

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Animal Abstract**

**Element Code:** AFCJC02072

**Data Sensitivity:**       No      

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Catostomus discobolus discobolus*

**COMMON NAME:** Bluehead Sucker, Bluehead Mountain Sucker

**SYNONYMS:** *Catostomus delphinus*, *Catostomus discobolus*, *Catostomus discobolus*,  
*Minomus delphinus*, *Pantosteus delphinus*, *Pantosteus delphinus delphinus*,  
*Pantosteus discobolus*, *Pantosteus plebeius*,

**FAMILY:** Catostomidae

**AUTHOR, PLACE OF PUBLICATION:** Cope, E. D. 1872. Recent reptiles and fishes in U.S. Geologic Survey of Wyoming and contiguous territory. Special reports Part IV:432-442.

**TYPE LOCALITY:** Green River, Wyoming.

**TYPE SPECIMEN:**

**TAXONOMIC UNIQUENESS:** 23 species in genus *Catostomus*, all found in North America. Six species in Arizona. Two subspecies of *C. discobolus* have been discussed, *C.d. discobolus* and *C.d. yarrowi*, the latter being the Zuni population (Smith et al. 1983, Crabtree and Buth 1987).

**DESCRIPTION:** "...specimens more than 300 mm (11.8 in.) standard length not being uncommon. Coloration varies with habitat conditions, silvery tan to dark green above, silvery to yellowish or dirty white below. Inguinal process sometimes absent or obsolescent. Lips large, with tiny papillae evenly scattered over lower and oral face of upper, but absent from anterior face of upper lip. Caudal peduncle thick to slender, ranging from 4.2 to 10.0 percent of standard length" (Minckley 1973). Lower lip shallowly notched at midline. Lateral line scales usually 90-100 (ranging from 78-122). Predorsal scales usually more than 50 (range 44-75). Dorsal fin rays 9-12 and anal fin rays 7. Breeding adult males have a blue patch on top of the head. The lower fins become yellow or orange, and red or rosy lateral bands form along the sides. Bluehead Suckers grow to about 50 cm (20 in.) in the mainstem Colorado River, Grand Canyon, but tributary resident fish tend to be smaller.

**AIDS TO IDENTIFICATION:** Cartilaginous scraper in lower jaw; deeply notched at corners. Generally, slightly larger than *C. d. yarrowi*, though large specimens of both subspecies are not uncommon (AZGFD 2012). Males exhibit distinctive breeding coloration, becoming intensely black dorsally with a bright red horizontal band, white abdomen, and bluish head (Propst 1999; Propst et al. 2001).

**ILLUSTRATIONS:**

Line drawing (Eddy and Underhill 1978:119)  
B&W photos (Minckley 1973:170)  
Line drawing (Minckley and Holden 1980:377)  
Color drawing (Page and Burr 1991)  
Color photo (Rinne and Minckley 1991:30)  
Line drawing (Sigler and Sigler 1987:222)  
B&W photo (Simpson and Wallace 1978:151)  
Line drawings and B&W photos (Snyder and Muth 1990:116-123)  
Line drawings (Sublette et al. 1990:208, 209)

**TOTAL RANGE:** High gradient streams of western North America. Found in Colorado River drainages upstream (including the Grand Canyon) from Lake Mead (AZ, CO, NM, UT and WY), Snake River, above Shoshone Falls (ID and WY), and Bear River (ID and UT) and Weber River drainages (UT and WY) of the Bonneville Basin.

**RANGE WITHIN ARIZONA:** Colorado River mainstem and Grand Canyon tributaries, including Little Colorado River, Clear Creek, Bright Angel Creek, Shinumo Creek, Kanab Creek and Havasu Creeks; increasingly common below Diamond Head Creek May be found in a few areas on the Navajo Reservation, and in the San Juan Drainage (Minckley 1995, AZGFD Native Fish Diversity Review)

**SPECIES BIOLOGY AND POPULATION TRENDS**

**BIOLOGY:** Can live more than 20 years. Known to hybridize with other species of *Catostomus*.

**REPRODUCTION:** Spawn in spring and summer, after water temperatures exceed 16.0° C (60.8° F); 2-5 males join a single female to spawn over gravel-sand and gravel-cobble substrates. Spawning in Grand Canyon tributaries occurs during April and May in water depths of a few cm to greater than one meter. Water temperatures at this time are generally 16.0-20.0° C (60.8-68.0° F). Young appear May through June and reach approximately 60 mm (2.36 in.) by the end of the first year in the mainstem. In the upper Colorado River basin they spawn over gravel and rubble, in flatwater reaches but sometimes in currents greater than 1.0 m/s near the upper ends of riffles.

**FOOD HABITS:** Bluehead Suckers are omnivorous, benthic foragers with uniquely adapted chisel-like ridges (referred to as cartilaginous scrapers) that occur inside the lips to allow for scraping of algae and benthic insects, and other material from the surface of rocks (Ptacek et al. 2005). Mostly immature dipterans and amphipods with diatoms and organic debris have been found in the gut.

**HABITAT:** Bluehead Suckers occupy "a variety of habitats from headwater streams to large rivers" (Sublette et al. 1990). Riverine habitats from cold (12° C), clear streams to warm, very

turbid rivers. When water is clear they stay in deep pools and eddies during the day then move into shallow riffles, tributary mouths, shorelines, or other hard-bottomed sites to feed at night. When water is turbid they occupy shallow areas throughout the day. Young inhabit backwaters in the Grand Canyon.

**ELEVATION:** 610 to 2,060 m (2,001 to 6,759 ft.)

**PLANT COMMUNITY:** Aquatic.

**POPULATION TRENDS:** Populations are stable except where habitat is destroyed by flooding of riverine habitats by dams; at last estimate, Bluehead Suckers only occupied 45 percent of their historic range in the Upper Colorado River Basin where dam construction has had significant ecological impacts (Bezzarides & Bestgen 2002).

## **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** CCA (USDI, FWS 2015)  
**STATE STATUS:** Full Species: 2 (AZGFD, AWCS 2022)  
[1A (AGFD SWAP 2012)]  
**OTHER STATUS:** Not Forest Service Sensitive, USDA FS  
Region 3, 2013  
(Below at Full Species):  
[Forest Service Sensitive USDA, FS Region  
3, 1988, 1999, 2007]  
Bureau of Land Management Sensitive  
(USDI, BLM AZ 2010, 2017)  
Group 4 (NNFWD, NESL 2001, 2008)

**MANAGEMENT FACTORS:** The population in the warm-water reaches of the Upper Colorado River Basin has been greatly reduced as a result of human activities during the last century, including dam construction and the associated alterations of the thermal and hydrological regimes (Ptacek et al. 2005). Loss of riverine habitat will decimate population, as they are not found in any reservoirs within their range. They do appear to be tolerant of a wide range of temperatures, except for spawning and larval growth requirements. Introduction of non-native fish species are a major threat to this species.

**PROTECTIVE MEASURES TAKEN:** In 2006 a Statewide Conservation Agreement was completed and signed by nine natural resource management entities in 2007: U.S. Fish and Wildlife Service, Arizona Game and Fish Department, U.S. Bureau of Reclamation, the Hualapai Tribe, Salt River Project, U.S. Bureau of Land Management, Arizona State Land Department, Arizona Department of Water Resources, The Nature Conservancy, and the U.S. Forest Service (AZGFD 2006). In 2015 The Revised Conservation Agreement was signed by seven natural resource entities (U.S. Fish and Wildlife Service, Arizona Game and Fish

Department, the Hualapai Tribe, Salt River Project, U.S. Bureau of Land Management, The Nature Conservancy, Arizona Department of Water Resources, and the U.S. Forest Service (AZGFD 2015).

Additionally, the Arizona Game and Fish Department, Colorado Division of Wildlife, Nevada Department of Wildlife, New Mexico Department of Game and Fish, Utah Division of Wildlife Resources, Wyoming Game and Fish Department, and Colorado River Fish and Wildlife Council signed a Range-Wide Conservation Agreement and Strategy that included conservation and management efforts for the Bluehead Sucker. Included in these agreements are objectives to maintain populations sufficient to ensure persistence of each species within their ranges, as well as connectivity between populations to ensure continued viability (UDNS 2006).

**SUGGESTED PROJECTS:** Laboratory examination of temperature preference and tolerance; larval and juvenile food habits; age and growth in the Colorado River and tributaries, Grand Canyon.

**LAND MANAGEMENT/OWNERSHIP:** In Arizona, most of the habitat for Bluehead Suckers is within Grand Canyon National Park. Other areas lie in the Navajo Nation, Bureau of Land Management, US Forest Service and private lands.

## **SOURCES OF FURTHER INFORMATION**

### **REFERENCES:**

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**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

Bill Persons, USFWS, Flagstaff, Arizona

Charles O. Minckley - USDI, Fish and Wildlife Service, Parker, Arizona.

R.A. Valdez, Bio/West, Inc., Logan, Utah

**ADDITIONAL INFORMATION:**

<b>Revised:</b>	1994-08-09 (TLH)
	1994-08-15 (MHH)
	1997-03-04 (SMS)
	2003-05-16 (AMS)
	2013-11-14 (BDT)
	2021-06-30 (CRB)
	2023-01-09 (MBL)

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