To ensure conservation of Minnesota’s dragonflies and damselflies through research, education, and outdoor recreation.
An effort to determine the ranges and distributions of the dragonflies and damselflies of Minnesota

Survey Workshops With Volunteers

Targeted Surveys

Historical Collections
“A Minnesota-shaped Hole”

- Minnesota range of the Skimming Bluet.
Minnesota Biomes

- tallgrass aspen parkland
- coniferous forest
- prairie grassland
- deciduous forest
Methods
Part 1

- Determine the historical record by cataloguing the known collections at universities, museums, and other sites.

- UMSP
- Science Museum of MN
- Warner Nature Center
- Carleton College
- Gustavus Adolphus
- St Olaf College
- Winona State University
- UM Morris
Methods
Part 2

• Targeted Surveys
Citizen Science

In seven years we held 29 one-day survey workshops and 7 weekend-long Minnesota Dragonfly Gatherings

An average of 17 participants per workshop and an average of 45 participants for the weekend events in the last two years.
Results

- 23 Odonata species added to the Minnesota state list.
- 2 species removed from the state list.
- 2580 specimens collected by the MOSP
- During the 7 years of the MOSP, 1881 new county records were generated in Minnesota.
- Current total Minnesota Odonata list sits at 148 species
10 species of Damselflies have been added to the Minnesota List since 2006
Red Damsel
Amphiagrion sp.

- Seep-fed marshes and spring-fed streams
- One museum specimen from 1935
- Rediscovered in 2008

Kurt Mead
Great Spreadwing
Archilestes grandis

- Small, wooded streams
- First photographed in 2010
- Found in two counties in 2011
Violet Dancer
*Argia fumipennes violaceae*

- Museum specimen from 1935
- Rediscovered in 2011
- Widespread and common
Springwater Dancer
*Argia plana*

- Common through the Great Plains, SW to Mexico
- Discovered at Blue Mounds State Park in 2011
River Bluet

Enallagma anna

• Museum specimen from 1965
• Rediscovered in 2006
River Bluet Distribution in the Midwest
(map from odonatacentral.com, June 22, 2018)
Azure Bluet
*Enallagma aspersum*

- Discovered in 2009
- Requires fishless waters
Skimming Bluet
*Enallagma geminatum*

- Discovered in 2006
- Now widespread throughout Minnesota

Arne Myrabo
Vernal Bluet
Enallagma vernale

- Discovered in 2013
- Possibly widespread, but easily confused with other species
Citrine Forktail
*Ischnura hastata*

- Museum specimen from 1968
- Rediscovered in 2010
- Probably irruptive in Minnesota
Southern Spreadwing
Lestes australis

- Discovered in 2011, widespread
- Newly recognized species (was subspecies of a common species)
Post-2013

Dragonflies

• 13 Dragonfly species have been added to the Minnesota List since 2006
• One specimen from Minnesota in 2012.

Harlequin Darner
Gomphaeschna furcillata

Jim Johnson
Spatterdock Darners
Rhionaeschna mutata

- One isolated population in Washington County, breeding in one pair of ponds
- Require fishless waters
Blue-eyed Darner
Rhionaeschna multicolor

- Common in the western US
- Only found in eastern MN
- Why not in prairies?
Cyrano Darner
_Nasiaeschna pentacantha_

Scattered records throughout the northern half of Minnesota
Sioux Snaketail

*Ophiogomphus smithi*

- First described in 2004
- Dependant on clean, sandy bottomed rivers
- Discovered in 2011 in upper reaches of the Zumbro River in SE MN
- Specimens from the 1990’s uncovered in museum collections from Chisago County

John Arthur
Jade Clubtail
Arigomphus submedianus

- Two photo records from the Twin Cities
In Minnesota, found only from the Mississippi River in SE counties.
Quebec Emerald
Somatochlora brevicincta

• Breed in patterned fens, a very rare habitat type in MN.
Quebec Emerald Distribution
(map from odonatacentral.com)
Ringed Emerald
Somatochlora albicincta

- One adult specimen from Lake County
- Efforts targeting the adult and nymph have turned up nothing. We have the habitat…
• Breed in tiny bog pools and emerge very early in the spring.
Slaty Skimmer
*Libellula incesta*

Great Blue Skimmer
*Libellula vibrans*

Striped Saddlebags
*Tramea calverti*

- All are likely strays to Minnesota
What species are still hiding in Minnesota?
Or should we ask…
What species are still hiding in Ohio?
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