

**Scientific Name:** *Phenacobius mirabilis*

**Common Name:** Suckermouth minnow

**BISON No.:** 010315

**Legal Status:**

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

**Distribution:**

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

**Major River Drainages:**

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

**Status/Trends/Threats (narrative):**

USFS Sensitive: Region 3. State NM: Threatened.

It has declined locally in abundance where habitats and stream flows have been modified to its detriment (Propst 1999). The distribution since the 1870's have been reduced to localized populations, probably as a result of depleted surface waters stemming directly from irrigation activities and overgrazing (Sublette et al 1990).

**Distribution (narrative):**

The suckermouth minnow is found in the Arkansas drainage in the northeast portion of the state (Koster 1957). The suckermouth minnow occurs throughout much of the central and lower Mississippi River system, including the Missouri and Ohio River drainages (Becker 1983) and

river tributaries to the Gulf of Mexico in Texas (Hubbs et al 1991). In the central portion of its range its often is common in suitable habitat (Miller and Robison 1973). In New Mexico, the native range of suckermouth minnow includes only the South Carolina and Dry Cimarron rivers (Propst 1999). The suckermouth minnow is found in the Canadian drainage generally between Cimarron and Conchas Reservoir, in the Dry Cimarron River near the New Mexico-Oklahoma state line, and in the Pecos River between Sumner Reservoir and Fort Sumner (Sublette et al 1990). The suckermouth minnow is found throughout the northern and central Mississippi River basin and a few Gulf slope drainages in Texas and western Louisiana (Sublette et al 1990).

### **Key Distribution/Abundance/Management Areas:**

**Panel key distribution/abundance/management areas:**

### **Breeding (narrative):**

Cross and Collins (1975) reported a reproductive season extending from April through August in Kansas, but Becker (1983) noted that spawning in Wisconsin was mainly during July and August. Spawning occurs when water temperature is 14 to 25°C (Cross 1967). Spawning habitat presumably is in the sand-gravel riffles occupied by adults (Propst 1999).

### **Habitat (narrative):**

The suckermouth minnow is primarily a riffle fish (Koster 1957). Suckermouth minnows most commonly occupy shallow to moderately deep (0.1 to 1.0 m) sand and gravel-bottomed riffles of low to moderate gradient, meandering streams (Propst 1999).

**Key Habitat Components:** Sand gravel substrates, moderate (< 90 cm) depth water.

### **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:**

## **Important Habitat Features (Water characteristics):**

### **Current**

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

### **Gradient**

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

### **Water Depth**

- Very Deep (> 1 m)
- 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  $\mu\text{S}/\text{cm}$ )
- High (750-2000  $\mu\text{S}/\text{cm}$ )
- Intermediate (250-750  $\mu\text{S}/\text{cm}$ )
- Low (< 250  $\mu\text{S}/\text{cm}$ )
- Unknown
- Variable

**Panel comments on water chemistry:**

**Important Habitat Features (Structural elements):**

**Substrate**

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

**Cover**

- Rocks, boulders
- Undercut banks
- Woody debris
- Aquatic vegetation
- Rootwads
- Not important
- Overhanging vegetation
- Unknown
- Variable

**Panel comments on structural elements:**

**Diet (narrative):**

The suckermouth minnow is primarily a riffle fish that feeds on small, bottom dwelling animals (Koster 1957). The suckermouth minnow is primarily a bottom feeder, taking insect larvae, and various other invertebrates, as well as detritus and plant material (Whitaker 1977). Suckermouth minnows feed among the sand and gravel of riffles (Pflieger, 1975). They also may consume detritus and plant material (Becker, 1983).

**Diet category (list):**

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

**Grazing Effects (narrative):**

Grazing could have negative impact if excessive fines are produced and impact gravel substrates or the habitat can become degraded by livestock trampling.

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

**Panel causal mechanisms comments:**

### Authors

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

### Bibliography:

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- Cross, F.B. 1967. Handbook of fishes of Kansas. University of Kansas Museum of Natural History, Miscellaneous publication no. 45, Lawrence, KS. 357 pp.
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- Whitaker, J.O. jr. 1977. Seasonal changes in food habits of some cyprinid fishes from the White River at Petersburg, Indiana. American Midl. Nat. 97(2):411-418