



Invasive Species Fact Sheet

Chinese mitten crab, *Eriocheir sinensis*

General Description

Chinese mitten crabs are medium-sized crabs named for their hairy, mitten-like claws. They have a smooth, round carapace (top shell) that is a maximum of 3 inches wide. Their legs are generally twice as long as the carapace is wide. Chinese mitten crabs can also be distinguished by the notch between their eyes and the four lateral spines found on each side of the carapace. They vary in color from brownish-orange to greenish-brown. Juveniles have the same features as adults, however crabs less than $\frac{3}{4}$ inch may have no or minimal hair, but hair is present by the time the carapace is 1 inch wide.



Chinese mitten crab
Photo by CDFW

Current Distribution

Chinese mitten crabs were first found in California in the San Francisco Bay in 1992, and by 1996 had migrated upstream to the Sacramento-San Joaquin Delta. By 1998, the crabs had traveled into the watershed as far north as Colusa County and as far south as Merced County. Chinese mitten crabs are believed to have experienced a bust after their population boom in the San Francisco Bay Delta watershed in the late 1990s, as they are rarely collected in the watershed today. Chinese mitten crabs were discovered in Chesapeake Bay (Maryland) in 2005 and Delaware Bay in 2007. Also in 2007, they were found in the Hudson River (New York) and have since been found as far inland as Albany. They have been collected in the Gulf Coast, Canada, and the Great Lakes, but populations have not successfully established. However, they are established in numerous European countries.

Habitat Preference

Chinese mitten crabs are catadromous, meaning they live in freshwater, but require saltwater to successfully reproduce. They are common in estuaries, intertidal areas, marshes, rice fields, lakes, rivers, and creeks. Adult Chinese mitten crabs utilize fresh, brackish, and saltwater habitats, constructing burrows in river banks and levees, intertidal areas, and marsh bottoms. The highest concentrations of adults are found in saltwater when the females are laying eggs. Newly hatched, Chinese mitten crab larvae can be found "swimming" in the open saltwater of bays and estuaries. Juveniles (fully molted and no longer "swimming") can be found in brackish and freshwater habitats within a few miles upstream of open water.

Pathways

Chinese mitten crabs are native to China's and South Korea's coastal rivers and estuaries that drain to the Yellow Sea. In Europe and California, Chinese mitten crabs are believed to have been introduced via ship ballast water and, possibly, intentionally released to establish fisheries. Additional pathways for Chinese mitten crab introduction to new areas include the aquarium and live seafood trades. Once introduced, mitten crabs are able to spread through a watershed by dispersal of larvae in the water column. Outside of the United States, they have been imported and/or transported as bait for fishing, food for cattle and chicken, fertilizer for agriculture, and material for the production of cosmetics. Chinese mitten crabs are on California's list of restricted animals and cannot be imported, transported, or possessed without a permit.

Impacts

The burrowing activities of Chinese mitten crabs cause damage to dikes, levees, and stream banks and increase erosion, which can cause weakening or collapse of flood control and water supply systems. In California, Chinese mitten crabs have interfered with water operations at diversion facilities by clogging fish salvage structures (approximately 750,000 crabs were captured in the facilities in 1998). Additionally, Chinese mitten crabs steal bait from recreational anglers, damage commercial fishing nets, compete with native and commercially important species for food (especially crayfish), prey upon native species (including fish eggs), damage rice crops by excessively burrowing and foraging, and may transfer diseases and parasites to native species (in Asia they are host for the human lung fluke).

Actions Taken if Found

If you catch or observe this species in California, please report your sighting to the CDFW Invasive Species Program at www.wildlife.ca.gov/Conservation/Invasives/report, or by email at Invasives@wildlife.ca.gov.

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References

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