



Gila Trout

BY TERRY B. JOHNSON
NONGAME BRANCH CHIEF
ILLUSTRATION BY RANDALL D. BABB

SCIENTIFIC NAME: *Oncorhynchus gilae*. Genus combines Greek words for (*onco*) hook or barb, and (*rhynchus*) jaw or snout, referring to jaws of breeding adults, which jut out like those of many members of the Family Salmonidae. Specific epithet Latinized form of *gilae*, a reference to the river drainage to which the species is native.

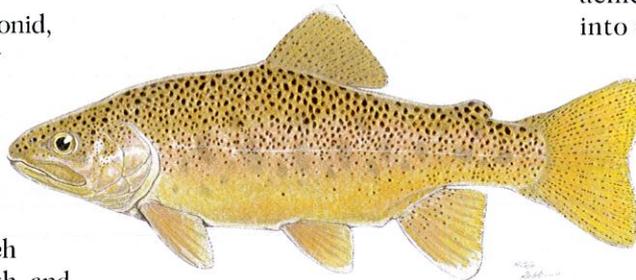
DESCRIPTION: A typical salmonid, including possession of a fatty (adipose) fin between dorsal and caudal fins. In size and weight, closely resembles its sibling species, the Apache trout (*Oncorhynchus apache*). Although adults reach about 18 to 22 inches in length, and weights slightly exceeding 5 pounds, most individuals (especially younger ones) are much smaller. Adults are golden-green, with many black spots concentrated on upper sides and back, above lateral line. Body (especially in breeding adults) often red or pink hued.

DISTRIBUTION: Historically occurred below Mogollon Rim in headwater streams of central Arizona and New Mexico drainages, including those of the Agua Fria, Verde, and San Francisco rivers. Eliminated from most areas of previous occurrence by mid-1900s, persisting in only five sites in west-central New Mexico.

Gila trout were stocked into Dude Creek near Payson in 1999.

HABITAT: Shallow, narrow headwater streams at elevations from 5,300 to 9,200 feet, with few pools and gradients ranging from 2 to 14 percent. Somewhat tolerant of water temperatures up to 81 degrees. Such characteristics suggest that historically Gila trout may have occurred in other habitats, perhaps including larger streams and rivers. Tolerance for lakes unknown.

BIOLOGY: Troutlike in all regards. Growth rate and body size depend in large part on habitat quality. In areas of little crowding, with abundant food, maximum sizes and weights may be expected.



Voraciously consumes a variety of aquatic and terrestrial invertebrates (mostly insects), including caddis flies, mayflies, and beetles.

Spawning occurs in springtime in streams occupied year-round. Long seasonal spawning runs, like those of coastal salmon/steelhead, do not occur in this species. Female lays a thousand or so eggs, which male fertilizes as they are deposited. The young are food for many species; few survive to maturity.

STATUS: Listed as an endangered species under each of the three federal endangered species acts of the 1960s and 1970s, including

the Endangered Species Act of 1973. The State of New Mexico also lists it as endangered, and it is included on Arizona's draft list of *Wildlife of Special Concern*.

The Gila trout's extant wild populations in New Mexico are limited by habitat availability. One key stream, Spruce Creek, which holds the lineage recently stocked in Arizona, is highly susceptible to forest fire and resultant habitat scorching and postburn scouring. Loss of the Spruce Creek lineage would effectively preclude official downlisting and recovery goals as they are now described.

MANAGEMENT NEEDS: Like most endangered species, the Gila trout needs aggressive management to achieve recovery. Reintroduction into suitable habitats within the historical range is key. New populations will need protection from take until they have become established, downlisted to threatened, and a rule passed to allow harvest.

Habitats in areas of current and future occurrence must be protected, enhanced, or restored. Management of nonnative fishes, especially rainbow trout, must ensure that hybridization does not occur. Proper management will assure that Arizona anglers will eventually have opportunities to catch trophy Gila trout.

The Gila trout furnishes an excellent opportunity to demonstrate that endangered species recovery can be achieved under full protection of the Endangered Species Act without disrupting other land uses, including ranching and recreation. 🐟