



Golden Sands
Resource Conservation
& Development Council, Inc.



Aquatic Invasive Species Quick Guide

Spiny Waterfleas (*Bythotrephes longimanus*)

Description: Spiny waterfleas are small, predatory zooplankton, usually growing to sizes of 1/4 to 5/8 inch long and appearing semi-transparent. They have a long, tail-like spine with additional spines along the edges. Spiny waterfleas are often noticed by fishermen when they accumulate on fishing lines or downrigger cables, creating a clear, gelatin-like mass.



Spiny water flea taken under magnification. This specimen is a half-inch long.

Photo: Paul Skawinski

North American Distribution: Found in Lake Ontario in 1982, spiny waterfleas had spread to all the Great Lakes by the late 1980s. They were likely transported in ballast water carried by shipping barges. Spiny waterfleas can tolerate brackish waters, and are currently found in inland waters in every US state or Canadian province bordering the Great Lakes.



Spiny waterfleas caught by tail spines on a fishing line, Lake Superior.

Photo: Chris Hamerla

Dispersal Vectors Spiny waterfleas can be transported in minnow buckets, live wells, or bilge water, or on nets and anchor lines. Spiny waterfleas can reproduce sexually or asexually by cloning. Asexually, a single individual can produce ten clone “offspring” every two weeks. Fertilized “resting eggs” are released from the parent in the fall, and overwinter at the bottom of the lake. When conditions are more favorable the eggs hatch. In lab settings, the eggs are able to resist freezing and drying out, and do not break down in the digestive tracts of fish. These eggs can be transported in the mud on anchors or other boating gear.

Ecological Impacts: Spiny waterfleas feed on native zooplankton. Native zooplankton feed on free-floating algae which help maintain water clarity. They are also necessary to support lake fisheries, as young fish rely on zooplankton as a food source. When spiny waterfleas remove native zooplankton from the food chain, native fish lose their food source, and algae blooms can occur with nothing to curb them. Fishermen are usually among the first to notice new populations of spiny waterfleas. Spiny waterfleas catch on lines and can become so

bunched that they clog pole eyelets and foul gear.

Larger fish will eat spiny waterfleas. However, the spines are not digested and have been known to puncture the stomachs of fish. Some fish such as pumpkinseed sunfish have the ability to remove the spine which aids in digesting the water flea. Canadian researchers have rated spiny water flea infestations as similar in severity to acid rain in the impact they cause to the diversity of lakes and native zooplankton communities.



In large numbers, spiny waterfleas appear to be a gelatinous mat along shorelines.

Photo: Laura Herman

Control options: There is currently no successful control methods or means of eradication for spiny waterfleas. The only way to curb the spread is to prevent introduction to new waterbodies.

Additional Information: <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=162>
http://bugwoodcloud.org/mura/mipn/assets/File/UMISC-2014/Tuesday/AISEstablishmentAndImpacts_LeDuc-Tues_1020am.pdf
<http://www.invadingspecies.com/invasors/invertebrates/spiny-and-fishhook-waterflea/>

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