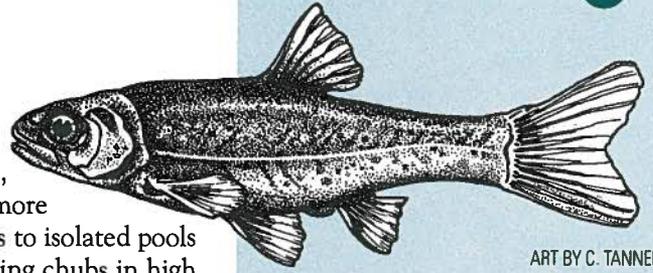




SONORA CHUB



ART BY C. TANNER

SCIENTIFIC NAME: *Gila ditaenia*. The genus refers to the Gila Indians and the central Arizona river from which the genus was first described. The specific epithet *ditaenia* stems from the Greek *di* meaning two and *taenia* meaning band, referring to the two dark lateral bands.

DESCRIPTION: A small- to medium-sized minnow. Adults can grow to about 8 to 10 inches in length. In the United States they rarely exceed 5 inches. Body is dark, with two black lines above and below the lateral line and a dark oval spot at base of the caudal fin. The lower sides and belly are lighter. Breeding adults are intense red to orange on the lips, opercle, fin bases, with some orange on the belly.

HABITAT: In Sycamore Creek (Santa Cruz County), Sonora chubs are most often found in the largest, deepest, and most permanent pools with bedrock-sand substrates. Juveniles disperse into shallower, less permanent habitats and other unoccupied areas during increasing flows. In Sonora, Mexico, chubs are found in deep habitats with abundant cover.

DISTRIBUTION: Sonora chubs occur only in the Río de la Concepción drainage of Arizona and Sonora, Mexico. In Sonora, they inhabit the rios Altar and Magdalena. In Arizona (Santa Cruz County), they inhabit Sycamore Creek, several of its tributaries (Peñasco, Atascosa, and Little Tinaja Spring canyons), and California Gulch.

BIOLOGY: Our information on the ecology and biology of the Sonora chub is not complete. Based on collections of young-of-the-year, spawning occurs in early spring, and possibly in midsummer. Sonora chubs are opportunistic and feed on aquatic and terrestrial insects and algae.

This is a tenacious, desert-adapted species, adept at exploiting small, marginal habitats, and able to survive under severe

environmental conditions. For example, surface water in Sycamore Creek regularly shrinks to isolated pools in summer, concentrating chubs in high numbers. Many chubs are lost in desiccated habitats, but those that survive recolonize available pools after the rains come again.

STATUS: The Sonora chub was included on the Department's draft list of *Wildlife of Special Concern in Arizona* (AGFD in prep.), and is listed by the U.S. Fish and Wildlife Service as threatened. Federally designated as "critical habitat" are: Sycamore Creek from Yank's Spring to the International Border; portions of Peñasco and Little Tinaja Spring canyons; and a 39-foot wide riparian area along each side of Sycamore and Peñasco creeks.

Sonora chubs are abundant in Sycamore Creek and in a half-mile reach of California Gulch. However, a catastrophic event (such as a mine spill or poisoning) or loss of surface water could easily eliminate them from the U.S.

MANAGEMENT NEEDS: Maintenance of current levels, permanence, and quality of surface water in Sycamore Creek and California Gulch should be the primary management goal in protecting Sonora chubs in the United States. Land uses such as grazing, recreation, road development and maintenance, groundwater pumping, and mining should be closely monitored. Non-native predatory fishes, such as green sunfish, bullhead, and largemouth bass, pose a continuing threat to chubs in Sonora and Arizona. Hybridization with an undescribed species of chub in Mexico has also been identified as a threat, but little is known about that issue. Further information on the species' biology and ecology is needed, as are inventories of historical range, to locate additional populations and areas suitable for re-establishment. ♣

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