

**ISCHNURA HASTATA (ODONATA: COENAGRIONIDAE):
NEW FOR MICHIGAN**

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ABSTRACT

Ischnura hastata is a tiny damselfly previously unknown from Michigan. An adult male was collected at an old quarry in Ives Road Fen Preserve, Lenawee County, Michigan; and a small population was found at a new development site in Wayne County, Michigan.

Ischnura hastata (Say) was not previously known from Michigan (Byers 1927, Kormondy 1958, MOS 2002). It is the smallest damselfly in the United States, at about 21 to 28 mm (Dunkle 1990). Its tiny size allows for wind-borne dispersal (Dunkle 1990, Abbott 1999). Thus, it has a large range, covering much of the United States, southern Ontario, the Bahamas and the Greater Antilles, Mexico and Central America, and south to Venezuela (Dunkle 1990, Mauffray and Beckenbach 2002). However, it is more common southward (Westfall and May 1996) and records are sparse north of about 41 degrees latitude (Oldham 2000, Sikes 2000, Brunelle 2002, WDNR 2002).

Ischnura hastata can be found in various habitats (bogs, marshes, lake margins, temporary ponds), often far from water (Abbott 1999, Dunkle 1990). In Ohio, they are said to inhabit "fairly clean wetlands" in areas that remain "unmuddied" (Glotzhober and McShaffrey 2002). In Ontario, most records have come from seepages (Oldham 2000).

We collected an adult male *Ischnura hastata* on 17 August 2002 at Kossey Tract #2 of Ives Road Fen Preserve, a Michigan Nature Conservancy property south of the city of Tecumseh in Lenawee County, Michigan. Kossey Tract #2 is a discontinuous part of the Preserve located south of the fen proper; it was acquired as a buffer. It is 76.5 ha of sandy soil with sparse herbaceous cover, shrubs, and some trees. The main features are three old, fishless borrow pits remaining from a sand and gravel quarry operation. The specimen was found along the margins of the second borrow pit, which is shallow, mucky, and fed by seeps, in a wet area of dense, tall grasses where there were many *Ischnura verticalis* (Say). On a return visit 2 September 2002, we did not find any *Ischnura hastata*. Conditions were much drier and there were large numbers newly emerged *Bufo americanus* Holbrook, which may have contributed to their absence.

On 24 August 2002, we found a small population (~7 individuals) of *Ischnura hastata* at a newly constructed industrial park in Northville, northwest Wayne County, Michigan. The site included a road, cleared lots, and wet areas that will probably be future retention basins for parking lots. The area was highly disturbed and covered with less than a year's growth of early successional weeds, grasses, and semi-emergent aquatic plants. The *Ischnura hastata* individuals were favoring dense patches of low (< 25 cm) spike-rushes (*Eleocharis* sp.).

DISCUSSION

Ischnura hastata is a species that was expected to be found in Michigan with some determined searching (M. F. O'Brien, pers. comm.). While not common in northern states, *Ischnura hastata* is found in fifteen counties in Illinois

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(Kondratieff 2000), five counties in Indiana (Kondratieff 2000), and 43 counties in Ohio (Glotzhober and McShaffrey 2002).

Ives Road Fen is the largest intact fen in the area, and eighteen species of Odonata were listed for Ives Road Fen by O'Brien (2000), including such uncommon Michigan species as *Enallagma basidens* Calvert, *Nehalonia gracilis* Morse, and *Cordulegaster bilineata* (Carle). *Somatochlora tenebrosa* (Say) was found in 2001 (O'Brien 2001). The authors have observed fifteen additional species. One of these species is notable. *Anax longipes* Hagen was first observed 8 July 2001 and one to three adults have been seen on each subsequent trip to Kossey Tract #2. We collected two exuviae there on 17 August 2002. This species was discovered in Michigan in 1996 in Livingston County (Kielb and O'Brien 1997). The Ives Road Fen location is only the second in Michigan.

The population in Wayne County was found in a very disturbed site in a highly urbanized county; it was evident that the site where the population was located was completely cleared and graded within the previous year. Further searches are needed to locate stable breeding populations of *Ischnura hastata* in Michigan.

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LITERATURE CITED

- Abbott, J. 1999. Citrine Forktail (*Ischnura hastata*). Odonata Central web site. Univ. Texas, Austin, TX <http://www.esb.utexas.edu/jcabbott/odonata/bfl/bflspecies.asp?TaxaID=366>. Accessed 05 Dec 02.
- Brunelle, P.-M. 2002. Maine Damselfly Distribution by County. Maine Damselfly and Dragonfly Survey web site. Maine Dept. Inland Fisheries and Wildlife, Augusta, ME. <<http://mdds.umf.maine.edu/Damselfly%20Distribution.htm>>. Accessed 05 Dec 02.
- Byers, F. C. 1927. An annotated list of the Odonata of Michigan. Occ. Papers Mus. Zool. Univ. Michigan. 183:1-15.
- Dunkle, S. W. 1990. *Damselflies of Florida, Bermuda, and the Bahamas*. Scientific Publishers, Gainesville, FL and Washington, D.C.
- Glotzhober, R. C. and D. McShaffrey, eds. 2002. *Dragonflies and Damselflies of Ohio*. Ohio Biological Surv., Columbus, OH.
- Kielb, M. A., and M. F. O'Brien. 1997. Discovery of an isolated population of *Anax longipes* in Michigan (Odonata: Aeshnidae). *Great Lakes Entomologist* 29(3):161-16
- Kondratieff, B. C. (coordinator). 2000. Dragonflies and Damselflies (Odonata) of the United States. Northern Prairie Wildlife Research Center Home Page, Jamestown, ND. <<http://www.npwrc.usgs.gov/resource/distr/insects/dfly/dflyusa.htm>> (Version 26JUN2002). Accessed 05 Dec 02.
- Kormondy, E. J. 1958. Catalogue of the Odonata of Michigan. Misc. Pub. 104. Mus. Zool. Univ. Michigan, Ann Arbor.
- Mauffray, B. and L. Beckenbach. 2002. Distribution Summary of North American Zygoptera. Odonata Information Network web site. International Odonata Research Institute, Gainesville, FL. <<http://www.afn.org/~iori/zyglist.html#Ihastata>>. Version 03Apr02. Accessed 05 Dec 02.

- [MOS] Michigan Odonata Survey. 2002. Michigan Odonata Survey Web Databases. Michigan Odonota Survey web site. University of Michigan Museum of Zoology Insect Division, Ann Arbor. <<http://insects.ummz.lsa.umich.edu/MICHODO/ododata.html>>. Accessed 05 Dec 02.
- O'Brien, M. 2000. Observations at Ives Road Fen. *Williamsonia* 4(4):4-5.
- O'Brien, M. 2001. *Somatochlora tenebrosa* at Ives Road Fen, Lenawee Co., Michigan (Corduliidae). *Argia* 13(3): 22-24.
- Oldham, M. J. 2000. Citrine Forktail (*Ischnura hastata*) in Ontario. Pp. 7-9 in *Ontario Odonata, Vol. 1*. P. M. Catling, C. Jones, and P. Pratt, eds. Toronto Ent. Assoc., Toronto.
- Sikes, D. 2000. CT Dragonfly Flight Records. Univ. Connecticut, Storrs, CT. <<http://www.eeb.uconn.edu/collections/insects/dragonpages/coenagrionidae.htm>>. Accessed 05 Dec 02.
- [WDNR] Wisconsin Dept. Natural Resources. 2002. Bureau of Endangered Resources, Madison, WI. <<http://www.dnr.state.wi.us/org/land/er/index.htm>>. Accessed 05 Dec 02.
- Westfall, M. J., Jr. and M. L. May. 1996. *Damselflies of North America*. Scientific Publishers, Gainesville, FL.