

*Acipenser fulvescens*

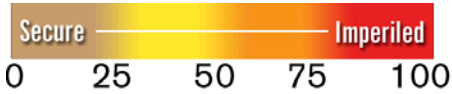
Lake Sturgeon

Class: Actinopterygii

Order: Acipenseriformes

Family: Acipenseridae

Priority Score: **27** out of 100



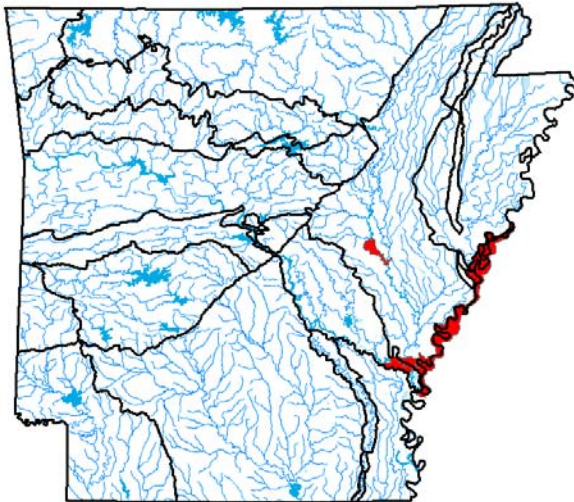
Population Trend: Unknown

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - Arkansas River

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Mississippi River Alluvial Plain - St. Francis River

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Mississippi River Alluvial Plain - White River

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Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

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**Habitats**

**Weight**

Natural Littoral: - Large

Suitable

Natural Pool: - Medium - Large

Optimal

Natural Shoal: - Medium - Large

Obligate

**Problems Faced**

Threat: Biological alteration  
Source: Commercial harvest

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Threat: Biological alteration  
Source: Exotic species

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Threat: Biological alteration  
Source: Incidental take

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Threat: Habitat destruction  
Source: Channel alteration

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Threat: Hydrological alteration  
Source: Dam

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**Data Gaps/Research Needs**

Continue to track incidental catches.

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**Conservation Actions**

**Importance Category**

Restore fish passage in dammed rivers.

High

Habitat Restoration/Improvement

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Restrict commercial harvest (Mississippi River closed to harvest).

High

Population Management

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**Monitoring Strategies**

Monitor population distribution and abundance in large river faunal surveys in cooperation with adjacent states.

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## Comments

Description: A large sturgeon (maximum size 8 feet long), with a pointed, short, conical snout, and robust body (Robison and Buchanan 1988). A primarily northern species only known from Arkansas from a few records (Robison and Buchanan 1988). Lake sturgeon were not detected in a three-year faunal survey of Arkansas' large rivers (Layher, Crabb, and Spurlock 2005) or by multiple studies performed to capture pallid sturgeon in the lower Mississippi River (Kilgore et al. 2007; Herrala et al. 2014). AGFC does not recognize historical reports of the species from the Ouachita River basin. It is unclear if a breeding population of this species has ever occurred in Arkansas.

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## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Alosa alabamae*

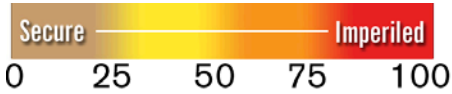
Alabama Shad

Class: Actinopterygii

Order: Clupeiformes

Family: Clupeidae

Priority Score: **52** out of 100



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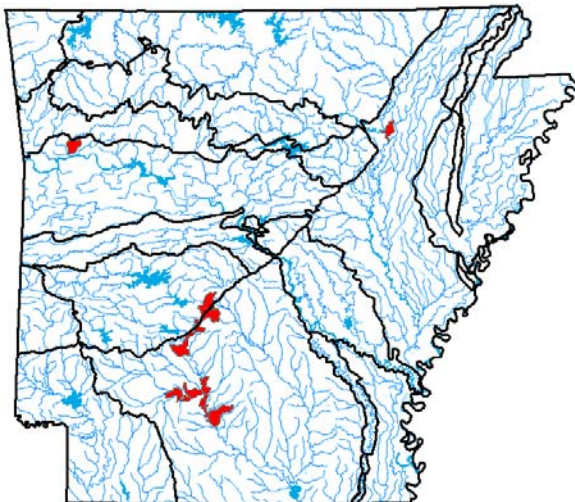
Population Trend: Decreasing

Gobal Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

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Mississippi River Alluvial Plain - White River

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Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

---

Ouachita Mountains - Ouachita River

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South Central Plains - Ouachita River

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**Habitats**

**Weight**

Natural Pool: - Medium - Large

Optimal

Natural Riffle: - Medium - Large

Obligate

Natural Run: - Medium - Large

Suitable

Natural Shoal: - Medium - Large

Obligate

**Problems Faced**

Threat: Habitat destruction

Source: Dam

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Threat: Hydrological alteration

Source: Channel maintenance

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Threat: Hydrological alteration

Source: Dam

---

Threat: Sedimentation

Source: unknown

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Threat: Temperature alteration

Source: Dam

---

**Data Gaps/Research Needs**

Conduct status and distribution surveys.

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Study migration, fish passage, and mortality at  
hydropower dams.

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**Conservation Actions**

**Importance**

**Category**

Assure minimum flow requirements are met below  
Remmel Dam.

Medium

Threat Abatement

---

Restore Ouachita and Little Missouri rivers to natural  
flow regime.

High

Habitat Restoration/Improvement

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Work across political boundaries to manage an  
interjurisdictional fish.

High

Public Relations/Education

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## Monitoring Strategies

Monitor presence through general stream faunal surveys.

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Monitor stream flow.

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Monitor water quality on a regular basis.

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## Comments

Description: A streamlined, slab-sided, silvery fish, growing to a maximum size of 18 inches (Robison and Buchanan 1988).

An anadromous fish that travels from the Gulf of Mexico upstream into freshwater rivers to spawn. It has been designated by the National Marine Fisheries Service as a candidate for listing under the Endangered Species Act (Federal Register 1999), and a 90-day finding indicated there is substantial scientific evidence that listing may be warranted (Federal Register 2013). Rigsby (2009) captured 26 specimens from 4 locations in the Ouachita River. Three juvenile Alabama shad were collected in the White River near Newport during 2006 (Layher and others 2005; Buchanan and others 2012).

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*Ameiurus nebulosus*

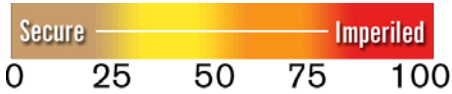
Brown Bullhead

Class: Actinopterygii

Order: Siluriformes

Family: Ictaluridae

Priority Score: **19** out of 100



Population Trend: Unknown

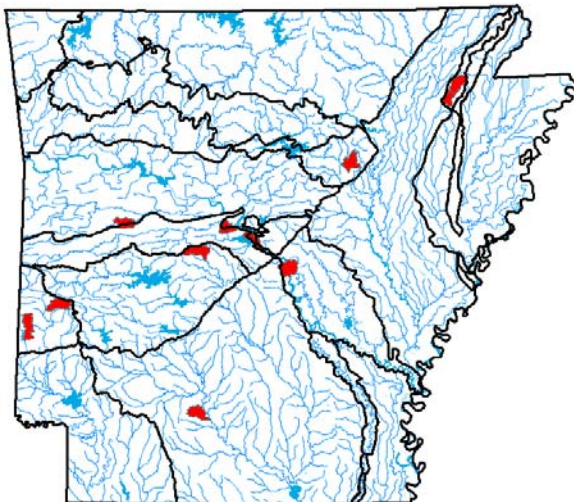
Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Arkansas Valley - White River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

Mississippi Valley Loess Plains - White River

Ouachita Mountains - Ouachita River

Ouachita Mountains - Red River

South Central Plains - Ouachita River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Pool: - Medium

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Agricultural practices

Threat: Hydrological alteration

Source: Dam

Threat: Hydrological alteration

Source: Water diversion

**Data Gaps/Research Needs**

Determine distribution and habitat requirements.

**Conservation Actions**

**Importance Category**

Implement best management practices in conjunction with agriculture.

Medium

Threat Abatement

Maintain riparian habitats.

High

Habitat Restoration/Improvement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

This species has a sporadic distribution within Arkansas (Robison and Buchanan 1988). Brown bullheads are often associated with quiet streams that have aquatic vegetation.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Ameiurus nebulosus*  
Brown Bullhead



*Ammocrypta clara*

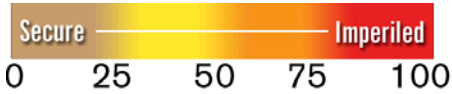
Western Sand Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **33** out of 100



©Konrad P. Schmidt

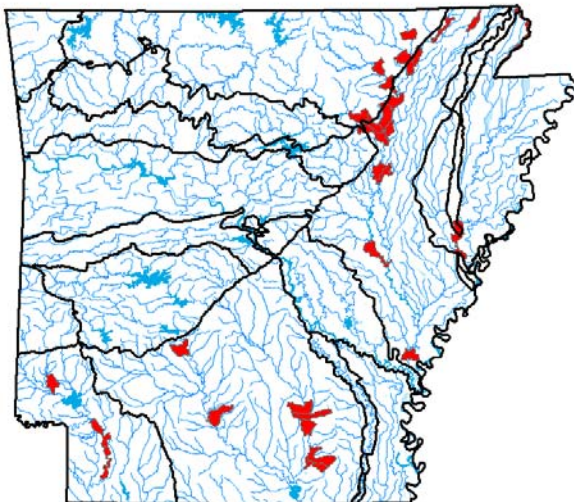
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - St. Francis River

---

Mississippi River Alluvial Plain - White River

---

Ozark Highlands - White River

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South Central Plains - Ouachita River

---

South Central Plains - Red River

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**Habitats**

**Weight**

Natural Littoral: - Large

Data Gap

Natural Run: - Medium - Large

Data Gap

Natural Shoal: - Medium - Large

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Channel maintenance

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Threat: Hydrological alteration

Source: Dam

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Threat: Sedimentation

Source: Unknown

---

**Data Gaps/Research Needs**

Conduct genetic study.

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Conduct status survey.

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**Conservation Actions**

**Importance**

**Category**

Implement best management practices during road construction.

High

Threat Abatement

---

Maintain riparian habitats.

High

Habitat Restoration/Improvement

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**Monitoring Strategies**

Monitor population distribution and abundance in large river faunal surveys.

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Monitor water quality in darter habitats on a regular basis.

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## Comments

Description: A pale, very slender darter that is largely unscaled and translucent (Robison and Buchanan 1988).

Inhabits moderate size rivers with sandy bottoms and is intolerant of excessive siltation and turbidity (Pflieger 1997). Kuehne and Barbour (1983) reported a trend of decreasing abundance over much of its range. Rigsby (2009) caught 202 individuals from 36 locations in the Black, Current, Eleven Point and Strawberry Rivers. In addition, he captured 17 individuals from 8 locations in the Ouachita and Saline rivers. Driver and Adams (2013) studied the life-history of the species from 379 individuals in northeast Arkansas rivers.

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## *Anguilla rostrata*

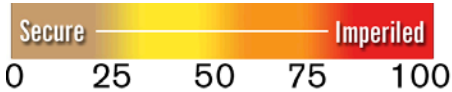
### American Eel

Class: Actinopterygii

Order: Anguilliformes

Family: Anguillidae

Priority Score: **24** out of 100



Population Trend: Decreasing

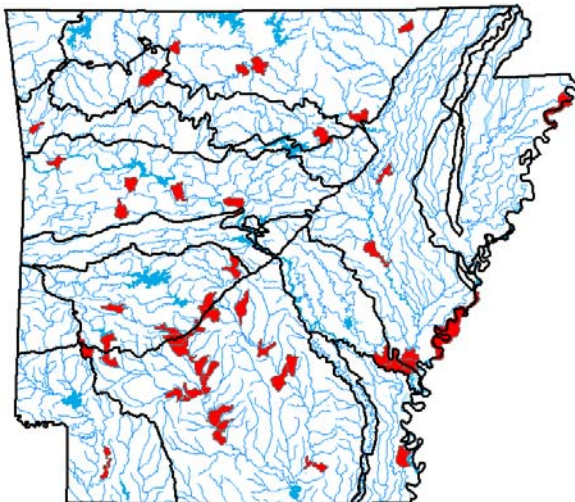
Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas



## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

---

Boston Mountains - Arkansas River

---

Boston Mountains - White River

---

Mississippi River Alluvial Plain - Arkansas River

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Mississippi River Alluvial Plain - St. Francis River

---

Mississippi River Alluvial Plain - White River

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Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

---

Ouachita Mountains - Arkansas River

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Ouachita Mountains - Ouachita River

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Ozark Highlands - Arkansas River

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Ozark Highlands - White River

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South Central Plains - Ouachita River

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South Central Plains - Red River

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**Problems Faced**

Threat: Habitat fragmentation

Source: Dam

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**Data Gaps/Research Needs**

Conduct status surveys, especially for the St. Francis River.

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Determine downstream eel mortality through turbines at Arkansas and Ouachita River system dams.

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Determine the timing and magnitude of out-migration of eels to spawning grounds.

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**Conservation Actions**

Create fish passage at Ouachita and Arkansas River navigation systems dams.

**Importance**

**Category**

High

Habitat Restoration/Improvement

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Provide fish passage on the White River at the following dams: Montgomery Point, Dam 1 at Batesville, Dam 2 at Martin, and Dam 3 at Younger.

---

Medium

**Monitoring Strategies**

Establish eel counters and photography installations at newly installed fish ladders for eels.

---

Targeted monitoring below Ouachita River system dams every 5 years.

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## Comments

Description: A long, slightly compressed snakelike fish without pelvic fins, not resembling any other Arkansas fishes except lampreys, and then only superficially (Robison and Buchanan 1988). American eels are a pandemic and catadromous species that have declined at multiple locations, and the species is currently under review by the U.S. Fish and Wildlife Service for possible listing under the Endangered Species Act (Federal Register 2011).

Cox (2014) collected 293 American eels from three river systems in Arkansas. Tumlison and Robison (2010) captured 35 eels in the Caddo River below Lake DeGray.

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## Taxa Association Team and Peer Reviewers

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## *Atractosteus spatula*

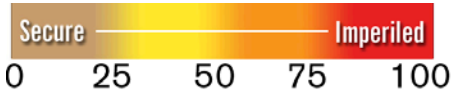
### Alligator Gar

Class: Actinopterygii

Order: Lepisosteiformes

Family: Lepisosteidae

Priority Score: **27** out of 100



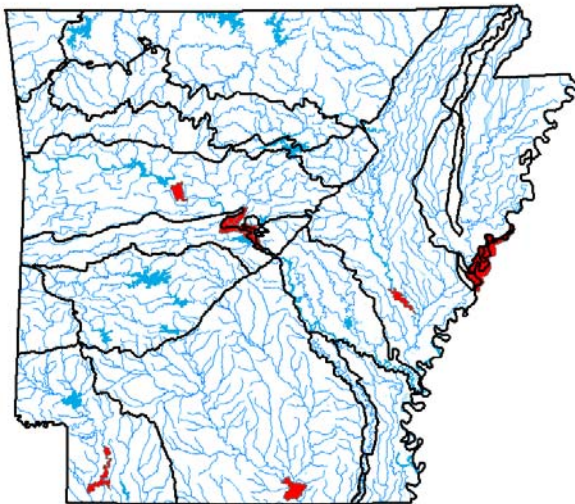
Population Trend: Stable

Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

Mississippi River Alluvial Plain (Lake Chicot) - Mississippi River

South Central Plains - Ouachita River

South Central Plains - Red River

**Habitats**

**Weight**

Man-made Pelagic: - Medium - Large	Marginal
Natural Oxbow - connected: - Medium - Large	Optimal
Natural Oxbow - disconnected: - Medium - Large	Suitable
Natural Pelagic: - Medium - Large	Suitable
Natural Pool: - Medium - Large	Optimal
Natural Side channel: - Medium - Large	Suitable
Natural Slough: - Medium - Large	Suitable
Natural Swamp/Wetlands: - Medium - Large	Obligate

**Problems Faced**

Threat: Biological alteration  
Source: Commercial harvest

Threat: Biological alteration  
Source: Recreation

Threat: Habitat destruction  
Source: Channel alteration

Threat: Hydrological alteration  
Source: Channel alteration

Threat: Hydrological alteration  
Source: Channel maintenance

Threat: Hydrological alteration  
Source: Dam

Threat: Hydrological alteration  
Source: Water diversion



### Data Gaps/Research Needs

Conduct baseline population survey.

Conduct genetic and taxonomic studies.

Conduct life history study.

### Conservation Actions

Augment natural populations.

**Importance**   **Category**

Low

Population Management

Restore connectivity to wetland ecosystems.

High

Habitat Restoration/Improvement

Restore natural hydrologic and thermal regimes.

High

Habitat Restoration/Improvement

Restore sinuosity and channel morphology to river systems.

Medium

Habitat Restoration/Improvement

### Monitoring Strategies

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in large river faunal surveys in cooperation with adjacent states.

### Comments

Description: Large, heavy bodied gar with a short, broad snout similar to that of its namesake (Robison and Buchanan 1988).

These large, slow growing fish were heavily harvested in the past. While quite rare, it is evident that they still occur in most of the large rivers of Arkansas (Layher and Phillips 2000). The Fourche La Pave River breeding population has been studied by Inebnit (2009) and Adams and others (2013).

The Arkansas Game and Fish Commission developed an independent, species specific management plan for alligator gar (Barnett and others 2011). In 2010, recreational anglers were restricted to 1 fish per day, with a closed the season during the normal spawning season.

Commercial harvest is still unrestricted, but annual reporting of the catch is mandatory as of January 2013. Studies to evaluate genetic diversity of Arkansas populations are underway.

### Taxa Association Team and Peer Reviewers

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*Carpiodes velifer*

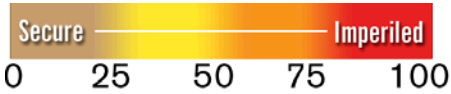
Highfin Carpsucker

Class: Actinopterygii

Order: Cypriniformes

Family: Catostomidae

Priority Score: **17** out of 100



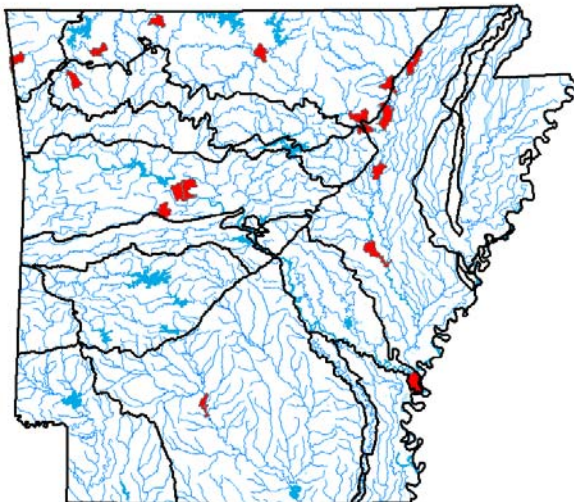
Population Trend: Unknown

Gobal Rank: G4G5 — Apparently secure (uncertain rank)

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Boston Mountains - White River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - White River

Ozark Highlands - Arkansas River

Ozark Highlands - White River

South Central Plains - Ouachita River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Pool: - Medium - Large

Suitable

Natural Shoal: - Medium - Large

Suitable

**Problems Faced**

Threat: Hydrological alteration

Source: Dam

Threat: Sedimentation

Source: Agricultural practices

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Conduct life-history studies.

**Conservation Actions**

**Importance Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture.

Medium

Threat Abatement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

Robison and Buchanan (1988) noted the species is rare. McAllister and others (2010) reported collecting an individual in the Red River, a range extension for the species.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

## *Crystallaria asprella*

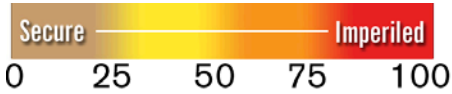
### Crystal Darter

**Class:** Actinopterygii

**Order:** Perciformes

**Family:** Percidae

**Priority Score:** 38 out of 100



**Population Trend:** Decreasing

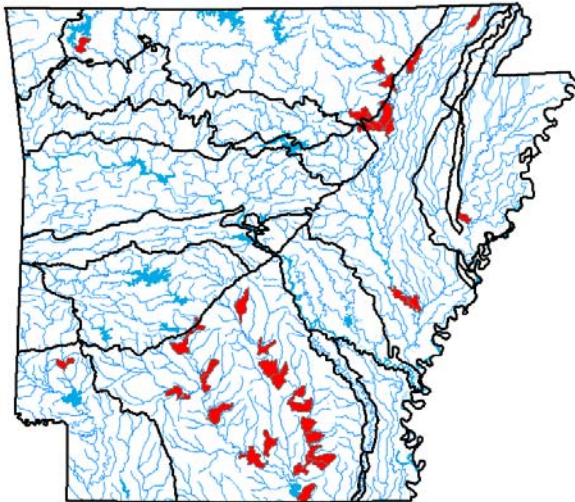
**Global Rank:** G3 — Vulnerable species

**State Rank:** S2 — Imperiled in Arkansas



## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - White River

---

Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

---

Ouachita Mountains - Ouachita River

---

Ozark Highlands - White River

---

South Central Plains - Ouachita River

---

South Central Plains - Red River

---

**Habitats**

**Weight**

Natural Pool: - Medium - Large

Suitable

Natural Run: - Medium - Large

Obligate

Natural Shoal: - Medium - Large

Optimal

**Problems Faced**

Threat: Habitat destruction or conversion  
Source: Channel alteration

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Threat: Habitat destruction  
Source: Channel maintenance

---

Threat: Habitat destruction  
Source: Dam

---

Threat: Sedimentation  
Source: Agricultural practices

---

Threat: Sedimentation  
Source: Confined animal operations

---

Threat: Sedimentation  
Source: Grazing/Browsing

---

**Data Gaps/Research Needs**

Conduct status and distribution survey.

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**Conservation Actions**

**Importance Category**

Maintain or, where necessary, restore water quality to state standards.

High

Habitat Restoration/Improvement

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Protect river corridors using appropriate buffer widths relative to stream size.

High

Habitat Protection

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**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

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Monitor population distribution and abundance in ongoing stream faunal surveys.

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Monitor water quality on a regular basis.

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## Comments

Description: A slender darter with four wide brown saddles on its back and a silver belly (Robison and Buchanan 1988).

This fish is the sole member of its genus and was once distributed throughout much of the eastern United States, but today persists only in isolated populations (Wood and Raley 2000). It is potentially threatened by impoundment, channelization, dredging, sedimentation, and gravel mining (Grandmaison, Mayasich, and Etnier 2003).

Layher and others (2005) captured 5 individuals in the Ouachita River and 1 individual in the White River. McAllister and others (2010) reported collection of the species in the mainstem Black River. Rigsby (2009) captured 5 individuals from 5 locations in the Black and Strawberry rivers, and he captured 6 individuals from 4 locations in the Ouachita and Saline rivers.

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## *Cycleptus elongatus*

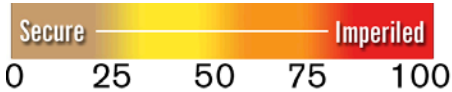
### Blue Sucker

Class: Actinopterygii

Order: Cypriniformes

Family: Catostomidae

Priority Score: **23** out of 100



©John Harris

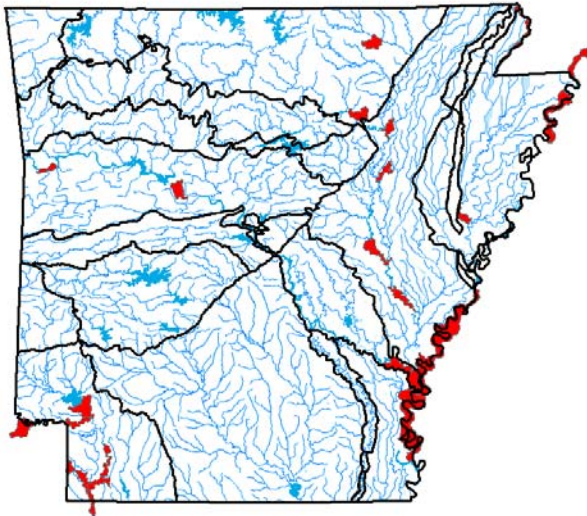
Population Trend: Stable

Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S3 — Vulnerable in Arkansas

## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

---

Mississippi River Alluvial Plain - Arkansas River

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Mississippi River Alluvial Plain - St. Francis River

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Mississippi River Alluvial Plain - White River

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Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

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Ouachita Mountains - Arkansas River

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Ozark Highlands - White River

---

South Central Plains - Red River

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**Habitats**

**Weight**

Natural Oxbow - connected: - Large

Suitable

Natural Pool: - Medium - Large

Suitable

Natural Riffle: - Medium - Large

Obligate

Natural Run: - Medium - Large

Obligate

Natural Shoal: - Medium - Large

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

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Threat: Hydrological alteration

Source: Dam

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Threat: Hydrological alteration

Source: Water diversion

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**Data Gaps/Research Needs**

Conduct genetic/ taxonomic studies.

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Conduct life history studies.

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Conduct population surveys.

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**Conservation Actions**

**Importance**

**Category**

Coordinate with U.S. Army Corps of Engineers regarding channel alteration and maintenance.

Medium

Threat Abatement

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Coordinate with Water Districts and Arkansas Soil and Water Conservation Commission regarding irrigation projects.

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Medium

Threat Abatement

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## Monitoring Strategies

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

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Monitor population distribution and abundance in large river faunal surveys.

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## Comments

Description: A large streamlined sucker having a long dorsal fin and growing to a maximum size of 40 inches (Robison and Buchanan 1988).

Restricted to large river environment, blue suckers use habitats that are relatively deep with fast current (Layher 1998). Blue suckers are abundant in the Red River (Buchanan and others 2003; Layher and others 2005).

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## Taxa Association Team and Peer Reviewers

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## *Cyprinella camura*

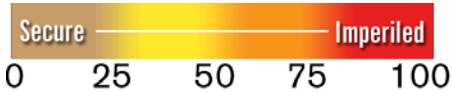
### Bluntnose Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **23** out of 100



Population Trend: Unknown

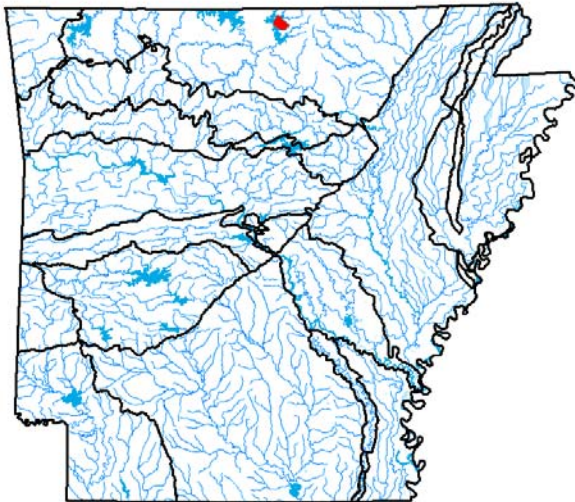
Global Rank: G5 — Secure

State Rank: SH — Historic record. Possibly extirpated in Arkansas



## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Boston Mountains - Arkansas River

Ozark Highlands - Arkansas River

**Habitats**

Natural Glide: - Small - Medium

Natural Pool: - Small - Medium

Natural Riffle: - Small - Medium

Natural Run: - Small - Medium

**Weight**

Optimal

Suitable

Suitable

Optimal

**Problems Faced**

Threat: Unknown

Source:

**Data Gaps/Research Needs**

Conduct baseline population survey.

Conduct genetic/ taxonomic studies.

Determine current status in Arkansas.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance**

Medium

**Category**

Data Gap

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

**Comments**

Description: A bluish silver, flattened shiner with a pale area at the base of the tail fin (Cross and Collins 1995).

This species is rare in Arkansas, having been found only in four, pre-1960 collections from northwest Arkansas (Robison and Buchanan 1988).

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# *Cyprinella spiloptera*

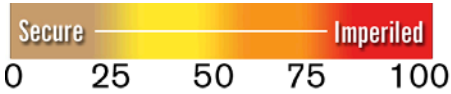
## Spotfin Shiner

**Class:** Actinopterygii

**Order:** Cypriniformes

**Family:** Cyprinidae

**Priority Score:** 23 out of 100



©Konrad P. Schmidt

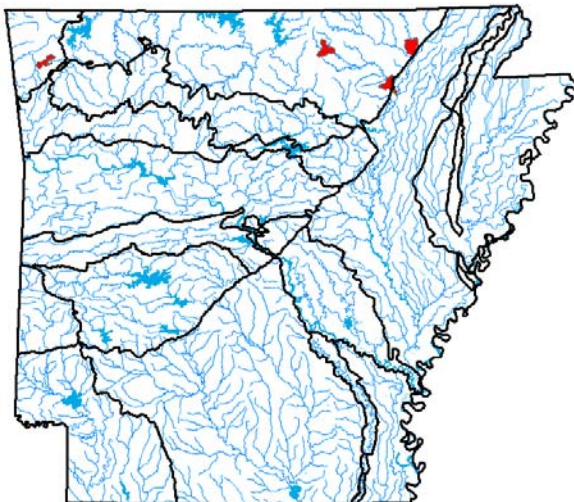
**Population Trend:** Unknown

**Global Rank:** G5 — Secure

**State Rank:** S1? — Critically imperiled in Arkansas (inexact numeric rank)

## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ozark Highlands - Arkansas River

---

Ozark Highlands - White River

---

**Problems Faced**

Threat: Unknown

Source:

---

**Data Gaps/Research Needs**

Conduct baseline population survey.

---

Conduct genetic/ taxonomic studies.

---

Determine status in Arkansas.

---

Determine threats.

---

**Conservation Actions**

**Importance Category**

More data are needed to determine conservation actions.

Medium

Data Gap

---

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

---

**Comments**

Description: A compressed, bluish silvery shiner with a dusky lateral band and a black blotch on the dorsal fin (Smith 1979).

This northeastern species is very rare in Arkansas having been collected only twice, from widely separated localities (Robison and Buchanan 1988).

---

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*Erimyzon sucetta*

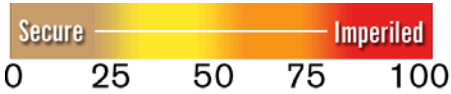
Lake Chubsucker

Class: Actinopterygii

Order: Cypriniformes

Family: Catostomidae

Priority Score: **15** out of 100



©G. W. Sneegas

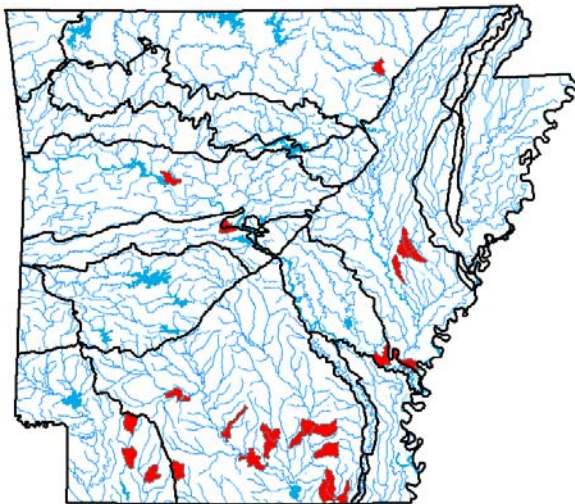
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

---

Mississippi River Alluvial Plain - Arkansas River

---

Mississippi River Alluvial Plain - White River

---

Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

---

Ozark Highlands - White River

---

South Central Plains - Ouachita River

---

South Central Plains - Red River

---

**Habitats**

**Weight**

Natural Oxbow - connected: - Medium - Large	Optimal
Natural Oxbow - disconnected: - Medium - Large	Marginal
Natural Side channel: - Medium - Large	Suitable
Natural Slough: - Medium - Large	Optimal
Natural Swamp/Wetlands: - Medium - Large	Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Agricultural practices

---

Threat: Habitat destruction  
Source: Channel maintenance

---

**Data Gaps/Research Needs**

Conduct baseline population survey.

---

Conduct genetic/ taxonomic studies.

---

Conduct life history studies.

---

**Conservation Actions**

**Importance Category**

Restore connectivity to wetlands and riverine backwaters.	Medium	Habitat Restoration/Improvement
---	--------	---------------------------------

---

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream and river faunal surveys.

---

## Comments

Description: A small, deep bodied, slightly compressed, olive colored sucker, lacking a lateral line (Robison and Buchanan 1988). A lowland species occurring in quite heavily vegetated areas of oxbow lakes, sloughs, and backwaters (Robison and Buchanan 1988).

Only one single individual was captured out of 220,116 fish in 49 riparian wetlands and backwaters of the Arkansas River (Adams and others 2007). Clark (2006) captured only 6 specimens out of approximately 45,000 fish from 41 White River oxbow lakes.

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*Etheostoma autumnale*

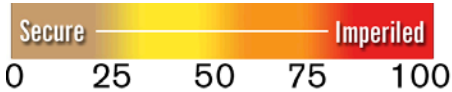
Autumn Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **19** out of 100



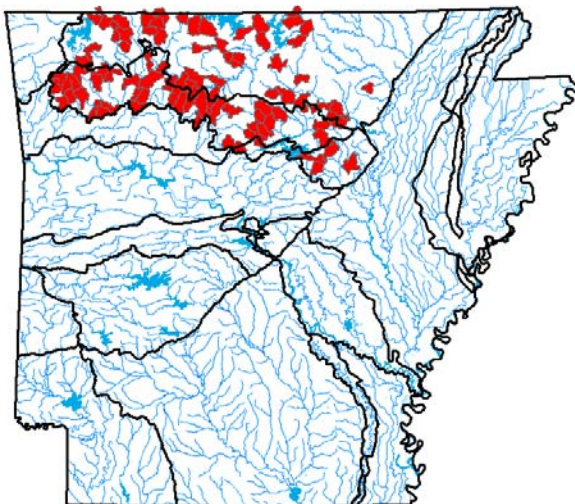
Population Trend: Stable

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - White River

---

Boston Mountains - White River

---

Ozark Highlands - White River

---

**Habitats**

Natural Glide: - Small - Medium

**Weight**

Suitable

Natural Pool: - Small - Medium

Suitable

Natural Riffle: - Small - Medium

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Resource extraction

---

Threat: Habitat disturbance

Source: Agricultural practices

---

Threat: Hydrological alteration

Source: Dam

---

Threat: Hydrological alteration

Source: Excessive groundwater withdrawal

---

Threat: Nutrient loading

Source: Agricultural practices

---

Threat: Riparian habitat destruction

Source: Agricultural practices

---

Threat: Sedimentation

Source: Road construction

---

**Data Gaps/Research Needs**

Conduct baseline population surveys.

---

Conduct life history study.

---

Refine range delineation.

---

**Conservation Actions**

Establish and enhance riparian corridors.

**Importance**

High

**Category**

Habitat Restoration/Improvement

---

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

---

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

---

Monitor population distribution and abundance in stream faunal surveys.

---

## Comments

Description: This species was elevated from *Etheostoma punctulatum* by Mayden (2010). Autumn Darters are often found in small streams with clear, cool water, coarse stream substrates and with vegetation (Mayden 2010). This species occurs in the White River drainage, upper Current River, and the Eleven Point River. The Autumn Darter is rare in the Little Red, Current, and Eleven Point rivers (Mayden 2010). Life-history information appears to be lacking for this species.

---

## Taxa Association Team and Peer Reviewers

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*Etheostoma clinton*

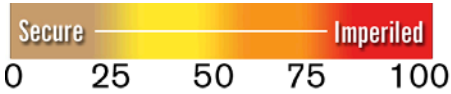
Beaded Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

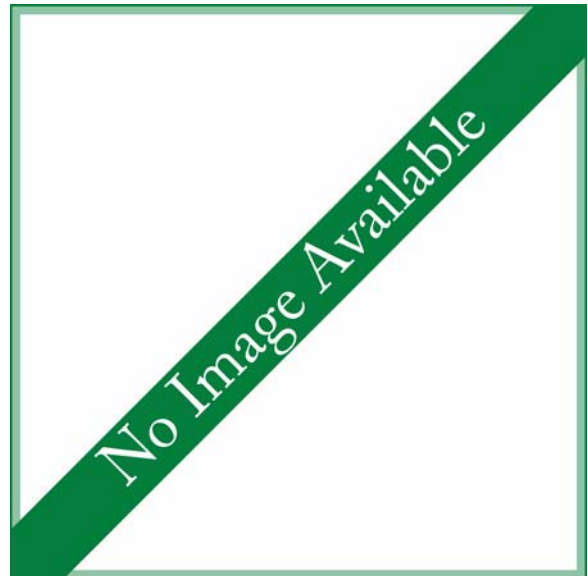
Priority Score: **19** out of 100



Population Trend: Stable

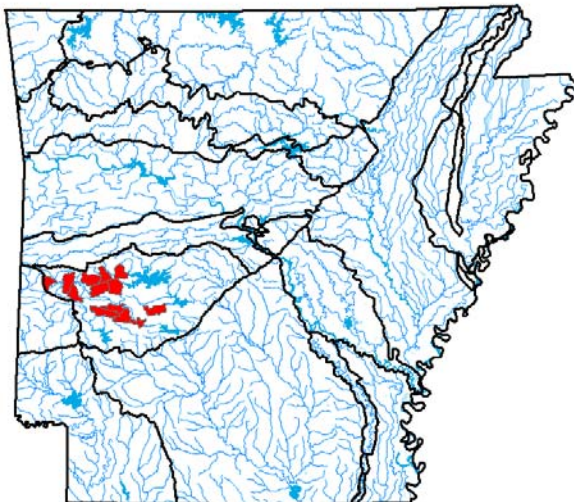
Gobal Rank: GNR — Not yet ranked

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Ouachita River

Habitats	Weight
Natural Glide: - Small - Medium	Suitable
Natural Pool: - Small - Medium	Optimal
Natural Riffle: - Small - Medium	Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Resource extraction

Threat: Habitat disturbance  
Source: Agricultural practices

Threat: Hydrological alteration  
Source: Dam

Threat: Nutrient loading  
Source: Agricultural practices

Threat: Riparian habitat destruction  
Source: Agricultural practices

Threat: Sedimentation  
Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Refine range delineation.

Conservation Actions	Importance	Category
Establish and enhance riparian corridors.	High	Habitat Restoration/Improvement
Implement best management practices in conjunction with agriculture and silviculture.	Medium	Threat Abatement

**Monitoring Strategies**

Monitor population distribution and abundance in stream faunal surveys.

## Comments

Description: This species was elevated from *Etheostoma stigmaeum* by Layman and Mayden (2012). In Arkansas, this species is found in Prairie Creek in Polk County, Mill Creek in Polk County, Ouachita River in Montgomery County, and South Fork Mazarn Creek in Garland County. Layman and Mayden (2012) indicated a status survey was needed to clearly define the distribution of the species. Habitat for this species includes clear, sandy and rock pools of small to medium sized rivers with moderate gradient and swift current.

This species does not have a numerical G-rank, so the priority score on this endemic fish with limited range is greatly underestimated. It has a distribution similar to *Noturus taylori* (Layman and Mayden 2012), which is a G1 ranked species. The beaded darter appears to be scarce or uncommon across its limited range (Layman and Mayden 2012).

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## Taxa Association Team and Peer Reviewers

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Etheostoma cragini*

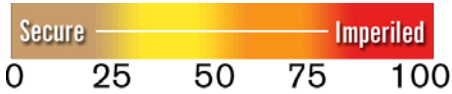
Arkansas Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **38** out of 100



Population Trend: Decreasing

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

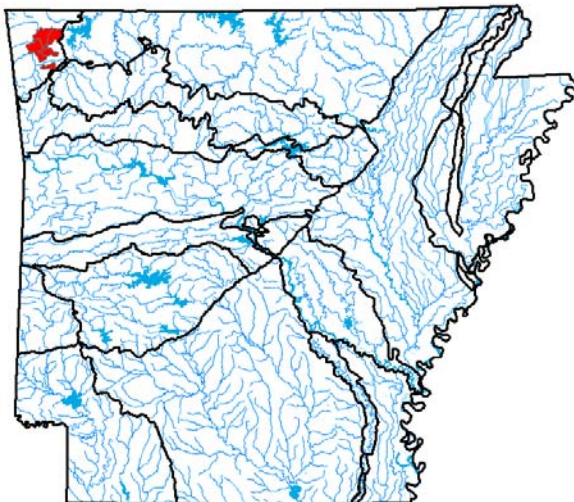
State Rank: S1 — Critically imperiled in Arkansas



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**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ozark Highlands - Arkansas River

**Habitats**

Natural Spring Run: Headwater - Small

**Weight**

Obligate

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

Threat: Habitat destruction  
Source: Grazing/Browsing

Threat: Habitat destruction  
Source: Resource extraction

Threat: Habitat destruction  
Source: Road construction

Threat: Habitat destruction  
Source: Urban development

Threat: Hydrological alteration  
Source: Urban development

Threat: Nutrient loading  
Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Conduct range-wide genetic study.

**Conservation Actions**

**Importance Category**

Cooperatively develop a management plan for species with local input.

Medium Public Relations/Education

Maintain and enhance adequate riparian buffers.

Medium Habitat Restoration/Improvement

Protect recharge area.

Medium Habitat Protection

Protect water quality from point and non-point pollution. Maintain or, where necessary, restore water quality to state standards.

Medium Habitat Protection

Provide education and outreach to local citizens and governments concerning this species and its habitat.

Medium Public Relations/Education

**Monitoring Strategies**

Monitor known populations every 5 years, with more frequent monitoring if impacts are suspected.

Monitor potential impacts to species' habitat annually.



## Comments

Description: A stout, bluntnosed darter, the males of which develop a bright orange abdomen in breeding condition (Robison and Buchanan 1988).

This darter is endemic to the Arkansas River basin and inhabits small spring runs, often with an abundance of water cress and other aquatic plants, and substrates of fine gravel, sand, and silt. It has been found historically at five locations in the Illinois River basin in Arkansas, three of which yielded specimens in a recent study (Hargrave 1998).

Wagner and others (2011) provide the most recent summary of the species status. Recent monitoring of populations has revealed that some newly discovered populations may no longer persist (B. Wagner, pers. Com.).

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*Etheostoma fragi*

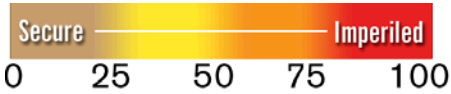
Strawberry River Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **29** out of 100



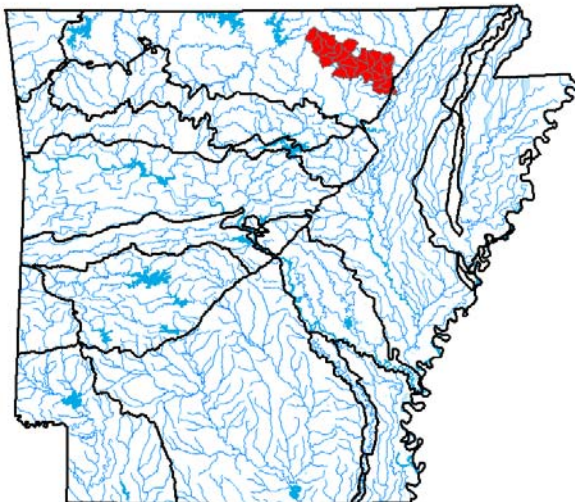
Population Trend: Decreasing

Gobal Rank: G4 — Apparently secure species

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ozark Highlands - White River

Habitats	Weight
Natural Pool: - Small - Medium	Suitable
Natural Riffle: - Small - Medium	Optimal
Natural Run: - Small - Medium	Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Grazing/Browsing

Threat: Habitat destruction  
Source: Road construction

Threat: Nutrient loading  
Source: Confined animal operations

Threat: Nutrient loading  
Source: Grazing/Browsing

Threat: Sedimentation  
Source: Grazing/Browsing

Threat: Sedimentation  
Source: Road construction

**Data Gaps/Research Needs**

Determine abundance.

**Conservation Actions**

Conservation Actions	Importance	Category
Improve riparian corridor.	High	Habitat Restoration/Improvement
Protect water quality from non-point sources. Maintain or, where necessary, restore water quality to state standards.	Medium	Threat Abatement
Provide education and outreach to local citizens and governments concerning this species and its habitat.	Medium	Public Relations/Education

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream and river faunal surveys.

## Comments

Description: A yellowish brown darter with dark brown saddles. Breeding males have a red throat, turquoise bars on the sides, and orange between some of the bars and on the belly (Robison and Buchanan 1988).

This member of the orangethroat darter group was elevated to species status by Ceas and Page (1997). The species is restricted to the Strawberry River basin and, while it remains locally abundant throughout this range, abundance seems to have declined over the past twenty years (Robison 1998).

The status of the species is currently being evaluated by Kyler Hecke and Dr. Steve Lochmann. The consensus of the Fish Taxa Team is that G-rank calculator should be used to re-evaluate the G4 rank of the species, because the species is only found in Arkansas and the state rank calculator scored the species S2.

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*Etheostoma fusiforme*

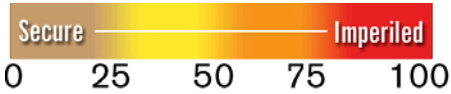
Swamp Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **15** out of 100



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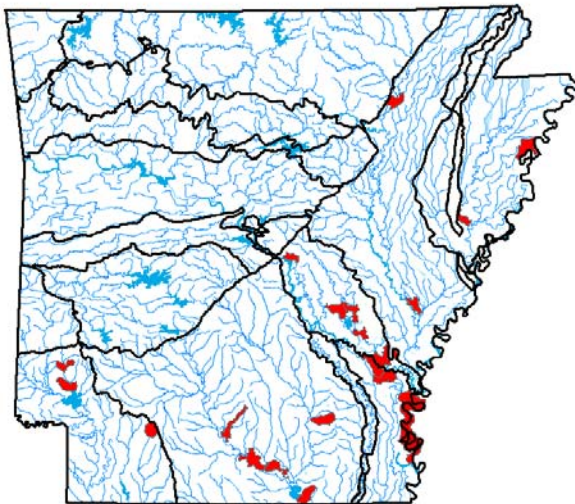
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - Arkansas River

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Mississippi River Alluvial Plain - St. Francis River

---

Mississippi River Alluvial Plain - White River

---

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

---

South Central Plains - Ouachita River

---

South Central Plains - Red River

---

**Habitats**

**Weight**

Natural Oxbow - connected: - Small - Medium - Large      Suitable

Natural Oxbow - disconnected: - Small - Medium - Large      Suitable

Natural Slough: - Small - Medium - Large      Suitable

Natural Swamp/Wetlands: - Small - Medium - Large      Suitable

**Problems Faced**

Threat: Biological alteration  
Source: Exotic species

---

Threat: Habitat destruction  
Source: Agricultural practices

---

Threat: Habitat destruction  
Source: Channel alteration

---

Threat: Habitat destruction  
Source: Water diversion

---

**Data Gaps/Research Needs**

Conduct distribution surveys.

---

**Conservation Actions**

**Importance**

**Category**

Optimize aquatic vegetation management within species' habitat.      Medium      Habitat Protection

---

Protect and improve riparian buffer.      Medium      Habitat Restoration/Improvement

---

Protect and improve wetlands.      Medium      Habitat Restoration/Improvement

---

Use Best Management Practices for agriculture.      Medium      Threat Abatement

---

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

---

Monitor population distribution and abundance in ongoing faunal surveys.

---

## Comments

Description: A small bluntnose, dark mottled darter (Robison and Buchanan 1988).

This darter has a widely scattered distribution in the lowlands of Arkansas, but is never abundant in any one locality (Robison and Buchanan 1988). It is almost always associated with dense aquatic vegetation and can tolerate low pH levels (Kuehne and Barbour 1983). Adams and others (2007) captured 53 individuals from 5 Arkansas River backwaters and wetlands. Clark (2006) captured 47 individuals in White River oxbow lakes.

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*Etheostoma microperca*

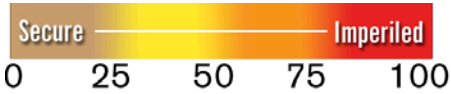
Least Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **29** out of 100



Population Trend: Decreasing

Global Rank: G5 — Secure

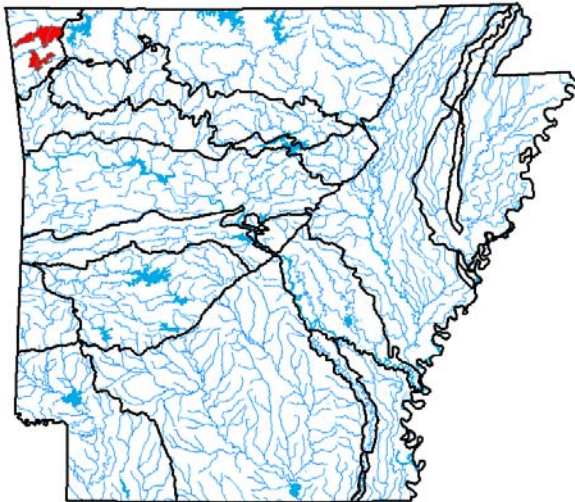
State Rank: S1 — Critically imperiled in Arkansas



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**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Ozark Highlands - Arkansas River

Habitats	Weight
Natural Pool: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Obligate

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

Threat: Habitat destruction  
Source: Grazing/Browsing

Threat: Habitat destruction  
Source: Resource extraction

Threat: Habitat destruction  
Source: Road construction

Threat: Habitat destruction  
Source: Urban development

Threat: Hydrological alteration  
Source: Urban development

Threat: Nutrient loading  
Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Formally describe this species.

Conservation Actions	Importance	Category
Cooperatively develop a management plan for species with local input.	Medium	Public Relations/Education
Maintain and improve riparian buffers.	Medium	Habitat Restoration/Improvement
Protect core habitat areas.	Medium	Land Acquisition
Protect existing habitat and stream corridors.	High	Habitat Protection
Protect recharge area.	Medium	Habitat Protection
Protect water quality from point and non-point sources. Maintain or, where necessary, restore water quality to state standards/stormwater turbidity standards.	High	Threat Abatement
Provide education and outreach to local citizens and governments concerning this species and its habitat.	Medium	Public Relations/Education

**Monitoring Strategies**

Monitor known populations every 5 years, with more frequent monitoring if impacts are suspected.

Monitor potential impacts to species' habitat annually.

## Comments

Description: Arkansas' smallest darter, reaching a maximum length of 1.5 inches. It has no lateral line, is tan and brown in color, with some red in the fins (Robison and Buchanan 1988).

While more common in the Great Lakes region, this darter is found in the Arkansas River basin of northwest Arkansas and inhabits small spring runs, often with an abundance of water cress and other aquatic plants, and substrates of fine gravel, sand, and silt. It has been found historically at five locations in the Illinois River basin in Arkansas, two of which yielded specimens in a recent study (Hargrave 1998).

A genetics study of the species indicates that the least darter in Arkansas represents an undescribed cryptic species with a very limited range (Echelle and others 2015). Wagner and others (2012) reported extirpation of the species at three historic sites, so this species appears to be declining. The G-rank of this species does not currently reflect new genetic information. Thus, the Fish Taxa Team recommends that new genetic information be used with the G-rank calculator to re-evaluate this species.

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*Etheostoma mihileze*

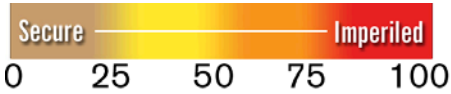
Sunburst Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **19** out of 100



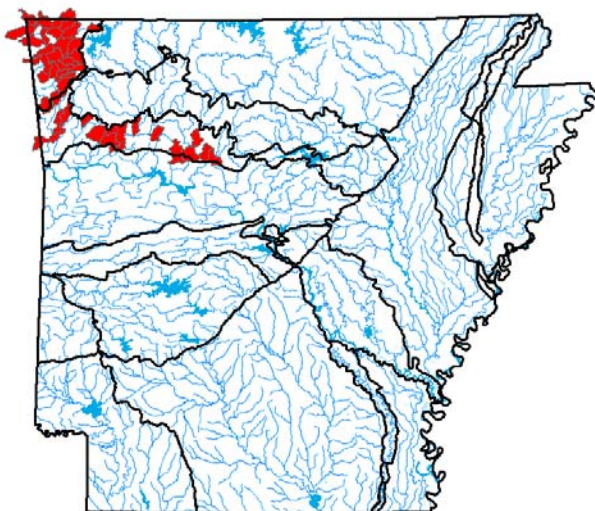
Population Trend: Stable

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Boston Mountains - Arkansas River

Ozark Highlands - Arkansas River

**Habitats**

**Weight**

Natural Glide: - Small - Medium

Suitable

Natural Pool: - Small - Medium

Suitable

Natural Riffle: - Small - Medium

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Dam

Threat: Habitat destruction

Source: Resource extraction

Threat: Habitat destruction

Source: Urban development

Threat: Habitat disturbance

Source: Agricultural practices

Threat: Hydrological alteration

Source: Dam

Threat: Hydrological alteration

Source: Excessive groundwater withdrawal

Threat: Nutrient loading

Source: Agricultural practices

Threat: Riparian habitat destruction

Source: Agricultural practices

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Refine range delineation.

**Conservation Actions**

**Importance**

**Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

## Monitoring Strategies

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

---

Monitor population distribution and abundance in stream faunal surveys.

---

## Comments

Description: This species was elevated from *Etheostoma punctulatum* by Mayden (2010). This species is found in small tributaries to the Arkansas River in the northwest portion of the state. It occurs in Benton, Crawford, and Franklin counties. Life history has been studied by two investigations (Mayden 2010). This species inhabits small, clear, cool streams with good water quality over gravel and cobble substrates. They are regularly found in association with aquatic vegetation and organic debris.

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## Taxa Association Team and Peer Reviewers

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Etheostoma moorei*

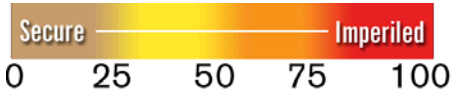
Yellowcheek Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **100** out of 100



Population Trend: Decreasing

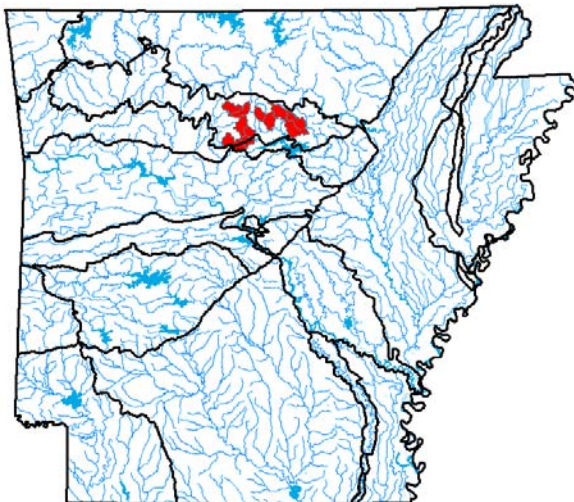
Gobal Rank: G1 — Critically imperiled species

State Rank: S1 — Critically imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Boston Mountains - White River

**Habitats**

Natural Riffle: - Small - Medium

**Weight**

Optimal

Natural Run: - Small - Medium

Optimal

**Problems Faced**

Threat: Habitat destruction

Source: Channel maintenance

Threat: Habitat destruction

Source: Dam

Threat: Habitat destruction

Source: Grazing/Browsing

Threat: Hydrological alteration

Source: Channel alteration

Threat: Hydrological alteration

Source: Dam

Threat: Sedimentation

Source: Forestry activities

Threat: Sedimentation

Source: Grazing/Browsing

Threat: Sedimentation

Source: Resource extraction

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Assess population response to dewatering of riffles.

Conduct genetic study.

**Conservation Actions**

**Importance Category**

Cooperate with U.S. Fish and Wildlife Service to implement Candidate Conservation Agreement for the yellowcheek darter.

Medium

Other

Coordinate research to reduce disturbance by scientists.

Medium

Threat Abatement

Provide education and outreach to local citizens and governments concerning the yellowcheek darter and its habitat.

Medium

Public Relations/Education

Restore and improve riparian buffers.

Medium

Habitat Restoration/Improvement

**Monitoring Strategies**

Coordinate AGFC and USFWS monitoring to reduce stress on populations.

## Comments

Description: A small brown darter reaching a maximum length of 2.5 inches (Robison and Buchanan 1988).

This Arkansas endemic is restricted to tributaries of the upper Little Red River system. The species was listed by the U.S. Fish and Wildlife Service as endangered during 2011.

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## Taxa Association Team and Peer Reviewers

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*Etheostoma pallididorsum*

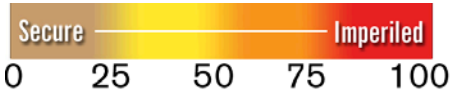
Paleback Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **46** out of 100



Population Trend: Stable

Gobal Rank: G2 — Imperiled species

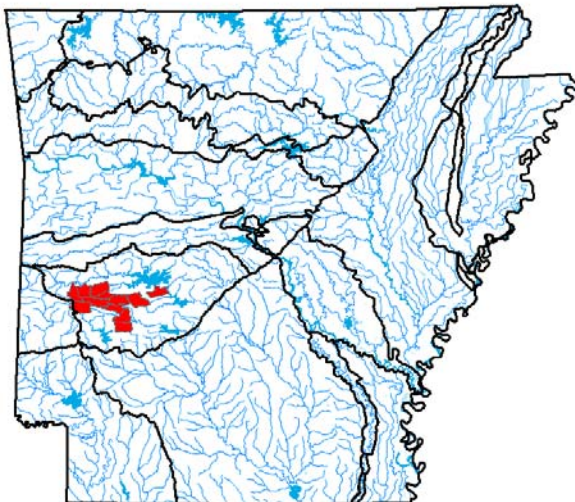
State Rank: S2 — Imperiled in Arkansas



©John Harris

**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Ouachita River

Habitats	Weight
Natural Pool: Headwater - Small	Obligate
Natural Riffle: Headwater - Small	Suitable
Natural Run: Headwater - Small	Suitable
Natural Spring Run:	Obligate

**Problems Faced**

Threat: Biological alteration  
Source: Predation

Threat: Chemical alteration  
Source: Resource extraction

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Resource extraction

Threat: Sedimentation  
Source: Channel alteration

Threat: Sedimentation  
Source: Forestry activities

Threat: Sedimentation  
Source: Road construction

**Data Gaps/Research Needs**

Survey for additional spawning habitat.

Conservation Actions	Importance	Category
Maintain or, where necessary, restore the quality and quantity of groundwater to state water quality standards.	Medium	Habitat Restoration/Improvement
Protect spawning habitat.	High	Habitat Protection

**Monitoring Strategies**

Continue stream surveys by partner agencies annually or biennially.

## Comments

Description: A stout, bluntnosed darter, the males of which develop a bright orange abdomen in breeding condition (Robison and Buchanan 1988).

This Arkansas endemic inhabits small tributaries of the upper Caddo and Ouachita River systems. It is threatened by loss of habitat through channelization, which eliminates much of the shallow backwater areas which are preferred by the species (Robison 2004).

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## Taxa Association Team and Peer Reviewers

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*Etheostoma parvipinne*

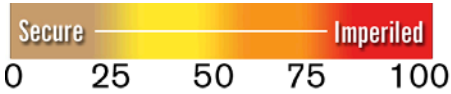
Goldstripe Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **17** out of 100



©G. W. Sneegee

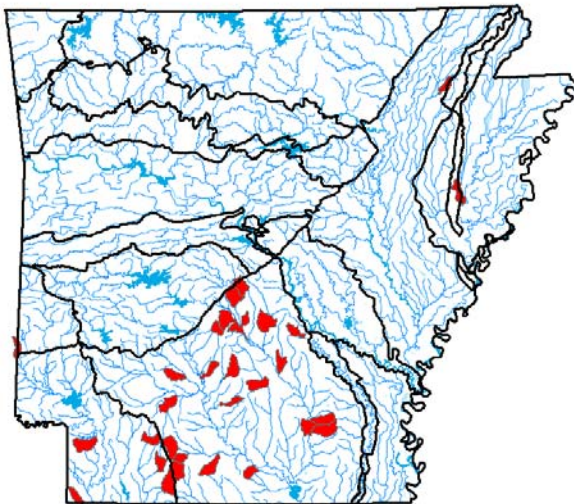
Population Trend: Stable

Gobal Rank: G4G5 — Apparently secure (uncertain rank)

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - White River

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Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

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Mississippi Valley Loess Plains - St. Francis River

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South Central Plains - Ouachita River

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South Central Plains - Red River

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**Habitats**

**Weight**

Natural Pool: Headwater - Small

Suitable

Natural Spring Run: Headwater - Small

Data Gap

**Problems Faced**

Threat:

Source:

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**Data Gaps/Research Needs**

Conduct distribution survey.

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Conduct life history study.

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**Conservation Actions**

**Importance Category**

More data is needed to determine conservation actions.

High

Data Gap

---

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

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**Comments**

Description: A small slender darter with a short, round snout, and a pale stripe down its side (Robison and Buchanan 1988).

Fairly widespread in southern Arkansas but not normally abundant (Robison and Buchanan 1988).

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**Taxa Association Team and Peer Reviewers**

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Etheostoma teddyroosevelt*

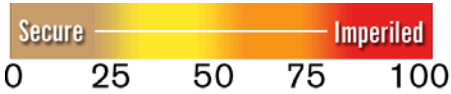
Highland Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

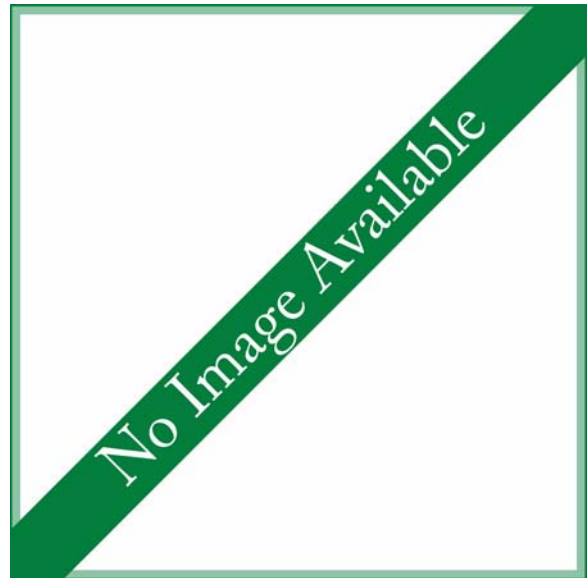
Priority Score: **15** out of 100



Population Trend: Unknown

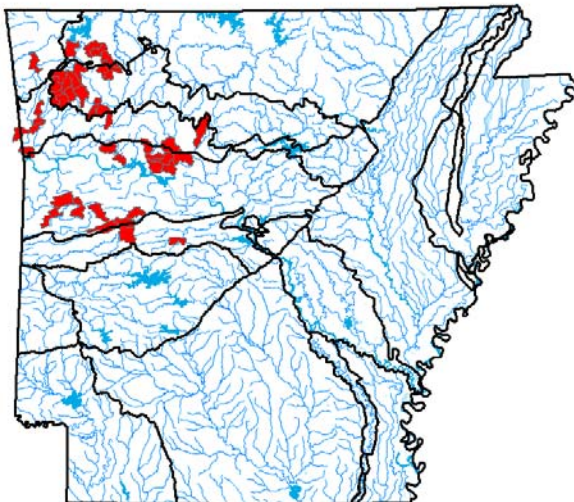
Gobal Rank: GNR — Not yet ranked

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Boston Mountains - Arkansas River

Ouachita Mountains - Arkansas River

Ozark Highlands - Arkansas River

**Habitats**

**Weight**

Natural Glide: - Small - Medium

Suitable

Natural Pool: - Small - Medium

Optimal

Natural Riffle: - Small - Medium

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Dam

Threat: Habitat destruction

Source: Resource extraction

Threat: Habitat destruction

Source: Urban development

Threat: Habitat disturbance

Source: Agricultural practices

Threat: Hydrological alteration

Source: Dam

Threat: Nutrient loading

Source: Agricultural practices

Threat: Riparian habitat destruction

Source: Agricultural practices

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Refine range delineation.

**Conservation Actions**

**Importance**

**Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

## Comments

Description: This species was elevated from *Etheostoma stigmaeum* by Layman and Mayden (2012). They are found in Ozark Highland, Boston Mountain, and Ouachita Mountain tributaries of the Arkansas River in Northwest Arkansas and the upper White River. Habitat for this species includes clear, sandy and rocky pools of small to medium sized river with swift current. This species does not have a numerical G-rank, so the priority score on this fish with limited range is underestimated.

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## Taxa Association Team and Peer Reviewers

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry



*Etheostoma uniporum*

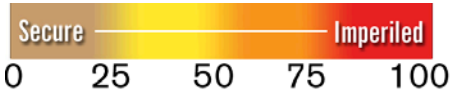
Current Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

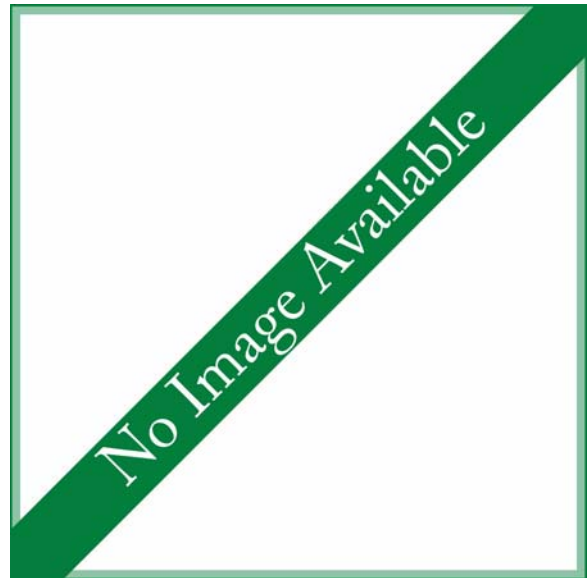
Priority Score: **19** out of 100



Population Trend: Unknown

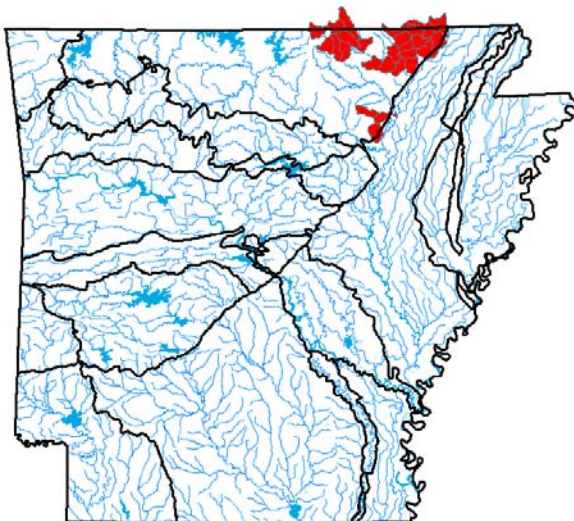
Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ozark Highlands - White River

**Habitats**

	<b>Weight</b>
Natural Pool: - Small - Medium	Suitable
Natural Riffle: - Small - Medium	Optimal
Natural Run: - Small - Medium	Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Grazing/Browsing

Threat: Habitat destruction  
Source: Road construction

Threat: Nutrient loading  
Source: Confined animal operations

Threat: Nutrient loading  
Source: Grazing/Browsing

Threat: Sedimentation  
Source: Grazing/Browsing

Threat: Sedimentation  
Source: Road construction

**Data Gaps/Research Needs**

Determine numerical abundance and distribution.

**Conservation Actions**

	<b>Importance</b>	<b>Category</b>
Improve riparian corridors.	Medium	Habitat Restoration/Improvement
Provide education and outreach to local citizens and governments concerning this species and its habitat.	Medium	Public Relations/Education
Use non-point source Best Management Practices.	Medium	Threat Abatement

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

## Comments

Description: A yellowish brown darter with dark brown saddles. Breeding males have predominately blue dorsal fins an orange throat, and forward slanting turquoise bars on the sides, (Robison and Buchanan 1988).

This member of the orangethroat darter group was elevated to species status by Ceas and Page (1997). The species is restricted to the Current, Eleven Point, and Spring River basins (Robison and Buchanan 1988).

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## Taxa Association Team and Peer Reviewers

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*Fundulus blirae*

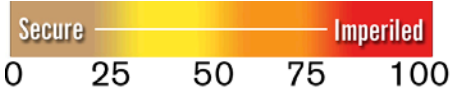
Lowland Topminnow

Class: Actinopterygii

Order: Cyprinodontiformes

Family: Fundulidae

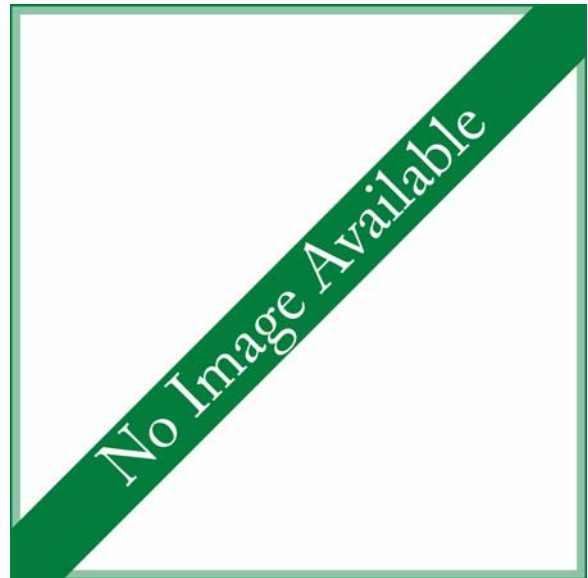
Priority Score: **23** out of 100



Population Trend: Unknown

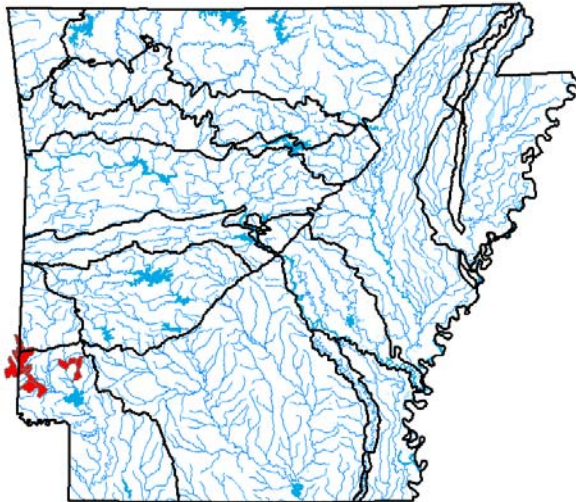
Gobal Rank: G4 — Apparently secure species

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Red River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Littoral:

Suitable

Natural Pool:

Suitable

Natural Swamp/Wetlands:

Suitable

**Problems Faced**

Threat: Chemical alteration

Source: Forestry activities

Threat: Hydrological alteration

Source: Dam

Threat: Hydrological alteration

Source: Water diversion

Threat: Nutrient loading

Source: Agricultural practices

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

**Conservation Actions**

**Importance Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

**Monitoring Strategies**

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

The lowland topminnow is only found in Ouachita Mountain streams that drain into the Red River. The species is found in small, clear creeks and swampy backwaters over mud substrate near vegetation (Robison and Buchanan 1988). Buchanan collected 50 individuals from Millwood Lake.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Hiodon alosoides*

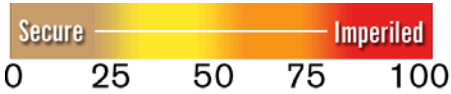
Goldeye

Class: Actinopterygii

Order: Osteoglossiformes

Family: Hiodontidae

Priority Score: **19** out of 100



Population Trend: Unknown

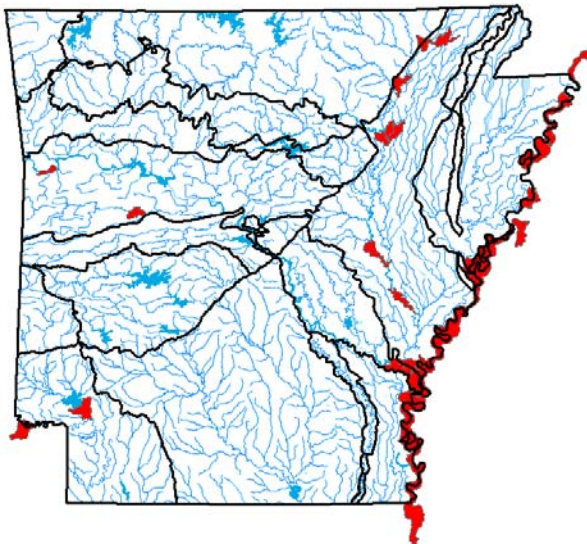
Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

Mississippi River Alluvial Plain (Lake Chicot) - Mississippi River

South Central Plains - Ouachita River

South Central Plains - Red River

**Habitats**

**Weight**

Man-made Pelagic: - Medium - Large

Data Gap

Natural Pool: - Medium - Large

Obligate

Natural Side channel: - Medium - Large

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

Threat: Habitat destruction

Source: Channel maintenance

Threat: Habitat fragmentation

Source: Dam

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

Conduct distribution and abundance survey.

**Conservation Actions**

**Importance**

**Category**

More data are needed to determine conservation actions.

Medium

Data Gap

Notch dikes and restore navigation channel.

Low

Habitat Restoration/Improvement

**Monitoring Strategies**

Monitor population distribution and abundance in large river faunal surveys.

## Comments

Description: A deep-bodied, compressed, silvery, shad-like with a large eye (Robison and Buchanan 1988). An inhabitant of medium to large rivers, abundant nowhere in state (Robison and Buchanan 1988). During high flows, the species is captured in moderate numbers by anglers with cast nets at the Arkansas River below Dam 2. Goldeye comprised 0.1% of fish captured in the White River by Vaught 2013.

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## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC  
Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry



*Hiodon tergisus*

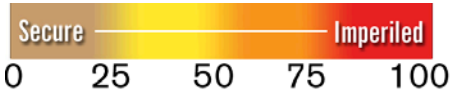
Mooneye

Class: Actinopterygii

Order: Hiodontiformes

Family: Hiodontidae

Priority Score: **19** out of 100



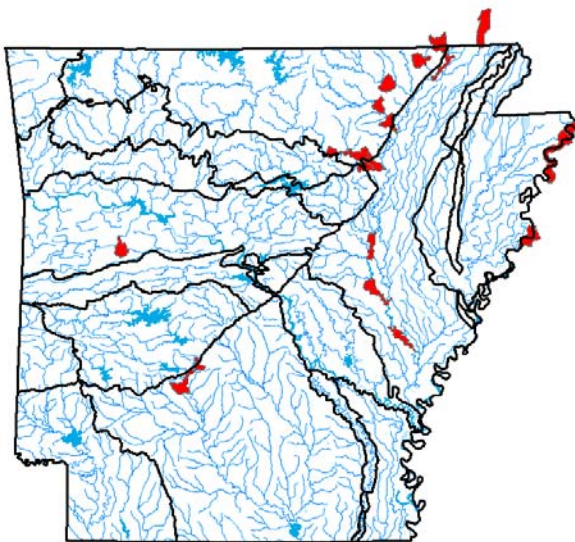
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

Ozark Highlands - White River

South Central Plains - Ouachita River

**Habitats**

Natural Riffle: - Large

Natural Shoal: - Large

**Weight**

Obligate

Suitable

**Problems Faced**

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Conduct life history study.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in large river surveys.

**Comments**

Mooneye inhabit the large rivers of the state including the Arkansas, White, Black, Little Red, Strawberry, Spring, Current, and Ouachita Rivers. The species is found in swift current over firm substrate. Buchanan (2003) did not report the species from the Red River. Vogt (2013) reported that mooneye represented 2% of fish captured with boat electrofishing in the lower White River during 2010, and CPUE was 0.14 and 0.17 fish/hr in the warm and transitional areas of the river.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

## *Hybognathus placitus*

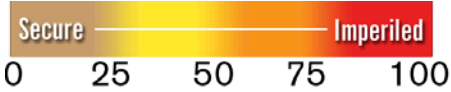
### Plains Minnow

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **27** out of 100



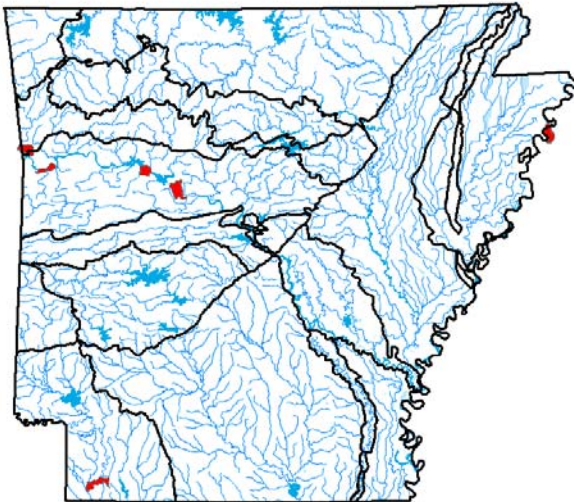
Population Trend: Unknown

Global Rank: G4 — Apparently secure species

State Rank: SH — Historic record. Possibly extirpated in Arkansas

## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi Valley Loess Plains - St. Francis River

South Central Plains - Red River

**Problems Faced**

Threat: Biological alteration  
Source: Dam

Threat: Habitat destruction  
Source: Dam

Threat: Hydrological alteration  
Source: Dam

**Data Gaps/Research Needs**

Conduct baseline population surveys.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Monitor population distribution and abundance in large river surveys.

**Comments**

Description: a large minnow with a short head, blunt snout, sub-terminal mouth, and very small eye (Robison and Buchanan 1988). The species has been collected in the Mississippi, Arkansas, and Red rivers, and no breeding populations are known to occur in the state.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Lampetra aepyptera*

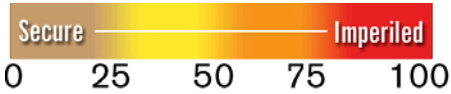
Least Brook Lamprey

Class: Petromyzontida

Order: Petromyzontiformes

Family: Petromyzontidae

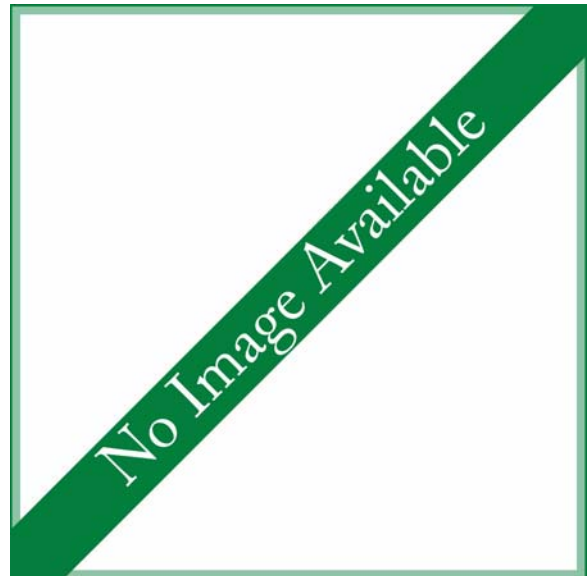
Priority Score: **15** out of 100



Population Trend: Unknown

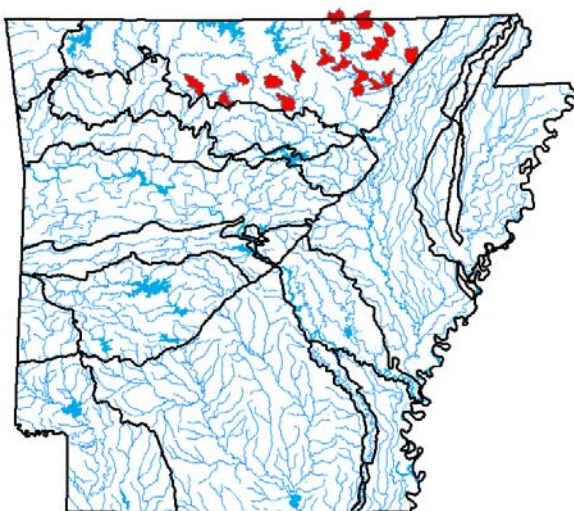
Global Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ozark Highlands - White River

**Habitats**

Natural Pool: - Medium

**Weight**

Suitable

**Problems Faced**

Threat: Hydrological alteration  
Source: Dam

Threat: Riparian habitat destruction  
Source: Conversion of riparian forest

Threat: Sedimentation  
Source: Agricultural practices

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Conduct life history study.

**Conservation Actions**

**Importance Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

This species typically inhabits headwater to medium-sized streams with clean gravel riffles, and the species inhabits smaller streams than other Arkansas lampreys (Robison and Buchanan 1988).

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry



*Lethenteron appendix*

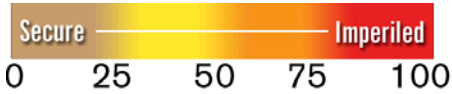
American Brook Lamprey

Class: Petromyzontida

Order: Petromyzontiformes

Family: Petromyzontidae

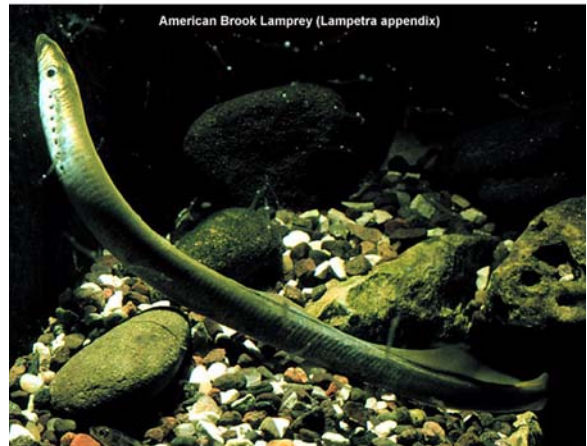
Priority Score: **19** out of 100



Population Trend: Unknown

Gobal Rank: G4 — Apparently secure species

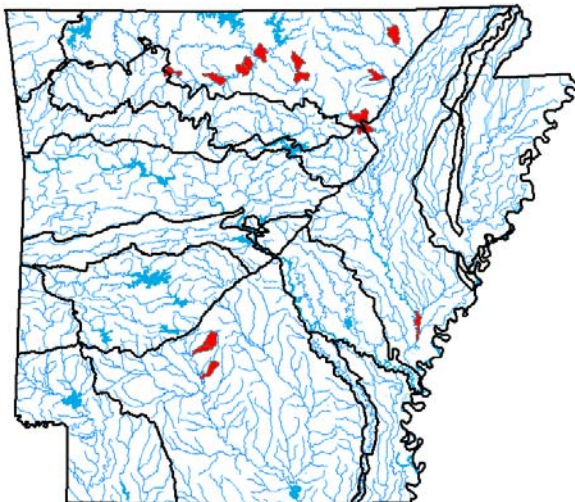
State Rank: S3 — Vulnerable in Arkansas



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**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Boston Mountains - White River

Mississippi River Alluvial Plain - White River

Ozark Highlands - White River

South Central Plains - Ouachita River

**Habitats**

**Weight**

Natural Pool: - Small - Medium

Suitable

Natural Riffle: - Small - Medium

Obligate

**Problems Faced**

Threat: Hydrological alteration

Source: Dam

Threat: Riparian habitat destruction

Source: Conversion of riparian forest

Threat: Sedimentation

Source: Agricultural practices

**Data Gaps/Research Needs**

Conduct targeted baseline population surveys.

Determine spawning sites.

**Conservation Actions**

**Importance Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

Description: This species name was changed from *Lamptera appendix*. It inhabits cool, clear, small to medium sized streams in gravel bottom runs and flowing pools.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry



*Lythrurus snelsoni*

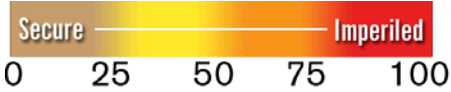
Ouachita Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **27** out of 100



Population Trend: Unknown

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

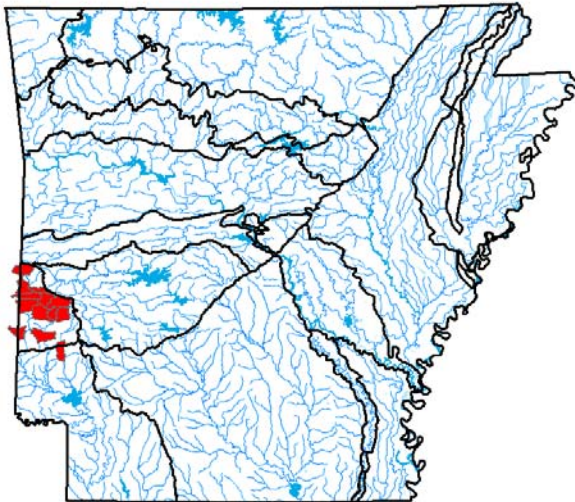
State Rank: S2 — Imperiled in Arkansas



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**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Red River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Glide: - Medium

Suitable

Natural Pool: - Medium

Obligate

**Problems Faced**

Threat: Chemical alteration

Source: Forestry activities

Threat: Hydrological alteration

Source: Dam

Threat: Hydrological alteration

Source: Water diversion

Threat: Nutrient loading

Source: Agricultural practices

Threat: Sedimentation

Source: Conversion of riparian forest

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Conduct life history study.

**Conservation Actions**

**Importance Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

Implement best management practices in conjunction with agriculture and silviculture.

Medium

Threat Abatement

**Monitoring Strategies**

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

The species lives in pools of clear, high-gradient streams of the Mountain Fork and Cossatot river basins (Robison and Buchanan 1988). Buchanan (2005) collected 8 specimens from Gillham Lake.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

## *Macrhybopsis hyostoma*

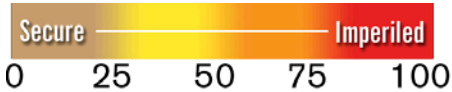
### Shoal Chub

**Class:** Actinopterygii

**Order:** Cypriniformes

**Family:** Cyprinidae

**Priority Score:** 15 out of 100



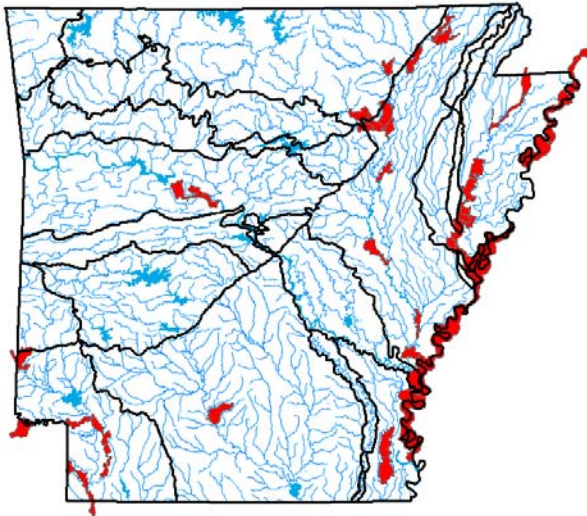
**Population Trend:** Stable

**Global Rank:** G5 — Secure

**State Rank:** S3 — Vulnerable in Arkansas

## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

---

Mississippi River Alluvial Plain - Arkansas River

---

Mississippi River Alluvial Plain - White River

---

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

---

Mississippi Valley Loess Plains - St. Francis River

---

Ozark Highlands - White River

---

South Central Plains - Ouachita River

---

South Central Plains - Red River

---

**Habitats**

**Weight**

Natural Pool: - Large

Suitable

Natural Shoal: - Large

Optimal

Natural Side channel: - Large

Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

---

Threat: Habitat fragmentation  
Source: Dam

---

Threat: Hydrological alteration  
Source: Dam

---

Threat: Sedimentation  
Source: Non-point source pollution

---

**Data Gaps/Research Needs**

Conduct baseline population surveys.

---

**Conservation Actions**

**Importance Category**

More data are needed to determine conservation actions.

Medium Data Gap

---

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

---

Monitor population distribution and abundance in large river surveys.

---

## Comments

The Shoal Chub is one of the species that used to be included in *M. aestivalis* (McAllister and others 2010, 2012). Layher and others (2005) captured 995 individuals from 7 large rivers in Arkansas. The Fish Taxa Team recommends using the S-rank calculator to re-evaluate the species once distributional records are entered into the fish database.

---

## Taxa Association Team and Peer Reviewers

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*Macrhybopsis meeki*

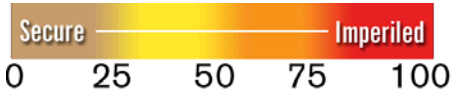
Sicklefin Chub

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **43** out of 100



Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

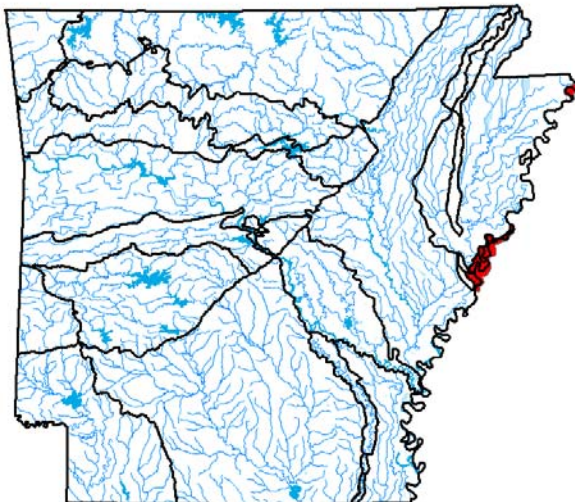
State Rank: S1 — Critically imperiled in Arkansas



By: David Ostendorf  
Sicklefin Chub

**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - Arkansas River

---

Mississippi River Alluvial Plain - St. Francis River

---

Mississippi River Alluvial Plain - White River

---

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

---

**Habitats**

**Weight**

Natural Run: - Large

Obligate

Natural Shoal: - Large

Obligate

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

---

Threat: Habitat destruction  
Source: Channel maintenance

---

Threat: Habitat destruction  
Source: Resource extraction

---

**Data Gaps/Research Needs**

Conduct distribution study.

---

**Conservation Actions**

**Importance**

**Category**

Coordinate with other agencies and entities for conservation measures.

Medium

Public Relations/Education

---

**Monitoring Strategies**

More information is needed before a monitoring strategy can be developed.

---

**Comments**

Description: A pale, silvery, barbeled minnow with a round snout and small eyes (Robison and Buchanan 1988). Only one historical Arkansas record, which is from the Mississippi River (Robison and Buchanan 1988). Recent collections of three individuals (2006, 2008) have been made by the U.S. Army Corps of Engineers at Mhoon Bend and Island 63 (Dr. Todd Slack, personal communication). This species has declined in the Missouri portion of the Mississippi River (Robert Hrabik, personal communication).

---

**Taxa Association Team and Peer Reviewers**

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*Moxostoma anisurum*

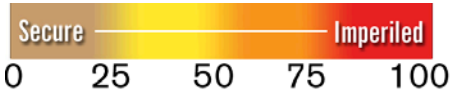
Silver Redhorse

Class: Actinopterygii

Order: Cypriniformes

Family: Catostomidae

Priority Score: **29** out of 100



Population Trend: Decreasing

Global Rank: G5 — Secure

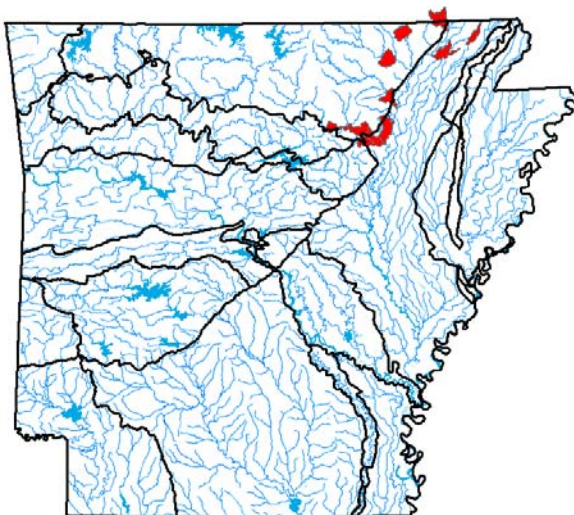
State Rank: S1 — Critically imperiled in Arkansas



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**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Mississippi River Alluvial Plain - White River

---

Ozark Highlands - White River

---

**Habitats**

Natural Pool: - Medium - Large

**Weight**

Optimal

Natural Riffle: - Medium - Large

Obligate

**Problems Faced**

Threat: Habitat destruction

Source: Resource extraction

---

Threat: Nutrient loading

Source: Confined animal operations

---

Threat: Sedimentation

Source: Confined animal operations

---

Threat: Sedimentation

Source: Grazing/Browsing

---

Threat: Sedimentation

Source: Resource extraction

---

Threat: Sedimentation

Source: Road construction

---

**Data Gaps/Research Needs**

Assess abundance in the middle White River and the Current River.

---

Conduct distribution survey.

---

**Conservation Actions**

**Importance Category**

Establish or improve riparian buffers.

Medium

Habitat Restoration/Improvement

---

Reduce or eliminate resource extraction.

Medium

Threat Abatement

---

Reduce sedimentation using Best Management Practices.

Medium

Threat Abatement

---

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

---

Monitor distribution and abundance with general river surveys.

---

## Comments

Description: A robust, pale yellow or silvery sucker growing to a maximum of 20 inches (Robison and Buchanan 1988).

The silver redbhorse is rare in Arkansas (Robison and Buchanan 1988), and only 23 specimens have been collected from five rivers (McAllister and others 2009).

---

## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC  
Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Moxostoma pisolabrum*

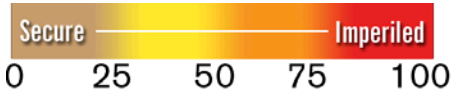
Pealip Redhorse

Class: Actinopterygii

Order: Cypriniformes

Family: Catostomidae

Priority Score: **19** out of 100



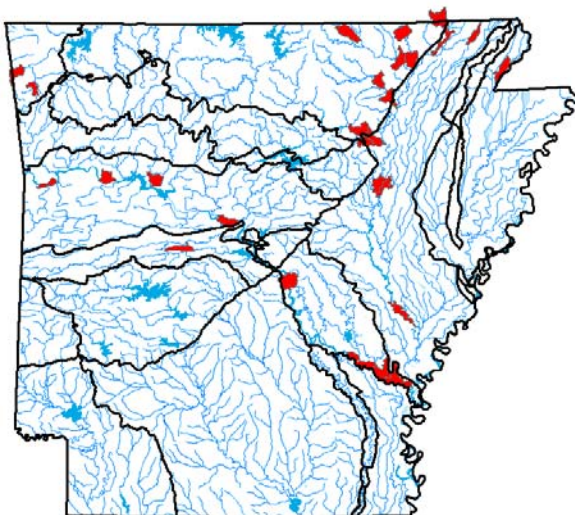
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain - White River

Ouachita Mountains - Arkansas River

Ozark Highlands - Arkansas River

Ozark Highlands - White River

**Habitats**

**Weight**

Natural Other: - Small - Medium - Large

Suitable

Natural Pool: - Small - Medium - Large

Optimal

Natural Riffle: - Small - Medium - Large

Obligate

Natural Run: - Small - Medium - Large

Obligate

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

Threat: Habitat destruction

Source: Dam

Threat: Habitat destruction

Source: Resource extraction

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

Conduct distribution surveys.

**Conservation Actions**

**Importance Category**

Establish or improve riparian buffers.

Medium

Habitat Restoration/Improvement

Minimize migration barriers.

Medium

Threat Abatement

Reduce or eliminate resource extraction.

Medium

Threat Abatement

**Monitoring Strategies**

Monitor distribution and abundance with general large river surveys.

## Comments

Description: A slender sucker with a red tail, growing to 24 inches (Robison and Buchanan 1988). This species was elevated from the shorthead redhorse by Nelson and others (2004).

Sparse records for this species are likely due to limited sampling of large rivers instead of rarity (Robison and Buchanan 1988; McAllister and others 2010).

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## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Mugil cephalus*

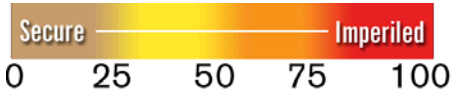
Striped Mullet

Class: Actinopterygii

Order: Mugiliformes

Family: Mugilidae

Priority Score: **19** out of 100



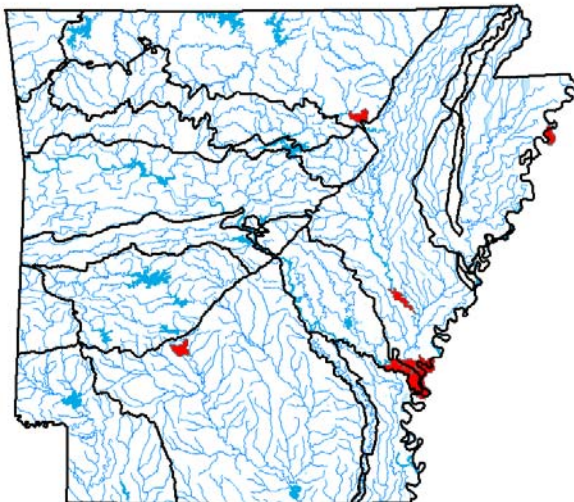
Population Trend: Stable

Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

Ozark Highlands - White River

South Central Plains - Ouachita River

**Habitats**

**Weight**

Natural Pool: - Large

Suitable

Natural Riffle: - Large

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Dam

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

Determine abundance in large river surveys.

**Conservation Actions**

**Importance Category**

Improve fish passage.

Medium

Threat Abatement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

Marine and estuarine, often ascending coastal rivers for considerable distances. Grimes (2015) captured 817 individuals in the lower Arkansas River downstream of Wilber D. Mills Dam. Vogt (2013) reported that striped mullet electrofishing CPUE was 0.07 and 0.17 fish/hour in the warm and transitional areas of the lower White River.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Nocomis asper*

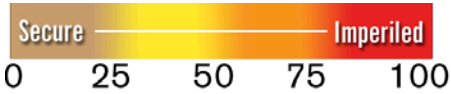
Redspot Chub

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **19** out of 100



Population Trend: Unknown

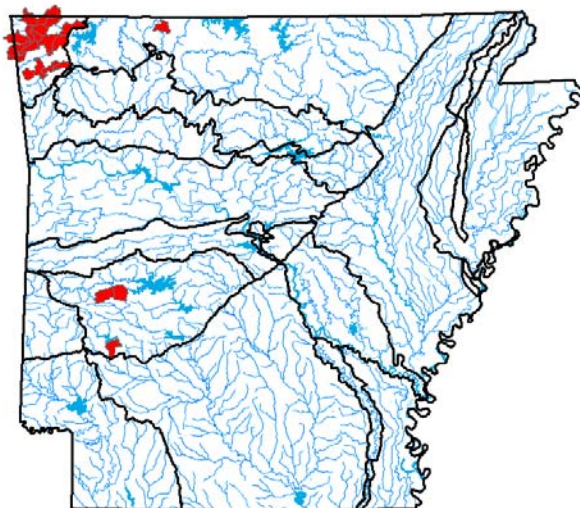
Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Ouachita Mountains - Ouachita River

Ozark Highlands - Arkansas River

Habitats	Weight
Natural Glide: - Small - Medium	Suitable
Natural Pool: - Small - Medium	Suitable
Natural Riffle: - Small - Medium	Obligate
Natural Run: - Small - Medium	Obligate

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

Threat: Habitat destruction  
Source: Resource extraction

Threat: Habitat destruction  
Source: Urban development

Threat: Hydrological alteration  
Source: Dam

Threat: Hydrological alteration  
Source: Urban development

Threat: Nutrient loading  
Source: Confined animal operations

Threat: Nutrient loading  
Source: Grazing/Browsing

Threat: Nutrient loading  
Source: Municipal/Industrial point source

Threat: Sedimentation  
Source: Grazing/Browsing

Threat: Sedimentation  
Source: Road construction

Threat: Sedimentation  
Source: Urban development

**Data Gaps/Research Needs**

Conduct abundance and distribution surveys.

Conservation Actions	Importance	Category
Maintain or, where necessary, restore groundwater quality to state standards.	Low	Habitat Restoration/Improvement
Maintain or, where necessary, restore instream aquatic habitat, substrate and flow regime.	Medium	Habitat Restoration/Improvement
Protect river corridors using appropriate buffer widths relative to stream size.	High	Habitat Protection

*Nocomis asper*  
Redspot Chub

## Monitoring Strategies

Monitor population distribution and abundance in stream faunal surveys.

---

## Comments

Description: A large (10 inches max), robust, cylindrical minnow with a red spot behind the eye of adults (Robison and Buchanan 1988).

Inhabits upland, clear, gravelly, spring-fed streams, mostly in the Arkansas River drainage in northwest Arkansas, with a couple of disjunct populations in the Ouachita River system (Robison and Buchanan 1988). Echelle et al. (2014) indicated genetic structure is weak among the disjunct populations, indicating they are likely the same species.

---

## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Notropis atrocaudalis*

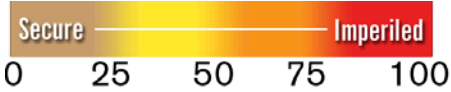
Blackspot Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **19** out of 100



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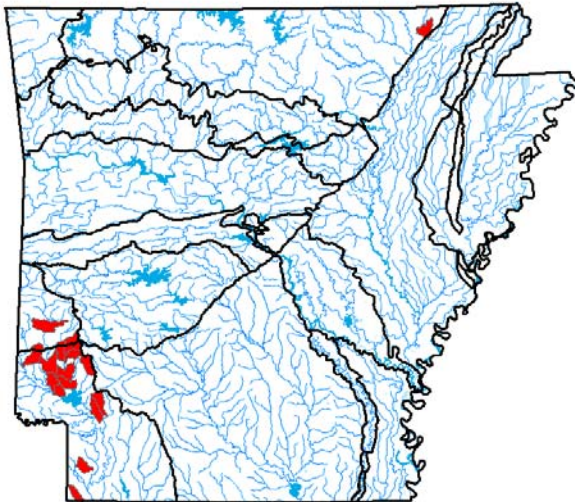
Population Trend: Unknown

Global Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Red River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Pool: - Small

Suitable

Natural Riffle: - Small

Suitable

Natural Run: - Small

Optimal

Natural Spring Run: - Small

Optimal

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

Threat: Habitat destruction

Source: Dam

Threat: Hydrological alteration

Source: Channel alteration

Threat: Hydrological alteration

Source: Dam

Threat: Sedimentation

Source: Grazing/Browsing

Threat: Sedimentation

Source: Urban development

**Data Gaps/Research Needs**

Conduct distribution surveys.

**Conservation Actions**

**Importance Category**

Conserve the water quality and habitat integrity of small stream tributaries and spring runs in the Little River and Red River systems.

High

Habitat Protection

Promote and implement measures to reduce sedimentation and turbidity in stream habitat.

Medium

Habitat Restoration/Improvement

**Monitoring Strategies**

Monitor presence through general stream faunal surveys.

## Comments

Description: A robust, blunt-nosed, small-headed shiner with a fairly large eye and a black stripe down its side (Robison and Buchanan 1988).

The Blackspot shiner is a rare fish in small, clear streams of the Red River basin (Robison and Buchanan 1988). Bean and others (2010) described habitat use, life history, and diet of the species.

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## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Notropis bairdi*

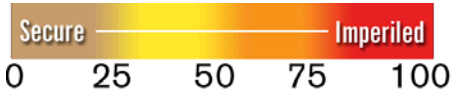
Red River Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **27** out of 100



©G. W. Sneevas

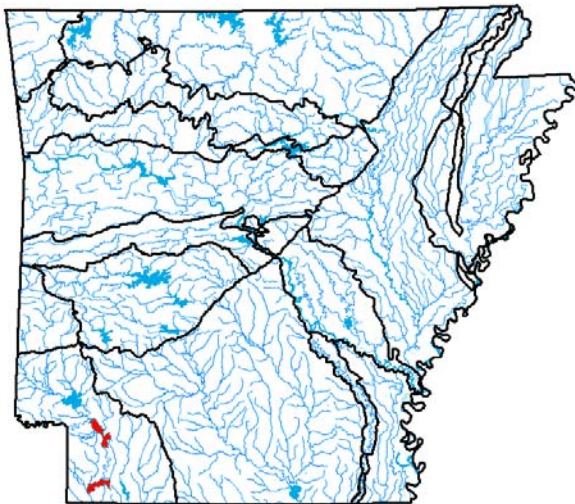
Population Trend: Unknown

Gobal Rank: G4 — Apparently secure species

State Rank: SH — Historic record. Possibly extirpated in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

South Central Plains - Red River

Habitats	Weight
Natural Pool: - Large	Suitable
Natural Shoal: - Large	Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Resource extraction

Threat: Hydrological alteration  
Source: Water diversion

**Data Gaps/Research Needs**

Conduct distribution surveys.

Conservation Actions	Importance	Category
Restore natural flow regime.	High	Habitat Protection
Work across political boundaries to conserve and enhance populations.	Medium	Population Management
Work with USACOE to minimize impacts from proposed Southwest Arkansas Navigation Project.	High	Threat Abatement

**Monitoring Strategies**

Survey for this species in the Red River.

**Comments**

Description: A small, tan to gray, compressed shiner (Robison and Buchanan 1988).

Species is locally abundant in Oklahoma/Texas, occurs in Arkansas only on periphery of its range. Only known in Arkansas from 2 pre-1950 records from the Red River (Robison and Buchanan 1988). The species has been collected 18-km upstream of the Arkansas state line as recently as 1995, so future sampling of the Red River could possibly detect the species (Buchanan and others 2003).

**Taxa Association Team and Peer Reviewers**

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Notropis girardi*

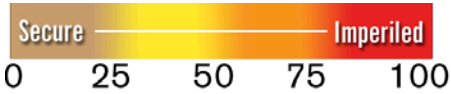
Arkansas River Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **50** out of 100



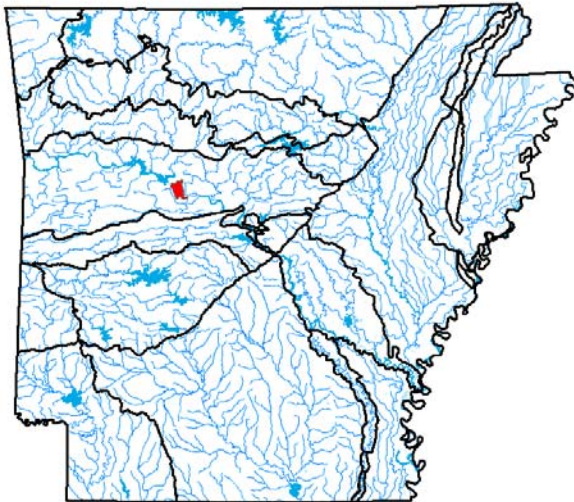
Population Trend: Unknown

Global Rank: G2 — Imperiled species

State Rank: SH — Historic record. Possibly extirpated in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Arkansas Valley - Arkansas River

**Habitats**

Natural Pool: - Large

Natural Shoal: - Large

Natural Side channel: - Large

**Weight**

Data Gap

Data Gap

Data Gap

**Problems Faced**

Threat: Habitat fragmentation

Source: Dam

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

It is unclear if this species was ever a regular part of the Arkansas fauna, or if it only was found as waifs from upstream.

**Conservation Actions**

More data is needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Be alert for species presence in any sampling on the Arkansas River in western Arkansas.

**Comments**

Description: A small, compressed, tan shiner (Robison and Buchanan 1988).

Great Plains endemic of the Arkansas River, taken only once in Arkansas and likely extirpated today (Robison and Buchanan 1988). It has declined greatly across its range (Larson 1991) and has been listed as threatened under the Endangered Species Act (Federal Register 1998).

This species is believed extirpated from Arkansas. The only record of its occurrence dates from 1939. If populations are discovered in Arkansas, this information will be included in future iterations of this report.

**Taxa Association Team and Peer Reviewers**

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*Notropis ortenburgeri*

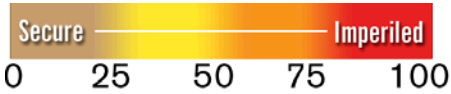
Kiamichi Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **33** out of 100



Population Trend: Decreasing

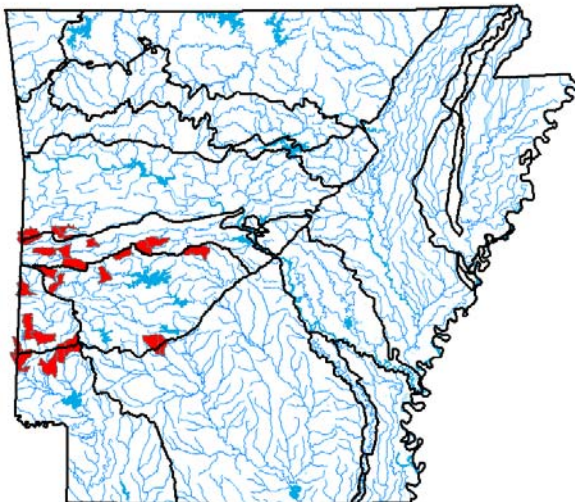
Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Arkansas River

Ouachita Mountains - Ouachita River

Ouachita Mountains - Red River

South Central Plains - Red River

**Habitats**

Natural Pool: - Small - Medium

**Weight**

Obligate

**Problems Faced**

Threat: Habitat destruction

Source: Dam

Threat: Sedimentation

Source: Forestry activities

Threat: Sedimentation

Source: Grazing/Browsing

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct distribution and abundance survey.

Conduct life history study.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

High Data Gap

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

**Comments**

Description: A slim, silvery shiner with a large eye (Robison and Buchanan 1988).

Good populations are present in in the Little Missouri and Ouachita river basins, but recent surveys did not locate any specimens in several other basins where they were historically found (Robison 2001a). Robison (2005) indicated this is a widespread, locally abundant minnow that has not greatly decreased in abundance or range.

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*Notropis ozarcanus*

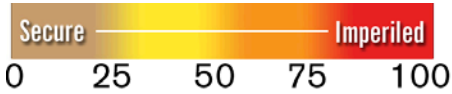
Ozark Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **33** out of 100



Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

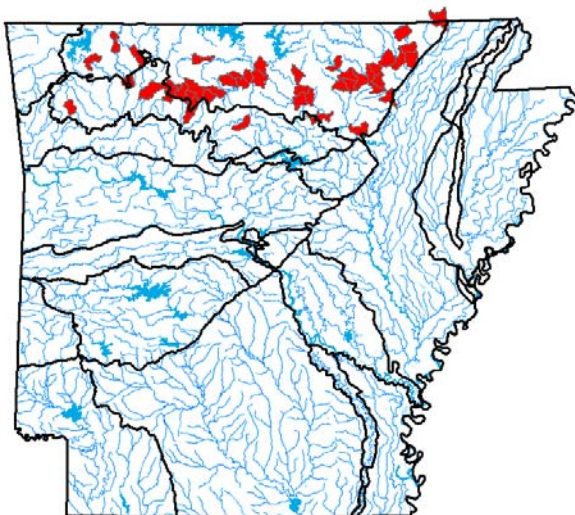
State Rank: S3 — Vulnerable in Arkansas



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**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Boston Mountains - White River

Ozark Highlands - White River

**Habitats**

**Weight**

Natural Pool: - Small - Medium - Large

Suitable

Natural Run: - Small - Medium - Large

Optimal

**Problems Faced**

Threat: Habitat destruction

Source: Dam

Threat: Habitat destruction

Source: Resource extraction

Threat: Habitat destruction

Source: Road construction

Threat: Hydrological alteration

Source: Dam

Threat: Sedimentation

Source: Forestry activities

Threat: Sedimentation

Source: Grazing/Browsing

Threat: Sedimentation

Source: Resource extraction

**Data Gaps/Research Needs**

Conduct distribution and status survey.

Conduct life history study.

**Conservation Actions**

**Importance**

**Category**

Enhance riparian zone.

Medium

Habitat Restoration/Improvement

Preserve habitat.

Medium

Habitat Protection

Promote alternative livestock water source.

Medium

Threat Abatement

Reduce sedimentation.

Medium

Habitat Restoration/Improvement

**Monitoring Strategies**

Conduct comprehensive aquatic community sampling.

Share data with other agencies and organizations.

## Comments

Description: A pale yellow and silvery shiner with a blunt nose and large eye (Robison and Buchanan 1988).

Recent surveys revealed healthy populations of this fish in the Buffalo and Spring rivers. Numbers were low or absent in several rivers where the species historically was found (Robison 1995). Rigsby (2009) reported collecting 7 individuals from 2 locations in the Eleven Point River.

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## Taxa Association Team and Peer Reviewers

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*Notropis perpallidus*

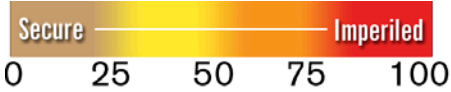
Peppered Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **33** out of 100



Population Trend: Decreasing

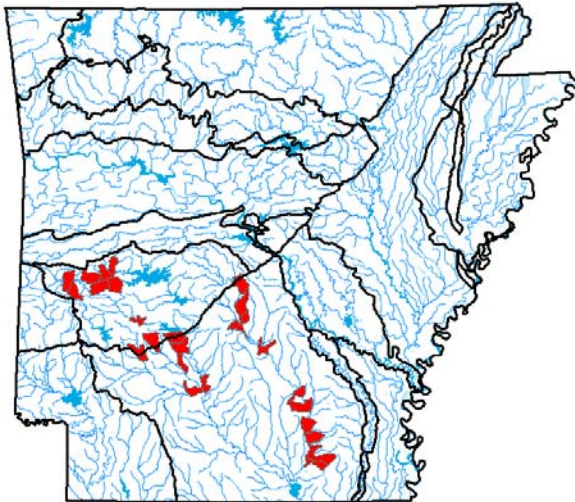
Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Ouachita Mountains - Ouachita River

South Central Plains - Ouachita River

**Habitats**

Natural Pool: - Medium

**Weight**

Obligate

**Problems Faced**

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Urban development

Threat: Sedimentation  
Source: Forestry activities

**Data Gaps/Research Needs**

Conduct distribution and abundance surveys.

Conduct life history study.

Identify threats and sources.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance**

High

**Category**

Data Gap

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

**Comments**

Description: A small, pale shiner sprinkled randomly with black speckles (Robison and Buchanan 1988).

Wagner, Echelle, and Maughan (1987) found significant niche overlap with *N. snelsoni* and *N. volucellus*. Robison (2006) recommended a vulnerable status for this rare fish. He collected only 17 specimens from 81 collections. He suggested the species has declined in Arkansas, only occurring in the Ouachita and Saline rivers.

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*Notropis potteri*

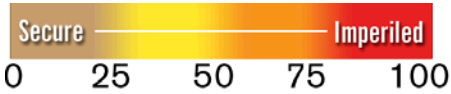
Chub Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

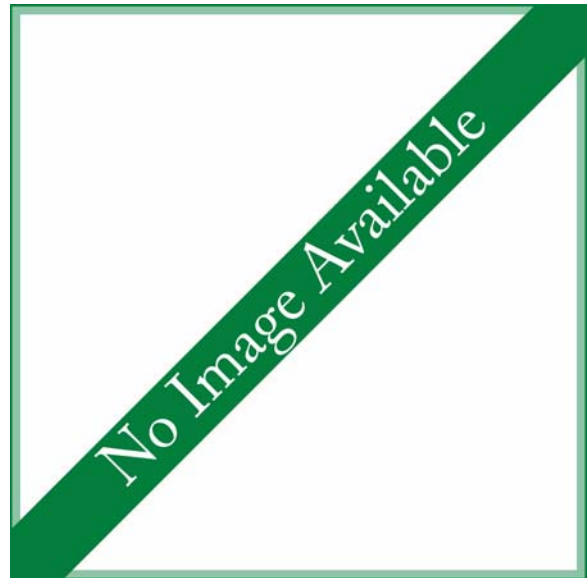
Priority Score: **23** out of 100



Population Trend: Stable

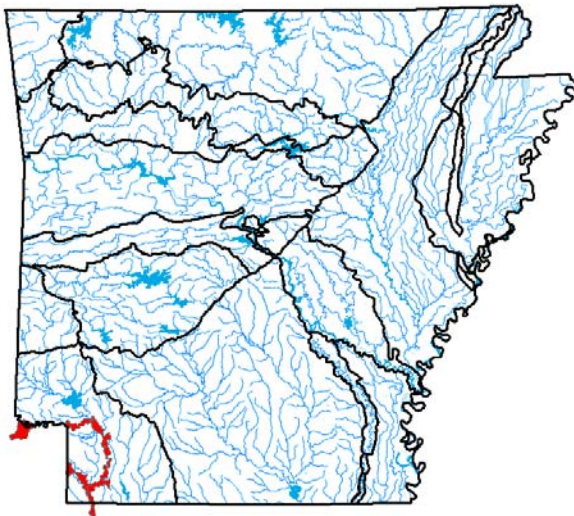
Gobal Rank: G4 — Apparently secure species

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

South Central Plains - Red River

**Habitats**

Natural Pool: - Large

Natural Shoal: - Large

**Weight**

Suitable

Suitable

**Problems Faced**

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

Conduct baseline surveys.

Conduct life history study.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Monitor population distribution and abundance in the Red River.

**Comments**

This species is restricted to the Red River, where it was the second most abundant species captured (Buchanan et al. 2003).

**Taxa Association Team and Peer Reviewers**

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*Notropis sabiniae*

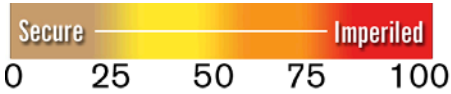
Sabine Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **23** out of 100



Population Trend: Unknown

Gobal Rank: G4 — Apparently secure species

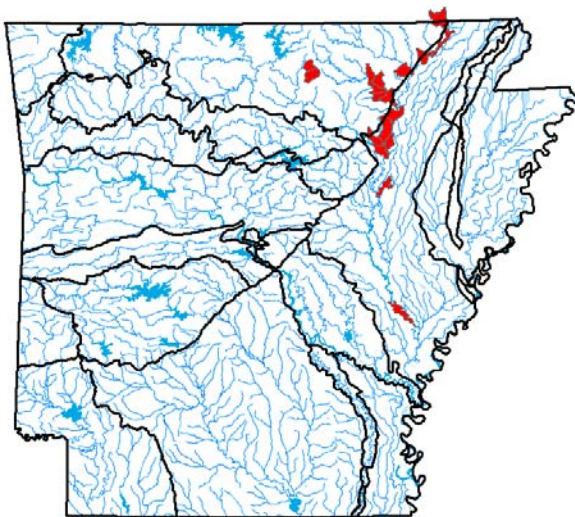
State Rank: S2 — Imperiled in Arkansas



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**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - St. Francis River

---

Mississippi River Alluvial Plain - White River

---

Ozark Highlands - White River

---

**Habitats**

Natural Glide: - Small - Medium

**Weight**

Data Gap

Natural Pool: - Small - Medium

Data Gap

**Problems Faced**

Threat: Chemical alteration

Source: Non-point source pollution

---

Threat: Habitat destruction

Source: Channel alteration

---

Threat: Habitat destruction

Source: Resource extraction

---

Threat: Habitat destruction

Source: Road construction

---

Threat: Sedimentation

Source: Agricultural practices

---

Threat: Sedimentation

Source: Channel alteration

---

Threat: Sedimentation

Source: Road construction

---

**Data Gaps/Research Needs**

Conduct distribution and abundance surveys.

---

Conduct genetic analysis of similar, allopatric populations.

---

**Conservation Actions**

**Importance Category**

Protect habitat.

High

Habitat Protection

---

Reduce sediment.

Medium

Habitat Restoration/Improvement

---

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

---

## Comments

Description: A small, silver-sided shiner with a small eye (Robison and Buchanan 1988).

Populations in rivers of the eastern Ozarks are widely disjunct from range in the coastal plain of east Texas and west Louisiana (Robison and Buchanan 1988).

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## Taxa Association Team and Peer Reviewers

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Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Notropis suttkusi*

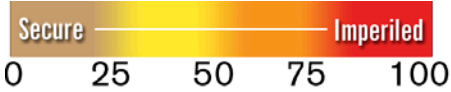
Rocky Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **27** out of 100



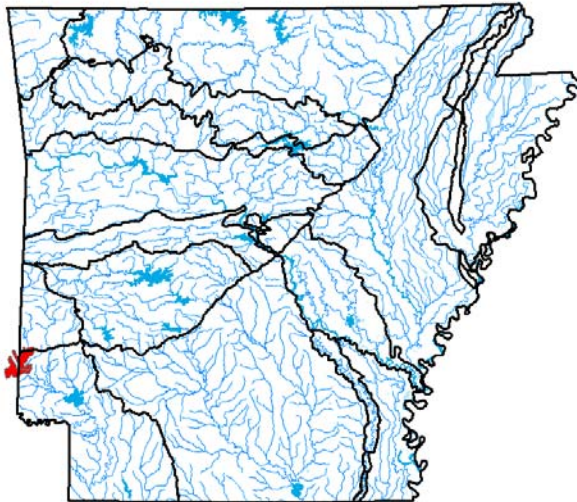
Population Trend: Unknown

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Ouachita Mountains - Red River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Glide:	Suitable
Natural Pool:	Suitable
Natural Riffle:	Suitable

**Problems Faced**

Threat: Chemical alteration

Source: Forestry activities

Threat: Hydrological alteration

Source: Dam

Threat: Hydrological alteration

Source: Water diversion

Threat: Nutrient loading

Source: Agricultural practices

Threat: Sedimentation

Source: Conversion of riparian forest

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Conduct life history study.

**Conservation Actions**

**Importance Category**

Establish and enhance riparian corridors.	High	Habitat Restoration/Improvement
Implement best management practices for road construction.	High	Threat Abatement
Implement best management practices in conjunction with agriculture and silviculture.	High	Threat Abatement

**Monitoring Strategies**

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

This species was elevated from *Notropis rubellus* (Humphries and Cashner 1994) and appears to be abundant within its limited range (Schwemm 2013). The rocky shiner inhabits clear water streams of moderate to high gradient with gravel and rubble substrates.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Notropis suttkusi*  
Rocky Shiner

*Notropis wickliffi*

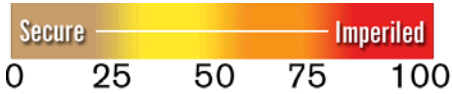
Channel Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **19** out of 100



Population Trend: Unknown

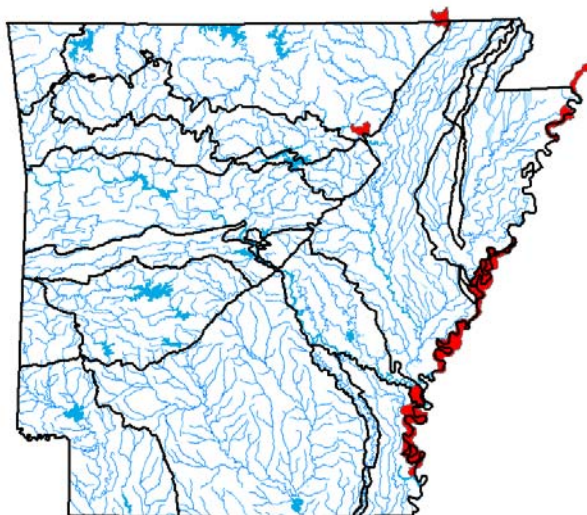
Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

Ozark Highlands - White River

**Habitats**

Natural Shoal: - Medium - Large

**Weight**

Optimal

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

Threat: Hydrological alteration

Source: Dam

**Data Gaps/Research Needs**

Conduct life history study.

Determine distribution and abundance.

Determine genetics of the Current River form.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in large river surveys.

**Comments**

Description: This species was long regarded as a subspecies of the mimic shiner, *N. volucellus* (McAllister et al. 2009). McAllister et al. (2009) reported collecting 211 channel shiners from the lower Arkansas and Mississippi rivers. Robison and Buchanan (1994) provided historical localities and noted the taxonomic status of the Current River form is unresolved. Distribution of the species is poorly understood.

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Noturus flavus*

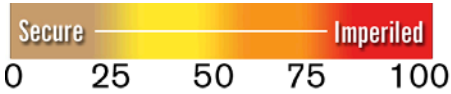
Stonecat

Class: Actinopterygii

Order: Siluriformes

Family: Ictaluridae

Priority Score: **29** out of 100



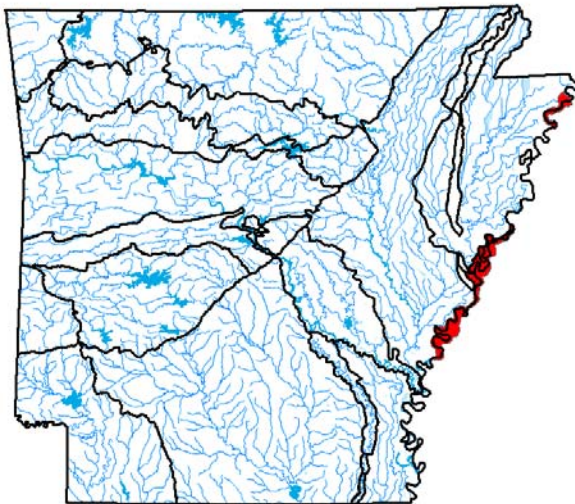
Population Trend: Decreasing

Global Rank: G5 — Secure

State Rank: S1 — Critically imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

**Habitats**

**Weight**

Natural Shoal:

Optimal

Natural Side channel:

Suitable

**Problems Faced**

Threat: Biological alteration  
Source: Exotic species

Threat: Chemical alteration  
Source: Urban development

Threat: Habitat destruction  
Source: Channel alteration

Threat: Toxins/contaminants  
Source: Agricultural practices

**Data Gaps/Research Needs**

Determine distribution and abundance in the  
Mississippi River.

Determine habitat requirements.

**Conservation Actions**

**Importance Category**

More data are needed to determine conservation  
actions.

Medium

Data Gap

**Monitoring Strategies**

Ensure location/occurrence records are compiled  
into the Arkansas Fish Database.

Monitor population distribution and abundance in  
large river surveys. Be aware that the species could  
possibly be discovered in clear streams in far  
Northwest Arkansas.

**Comments**

This primarily northern species inhabits the Mississippi River in Arkansas, but clear gravel-bed streams elsewhere. McAllister and others (2012) provided recent records for the *Noturus flavus* in Arkansas, which have all been collected using rotenone. This species has been collected from large rip rap dike habitat in the Mississippi River.

**Taxa Association Team and Peer Reviewers**

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*Noturus lachneri*

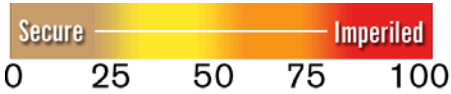
Ouachita Madtom

Class: Actinopterygii

Order: Siluriformes

Family: Ictaluridae

Priority Score: **46** out of 100



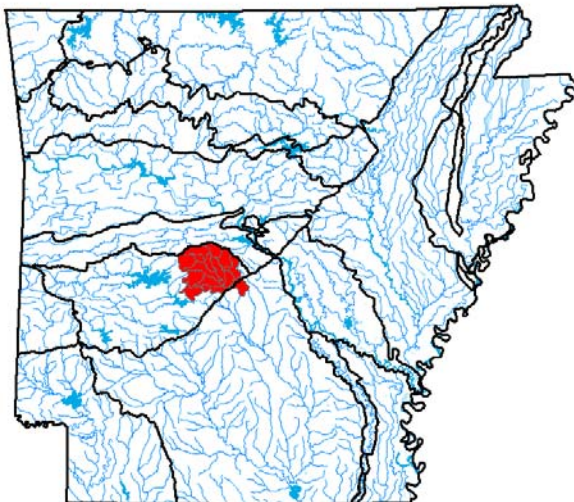
Population Trend: Unknown

Gobal Rank: G2 — Imperiled species

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Ouachita River

Habitats	Weight
Natural Glide: - Small - Medium	Obligate
Natural Pool: - Small - Medium	Marginal
Natural Riffle: - Small - Medium	Suitable

**Problems Faced**

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Resource extraction

Threat: Hydrological alteration  
Source: Water diversion

Threat: Sedimentation  
Source: Forestry activities

Threat: Sedimentation  
Source: Resource extraction

**Data Gaps/Research Needs**

Conduct distribution surveys.

Conservation Actions	Importance	Category
Maintain or, where necessary, restore instream aquatic habitat and substrate.	Medium	Habitat Restoration/Improvement

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

**Comments**

Description: A slender, elongate, brown to gray, uniformly colored, small catfish - maximum size 2.7 inches (Robison and Buchanan 1988).

This Ouachita endemic is found in the upper Saline River basin and one tributary of the Ouachita River (Robison and Harp 1985). Gagen and Stoeckel (1994) reported that madtoms in riffles die when the riffles dry and these areas are recolonized from pools the following season. Buchanan (2005) collected 329 specimens from 6 Saline River basin reservoirs (Balboa, Coronado, Cortez, DeSoto, Pineda, Winona). Stoeckel and others (2011) studied feeding and reproductive biology of the species.

**Taxa Association Team and Peer Reviewers**

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## *Noturus phaeus*

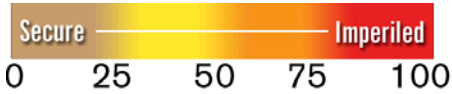
### Brown Madtom

**Class:** Actinopterygii

**Order:** Siluriformes

**Family:** Ictaluridae

**Priority Score:** 27 out of 100



**Population Trend:** Unknown

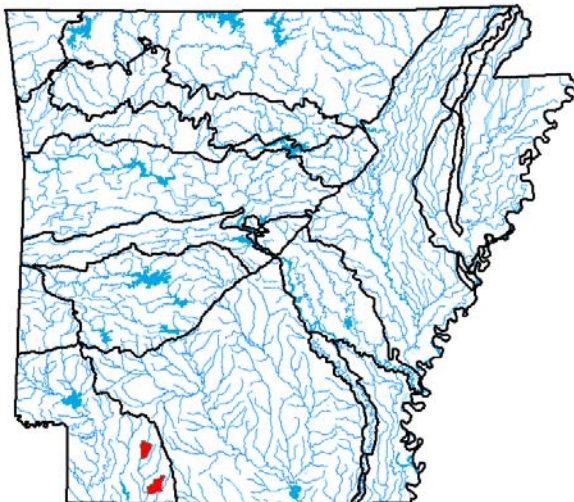
**Global Rank:** G4 — Apparently secure species

**State Rank:** S1? — Critically imperiled in Arkansas (inexact numeric rank)



## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

South Central Plains - Red River

Habitats	Weight
Natural Pool: - Small - Medium	Marginal
Natural Riffle: - Small - Medium	Optimal
Natural Run: - Small - Medium	Optimal
Natural Spring Run: - Small	Suitable

**Problems Faced**

Threat: Chemical alteration  
Source: Forestry activities

Threat: Chemical alteration  
Source: Resource extraction

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Forestry activities

Threat: Sedimentation  
Source: Forestry activities

Threat: Sedimentation  
Source: Resource extraction

**Data Gaps/Research Needs**

Conduct distribution surveys.

**Conservation Actions**

Conservation Actions	Importance	Category
Enhance and conserve the riparian corridor.	Medium	Habitat Restoration/Improvement
Use Best Management Practices for resource extraction.	Medium	Threat Abatement

**Monitoring Strategies**

More information is needed before a monitoring strategy can be developed.

**Comments**

Description: A heavy-bodied, brown, small catfish (Robison and Buchanan 1988).

This species has been reported from Bayou Dorcheat and a tributary to Horsehead Creek. The Bayou Dorcheat occurrence is the only one that is post-1972.

**Taxa Association Team and Peer Reviewers**

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*Noturus taylori*

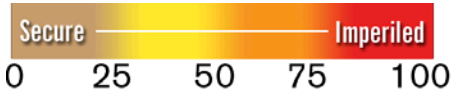
Caddo Madtom

Class: Actinopterygii

Order: Siluriformes

Family: Ictaluridae

Priority Score: **80** out of 100



Population Trend: Stable

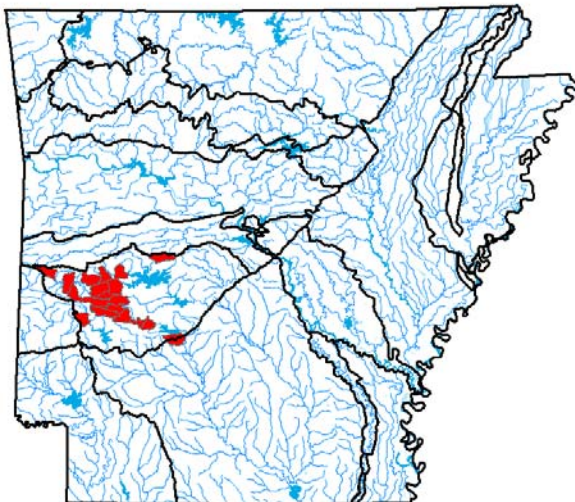
Gobal Rank: G1 — Critically imperiled species

State Rank: S1 — Critically imperiled in Arkansas



**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Ouachita Mountains - Ouachita River

Habitats	Weight
Natural Glide: - Small - Medium	Optimal
Natural Pool: - Small - Medium	Suitable
Natural Riffle: - Small - Medium	Marginal
Natural Run: - Small - Medium	Optimal

**Problems Faced**

Threat: Hydrological alteration  
Source: Dam

Threat: Hydrological alteration  
Source: Resource extraction

Threat: Sedimentation  
Source: Conversion of riparian forest

Threat: Sedimentation  
Source: Forestry activities

Threat: Sedimentation  
Source: Resource extraction

Threat: Sedimentation  
Source: Road construction

**Data Gaps/Research Needs**

Conduct distribution surveys.

Conduct life history study.

Conduct survey to identify spawning sites.

Conservation Actions	Importance	Category
Maintain or, where necessary, restore instream aquatic habitat and substrate.	Medium	Habitat Protection
Maintain or, where necessary, restore riparian habitat using appropriate river corridor management techniques.	High	Habitat Restoration/Improvement
Reduce sedimentation through Best Management Practices.	Medium	Threat Abatement

**Monitoring Strategies**

Monitor population distribution and abundance in ongoing stream faunal surveys.

## Comments

Description: An elongate, slender, small catfish with black dorsal saddles and a black tip on the dorsal fin (Robison and Buchanan 1988).

This species was described in 1972 from the upper Caddo River (Douglas 1972). The most recent work indicated that populations are stable (Robison 1993). Endemic to the south-central Ouachita Mountains (Upper Caddo, Little Missouri and Ouachita rivers). Relatively abundant in the Caddo, but uncommon in the Little Missouri and Ouachita rivers. Turner and Robison (2006) found high genetic divergence for the Caddo madtom between Ouachita and Caddo river systems ( $F_{st} = 0.71$ ) with a fixed allelic difference. Buchanan (2005) observed 612 madtoms in the Lake Ouachita that shared characteristics of both *N. miurus* and *N. taylori*.

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## Taxa Association Team and Peer Reviewers

AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Percina brucethompsoni*

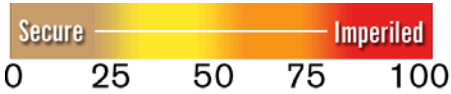
Ouachita Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **46** out of 100



Population Trend: Stable

Gobal Rank: G2? — Imperiled (inexact numeric rank)

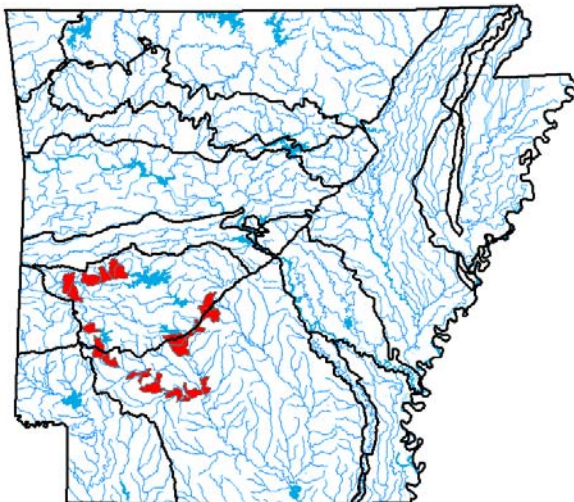
State Rank: S2 — Imperiled in Arkansas



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**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Ouachita Mountains - Ouachita River

South Central Plains - Ouachita River

**Habitats**

**Weight**

Natural Glide: - Medium

Obligate

Natural Pool: - Medium

Obligate

Natural Riffle: - Medium

Suitable

Natural Run: - Medium

Suitable

**Problems Faced**

Threat: Chemical alteration

Source: Non-point source pollution

Threat: Habitat destruction

Source: Dam

Threat: Hydrological alteration

Source: Dam

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Study population abundance and distribution.

**Conservation Actions**

**Importance Category**

More data are needed to determine conservation actions.

Medium

Data Gap

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in ongoing stream faunal surveys.

**Comments**

Description: A slender darter with a long head and pointed snout and dark blotches or bars on its sides (Robison and Buchanan 1988). This Ouachita River drainage endemic was recently described by Robison and others (2014), and they noted the species is never abundant at a locality. Caldwell (2011) reported density of the Ouachita darter was higher in transition areas flooded by Lake Ouachita (1.36 fish/100 m<sup>2</sup>) than in the upstream Ouachita River (0.24 fish/100 m<sup>2</sup>).

Present at all historic localities and no apparent decline overall (Robison 1992b).

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*Percina evides*

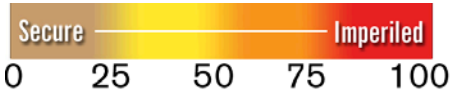
Gilt Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

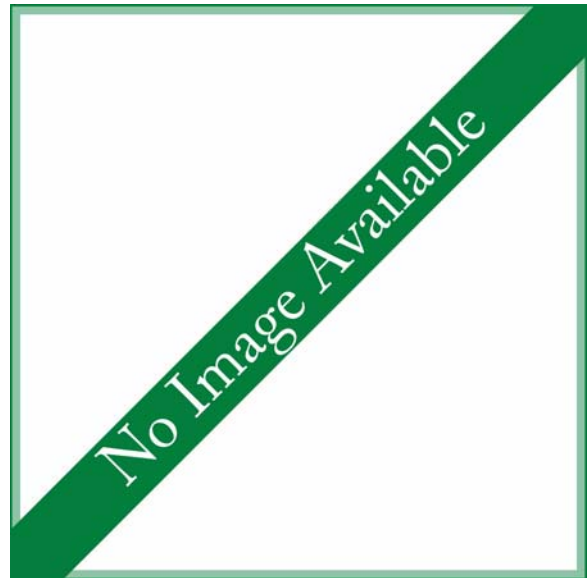
Priority Score: **19** out of 100



Population Trend: Unknown

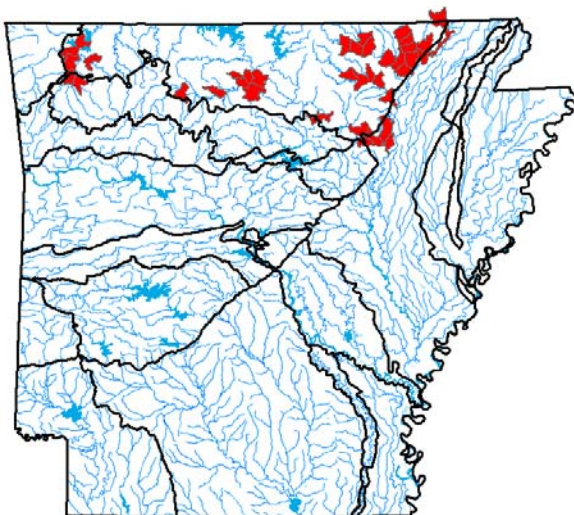
Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Boston Mountains - White River

Mississippi River Alluvial Plain - White River

Ozark Highlands - White River

Habitats	Weight
Natural Glide: - Medium	Suitable
Natural Pool: - Medium	Suitable
Natural Riffle: - Medium	Obligate

**Problems Faced**

Threat: Habitat destruction  
Source: Resource extraction

Threat: Hydrological alteration  
Source: Dam

Threat: Nutrient loading  
Source: Agricultural practices

Threat: Riparian habitat destruction  
Source: Agricultural practices

Threat: Sedimentation  
Source: Agricultural practices

Threat: Sedimentation  
Source: Road construction

**Data Gaps/Research Needs**

Conduct baseline population surveys.

Conduct life history study.

Conservation Actions	Importance	Category
Establish and enhance riparian corridors.	High	Habitat Restoration/Improvement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in stream faunal surveys.

**Comments**

Robison and Buchanan (1988) noted the species has been eliminated from areas impacted by the construction of Beaver Dam. Gilt darter was among the top 4 species collected by trawling in the Current, Eleven Point, Spring and Strawberry rivers (Rigsby 2009).

**Taxa Association Team and Peer Reviewers**

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*Percina nasuta*

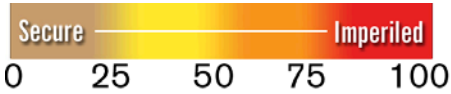
Longnose Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **27** out of 100



Population Trend: Stable

Gobal Rank: G3 — Vulnerable species

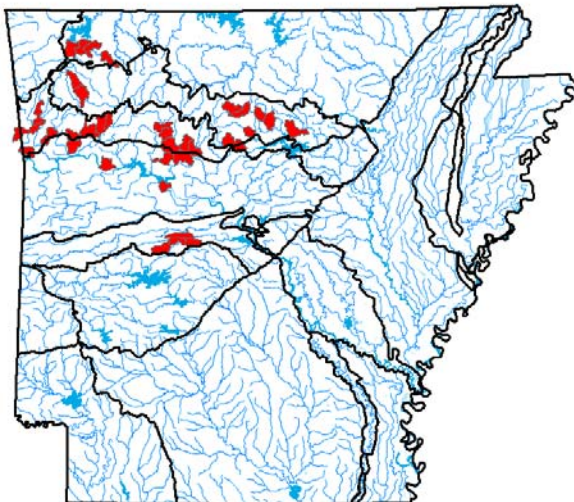
State Rank: S3 — Vulnerable in Arkansas



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**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Boston Mountains - Arkansas River

Boston Mountains - White River

Ouachita Mountains - Arkansas River

Ozark Highlands - White River

**Habitats**

**Weight**

Man-made Littoral: - Large

Suitable

Natural Glide: - Medium

Obligate

Natural Pool: - Medium

Obligate

Natural Riffle: - Medium

Suitable

Natural Run: - Medium

Suitable

**Problems Faced**

Threat: Hydrological alteration

Source: Channel alteration

Threat: Hydrological alteration

Source: Dam

Threat: Sedimentation

Source: Grazing/Browsing

Threat: Sedimentation

Source: Resource extraction

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Assess distribution and abundance in lakes and large stream pools.

**Conservation Actions**

**Importance**

**Category**

Maintain watershed condition by enforcing Best Management Practices for highway construction, urban development, agriculture and silviculture.

High

Threat Abatement

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

Monitor population distribution and abundance in ongoing stream faunal surveys.

## Comments

Description: A slender darter with a long head and pointed snout and dark blotches or bars on its sides (Robison and Buchanan 1988).

While rare, this darter persists throughout its historical distribution (Robison 1992a). Arkansas Department of Environmental Quality biologists captured 99 specimens from nine Boston Mountain streams during 2014 (Tate Wentz, personal communication). Buchanan (2005) captured 7 specimens from Greers Ferry Lake, where the species was regularly captured by AGFC biologists during rotenone sampling.

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*Percina pantherina*

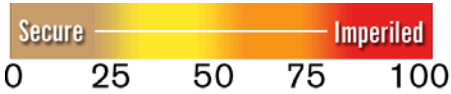
Leopard Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **62** out of 100



Population Trend: Decreasing

Global Rank: G2 — Imperiled species

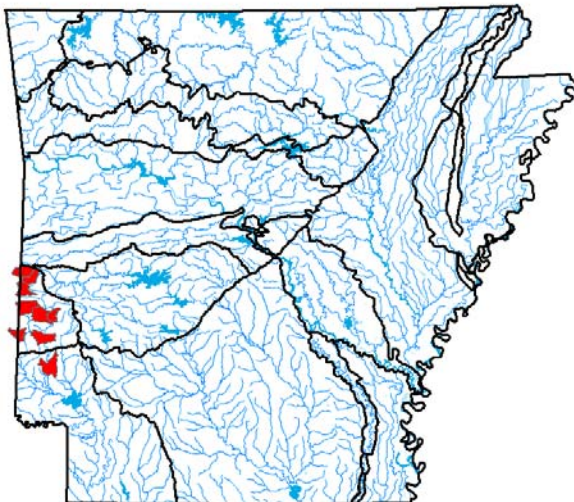
State Rank: S1 — Critically imperiled in Arkansas



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**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



**Ecobasins**

Ouachita Mountains - Red River

South Central Plains - Red River

**Habitats**

**Weight**

Natural Pool: - Medium

Obligate

Natural Riffle: - Medium

Optimal

Natural Run: - Medium

Suitable

**Problems Faced**

Threat: Chemical alteration

Source: Conversion of riparian forest

Threat: Habitat destruction

Source: Dam

Threat: Hydrological alteration

Source: Dam

Threat: Nutrient loading

Source: Municipal/Industrial point source

Threat: Sedimentation

Source: Forestry activities

Threat: Sedimentation

Source: Road construction

**Data Gaps/Research Needs**

Conduct spawning site survey.

Determine if the Robinson Fork population has been extirpated.

Determine the amount of thermally suitable habitat for the species.

**Conservation Actions**

**Importance Category**

Protect, enhance and restore habitat.

High

Habitat Restoration/Improvement

Support Cossatot River State Park educational program.

Medium

Public Relations/Education

**Monitoring Strategies**

Monitor results of annual joint surveys by USFS, FWS and AGFC.



## Comments

Description: A medium-sized, greenish darter with 10-14 distinct spots along the side (Robison and Buchanan 1988).

This species is listed as threatened under the Endangered Species Act due to impoundments, silviculture, agriculture, industry, and gravel removal (USFWS 1984). USFWS and Ouachita National Forest monitoring indicates declining populations in the Cossatot and Robinson Fork rivers (Richard Standage, USFS, personal communication). Schwemm (2013) noted extremely small genetic effective population sizes, and Arkansas populations appear highly susceptible to extinction. Population monitoring using snorkeling and eDNA techniques is planned for 2015-2017. The Arkansas fish Taxa Team recommends that the G-rank calculator be used with new genetics and trend data to revise the score for this species. This species priority score appears low considering the low genetically effective population size for the species.

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*Percina phoxocephala*

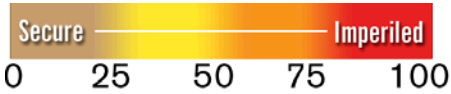
Slenderhead Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **19** out of 100



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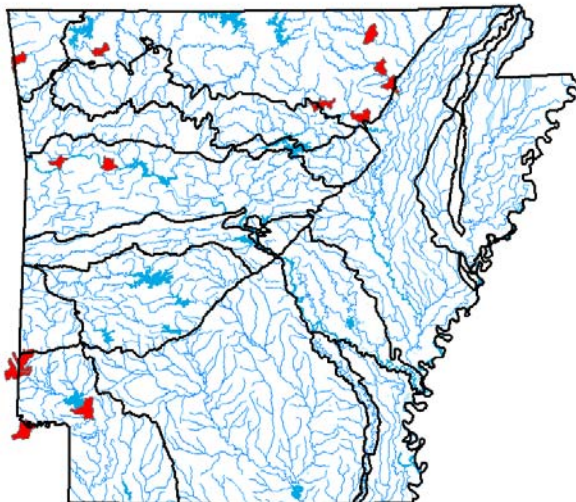
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

---

Ozark Highlands - Arkansas River

---

Ozark Highlands - White River

---

South Central Plains - Red River

---

**Habitats**

**Weight**

Man-made Littoral: - Large

Marginal

Natural Pool: - Small - Medium

Suitable

Natural Riffle: - Small - Medium

Optimal

Natural Side channel: - Large

Suitable

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

---

Threat: Habitat destruction

Source: Grazing/Browsing

---

Threat: Sedimentation

Source: Channel maintenance

---

Threat: Sedimentation

Source: Grazing/Browsing

---

Threat: Sedimentation

Source: Road construction

---

**Data Gaps/Research Needs**

Conduct distribution study.

---

Conduct genetic relationship study with morphologically similar but disjunct populations.

---

Conduct habitat preference study.

---

**Conservation Actions**

**Importance Category**

More data is needed are determine other conservation actions.

Medium

Data Gap

---

Use Best Management Practices in applicable watersheds.

---

Medium

Threat Abatement

**Monitoring Strategies**

More information is needed before a monitoring strategy can be developed.

---

## Comments

Description: A medium-sized, yellow-brown darter with 10-15 indistinct blotches along the side (Robison and Buchanan 1988).

Rarely occurs in the Arkansas River drainage of northwest Arkansas (Robison and Buchanan 1988). This is the most widely distributed member of its subgenus, *Swainia*, ranging from Oklahoma east to Pennsylvania and north to Wisconsin (Page and Smith 1971).

The taxonomic status of specimens from the White River, Ozark Mountains Ecoregion is uncertain at this time (Robison and Buchanan 1988). Buchanan (2005) captured 4 specimens in two Arkansas River reservoirs (Lake Dardanelle, Ozark Lake).

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## Taxa Association Team and Peer Reviewers

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*Percina uranidea*

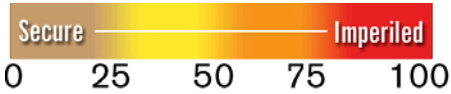
Stargazing Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **38** out of 100



Population Trend: Decreasing

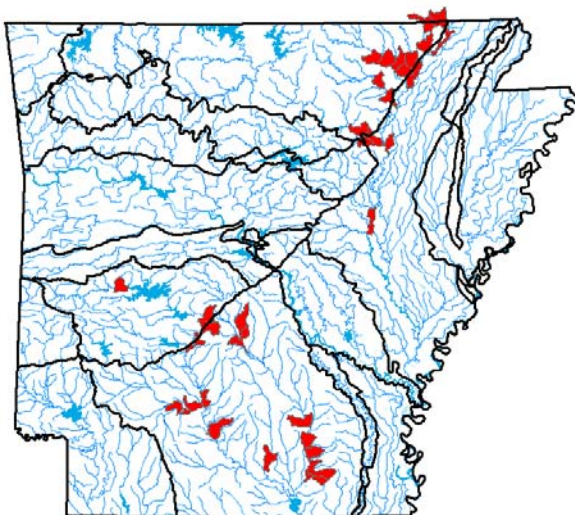
Gobal Rank: G3 — Vulnerable species

State Rank: S2 — Imperiled in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - White River

---

Ouachita Mountains - Ouachita River

---

Ozark Highlands - White River

---

South Central Plains - Ouachita River

---

**Habitats**

**Weight**

Natural Riffle: - Medium

Optimal

Natural Run: - Medium

Optimal

**Problems Faced**

Threat: Habitat destruction

Source: Dam

---

Threat: Habitat destruction

Source: Resource extraction

---

Threat: Sedimentation

Source: Forestry activities

---

Threat: Sedimentation

Source: Grazing/Browsing

---

Threat: Sedimentation

Source: Road construction

---

**Data Gaps/Research Needs**

Conduct distribution and abundance study.

---

Conduct genetic study of disjunct populations.

---

Conduct life history study of Black River drainage population.

---

**Conservation Actions**

**Importance Category**

Reduce sediment through Best Management Practices.

Medium

Threat Abatement

---

**Monitoring Strategies**

More information is needed before a monitoring strategy can be developed.

---

## Comments

Description: A robust darter with 4 dark saddles and eyes closely set high on the head (Robison and Buchanan 1988). Prefers clear water and is intolerant of silt - extirpated in Illinois and Indiana (Robison and Buchanan 1988).

Rigsby (2009) used mitochondrial DNA to conclude that disjunct populations in the Ouachita and Black river drainages are divergent and should be considered separate management units.

Populations in the Black River drainage are large and stable (Rigsby 2009; Stroman 2014). Populations in the Ouachita River drainage have declined. Rigsby (2009) did not detect the species in the Saline River, and Stroman (2014) collected only 4 specimens at two lower Saline River sites and one Ouachita River site. Caldwell (2011) only captured stargazing darters (0.26 fish/100 m<sup>2</sup>) in the transition area of the Ouachita River that is flooded by Lake Ouachita.

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*Percina vigil*

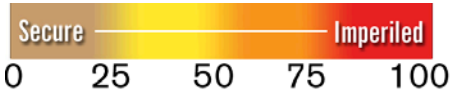
Saddleback Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **15** out of 100



Population Trend: Stable

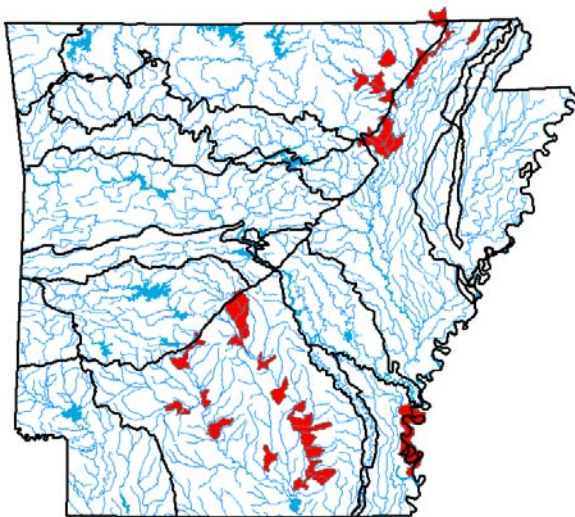
Global Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas



**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

---

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

---

Ouachita Mountains - Ouachita River

---

Ozark Highlands - White River

---

South Central Plains - Ouachita River

---

**Habitats**

Natural Glide: - Medium

**Weight**

Suitable

Natural Pool: - Medium

Suitable

Natural Riffle: - Medium

Optimal

**Problems Faced**

Threat: Habitat destruction  
Source: Resource extraction

---

Threat: Habitat destruction  
Source: Urban development

---

Threat: Habitat disturbance  
Source: Agricultural practices

---

Threat: Hydrological alteration  
Source: Dam

---

Threat: Nutrient loading  
Source: Agricultural practices

---

Threat: Riparian habitat destruction  
Source: Agricultural practices

---

Threat: Sedimentation  
Source: Road construction

---

**Data Gaps/Research Needs**

Conduct baseline population surveys.

---

Conduct life history study.

---

**Conservation Actions**

**Importance**

**Category**

Establish and enhance riparian corridors.

High

Habitat Restoration/Improvement

---

**Monitoring Strategies**

Ensure location/occurrence records are compiled into the Arkansas Fish Database.

---

Monitor population distribution and abundance in stream faunal surveys.

---

## Comments

The saddleback darter is often collected in shallow riffle habitat. Rigsby (2009) collected 503 individuals from 53 of 186 sites sampled from 2006-2008.

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## Taxa Association Team and Peer Reviewers

AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

*Phenacobius mirabilis*

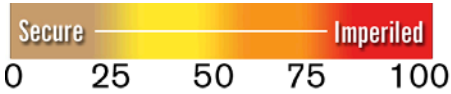
Suckermouth Minnow

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **23** out of 100



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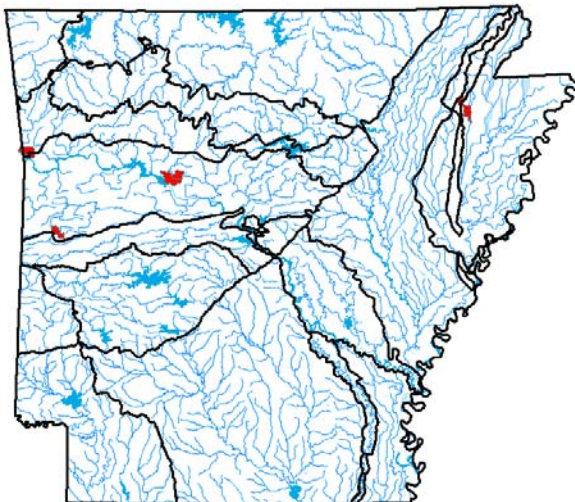
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S1? — Critically imperiled in Arkansas (inexact numeric rank)

**Distribution**

Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Ouachita Mountains - Arkansas River

**Habitats**

Natural Riffle: - Small - Medium

Natural Run: - Small - Medium

**Weight**

Obligate

Optimal

**Problems Faced**

Threat: Habitat destruction

Source: Channel alteration

Threat: Habitat destruction

Source: Dam

Threat: Habitat destruction

Source: Resource extraction

Threat: Habitat destruction

Source: Urban development

**Data Gaps/Research Needs**

Conduct distribution surveys with emphasis on Red River tributaries and Mississippi Alluvial Plain streams.

**Conservation Actions**

Maintain or, where necessary, restore habitat.

**Importance Category**

Medium

Habitat Restoration/Improvement

**Monitoring Strategies**

More information is needed before a monitoring strategy can be developed.

**Comments**

Description: A fairly large, streamlined minnow with a blunt snout and sucker-like mouth (Robison and Buchanan 1988).

Rare in Arkansas, with only one collection since 1940 (Robison and Buchanan 1988).

**Taxa Association Team and Peer Reviewers**

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*Platygobio gracilis*

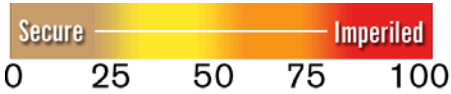
Flathead Chub

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **23** out of 100



©G. W. Sneegee

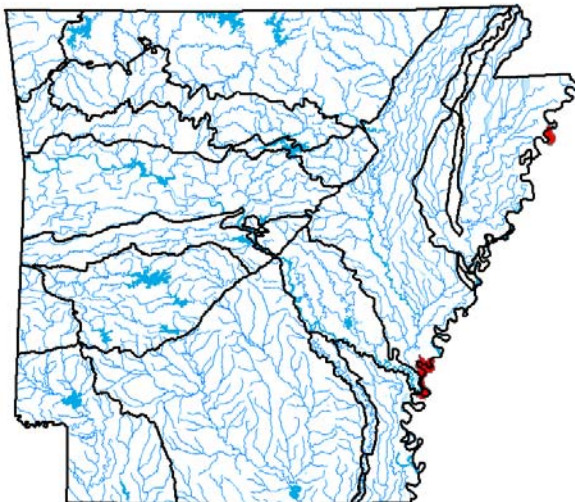
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: SH — Historic record. Possibly extirpated in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

**Habitats**

**Weight**

Natural Pool: - Large

Suitable

Natural Shoal: - Large

Optimal

**Problems Faced**

Threat: Habitat destruction  
Source: Channel alteration

Threat: Hydrological alteration  
Source: Dam

Threat: Sedimentation  
Source: Channel maintenance

**Data Gaps/Research Needs**

Conduct distribution study.

**Conservation Actions**

**Importance Category**

Additional conservation actions will be determined based on distributional surveys.

Medium Data Gap

Maintain or restore natural flow, sediment and temperature regimes.

Medium Habitat Restoration/Improvement

**Monitoring Strategies**

Monitor distribution and abundance with general large river surveys.

**Comments**

Description: A large, silvery chub reaching 9 inches maximum length (Robison and Buchanan 1988).

Known in Arkansas from only 3 collections on the Mississippi River (Robison and Buchanan 1988). It inhabits turbid, alkaline waters with shifting sand substrate (Tibbs 1998).

**Taxa Association Team and Peer Reviewers**

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*Polyodon spathula*

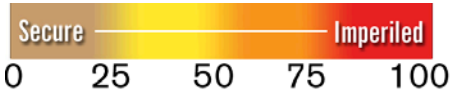
Paddlefish

Class: Actinopterygii

Order: Acipenseriformes

Family: Polyodontidae

Priority Score: **24** out of 100



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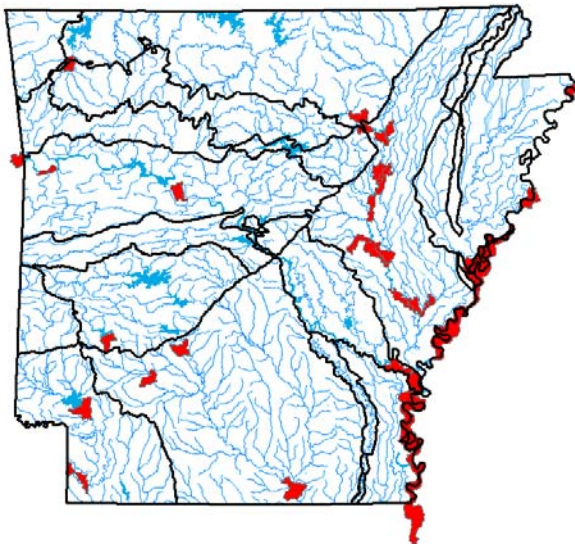
Population Trend: Decreasing

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Arkansas Valley - Arkansas River

Boston Mountains - White River

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

Ouachita Mountains - Ouachita River

Ozark Highlands - White River

South Central Plains - Ouachita River

South Central Plains - Red River

**Habitats**

**Weight**

Man-made Pelagic: - Large	Optimal
Man-made Pool: - Large	Optimal
Natural Oxbow - connected: - Large	Suitable
Natural Oxbow - disconnected: - Large	Suitable
Natural Pelagic: - Large	Optimal
Natural Pool: - Medium - Large	Optimal
Natural Shoal: - Large	Obligate
Natural Side channel: - Large	Suitable
Natural Slough: - Medium - Large	Suitable

**Problems Faced**

Threat: Biological alteration  
Source: Commercial harvest

---

Threat: Biological alteration  
Source: Exotic species

---

Threat: Habitat destruction  
Source: Channel alteration

---

Threat: Habitat destruction  
Source: Channel maintenance

---

Threat: Habitat destruction  
Source: Dam

---

Threat: Habitat destruction  
Source: Resource extraction

---

Threat: Hydrological alteration  
Source: Dam

---

Threat: Hydrological alteration  
Source: Water diversion

---

Threat: Sedimentation  
Source: Channel maintenance

---

Threat: Sedimentation  
Source: Dam

---

**Data Gaps/Research Needs**

Conduct spawning sites survey.

---

Determine the impacts of introduced Asian carp on paddlefish populations.

---

**Conservation Actions**

	<b>Importance</b>	<b>Category</b>
Implement the Arkansas Game and Fish Commission paddlefish and sturgeon management plan.	Medium	Population Management
Maintain adequate instream flow and natural flow regime.	High	Habitat Protection
Manage and monitor a conservative commercial harvest.	Medium	Population Management
Schedule channel maintenance to accommodate spawning.	Medium	Threat Abatement
Work across political boundaries to manage an inter-jurisdictional fish.	Medium	Public Relations/Education

## Monitoring Strategies

Monitor commercial harvest.

---

Monitor export of this species through Convention on International Trade of Endangered Species (CITES).

---

Monitor population distribution and abundance in ongoing large river faunal surveys.

---

## Comments

Description: A very large (maximum length 60 inches), scaleless, cartilaginous fish with an elongated paddle-like nose or rostrum (Robison and Buchanan 1988).

Found in most of the large rivers in Arkansas; harvest for the caviar industry is impacting size structure and recruitment in some areas (Quinn and others 2009; Leone and others 2012; Sharov and others 2014). Paddlefish habitat use and spawning areas were determined for Ozark Lake (Donabauer and others 2009), and studies are underway to evaluate habitat use on Lake Dardanelle.

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*Pteronotropis hubbsi*

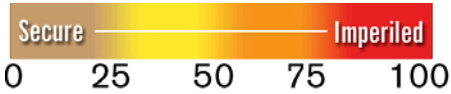
Bluehead Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **33** out of 100



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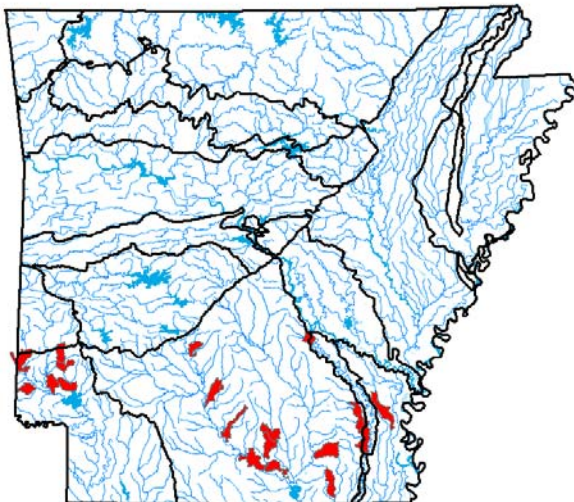
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River

---

Mississippi River Alluvial Plain (Lake Chicot) - Mississippi River

---

South Central Plains - Ouachita River

---

South Central Plains - Red River

---

**Habitats**

**Weight**

Natural Other: Headwater

Suitable

Natural Oxbow - disconnected: - Small

Suitable

Natural Pool: Headwater

Optimal

**Problems Faced**

Threat: Chemical alteration  
Source: Resource extraction

---

Threat: Habitat destruction  
Source: Channel alteration

---

Threat: Habitat destruction  
Source: Forestry activities

---

Threat: Habitat destruction  
Source: Resource extraction

---

Threat: Sedimentation  
Source: Forestry activities

---

Threat: Sedimentation  
Source: Resource extraction

---

**Data Gaps/Research Needs**

Determine population status.

---

Determine populations for monitoring.

---

Determine spawning migration patterns.

---

**Conservation Actions**

**Importance**

**Category**

Conserve and enhance habitat. Implement non-point source Best Management Practices.

Medium

Habitat Restoration/Improvement

---

Conserve and enhance riparian buffer zones.

Medium

Habitat Restoration/Improvement

---

Minimize migration barriers.

Medium

Habitat Protection

---

**Monitoring Strategies**

Monitor known populations every 3-5 years.

---

## Comments

Description: A small (2.5 inches maximum length), slab-sided minnow with a broad black lateral stripe and iridescent blue on top of head (Robison and Buchanan 1988).

The species typically inhabits quiet backwaters of sluggish streams and oxbow lakes and spawns in association with sunfish nests (Ranvestel and Burr 2002).

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Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry



# *Scaphirhynchus albus*

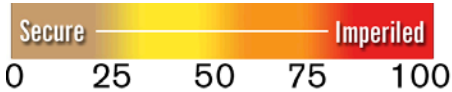
## Pallid Sturgeon

**Class:** Actinopterygii

**Order:** Acipenseriformes

**Family:** Acipenseridae

**Priority Score:** 48 out of 100



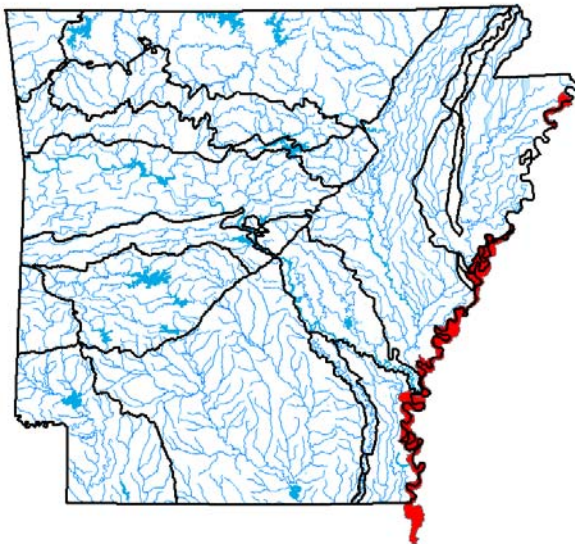
**Population Trend:** Unknown

**Global Rank:** G2 — Imperiled species

**State Rank:** S1S2 — Critically imperiled in Arkansas (uncertain rank)

## Distribution

### Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Mississippi River Alluvial Plain - White River

Mississippi River Alluvial Plain (Lake Chicot) -  
Mississippi River

**Habitats**

Natural Pool: - Large

**Weight**

Obligate

**Problems Faced**

Threat: Biological alteration  
Source: Crossbreeding

Threat: Habitat destruction  
Source: Channel maintenance

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Resource extraction

Threat: Hydrological alteration  
Source: Dam

**Data Gaps/Research Needs**

Conduct spawning sites survey.

Determine catch rates for pallid sturgeon in the lower  
Arkansas and St. Francis rivers during winter.

Determine use and importance of tributaries like the  
St. Francis and Arkansas rivers to the life history of  
the species.

Further genetic study is needed to understand the  
hybridization issue with shovelnose sturgeon.

**Conservation Actions**

**Importance Category**

Attempt to restore the Mississippi River's hydrologic  
integrity.

Medium

Habitat Restoration/Improvement

Work with the lower basin pallid sturgeon work group  
to implement the pallid sturgeon recovery plan.

High

Population Management

**Monitoring Strategies**

Work with the Lower Mississippi River Conservation  
Committee and Mississippi Interstate Cooperative  
Resource Association to share information on the  
distribution, habitat preferences and abundance of  
the species across its range.

## Comments

Description: A pale sturgeon with a flattened, shovel-shaped snout and a long, slender caudal peduncle (Robison and Buchanan 1988).

This species was listed as endangered under the Endangered Species Act, due to impacts on its large river habitats (USFWS 1993). A large research program has greatly increased understanding of this Mississippi River species, and over 500 pallid sturgeon have been captured during the past 10 years (e.g., Kilgore and others 2007). Habitat selection was documented by Herralá and others (2014), and the species was detected using the lower Arkansas River during two consecutive winters. Shovelnose sturgeon were listed based on similarity of appearance with pallid sturgeon to eliminate the threat of accidental and illegal commercial harvest (Federal Register 2010). The U.S. Army Corps of Engineers (2013) recently developed a 7(a)(1) conservation plan for pallid sturgeon.

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## Taxa Association Team and Peer Reviewers

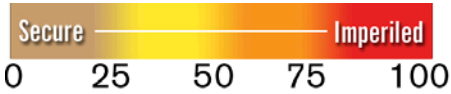
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

# *Troglichthys rosae*

## Ozark Cavefish

**Class:** Actinopterygii  
**Order:** Percopsiformes  
**Family:** Amblyopsidae

**Priority Score:** 43 out of 100



**Population Trend:** Decreasing

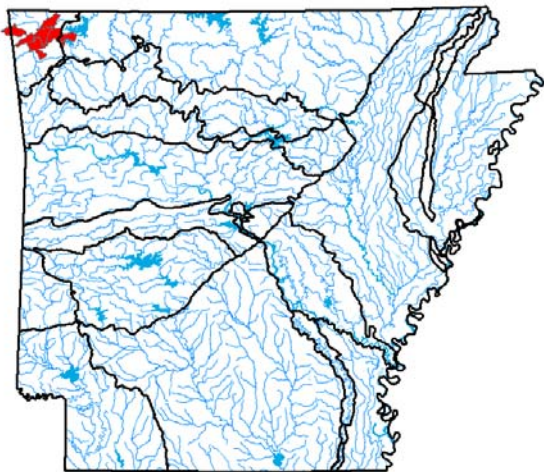
**Global Rank:** G3 — Vulnerable species

**State Rank:** S1 — Critically imperiled in Arkansas



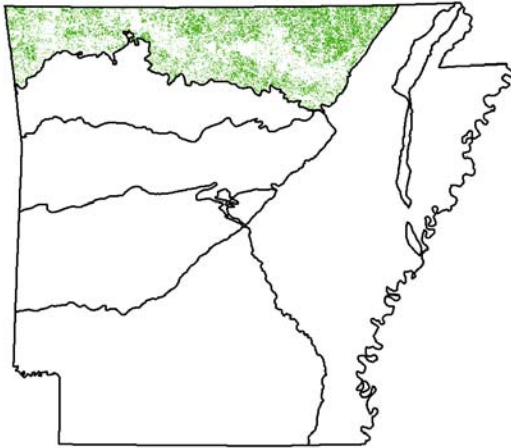
## Distribution

### Element Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Arkansas Valley
- Ouachita Mountains
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



Terrestrial Habitats



**Ecobasins**

Ozark Highlands - Arkansas River

Ozark Highlands - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Obligate

Natural Groundwater: Headwater - Small      Obligate

Natural Spring Run: Headwater - Small      Marginal

**Problems Faced**

Threat: Biological alteration  
Source: Recreation

---

Threat: Chemical alteration  
Source: Confined animal operations

---

Threat: Chemical alteration  
Source: Urban development

---

Threat: Hydrological alteration  
Source: Urban development

---

Threat: Hydrological alteration  
Source: Water diversion

---

Threat: Nutrient loading  
Source: Confined animal operations

---

Threat: Nutrient loading  
Source: Urban development

---

**Data Gaps/Research Needs**

Search for new populations.

---

**Conservation Actions**

**Importance Category**

Protect karst habitats and cave recharge zones.	High	Habitat Protection
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Restrict access to caves with sensitive species.	High	Threat Abatement
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**Monitoring Strategies**

Conduct visual surveys of known populations biannually.

---

## Comments

Description: A small, eyeless, unpigmented fish with an elongated, flattened head and a rounded tail fin (Robison and Buchanan 1988).

This species was listed as threatened under the Endangered Species Act, due to habitat destruction, collection, and disturbance (USFWS 1988). Joint surveys are conducted biennially by a survey team from AGFC, USFWS, Arkansas Natural Heritage Commission, and The Nature Conservancy. The team is also actively working with developers in the rapidly growing northwest Arkansas portion of this species' range to minimize impacts on its habitat (David Kampwerth, personal communication). Graening and others (2010) indicated the species appears to be stable. The locations with the largest observable populations are under conservation ownership, with USFWS protecting Logan Cave and ANHC protecting Cave Springs Cave. The Illinois River Watershed Partnership development of educational facilities adjacent to Cave Springs Cave provides good opportunities for education, but may also increase illegal human entry to the cave.

Arkansas has the large majority of observed individuals and ranks the species as an S1, Oklahoma also ranks it as S1, and Missouri ranks it as S2 based on based on a larger number of locations with rare sightings. In light of this, the global rank of G3 may be too high. The USFWS categorizes the population trend for this species as <30% to relatively stable, citing that 10 populations are stable, 6 have declined and 25 are undetermined. The long-term trend is a decline of 10-70% (USFWS 2011).

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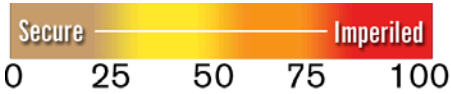


# *Typhlichthys subterraneus*

## Southern Cavefish

Class: Actinopterygii  
 Order: Percopsiformes  
 Family: Amblyopsidae

Priority Score: **27** out of 100



Population Trend: Unknown

Global Rank: G4 — Apparently secure species

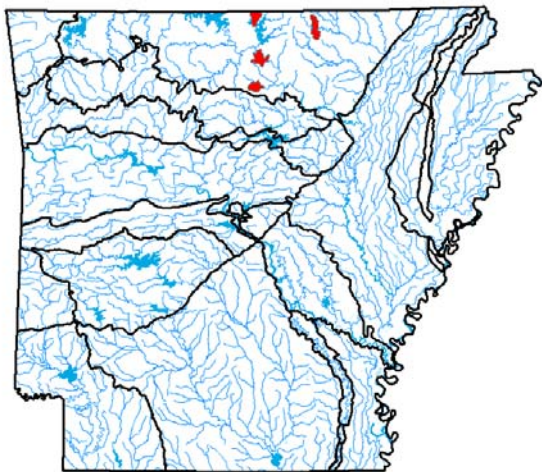
State Rank: S1 — Critically imperiled in Arkansas



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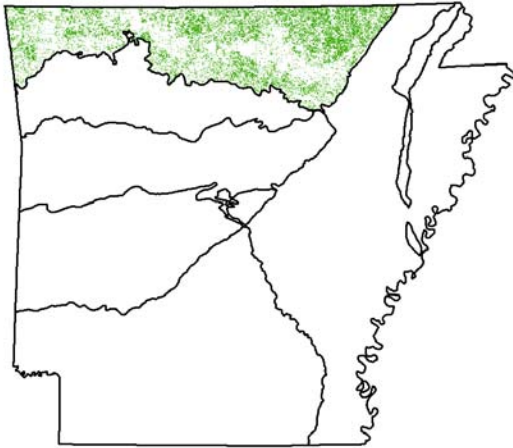
## Distribution

### Element Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Arkansas Valley
- Ouachita Mountains
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains



Terrestrial Habitats



**Ecobasins**

Ozark Highlands - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Obligate

Natural Groundwater: Headwater - Small      Obligate

Natural Spring Run: Headwater - Small      Marginal

**Problems Faced**

Threat: Habitat destruction  
Source: Dam

Threat: Habitat destruction  
Source: Recreation

Threat: Hydrological alteration  
Source: Water diversion

Threat: Nutrient loading  
Source: Confined animal operations

Threat: Nutrient loading  
Source: Grazing/Browsing

Threat: Toxins/contaminants  
Source: Non-point source pollution

**Data Gaps/Research Needs**

Conduct distribution surveys.

Conduct genetic studies of this and other cavefish species in Arkansas.

Delineate and monitor recharge areas.

Describe new Ozark species.

**Conservation Actions**

**Importance Category**

Limit cave access for recreational uses.

Medium Threat Abatement

Limit take by scientific investigators.

Medium Threat Abatement

Protect karst habitats and cave recharge zones.

High Habitat Protection

Public outreach and education with local landowners and rural communities.

Medium Public Relations/Education

Restrict access to caves with sensitive species.

High Threat Abatement

Use of Best Management Practices within cave recharge zone.

High Threat Abatement

**Monitoring Strategies**

Coordinate sampling with other scientific efforts and monitor no more than once every two years.

**Comments**

Description: A small, eyeless, unpigmented fish with an elongated, flattened head and a rounded tail fin (Robison and Buchanan 1988).

There are a small number of historic records of this species from wells and caves in the eastern Ozarks of Arkansas (Robison and Buchanan 1988). Ozark populations of the species appear to be a new species (Romero and Conner 2007; Niemiller and others 2011), thus the G-score and priority score for this species are functionally too low and need revision.

**Taxa Team and Peer Reviewers**

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*Umbra limi*

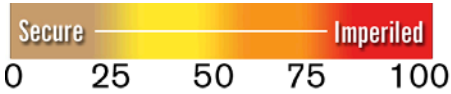
Central Mudminnow

Class: Actinopterygii

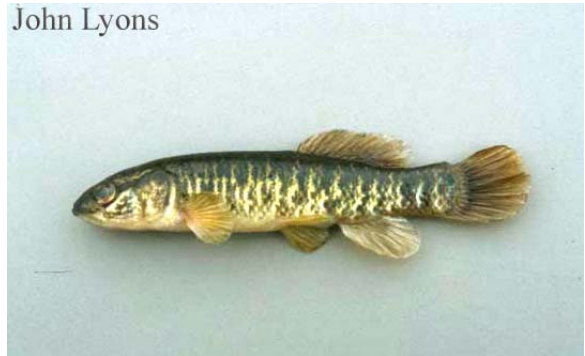
Order: Esociformes

Family: Esocidae

Priority Score: **23** out of 100



John Lyons



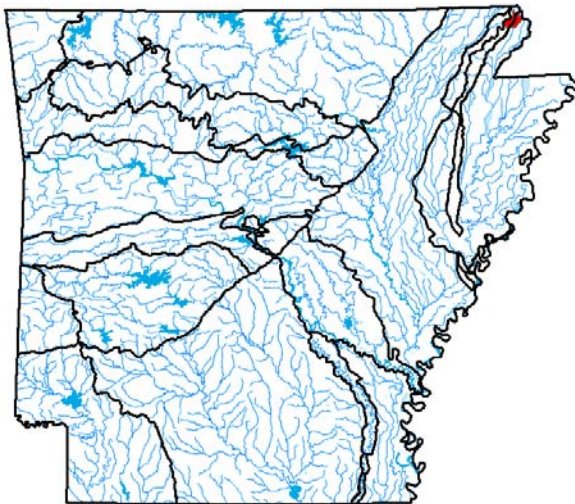
Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: SH — Historic record. Possibly extirpated in Arkansas

**Distribution**

**Occurrence Records**



Ecoregions where the species occurs:

- Ozark Highlands
- Boston Mountains
- Ouachita Mountains
- Arkansas Valley
- South Central Plains
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

**Ecobasins**

Mississippi River Alluvial Plain - St. Francis River

Habitats	Weight
Natural Pool:	Suitable
Natural Swamp/Wetlands:	Suitable

**Problems Faced**

Threat: Habitat destruction  
 Source: Agricultural practices

Threat: Habitat destruction  
 Source: Channel alteration

**Data Gaps/Research Needs**

Determine distribution and abundance.

Conservation Actions	Importance	Category
More data are needed to determine conservation actions.	Medium	Data Gap

**Comments**

This northern species has only been collected once in Arkansas during 1894 in Clay County. Evidently, a large population occurs in Reelfoot Lake, Tennessee (Pflieger 1997). This species is highly tolerant of low dissolved oxygen and often lives in swamps.

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