

Cercopagis pengoi



| Taxon | Family / Order / Class / Phylum |
|--|---|
| <i>Cercopagis pengoi</i> (Ostroumov, 1891) | Cercopagidae / Cladocera / Crustacea / Arthropoda |

COMMON NAMES (English only)

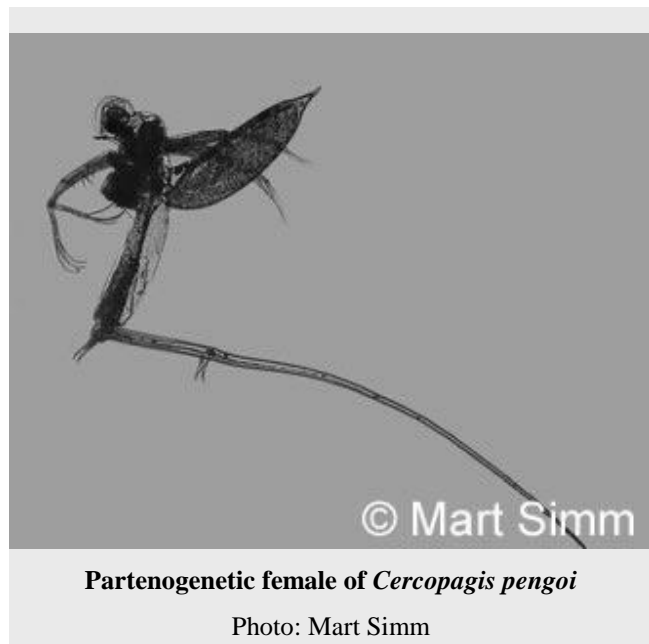
Fish-hook waterflea

SYNONYMS

Cercopagis (Apagis) ossiani (Mordukhai-Boltovskoi 1968)

SHORT DESCRIPTION

A water flea with body size up to 2 mm and caudal process with length up to 10 mm. 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. Parthenogenic females of the first generation 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. They prey mainly small plankton crustaceans.



Parthenogenic female of *Cercopagis pengoi*

Photo: Mart Simm

BIOLOGY/ECOLOGY

Dispersal mechanisms

Long-distance dispersal take place from resting eggs in ballast tanks of ships and local dispersal by fishing boats and on fishing lines.

Reproduction

Parthenogenesis and gamogenesis (sexual). Parthenogenesis prevails during periods of rapid population growth. In the Caspian Sea, sexual reproduction is more typical at the last stages of population growth, and results in the production of resting eggs. In invaded habitats, may switch to prolonged sexual reproduction during summer.

Known predators/herbivores

Important prey item for planktivorous fish. Spiny waterflea (*Bythotrephes longimanus*) predate upon them.

Resistant stages (seeds, spores etc.)

Most gamogenetic females (94%) carry two resting eggs; females with one or three resting eggs in the brood pouch are rare. As with other invasive onychopods, may possess adaptive life cycles, switching to the early gamogenetic reproduction which facilitates their establishment in the recipient ecosystems and further dispersal.

HABITAT

Native (EUNIS code)

A7: Pelagic water column, C2: Surface running waters.

Habitat occupied in invaded range (EUNIS code)

Occupied in invaded range A7: Pelagic water column, C2: Surface running water. Large freshwater reservoirs, lakes, coastal waters.

Habitat requirements

They are brackish water euryhaline species, found from freshwater to brackish water up to 13 PSU. They are eurythermic, they first appear in the summer plankton at water temperatures between 15 and 17°C and during autumn they appear in the zooplankton at relatively low temperatures of 8°C.

DISTRIBUTION

Native Range

Caspian endemic species, which spread during different geological periods to the Ponto-Azov and Aral Sea basins

Known Introduced Range

Reservoirs of Don and Dnieper rivers, Baltic Sea, Great Lakes of North America

Trend

Generally increasing in Europe and North America

MAP (European distribution)



Legend

| | | | | | |
|--|-------------------|--|-----------------------|--|----------------------|
| | Known in country | | Known in CGRS square | | Known in area |
| | Native in country | | Native in CGRS square | | Assumed native range |

INTRODUCTION PATHWAY

Ships' ballast water

IMPACT

Ecosystem Impact

It is a potential competitor with young stages of planktivorous fish for herbivorous zooplankton. They may affect resident zooplankton communities by selective predation.

Health and Social Impact

May cause allergy in humans during cleaning of fishing nets.

Economic Impact

May attach to fishing gear, clog nets and trawls, causing problems and substantial economic losses for fishermen.

MANAGEMENT

Prevention

Preventive measures for long-distance dispersal may include ballast water management. On the local level, fishing boats and gear should be properly cleaned.

Mechanical

Unknown.

Chemical

Unknown.

Biological

Unknown.

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