**Eriocheir sinensis**

**Taxon**  | **Family / Order / Class / Phylum**  
---|---
*Eriocheir sinensis* H. Milne Edwards, 1853  | Varunidae / Decapoda / Malacostraca / Arthropoda

**COMMON NAMES (English only)**
Chinese mitten crab  
Chinese freshwater edible crab  
Shanghai crab  
Chinese river crab

**SYNONYMS**
*Eriocheir leptognathus* Rathbun  
*Eriocheir rectus* Stimpson

**SHORT DESCRIPTION**
This small crab has a carapax that might may reach 5 cm and are usually brownish in colour. A characteristic feature is the mitten like “fur” on the claws. The Chinese mitten crab is an omnivorous predator. The diet of the crabs includes a wide range of plants, invertebrates, fishes and also detritus. Gastropods and bivalves are the dominant food component.

**BIOLOGY/ECOLOGY**

- **Dispersal mechanisms**
  Larvae disperse with water currents, juveniles and adults show active migration. Crabs even cross dikes and streets.

- **Reproduction**
  The life-cycle is characterised by migrations to waters of different salinities. Larval stages occur in marine and higher saline estuarine waters. The upstream larval migration (in spring) is supported by currents in estuaries. Juveniles actively migrate upstream over very long distances (up to 1,500 km inland in China). Adults migrate downstream to the marine environment in summer. This migration may take several months, during which they become reproductively mature. Most crabs live for two years, rare specimens grow older. After one year, the crabs reach full size. Mass developments were reported frequently in the last Century.

- **Known predators/herbivores**
  Crabs are preyed upon by birds.

- **Resistant stages (seeds, spores etc.)**
  None.

**HABITAT**

- **Native (EUNIS codes)**

- **Habitat occupied in invaded range (EUNIS codes)**
waterbodies. Larger estuaries and adjacent waters. Due to its inland migration it colonizes lakes and streams hundreds of kilometres from the sea.

**Habitat requirements**

The crabs are highly tolerant to water temperature changes. The temperature tolerance goes down to freezing point. High salinity tolerance is shown by the migration into marine, brackish and freshwater habitats. The species tolerates low oxygen conditions and air exposure for several hours.

**DISTRIBUTION**

**Native Range**

Temperate and tropical regions between Vladivostock (Russia) and South China, including Japan and Taiwan. Centre of occurrence is the Yellow Sea.

**Known Introduced Range**

First recorded from the German river Aller in 1912. The species probably spread into the Baltic Sea via the Kiel Canal and reached the German Baltic coast in 1926. The greatest abundance in Europe is in the Elbe, Weser and Thames and adjacent waters. It is also found in all North and Baltic Seas countries, the Atlantic seaboard of Europe and in the Mediterranean and Black Seas.

**Trend**

Although the crabs colonised already a wide distribution area in Europe, they continue to spread and new records are reported each year, predominantly in northern Europe.

**MAP (European distribution)**

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**INTRODUCTION PATHWAY**

The most likely introduction vector is shipping (ballast water and hull fouling of vessels) or imports of living species for aquaria and for human consumption. Range extensions (secondary spread) are aided by the enormous migrational behaviour of the species.
IMPACT

Ecosystem Impact
It competes for space and food especially during mass developments.

Health and Social Impact
The crabs are the second intermediate host for the human lung fluke parasite in Asia (no lung fluke record in crabs in Europe).

Economic Impact Crabs
damage nets by feeding on fishes caught in traps and nets. In freshwater ponds the crabs feed on cultured fish and their food as well. The burrowing activities of crabs result in increased erosion of dikes, river and lake embankments. They can also clog up industrial water intake filters during mass occurrences. In some European countries crabs are imported for human consumption. In Asia the crabs are considered a delicacy and in certain European regions adult crabs, caught as by-catch in inland fisheries, are sold to Asian restaurants. They have been also used as fishing bait, for fish meal production, cosmetic products and human consumption.

MANAGEMENT

Prevention
The species is known as delicacy and is traded on Asian markets for human consumption. Release in the wild should be avoided.

Mechanical
Attempts to catch as many juvenile crabs as possible during their upstream migration have been undertaken, especially during mass developments. However, trapping of crabs has not been found to be effective in controlling crab populations.

Chemical
Unknown.

Biological
Unknown.

REFERENCES


Schnakenbeck W (1924) Ueber das Auftreten chinesischer Krabben in der Unterelbe. Schriften für Süßwasser- und Meereskunde 5

OTHER REFERENCES


Boettger CR (1933) Die Ausbreitung der Wollhandkrabbe in Europa. Sitzungberichte der Gesellschaft naturforschender Freunde, Berlin, pp 399-415


Christiansen ME (1977) Kinesisk ullhåndkrabbe funnet for første gang i Norge. Fauna(Oslo) 30:134-138

CIESM Atlas of Exotic Species in the Mediterranean. Vol. 2 - Crustaceans decapods and stomatopods (assessed at www.ciesm.org/atlas)


Redeke HC (1932) De Chineesche wolhandkrab, Eriocheir sinensis (Milne Edwards) in ons land. Levende Natuur 37:41-46

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