern bluet (*Enallagma annexum*)

Boreal bluet (*Enallagma boreale*)

Marsh bluet (*Enallagma ebrium*)

Hagen's bluet (*Enallagma hageni*)

Rainbow bluet (*Enallagma antennatum*)
Orange bluet (*Enallagma signatum*)

Because of their small size and similar appearance, the bluets are somewhat difficult to identify in the field. Paulson (2009) provides a good identification table for identifying bluets in the hand.

Plains forktail (*Ischnura damula*)
Eastern forktail (*Ischnura verticilis*)
Sedge sprite (*Nehalennia irene*)
Blue-fronted dancer (*Argia apicalis*)



Bluet's in-situ at Enemy Swim Lake (photo by Dave German)

The following species of damselflies and dragonflies have been identified only by larvae collected by Skadsen (2018) and identified to species level by Kaira Kamke, aquatic invertebrate taxonomist for RMB Laboratories, Detroit Lakes, MN.

Paddle-tailed darner (*Aeshna plamata*)
Black-shouldered spinylegs
(*Dromogomphus spinosus*)

Prince baskettail (*Epithica princeps*)
Flame skimmer (*Libellula saturata*)



Emma's dancer (*Argia emma*)
Vesper bluet (*Enallagma vesperum*)



❖ Suggested References

Dragonflies and Damselflies of the West
(Princeton Field Guide Series)
Dennis Paulson
2009. Princeton University Press

Dragonflies through Binoculars, a Field
Guide to Dragonflies of North America.
Sidney W. Dunkle
2000. Oxford University Press, NY.

To learn more about the life histories etc. of Odonata visit the *Odes for Beginners* website at;

<http://www.odesforbeginners.com/>

❖ Literature Cited

Bick, George H., Juanda C. Bick, and Lothar E. Hornuff. 1977. An annotated list of the Odonata of the Dakotas. *The Florida Entomologist*. 60: 149-165.

Hummel, Steve. 2012. *The Odonata of South Dakota, A survey of species distribution with recommendations for species of greatest conservation needs*. SD Dept. of Game, Fish, and Parks, Pierre.

Odonata Central. Sponsored by Texas Natural Science Center, The University of Texas at Austin. Available at; <http://www.odonatacentral.org>

Skadsen, Dennis. 2019. *A preliminary survey of selected aquatic invertebrates of northeast South Dakota*. SD Dept. Game, Fish, and Parks, Pierre.