



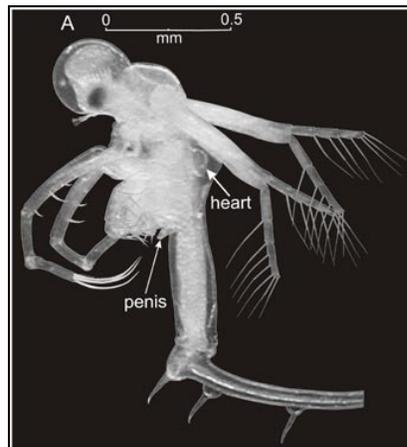
fish-hook water flea

US ARMY CORPS OF ENGINEERS

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Common Name	fish-hook water flea
Genus & Species	<i>Cercopagis pengoi</i>
Family	Cercopagididae
Order	Cladocera
Class	Branchiopoda

Diagnosis: The head is essentially composed of a large single eye, where the amount of black pigment makes less than one half of the diameter of the eye. The second antenna is a large appendage containing of two branches - the endopod and exopod. The first pair of thoracic legs (thoracopods I) are 3-4 times longer than the second ones. Abdomen length is equal to the length of the rest of the body, and spines are large, equal to 2-3 diameters of caudal process. Parthenogenic females of the first generation of *C. pengoi* that hatch from resting eggs are anatomically distinct from parthenogenic females of following generations. They have a short straight caudal spine unlike the characteristically looped caudal spine of parthenogenically-produced individuals.



Ecology: In addition to sexual reproduction, *Cercopagis* most commonly reproduce parthenogenically (asexually), which allows them to quickly establish new populations with a relatively small seed population without the need for a large number of the smaller males along with females. Resting eggs are also resistant to desiccation, freeze-drying and ingestion by predators (such as other fish). They can be easily transported to other drainage basins by various vectors, particularly if they are still in the female's body (the barbed caudal spine allows attachment to ropes, fishing lines, waterfowl feathers, aquatic gear, vegetation and mud). Resting eggs can hatch regardless of whether the carrier female is alive or dead.

Habitat & Distribution: *Cercopagis pengoi* is a euryhaline and eurythermic, having a wide tolerance to salinity and temperatures. Its native range is southern Europe - Ponto-Aralo-Caspian basin, i.e. Caspian, Black and Azov seas and small coastal lakes.

Status: Its presence in Lake Michigan makes it a high risk for invasion to the Mississippi Basin. Concern has increased to the impact of this invasive species in the Great lakes region and other areas it might have been accidentally introduced. The spiny water flea, eggs and larvae may be caught up in fishing line, downriggers, fishing nets, and other fishing equipment which has caused the spread of the water flea to inland lakes and rivers.

USGS Fact Sheet: <http://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=163>