

SCIENTIFIC NOTE

NEW RECORDS OF *OPHONUS PUNCTICEPS* STEPHENS (COLEOPTERA: CARABIDAE) FROM IOWA, USA SHOW CONTINUED WESTWARD RANGE EXPANSION

KIRK J. LARSEN

Department of Biology, Luther College
700 College Drive, Decorah, IA 52101, U.S.A.
larsenkj@luther.edu

AND

FOSTER F. PURRINGTON

3028 Brantwood Drive, Zolfo Springs, FL 33890, U.S.A.
scaphinotus8@yahoo.com

The ground beetle *Ophonus puncticeps* Stephens, 1828 (Coleoptera: Carabidae) (Fig. 1) is a Palearctic species that was introduced to North America from Europe (Dietrich 1957). This species is known to be a strong flier in Europe (Lindroth 1945) and is often attracted to lights at night (Ball and Bousquet 2000; Laroche and Larivière 2003). *Ophonus puncticeps* lives in old-field habitats on bare gravel-loam soil (Lindroth 1968) and feeds on seed-heads of Queen Anne's lace, *Daucus carota* L. (Apiaceae), in Europe (Laroche 1990). Davidson (1975) has found it on curly dock, *Rumex crispus* L. (Polygonaceae), and Queen Anne's lace in New York and Vermont.

In North America, *O. puncticeps* was first found on Long Island, New York in 1954 (Dietrich 1957). Since then, it has expanded its range (Fig. 2) into upstate New York in 1969 and Vermont in 1972 (Davidson 1975), Massachusetts in 1973 (Laroche and Larivière 1989), New Jersey in 1975 (Steffens and Davidson 1979), Maine (Duval and Duval 1977), New Hampshire (Choate 1977), Ohio in 1978 (Laroche and Larivière 1989), Connecticut in 1982 (Krinsky and Oliver 1988), Québec in 1985 (Bousquet 1987), Ontario and Nova Scotia in 1987 (Laroche and Larivière 1989), Pennsylvania (Laroche and Larivière 1989), Wisconsin in 1995, Michigan in 1998, and Illinois in 1999 (Purrington *et al.* 2000), and Prince Edward Island in 2002 (Majka *et al.* 2006).

We now report the continued expansion of *O. puncticeps* westward across the Mississippi River into Iowa. This species was first collected in eastern Iowa in 2006 ("IOWA: Linn County, Cedar Rapids: 2605 Blairs Ferry Rd NE on sidewalk 21-July-2006. Coll. Doug Veal"). It was then collected in extreme northeastern Iowa in 2009 ("IOWA: Allamakee County, Dorchester,



Fig. 1. *Ophonus puncticeps*.

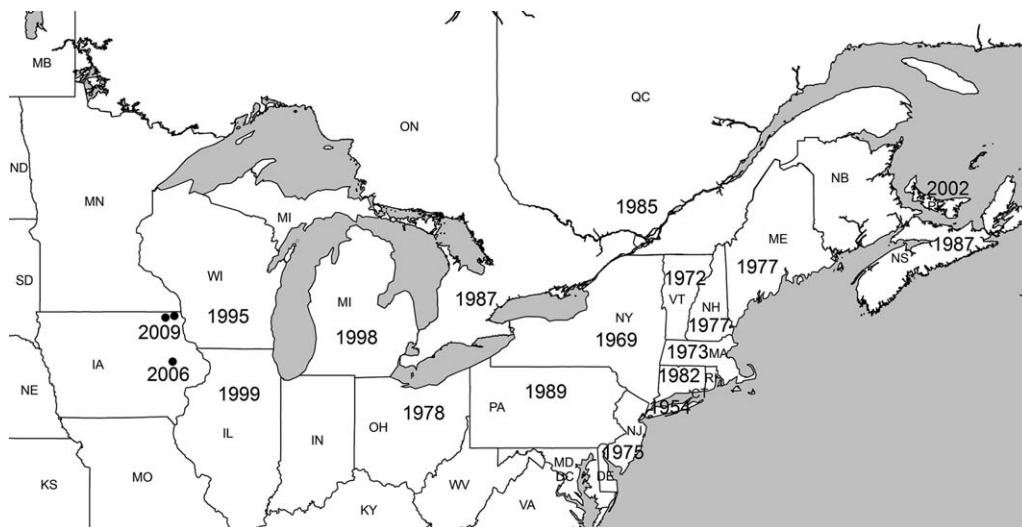


Fig. 2. Known distribution of *Ophonus puncticeps* in northeastern North America, with years of first collection records per state/province.

tallgrass prairie planting in former corn field 1–5 Sept 2009, pitfall trap, Coll. Kirk Larsen” and “IOWA: Winneshiek County, US-52 roadside, 3 km SW Decorah, pitfall trap 1–8 Sept 2009, Coll. Kirsten Manges & Kirk Larsen”). Since 2009, KJL has collected this species at the same location in Winneshiek County each year, including the following records: “IOWA: Winneshiek County, US-52 roadside, 3 km SW Decorah, pitfall trap 26 July-2 Aug 2010, Coll. Tyler Zinnecker & Kirk Larsen”. At this site in Winneshiek County in the roadside of US Highway 52, relative abundance has increased each year as determined by the number of *O. puncticeps* collected in pitfall traps from the first specimen found in 2009, to two in 2010, to 55 collected in 2011, and over 100 collected in 2012 as of 1 August. Voucher specimens of *O. puncticeps* are housed in the insect research collection of the Hoslett Museum of Natural History at Luther College in Decorah, Iowa.

Given the proximity to the Minnesota state line (only 1 km north of the Dorchester site and 15 km north of the US Highway 52 site), the known flight ability of this species, and the abundance of *D. carota* in roadside ditches in the Upper Midwest, we expect that this species may already be present in Minnesota. It may also already be present in Indiana, Rhode Island, and New Brunswick as well since it is found in neighboring states and provinces. This species will likely continue to expand its range further.

ACKNOWLEDGMENTS

We thank Douglas Veal of Marion, Iowa for sharing information on the specimen he found in Linn County, Iowa in 2006. We also thank Tex Sordahl of Decorah, Iowa for helpful comments on this manuscript.

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(Received 16 August 2012; accepted 13 January 2013.
Publication date 20 March 2013.)