Scientific Name: *Platygobio gracilis*
Common Name: Flathead chub
BISON No.: 010130

Legal Status:

- Arizona, Species of Special Concern
- ESA, Endangered
- ESA, Proposed Endangered
- ESA, Proposed Threatened
- ESA, Threatened
- New Mexico-WCA, Endangered
- New Mexico-WCA, Threatened
- USFS-Region 3, Sensitive
- None

Distribution:

- Endemic to Arizona
- Endemic to Arizona and New Mexico
- Endemic to New Mexico
- Not Restricted to Arizona or New Mexico
- Northern Limit of Range
- Southern Limit of Range
- Western Limit of Range
- Eastern Limit of Range
- Very Local

Major River Drainages:

- Dry Cimmaron River
- Canadian River
- Southern High Plains
- Pecos River
- Estancia Basin
- Tularosa Basin
- Salt Basin
- Rio Grande
- Rio Mimbres
- Zuni River
- Gila River
- Rio Yaqui Basin
- Wilcox Playa
- Rio Magdalena Basin
- Rio Sonoita Basin
- Little Colorado River
- Mainstream Colorado River
- Virgin River Basin
- Hualapai Lake
- Bill Williams Basin

Status/Trends/Threats (narrative):

Federal: (FWS) Species of concern. State NM: Provides limited protection.
The status of the flathead chub is expanding in the Rio Grande ad stable in the Pecos, Canadian, and Dry Cimarron drainages (Sublette et. al. 1990).

Distribution (narrative):

Flathead chubs are native to rivers and creeks east of the Continental Divide, and some were established, at least temporarily, in the Gila Basin through the escape of bait minnows (Koster 1957). The flathead chub is native to the Rio Grande, Pecos, Canadian River and Dry Cimarron drainages (Sublette et. al. 1990). Occurrences are principally between 1,371 and 2,438 m elevation (Lee et. al. 1981, Sublette et. al. 1990). The flathead chub occurs in west central North

America from the lower Mississippi River and tributaries of the South Canadian River in Oklahoma, north to Lake Winnipeg and Saskatchewan and Mackenzie river drainages in Canada (Lee et. al. 1981, Sublette et. al. 1990).

Key Distribution/Abundance/Management Areas:

Panel key distribution/abundance/management areas:

Breeding (narrative)**:**

Spawning occurs in late summer when water temperatures range from 18-25 C (Koster 1957, Lee et. al. 1981, Gould 1985) however; Fishbase.org (2002) reported that spawning probably occurs from June to August. Longevity for the flathead chub is about five to six years (Sublette et. al. 1990).

Habitat (narrative)**:**

Flathead chubs occupy the rivers and large creeks in areas where the bottom is shifting. Except for periods of rest, they are found mainly in the moderately strong, to strong, current of channels (Koster 1957). The flathead chub is found in moderate to strong river current in rivers and large streams above shifting sand substrates, in water that is usually high in turbidity and high levels of dissolved solids (Lee et. al. 1981, Cross and Moss 1987). Fishbase.org (2002) reported the habitat as small to large turbid rivers.

Key Habitat Components: shifting sand substrates, turbid waters.

Breeding Season:

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Panel breeding season comments:

Aquatic Habitats:

Large Scale:

- Rivers
- Streams
- Springs
- Spring runs
- Lakes
- Ponds
- Sinkholes
- Cienegas
- Unknown
- Variable

Small Scale:
- Runs
- Riffles
- Pools
- Open Water
- Shorelines

Panel comments on aquatic habitats:

- Intermediate (10-75 cm/sec)
- Slow (< 10 cm/sec)
- None
- Unknown
- Variable

- Intermediate Gradient (0.25-1%)
- Low Gradient (<0.25%)
- None
- Unknown
- Variable

- Deep (0.25-1 m)
- Intermediate (0.1-0.25 m)
- Shallow (< 0.1 m)
- Unknown
- Variable

Panel comments on water characteristics:

Important Habitat Features (Water Chemistry)

Temperature (general)
- Cold Water (4-15°C)
- Cool Water (10-21°C)
- Warm Water (15-27°C)
- Unknown
- Variable

Turbidity
- High
- Intermediate
- Low
- Unknown
- Variable

Conductivity
- Very High (> 2000 µS/cm)
- High (750-2000 µS/cm)
- Intermediate (250-750 µS/cm)
- Low (< 250 µS/cm)
- Unknown
- Variable

Panel comments on water chemistry:

Important Habitat Features (Structural elements):

Substrate
- Bedrock
- Silt/Clay
- Detritus
- Sand
- Gravel
- Cobble
- Boulders
- Unknown
- Variable

Panel comments on structural elements:

- Rocks, boulders
- Undercut banks
- Woody debris
- Aquatic vegetation
- Rootwads

- Not important
- Overhanging vegetation
- Unknown
- Variable

Diet (narrative)**:**

Koster (1957) reported the flathead chub to be omnivorous. Olund and Cross (1961) described the flathead chub diet as being composed of mainly terrestrial insects.

Diet category (list):

- Planktivore
- Herbivore
- Insectivore
- Piscivore (Fish)
- Omnivore
- Detritivore

Grazing Effects (narrative):

Because the species lives in larger rivers over shifting sand bottoms and highly turbid waters, grazing very probably will have little impact to the species.

Panel limiting habitat component relative to grazing and comments:
Panel assessment: Is this species a priority for selecting a grazing strategy? Throughout the species' distribution in New Mexico and Arizona YES NO UNKNOWN In key management area(s) YES NO UNKNOWN

Principle Mechanisms Through Which Grazing Impacts This Species (list):

May be Revised

- Alteration of bank structures
- Alteration of substrate
- Alteration of water regimes
- Altered stream channel characteristics
- Altered aquatic vegetation composition
- Altered bank vegetation structure
- Change in food availability
- Change in water temperature
- Change in water quality
- Habitat fragmentation
- Increased turbidity
- Other biotic factors
- Parasites or pathogens
- Population genetic structure loss
- Range improvements
- Trampling, scratching
- Unknown

Panel causal mechanisms comments:

Authors

- **Draft:** Rinne, J.N. and Magaña, H.A.
- **GP 2001:**
- **GP 2002:**
- **Revision:**

Bibliography:

Fishbase.org. 2002. Cite properly.

Koster, W.J. 1957. Guide to the fishes of New Mexico. The University of New Mexico Press. Albuquerque, New Mexico.

Lee, D. S., Gilbert C. R., Hocutt C. H., Jenkins R. E., Callister D. E., and Stauffer J. R. 1981. Atlas of North American Freshwater Fishes: North Carolina, North Carolina State Museum of Natural History, 1981, c1980.

Sublette, J. E., M. D. Hatch, and M Sublette. 1990. The Fishes of New Mexico. The University of New Mexico Press. Albuquerque. 393 pp.