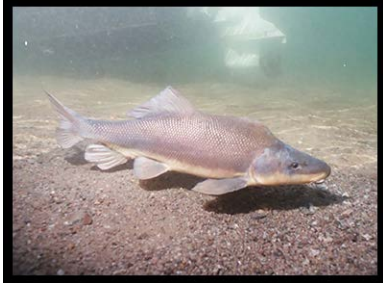




NATIVE FISHES



The razorback sucker is a native sucker to the Colorado River, which can live in excess of 40 years. It occupies habitats ranging from swift-flowing rivers to large reservoirs. During spring it can be found in large congregations over cobble to gravel substrates. Individuals can reach lengths up to 1 meter.

It has a distinctive raised razor-like keel from its head to the beginning of the dorsal fin, providing basis for the common name, razorback sucker. Body coloration transitions from dark brown to olivaceous on the upper surfaces into yellow to white on the lower surfaces. It has a subterminal mouth primarily used for benthic

feeding. During spawning, razorback suckers are sexually dimorphic, with breeding males showing bright yellow and orange laterally and ventrally, dark dorsal surfaces, and tuberculation present, especially on the anal and caudal fins.

The razorback sucker is listed as endangered under Federal law, as well as in California, Nevada, and Arizona.

Razorback suckers were historically widespread and common throughout the larger rivers of the Colorado River Basin, from Sonora and Baja California, into Arizona, Colorado, Nevada, New Mexico, and Wyoming. The largest reservoir population, estimated at 75,000 in the 1980s, occurred in Lake Mohave, Arizona and Nevada, but it had declined to less than 3,000 by 2001. Today, the Lake Mohave population is largely supported by stocking captive-reared fish.

More recently, over 12 million razorback suckers have been stocked into the Lower Colorado River Basin with limited success in retention and survival. Predation in nursery habitats appears to be the major limiting factor for razorback suckers in the Colorado River today. Creation of 360 acres of backwaters, paired with active stocking of 660,000 subadult fish within the planning area, is one way the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is helping razorback suckers.



The bonytail is a fish native to the Colorado River that may reach lengths greater than 550 millimeters (mm), and large individuals have been aged at 50 years.

It is a streamlined fish, typified by its small head, slender body, and thin, pencil-like caudal peduncle. The head is compressed, and the snout overhangs the mouth. Bonytail also have a small, smooth hump located directly posterior to the head of adult fish. Coloration is typically grey dorsally, fading to white ventrally, with yellowish pigmentation near the base of the pectoral and pelvic fins.

Bonytail are listed as federally endangered, as well as endangered in California, Nevada, and Arizona.

Bonytail were historically widespread and common throughout tributaries of the Colorado River and other larger rivers, with historical captures documented from Mexico to Wyoming. However, during the 1950s, bonytail populations began a rather large, yet poorly documented decline in abundance following numerous habitat modifications and introductions of sport fishes. During the period between 1976–88, 34 bonytail were captured in Lake Mohave, and some of these fish were incorporated in the establishment of a broodstock, the progeny of which are presently stocked into Lake Mohave and Lake Havasu and a number of Upper Colorado River Basin rivers.

Very few documentations of wild bonytail capture have been recorded in recent years and, therefore, little is known about the specific habitat requirements of this unique species. Creation of 360 acres of backwaters, paired with active stocking of 620,000 subadult fish within the planning area, is one way the LCR MSCP is helping bonytail. Additionally, research projects are being completed to better understand bonytail habitat requirements.





The **flannelmouth sucker** is the most abundant native sucker of the Colorado River. It is a river obligate species and is most often found in runs. Compared with the other rare species, such as the razorback sucker and bonytail, the flannelmouth sucker is the generalist of the river. The species can reach lengths of 700 mm and can live up to 30 years.

The most conspicuous feature of the flannelmouth sucker is the distinct, fleshy lips ventrally located on the snout. Its subterminal mouthparts are enlarged, protrusible, and plicate or covered with papillae, adapted for benthic feeding strategies. These fish typically are dark brownish-green dorsally, yellowish or orange laterally, and white ventrally, with some variations depending on water turbidity. Colorations become more prominent during the spawning season, with tubercles becoming highly evident on male fish.

The flannelmouth sucker is currently listed as species of special concern in Arizona, and in California it is listed as an extinct native species. The flannelmouth sucker is included in the LCR MSCP due to potential of the species being listed under the Endangered Species Act or California Endangered Species Act, or becoming protected under Nevada or Arizona law.

The flannelmouth sucker was historically the most abundant large fish species in the Upper Colorado River Basin, where they remain relatively abundant. It was found to be declining in the lower Colorado River (LCR) and was thought to have disappeared from the LCR by the 1970s. In 1976, the Arizona Game and Fish Department stocked 611 adult flannelmouth suckers originating in the LCR, just below Davis Dam.

Flannelmouth sucker apparently are not able to persist in large impoundments, unlike the razorback sucker. By creating up to 85 acres of open backwater habitat, the LCR MSCP is helping to conserve the flannelmouth sucker in the LCR. Ongoing research activities are helping define habitat requirements to ensure that this goal is met.



The **humpback chub** is a large minnow endemic to the Colorado River Basin of the Southwestern United States and can grow to nearly 20 inches; it may survive more than 30 years in the wild. It does not have the swimming speed or strength of species such as the Colorado pikeminnow, so instead, it uses its large fins to "glide" through slow-moving areas, feeding on insects that become trapped in water pockets. The humpback chub lives primarily in canyons with swift currents and white water in the upper Colorado River and its tributaries.

The pronounced hump behind its head gives the humpback chub a striking, unusual appearance. Adult coloration is light olivaceous and slate-gray dorsally and laterally, with a white

belly tinged with light orange and yellow. The head is narrow and flattened and may be dorsally concave, with small eyes and a snout that overhangs its jaw.

The humpback chub is listed as endangered under Federal law, as well as in Colorado, and it is protected in Utah.

Historically, it inhabited canyons of the Colorado River and some of its tributaries. Now, there are two populations near the Colorado/Utah border. Though now smaller in number than they were historically, the two populations seem to be fairly stable. Smaller numbers have been found in rivers in Utah and the Colorado River in Arizona. The largest known population is in the Little Colorado River in the Grand Canyon, where up to 10,000 individuals may remain. There are no population estimates available for the rest of the Upper Colorado River Basin. The LCR MSCP is assisting the humpback chub by providing funding to existing humpback chub conservation programs.



DECLINE OF NATIVE FISHES

Numerous researchers have identified that the major factor contributing to the decline of native large-river fishes such as the razorback suckers, bonytail, flannelmouth suckers, and the humpback chub has been the construction of main stem dams and the resultant cool tailwaters and reservoir habitats that replaced a once warm, riverine environment.

This change in the physical environment presumably allowed for an increase in competition and predation from nonnative fishes, which are successfully established in the Colorado River and its reservoirs, and have also contributed to native fish population declines. Furthermore, given declines of suitable riverine habitat, increased predation and competition in current suitable and limited habitats may occur.