

Sitka Bioblitz Discovery Produces First Notonecta (*Hemiptera*: Notonectidae) Recorded in Alaska

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NOTE

Sitka Bioblitz discovery produces first *Notonecta* (Hemiptera: Notonectidae) recorded in Alaska

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Notonectidae are small to medium-sized predatory water bugs commonly referred to as backswimmers due to their unusual style of upside-down locomotion. They can be found in the still or slow moving water of lakes, ponds, and streams where they feed on other aquatic invertebrates and occasionally small vertebrates. Somewhat similar in appearance to members of the widespread family Corixidae, they are usually larger bodied and lack scoop like front legs (Merritt et al. 2008).

As part of the 2012 Sitka Bioblitz biodiversity survey, ten adult and six immature specimens of Notonectidae were collected on 18 August 2012. All specimens were collected from the shore of a man-made lake (57.03011°N, 135.32588°W. +/- 7m WGS84, 7m elevation) on Galankin Island, Sitka, located in Southeastern Alaska. Galankin Island is a relatively large island in Sitka Sound at roughly 2.5 km long and 0.6 km wide. It is located approximately 2 km from downtown Sitka. Because it is one of the only small islands near shore with a freshwater habitat, the number of nearby potential habitats for other Notonectidae populations is limited. Specimens were collected at night, using a small aquatic net, and preserved in 70% ethyl alcohol.

Previously, no species of Notonectidae have been recorded from Alaska (Polhemus and Polhemus 1988, Maw et al. 2000, Lattin 2008). Specimens keyed to the species *Notonecta kirbyi* Hungerford in Hungerford's (1933) key to Western Hemisphere *Notonecta* (p. 65). The

diagnostic characters in the key, which match these specimens, are “keel on the fourth abdominal sternum is bare with setae confined to the sides, the scutellum is not conspicuously broader than long, and the metaxyphus is black.”

Previous reports of *N. kirbyi* as far north as the Yukon and Northwest Territories in Canada have been recorded in Maw et al. (2000), who listed five species of *Notonecta* from British Columbia, three in Northwest Territories, and one from Yukon. In the United States *N. kirbyi* is restricted to the western states (Polhemus and Polhemus 1988).

All specimens are deposited in the University of Alaska Museum Insect Collection. Average specimen length is 12.87 mm +/- 2.21 mm. Average specimen width is 4.37 mm +/- 0.14 mm. Cryovial tissues were used to successfully amplify and sequence the DNA Barcode region of the mtDNA gene CO1 for two adults (UAM:Ento:230094 / BoLD barcode ID: UAMIC641-13 and UAM:Ento:230095 / BoLD barcode ID: UAMIC642-13). All specimen data, including links to DNA sequences and habitus photos on the Barcode of Life Data Systems (which shares data with GenBank), have been entered into the museum's database, Arctos, and are accessible to the general public (<http://arctos.database.museum/saved/Notonecta>). These data are also shared with the Global Biodiversity Information Facility (GBIF).

This new record is just one of over 1,000 new records that have accumulated

since efforts began in 2000 to prepare a checklist of non-marine arthropods of Alaska. The checklist now includes over 8,000 species and is available at <http://arctos.database.museum/saved/AK-species-list>. This work is a collaborative effort between the University of Alaska Museum, The United States Fish and Wildlife Service, The United States Department of Agriculture Forest Service, and numerous other collaborators. More information on this project is available on the Alaska Entomological Society's website: http://www.akentsoc.org/the_fauna/checklist.

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