

# Pesky mitten crabs found in Bay

Exotic crustaceans can carry a parasite that causes lung ailment in humans

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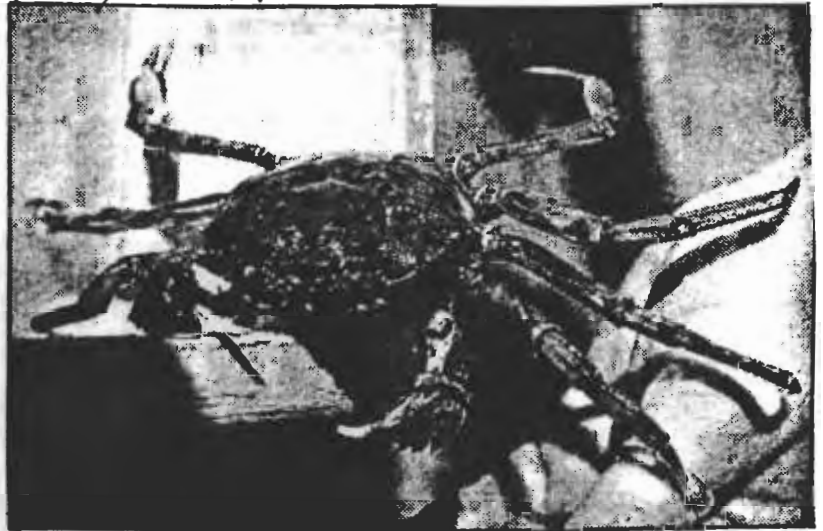
The latest stowaway in the Bay, a 6-inch crab with claws that look like mittens, poses a potential danger to human health and the earthen canals of state water projects, scientists say.

The crab, from mainland China, slipped into the country as recently as June after being banned from U.S. fish markets about eight years ago to stop it from invading estuaries.

A monitoring trawler operated by the Marine Science Institute, a nonprofit educational center in Redwood City, picked up the Chinese mitten crab in June.

"It has an absolute potential of causing real, real damage," said Dusty Chivers, a marine biologist at the California Academy of Sciences.

"When things get out of their native habitat with no checks and balances, they just explode," Chivers said. "We're hoping there is some natural barrier in the way of a disease that the crab can't handle."



The Chinese crustaceans are diggers, and the worry is that they can proliferate and damage the mud levees of the Delta or canals such as the Delta-Mendota, he said.

The crab, about half the size of a native Dungeness, has a nasty reputation in Germany, England and other parts of Europe where it became an unruly pest, peaking in the 1930s.

Free of natural predators, it swarmed into rivers and onto dam walls, crawled over land to find saltwater spawning grounds and burrowed into mud levees.

## Crab harbors parasitic worm

In its native home of Shanghai and the Yellow River extending north to the Yellow Sea and the shores of Korea, the mitten crab carries a lung fluke, a parasitic worm that penetrates human organs to cause tuberculosis-like symptoms.

"You can get the vicious parasite from eating the crab or handling it," Chivers warned. "There was one case where someone got it from a salad prepared on a board previously used for the preparation of the crab."

In Europe, people haven't been infected with the fluke because they don't eat the crab, said Andrew Cohen, a marine biologist at the UC-Berkeley Energy and Resources Group.

But on the West Coast, where Asian immigrants recognize the delicacy, it could pose a health risk

if they don't fully cook or pickle it, Cohen said.

Captured mitten crabs will be examined for the presence of the fluke, he said.

## Creature banned since 1986

California banned the mitten crab in 1986. A year later, the U.S. Fish and Wildlife Service did so as well.

Cohen said he had predicted the crab's appearance because it had been sold in San Francisco fish markets prior to the ban, Asian fishers would plant it in the Bay, and the Bay has a range of saltness and temperature compatible with its habitat.

The San Francisco estuary already has more than 200 introduced species, dating from the Atlantic barnacle, found in 1853 during the Gold Rush.

Many species hitched a ride after the railroad started hauling in oysters in 1869. Some came in ballast rock or water, or clung as barnacles, seaweed and other creatures on boat hulls.

Some, like the striped bass, sun fish, catfish and shad, were planted by agencies to boost commercial and sport fishing.

Cohen and James Carlton, a scientist at Mystic Seaport in Mystic, Conn., are preparing a study for U.S. Fish and Wildlife Service on the Bay's introduced species.

"San Francisco is very much an international port, drawing ships from all over the world," Cohen said.



EXAMINER PHOTOS BY CRAIG LEE

**UC-Berkeley marine biologist Andrew Cohen** holds Chinese mitten crabs, above and below, found in the Bay.

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