

Interagency Ecological Program for the Sacramento-San Joaquin Estuary

Newsletter

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For more information about the Interagency Ecological Program, visit our home page on the World Wide Web (www.iep.water.ca.gov).

Readers are encouraged to submit brief articles or ideas for articles. Correspondence, including requests for changes in the mailing list, should be addressed to Randall Brown, California Department of Water Resources, 3251 S Street, Sacramento, CA 95816-7017.

Interagency Program Quarterly Highlights

Delta Flow Measurement (April to June 1998)

Richard N. Oltmann

The San Joaquin River at Stockton and Sacramento River above the Delta Cross Channel UVM sites have been repaired and are again operational. These sites were non-operational due to transducer problems resulting from high flows. The other UVM stations successfully collected data throughout the quarter.

On April 1, USGS deployed velocity measuring equipment (ADCPs and one S4) in the south delta at the sites listed below as was done during spring 1997. The ADCPs will provide a continuous velocity-profile record

and the S4 a point-velocity record which will be used to provide additional flow time-series data to augment the UVM flow network. ADCPs were deployed at the same six locations as last spring; the seven velocity monitoring sites are:

1. San Joaquin River between Turner and Columbia Cuts
2. Turner Cut
3. Middle River between Columbia Cut and Connection Slough
4. Victoria Canal
5. Old River between Clifton Court Forebay intake channel and Grantline Canal

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What's New on the Mitten Crab Front?

Tanya Veldhuizen, DWR, and Kathy Hieb, DFG

The Chinese mitten crab, *Eriocheir sinensis*, has rapidly increased its distribution in the San Francisco Estuary and watershed since it was first discovered in south San Francisco Bay in 1992. As of July 1998, the known distribution of the Chinese mitten crab extends north to Hunter's Creek (near Delevan National Wildlife Area) in the Sacramento River drainage and near Nicolaus in the Feather River, east to Roseville (Cirby Creek) and eastern San Joaquin County (Escalon-Bellota Weir on the Calaveras River and Littlejohns Creek near Farmington) and south to the San Luis National Wildlife Refuge near Gustine. We also have an unconfirmed report from the lower Stanislaus River. The mitten crab's distribution is also expanding in tributaries to San Pablo Bay, with sightings from all the major tributaries to Petaluma Creek and from a tributary to Sonoma Creek near Sonoma. It has been found throughout the Delta and South Bay tributaries.

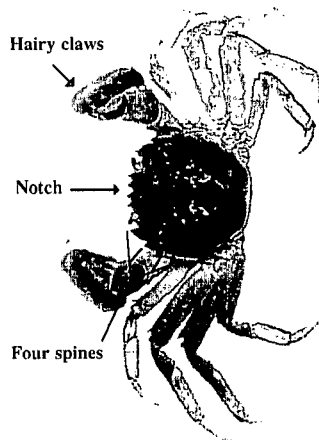
Any crab found in fresh water is likely to be a mitten crab. The main identifying characteristic of the mitten crab is brown "hair" on the front claws (see figures below). Very small juveniles (<25 mm carapace width) rarely have "hairy" claws and may be confused with another non-native crab, the Harris mud crab (*Rithropanopeus harrisi*).

If you find a mitten crab beyond the current known range, please notify Kathy Hieb (khieb@delta.dfg.ca.gov) or Tanya Veldhuizen (tanyav@water.ca.gov) with the collection information (i.e., date, location, size, number, collection method, and contact person). You do not need to send us the crab.

Remember, it is illegal to import, transport, or possess live Chinese mitten crabs (Title 14 of the California Code of Regulations). Accidental release or escape will spread these crabs to uninfested waters. If you keep a mitten crab, it must be dead.

IDENTIFICATION OF THE CHINESE MITTEN CRAB

Eriocheir sinensis

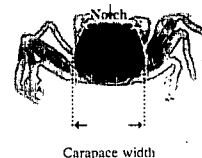


ADULT CHARACTERISTICS

- ▶ hairy claws with white tips, normally equal in size
- ▶ notch between the eyes
- ▶ four lateral carapace spines (fourth spine is small)
- ▶ smooth, round carapace or body shape
- ▶ maximum carapace width (distance across the back) is approximately 80 mm (3 1/8 inches)
- ▶ legs over twice as long as the carapace width
- ▶ light brown color

IDENTIFICATION OF THE CHINESE MITTEN CRAB

JUVENILE MITTEN CRAB vs. HARRIS MUD CRAB



JUVENILE MITTEN CRAB CHARACTERISTICS

- ▶ notch between the eyes
- ▶ claws may not be hairy if carapace width is less than 20 mm (3/4 inch)
- ▶ claws are hairy by 25 mm (1 inch) carapace width
- ▶ four lateral carapace spines (fourth spine is small)
- ▶ smooth, round carapace or body shape
- ▶ legs over twice as long as the carapace width
- ▶ light brown color



HARRIS MUD CRAB CHARACTERISTICS

- Small mitten crabs may be confused with the Harris mud crab, because of their similar size and appearance.
- ▶ no notch between the eyes
 - ▶ non-hairy, white-tipped claws
 - ▶ ridges on back
 - ▶ dull greenish-brown color
 - ▶ maximum carapace width is 19 mm (3/4 inch)