2021 Collecting Permit Report for Kenai NWR

**Miller Creek Aquatic\_Invertebrate\_Inventory**

**Objective(s):** Freshwater mollusks were inventoried within the Miller Creek watershed before rotenone was applied in Octoboer 2021 to eradicate a population of invasive northern pike. We plan to compare these pre-treatment samples with post-treatment samples to be collected in 2022 to determine whether rotenone application altered mollusk communities.

**Benefits:** Since rotenone is toxic to many aquatic invertebrates, it is considered a good practice to survey aquatic invertebrates before and after treatment. On the Kenai Peninsula, ADF&G has conducted these kinds of surveys in other pike eradication projects.

**Dates and Location of Collections:** July 21 - September 13, 2021 at North Vogel Lake, Vogel Lake, and Miller Creek on the northern Kenai Peninsula.

**Target Species:** All freshwater mollusk species present in the planned treatment area.

**Capture Methods:** D-net, Wisconsin net, Ekman dredge, and opportunistic (hand) sampling.

**Numbers and Disposition:**

**Additional Sampling:**

**Final Reporting Outlet(s) and Completions Date(s):** An interim report to be published in the Newsletter of the Alaska Entomlogical Society, spring 2022. A final report is planned for 2023.

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Specific information on the mollusks that were sampled during this project is included in the attached Excel file.

A handful of sculpins and juvenile salmonids were collected in D-nets in lower Miller Creek. These were quickly released so that none were harmed. Sticklebacks were frequently collected in D-net samples in the lakes and upper Miller Creek. Almost all of these were released live, but two small sticklebacks ended up in bulk invertebrate samples.

Most of the mollusk voucher specimens collected have yet to be identified. Only *Radix auricularia* and a *Sphaerium* sp. BOLD:AAG0345[[1]](#footnote-1) were identified by metabarcoding, despite other species being present in the samples. Our metabarcoding methods appear to have worked poorly for identifying gastropods.



1. <https://doi.org/10.5883/BOLD:AAG0345> [↑](#footnote-ref-1)