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US Fish & Wildlife Service FieldNotes

STOCKTON FWO: "Shocking" Discovery on the San Joaquin River

Region 8, December 1, 2014

Service and CDFW staff using backpack electrofishing gear to sample a disconnected pool adjacent to the Chowchilla bifurcation structure on the San Joaquin River in Madera County, Calif., on Nov. 12, 2014. - Photo Credit: n/a

During fish monitoring surveys on the San Joaquin River in Madera County recently, fisheries biologists from the Stockton Fish and Wildlife Office (FWO) encountered a previously undocumented invasive fish species.

Weather loach (misgurnus anquillicaudatus) captured in the San Joaquin River upstream of the Chowchilla bifurcation structure in Madera County, Calif., on Nov. 12, 2014. - Photo Credit: n/a

San Joaquin River Restoration Program (SJRRP) staff identified "a lone weather loach (Misgurnus anquillicaudatus) specimen during our quarterly survey while backpack electrofishing at a site immediately upstream from the Chowchilla bifurcation structure," explained fisheries biologist **Zac Jackson**, of the Stockton FWO.

Although native to Asia, weather loach (a.k.a. Dojo, Japanese loach, oriental weatherfish, or pond loach), are common in the United States in the pet trade and as bait fish, he said.

SJRRP staff worked with other Stockton FWO staff from the Delta Juvenile Fish Monitoring Program and Regional Aquatic Invasive Species Program to develop a plan to return to the capture location for an intensive sampling effort to evaluate the degree of population establishment.

A crew of seven U.S. Fish and Wildlife Service employees and two California Department of Fish and Wildlife personnel returned to the Chowchilla bifurcation structure with backpack electrofishing units, seines, and block nets on Nov. 12, 2014.

Four disconnected pools in the vicinity of the facility were selected for intensive sampling. Six additional Weather loach were captured during this effort; five at the original capture site and one a kilometer upstream at survey site 1. While weather loach were not detected at any survey sites downstream from the structure, the distribution of this species in the San Joaquin River remains uncertain, Jackson said.

Weather loach are a hardy species that tolerate a wide temperature range and can even breathe air to supplement respiratory requirements in oxygen-depleted environments. They are known to burrow into muddy substrates and can survive in moist soils without food for several months. Common diet items for this omnivorous species include invertebrates and fish eggs, larvae, and fry. Weather loach have also been shown to carry a number of pathogens of concern.

"It is uncertain how this species may impact native species throughout the San Joaquin River basin, but egg predation, competition for resources, and pathogen transfer are all possible negative effects," said Jackson. "Stockton FWO staff will continue to work with agency partners and other stakeholders throughout the watershed to discuss management options."

A concern the public must address is the expansion of harmful plants, fish and other animals throughout American waterways. "If you are an aquarium hobbyist, backyard pond owner, water gardener, or an angler that uses live bait, it is important not to release plants or animals into the environment," explained **Louanne McMartin**, assistant coordinator for the Aquatic Invasive Species Program at the Stockton FWO.

"While most of these organisms will die, some may be able to survive," she explained. "A small number of those that do survive have the potential to create negative impacts on the natural environment."

It is estimated that the annual damage caused by invasive species now totals more than $120 billion in the United States.

If you are faced with the situation of having an undesirable species, what can you do? You can properly dispose of these unwanted aquatic plants or fish by contacting a retailer for proper handling advice or possible returns. For more ideas and information, please refer to educational outreach programs such as Habitattitude at (www.habitattitude.net).

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