



Invasive Species: Chinese Mitten Crab



Rays of sun beam on the glistening bay. The water ripples and your fishing pole twitches, drumming on the dock. Leaning over to take a look, you see an odd crab scurry back into the shadows of a rock. The crab appears again and this time you are prepared with a net scooping it up and onto the dock. Taking a closer look you notice it has fuzzy fur like patches on both of its front claws. What is this odd looking creature?

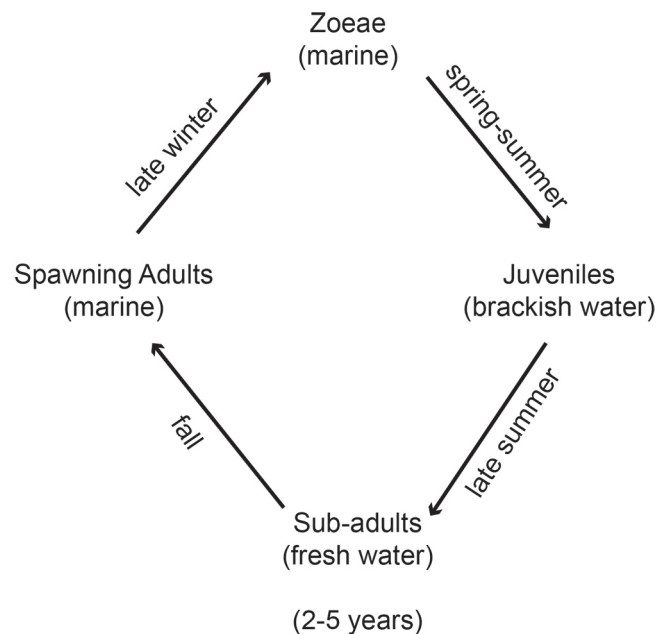
Image from smithsonianscience.org

Chinese Mitten Crab

The Chinese mitten crab (*Eriocheir sinensis*) is native to Southeast Asia and was first spotted in the US in 1965 in the Great Lakes. The first self-sustaining population of the Chinese mitten crab in the US was recorded in San Francisco Bay in 1992. They have also been also been reported in the Detroit River, Mississippi River, Hudson River, and Chesapeake Bay. This species was most likely introduced to the U.S. via ballast water (water stored in the hulls of ships), by illegal release to establish a local seafood source, or accidental release.

Life History

The Chinese mitten crab spends most of its life in fresh water and migrates to marine water to reproduce. Its breeding season occurs from November to June and both sexes die soon after reproduction. Females have the ability to produce 250,000 to 1,000,000 eggs, and carry the eggs until they hatch. The larvae are planktonic for 1-2 months before settling in more brackish areas as juveniles, and finally migrating from the estuary to freshwater lakes, rivers, and streams. Adults remain in freshwater habitats for 2-5 years before migrating back to the estuary to reproduce. These crabs are omnivores consuming a mixed diet of plants, fish and invertebrates (clams, worms, and shrimp).



The Chinese mitten crab (*Eriocheir sinensis*) spends most of its life in fresh water, migrating to marine environments to breed.

Identification

Physical Description

- Dense fuzzy patches on claws of adults and larger juveniles (>1 inch)
- Regenerated claws and claws of smaller juveniles may not have fuzz
- Claws are equally sized and white-tipped
- Sharp-tipped walking legs of adult over twice as long as carapace width; adept at walking on land and around barriers
- Four lateral spines on each side of carapace (shell); notch between the eyes
- Carapace light-brown to olive color; width up to 4 in (10 cm)

Habitat Preference

- Catadromous life cycle; spends most of its adult life in freshwater before migrating to estuaries to reproduce
- Burrows in the bottom of banks of freshwater rivers and estuaries
- Tolerates a wide range of temperatures

Ecological Concern

The introduction of the Chinese mitten crab to the U.S. is a concern because of its prior introduction and destruction in Europe. Its habitat and reproductive advantages makes it easier for them to out-compete native species and quickly establish a population. Their deep burrowing causes damage to dikes and soft banks which may cause increased erosion and threaten dam stability. The crabs also impact the fishing industry by feeding on nets and damaging captured fish. In Asia, the Chinese mitten crab is the intermediate host for the Oriental lung fluke which can be transferred to mammals and humans through raw or ill cooked crab. This parasite has not been reported in areas of the U.S. where the Chinese mitten crab has been introduced.



More Information

Northeast Coastal and Barrier Network
<http://science.nature.nps.gov/im/units/ncbn/>

NY Department of Environmental Conservation
<http://www.dec.ny.gov/animals/35888.html>

Aquatic Nuisance Species Task Force
<http://anstaskforce.gov/soc.php>

Smithsonian Environmental Research Center
http://www.serc.si.edu/labs/marine_invasions/

NPS Contact
Dana Filippini
Northeast Coastal and Barrier Network,
National Park Service
University of Rhode Island
Coastal Institute in Kingston, #102
1 Greenhouse Road
Kingston, RI 02881
401-874-7060

This Resource Brief was developed by Sophie
Nerone (The MET East Bay School)

The adult Chinese mitten crab can be identified by the dense fuzzy patches on their claws. Their walking legs make them especially adept at walking on land.

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