

Delta Smelt

(*Hypomesus transpacificus*)

Status - Federal: Threatened State: Threatened



Photo: Moose Peterson, WRP

The delta smelt is a small (2 to 3 inches long), bluish gray -almost translucent- fish. The fish usually lives for about a year -just long enough to breed. It is one of the few native California fish to spend its entire life in the Sacramento-San Joaquin Delta. Most of its adult stage is spent in the mixing zone, where fresh water from the delta mixes with salt water from San Francisco Bay. Not only is the delta smelt adapted to the rich waters of the mixing zone, it is almost entirely dependent on them. Furthermore, because adults live for only one year, a single bad year could eliminate the species.



California Department of Pesticide Regulation
Endangered Species Project

www.cdpr.ca.gov/docs/endspec/index.htm



Delta Smelt

Water diversion for agricultural and urban use has been the single greatest factor in the smelt's decline. Disturbance of its habitat by water diversions and drought has also left the delta smelt vulnerable to introduced species that have taken hold in the delta region. Dozens of introduced species of zooplankton, mollusks and crustaceans are thriving in the absence of their natural predators.

Distribution: Delta smelt are found only from the Suisun Bay upstream through the delta in Contra Costa,

Sacramento, San Joaquin, Solano and Yolo counties.

Behavior and food: They live together in schools and feed on zooplankton such as small fishes and invertebrates. Copepods are important diet items.

Reproduction From February to June, adults swim upstream into river channels and backwaters of dead-end sloughs where they spawn. Delta smelt only produce 1,400-2,800 eggs per female. Most delta smelt die after spawning, preventing them from defending their eggs and young. Eggs hatch after 10-14 days, the emerging larvae ride downstream currents to the mixing zone. There, circulating currents trap the smelt and great quantities of zooplankton - a rich source of food for the smelt and other fry. By September the fish, now adult size, begin their gradual return to spawning areas. A small contingent of adults survives and can spawn in their second year.



Copepod
Cyclops sp.

enlarged
6X lifesize