

The population ecology of *Leptorhynchoides thecatus* (Acanthocephala) in two invasive fish species, smallmouth bass and yellow perch, from St. Mary Lake, Salt Spring Island, BC.

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The introduction of non-indigenous species into new geographic regions can result in the introduction of their parasites. Smallmouth bass (*Micropterus dolomieu*) and yellow perch (*Perca flavescens*) are both invasive fish species introduced to St. Mary Lake on Salt Spring Island, BC. The acanthocephalan, *Leptorhynchoides thecatus*, was subsequently introduced with these fishes. This parasite is transmitted through predator-prey interactions, using amphipod crustaceans and fish paratenic hosts. The primary objective of this study was to compare the prevalence, abundance, and degree of aggregation of *L. thecatus* in smallmouth bass and yellow perch. Bass (n=13) and perch (n=15) were caught by angling during July - September 2016, and the digestive tract examined for this parasite. A dietary analysis of the two fish species was also conducted. In bass and perch, the prevalence of *L. thecatus* was 100% and 87%, respectively. These high prevalences are due to favorable aquatic conditions and the availability of suitable amphipod intermediate hosts for successful transmission. The mean abundance of *L. thecatus* was significantly higher for bass (254.2 ± 44.9), compared to perch (11.0 ± 3.5). The parasite was especially highly aggregated in smallmouth bass, with 54.7% of the 3,305 *L. thecatus* found in four host individuals. Amphipods (*Hyaella* sp.) were observed in the stomach contents of yellow perch, with piscivory observed in smallmouth bass exclusively. Bioaccumulation of *L. thecatus* larvae in fish paratenic hosts is the most important factor explaining the observed high abundances and aggregation in bass.