New Record of Neohaemonia melsheimeri (Lacordaire, 1845) (Coleoptera: Chrysomelidae) from Alberta, Canada

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SCIENTIFIC NOTE

New Record of *Neohaemonia melsheimeri* (Lacordaire, 1845) (Coleoptera: Chrysomelidae) from Alberta, Canada

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We report the first collection record of the leaf beetle *Neohaemonia melsheimeri* (Lacordaire, 1845) for Alberta, Canada. *Neohaemonia* Székessy is a genus of aquatic leaf beetles (Coleoptera: Chrysomelidae: Donaciinae) that appears to be restricted to host plants in the genus *Potamageton* L. (Potamogetonaceae) (Riley *et al.* 2002). The Nearctic fauna consists of four known species, with the possibility of one additional species, *Neohaemonia flohri* (Jacoby, 1884), from central Mexico that may now be extinct (Askevold 1988). Specimens of *Neohaemonia* are collected infrequently due, at least in part, to their completely aquatic nature (Askevold 1988; Webster *et al.* 2012). Previous records of *N. melsheimeri* range from Virginia (Askevold 1988) north to New Brunswick (Webster *et al.* 2012) and west to South Dakota and southern Manitoba (Askevold 1988). Our collection of *N. melsheimeri*, therefore, not only represents the first record of this species in Alberta, but also the most western record to date (Bousquet *et al.* 2013).

Both male and female adult specimens of *N. melsheimeri* were collected on 15 June 2017 from a site approximately 50 km northeast of Brooks, Alberta (50.95369° N, 111.54665° W) as part of the provincial wetland monitoring program being conducted by the Alberta Biodiversity Monitoring Institute (ABMI). Specimens reported herein were deposited in the aquatic invertebrate collection at the Royal Alberta Museum in Edmonton, Alberta (TMS: ABMI.A.40525).

The collection site is an anthropogenic pond located in an actively grazed cattle pasture in Alberta's Dry Mixedgrass Natural Subregion (Alberta Biodiversity Monitoring Institute 2017). At the time of collection, the maximum length of the pond was 76 m, the maximum depth was 5.7 m, the pH was 7.63, the conductivity was 304 μS/cm, the salinity was 0.15 ppt, and the dissolved oxygen content was 7.94 mg/L (Alberta Biodiversity Monitoring Institute 2017). The beetles were collected with a D-ring dip net (500 μm mesh size) following the ABMI's published sampling protocols (Alberta Biodiversity Monitoring Institute 2016), which employ a rapid triple net sweep method that targets rooted macrophytes. Aquatic vegetation at the site is primarily composed of *Potamogeton richardsonii* (A. Benn.) Rydb. and *Stuckenia pectinata* (L.) Börner (Potamogetonaceae) (Alberta Biodiversity Monitoring Institute 2017).

Neohaemonia melsheimeri can be distinguished from other members of the genus by the presence of oblique, impressed, usually darkened bands on either side of the midline of the pronotum (Fig. 1), as well as its small size (length = 4.7–5.3 mm). When compared with *Neohaemonia flagellata* Askevold (length = 5.6–7.6 mm), the only other *Neohaemonia* known to occur in Alberta (Bousquet *et al.* 2013), *N. melsheimeri* is distinctly smaller (Fig. 2).

Acknowledgments

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Figs. 1–2. *Neohaemonia* species. **1)** Dorsal view of *N. melsheimeri* with arrows indicating impressed, oblique, darkened bands on either side of the midline of the pronotum; **2)** Dorsal view of *Neohaemonia flagellata* (left) and *N. melsheimeri* (right).

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