

scientific name

Gila intermedia

Bison code 010135

common name

Gila chub

Official status

Federal (USDI): threatened

State AZ: threatened

State NM: endangered

Endemism

Gila River Basin, AZ/NM

Status/Threats

Currently, 24 populations of Gila chub exist. Of these 9 are of unknown status, 6 are considered unstable and threatened, 8 are considered stable but threatened, and 1 only one is considered stable and secure. Groundwater pumping for municipal and irrigation uses, water diversions for irrigation, and damming of streams all contribute to drying of springs and reduction of streamflow are major threat to the species persistence. In addition, introduction of nonnative, competitive and predatory species, especially green sunfish has negatively impacted the Gila chub. One undescribed form of this species in southern Arizona is now extinct due to a combination of dam construction and introduction of largemouth bass.

Distribution

The Gila chub was primarily distributed in central and southern Arizona, mostly in small creeks and cienegas at less than 1500 m in elevation. It now occurs in 24 isolated streams or cienegas in the Gila River Basin in central and southern Arizona and northern Sonora. The species is now considered extirpated from the waters of New Mexico.

Habitat

The species primarily occupies pool habitats in small creeks and cienegas. Adult Gila chub are highly secretive in nature and occupies the deeper waters of pools or concealed by cover in form of undercut banks, root wads, and instream woody organic debris. Smaller individuals inhabit shallower stream margins and areas of aquatic vegetation.

Life history and ecology

The biology of this species is poorly understood. The species displays sexual dimorphism. Female chubs reach 250 mm in size, but males rarely exceed 150 mm. Foods consists primarily of immature and adult aquatic and adult terrestrial insects which may fall into pools commonly inhabited by the species.

Breeding

Gila chub reproduces in late spring to early summer (May-June) in optimal waters temperatures of 20-24 C. Young of year chub grow rapidly their first summer and reach 90 mm by winter. In a constant temperature spring in southern Arizona, the species has been noted to spawn throughout the year. Spawning occurs over aquatic vegetation where eggs are broadcast. Both species developed brightly orange to red-colored fins during reproductive activity.

Key habitat components: deep pools, cover in form of undercut banks, root wads and instream organic debris

Reproductive season: May-June in non constant temperature springs, year round in thermal springs.

Grazing effects

No studies of effects of grazing on the species is documented. Livestock grazing potentially could break down undercut banks which could serve as cover and remove vegetation that could also serve as streambank cover or as larger, wood organic debris. Excessive grazing could conceivably increase fine sediment input and affect reproduction and food supply.

Selected references

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