



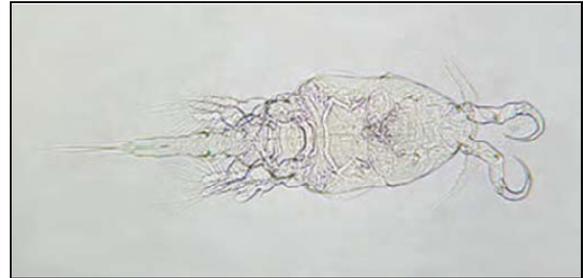
# parasitic copepod

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|----------------------------|-------------------------------|
| <b>Common Name</b>         | parasitic copepod             |
| <b>Genus &amp; Species</b> | <i>Neoergasilus japonicus</i> |
| <b>Family</b>              | Ergasilidae                   |
| <b>Order</b>               | Poecilostomatoida             |
| <b>Class</b>               | Maxillopoda                   |

**Diagnosis:** Morphological features tend to vary among different populations of *N. japonicus*. In general, North American populations tend to have a long body with a subtriangularly-shaped dorsal cephalic shield. The thorax consists of 4 free segments and a 5<sup>th</sup> reduced segment, while the abdomen comprises 3. They have a sharply curved 2<sup>nd</sup> pair of antennae, as well as rasping double segmented mandibles. The 1<sup>st</sup> pair of antennae consists of 6 segments and the 2<sup>nd</sup> pair of antennae consists of 4. The 1<sup>st</sup> maxilla displays 3 spines while the 1<sup>st</sup> walking legs endopod displays 2. Four setae are present on the third segment of the endopod. The first 4 pairs of walking legs are biramous, while the 5<sup>th</sup> pair is uniramous and reduced. Adults range in length from 0.6 to 0.76 mm.



**Ecology:** This species has a rapid and highly productive reproductive cycle with females capable of producing 1500 to 2000 eggs over their lifetime. Free-living individuals (i.e. larvae, males, and immature females) feed on algae and zooplankton. Gravid females of this species are parasitic, attaching to the fins of freshwater fish species and feeding on their tissue. In their native range, cyprinids are thought to be the only host for this species; however, a wide array of fish species has been targeted in North America. Fish hosts have included the following species: pumpkinseed, yellow perch, rock bass, bluegill, common carp, channel catfish, goldfish, green sunfish, smallmouth bass, largemouth bass, and fathead minnow.

**Habitat & Distribution:** *N. japonicus* is a freshwater species typical of eutrophic and polluted aquatic environments. The native range of this species is Asia; however, it has spread fairly worldwide. In 20 years, the species has dispersed across Europe, where it was introduced into the United Kingdom, Finland, France, and Hungary. In the U.S. this species was first recorded from Saginaw Bay, Lake Huron in 1994. It has since been detected in Lake Erie as well as the states Alabama and Colorado. Introduction and dispersal of the species is attributed to the aquarium industry.

**Status:** So far, established populations of *N. japonicus* have only been recorded from Lake Huron within the Great Lakes drainage basin.

**USGS Fact Sheet:** <http://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=2595>