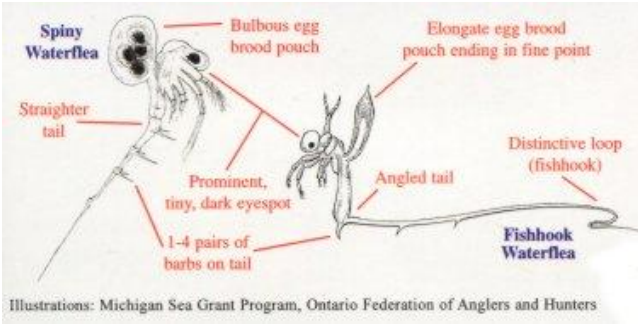
THE SPINY AND THE FISHHOOK WATER FLEAS

The spiny water flea *(Bythotrephes longimanus)* and the fishhook water flea *(Cercopagis pengoi)* are small crustaceans. Crustaceans include organisms such as shrimp, crab and crayfish. The spiny and the fishhook water fleas come from the Caspian Sea in Eastern Europe. Both species were introduced in North America via ballast water of merchant ships. The spiny water flea was first discovered in Lake Huron in 1982 and the fishhook water flea was identified in 1998 in Lake Ontario.



Picture 1. The spiny and the fishhook water fleas (source: www.invadingspecies.com)

HOW TO RECGNIZE IT? (Picture 1)

- Small size, approximately 1 to 1.5 cm long including the tail
- Long spiny tail representing ¾ of their total length
- Big bag containing orange eggs
- Obvious black eye

THE SPINY AND THE FISHHOOK WATER FLEAS ECOLOGY

These small organisms are euryhaline and eurythermal organisms which mean that they can tolerate variations in both the salinity and the water temperature. However, these water fleas prefer brackish water (mix of fresh and saltwater). They feed on small organisms in suspension in the water (plankton).

Picture 2. Mat of these water fleas on a fishing line (source: Jeff Gunderson, Minnesota Sea Grant)

The spiny and the fishhook water fleas are parthenogenetic, which means that they can reproduce sexually or asexually according to environmental conditions. Under good conditions, the female reproduces asexually, i.e. it doesn't needs a male to be fertilized. Eggs produce only females, identical to the mother (clones). In the summer, when water gets warmer, a new generation of clones can be produced within 2 weeks. When conditions become difficult (lack of food or temperature dropping) the females produce males. The males then fertilize the females (sexual reproduction). These females produce highly resistant resting eggs which survive the winter. When conditions improve, resting eggs hatch into females which begin a new cycle.

IMPACTS

When the spiny and the fishhook water fleas are abundant, their large consumption of plankton decreases the quantity of food available for other native species (small fish, insects and other small organisms). Furthermore, small fish do not like to eat spiny and fishhook water fleas because of their long spiny tail. For these reasons, the survival and growth rate of small fishes is affected.

Finally, the spiny and the fishhook water fleas create big problems for fishermen. Effectively, these small creatures stick to fishing lines and nets.

CONTROL METHODS

There are no control methods for these two aquatic alien invasive species.

Picture 3. Mat of these water fleas on a fishing line (source: www.mass.gov)

VECTORS

- Boaters (boats, rowboats, canoes, kayaks, jet skis, etc.) can easily spread these alien invasive species. Transport of a boat from a body of water to another is an obvious risk of contamination
- Anglers and hunters (boats, fishing and hunting equipment, bait buckets, etc.) (pictures 1 and 3)
- Seaplanes
- Scuba divers
- Ocean-going vessels

WEBSITES

For more information or to find the information above you can visit the following websites:

http://www.especesenvahissantes.gc.ca/Francais/LinkSearch.asp?x=1&formAction=SubjectArea

http://www.mrn.gouv.qc.ca/

http://www.invadingspecies.com/InvadersFR.cfm?A=Page&PID=2

http://www.anstaskforce.gov/default.php

http://www.seagrant.umn.edu/ais/waterflea

http://www.nobanis.org/files/factsheets/cercopagis_pengoi.pdf

http://www.issg.org/database/species/ecology.asp?si=118&fr=1&sts=sss&lang=EN