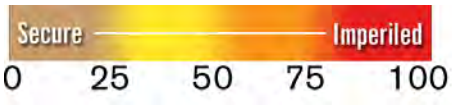
Acipenser fulvescens

Lake Sturgeon

Class: Actinopterygii
Order: Acipenseriformes
Family: Acipenseridae

Priority Score: 27 out of 100



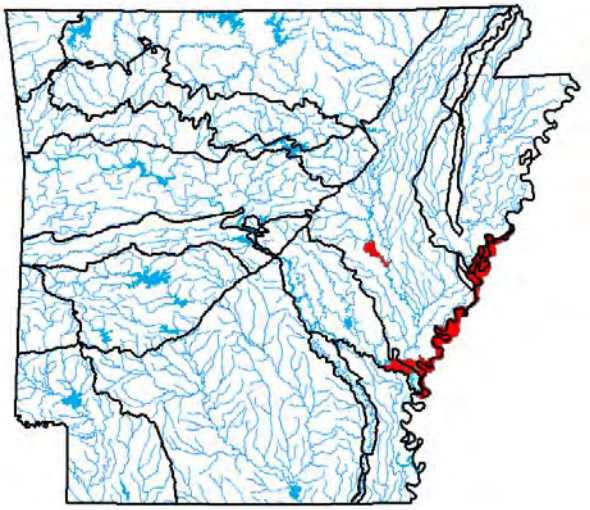
Population Trend: Unknown

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
Mississippi River Alluvial Plain - St. Francis River
Mississippi River Alluvial Plain - White River
Mississippi River Alluvial Plain (Lake Chicot) - Mississippi River

Habitats

	Weight
Natural Littoral: - Large	Suitable
Natural Pool: - Medium - Large	Optimal
Natural Shoal: - Medium - Large	Obligate

Problems Faced

Threat: Biological alteration Source: Commercial harvest
Threat: Biological alteration Source: Exotic species
Threat: Biological alteration Source: Incidental take
Threat: Habitat destruction Source: Channel alteration
Threat: Hydrological alteration Source: Dam

Data Gaps/Research Needs

Continue to track incidental catches.

Conservation Actions

	Importance	Category
Restore fish passage in dammed rivers.	High	Habitat Restoration/Improvement
Restrict commercial harvest (Mississippi River closed to harvest).	High	Population Management

Monitoring Strategies

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

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.

Taxa Association Team and Peer Reviewers

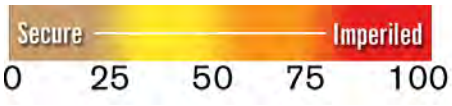
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Alosa alabamae

Alabama Shad

Class: Actinopterygii
Order: Clupeiformes
Family: Clupeidae

Priority Score: **52** **out of 100**



©Native Fish Conservancy

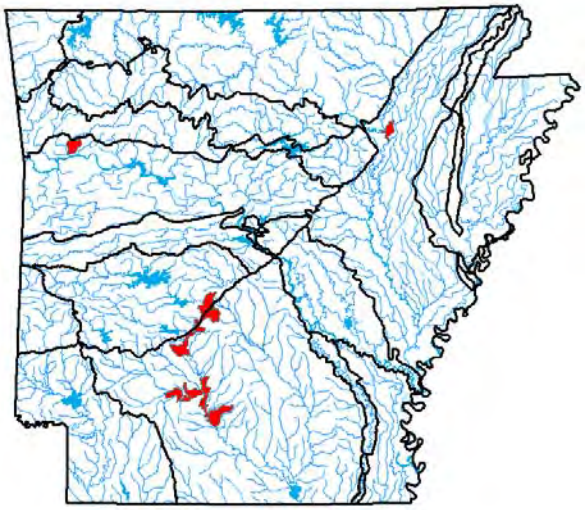
Population Trend: Decreasing

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
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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
Ouachita Mountains - Ouachita River
South Central Plains - Ouachita River

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
Threat: Hydrological alteration Source: Channel maintenance
Threat: Hydrological alteration Source: Dam
Threat: Sedimentation Source: unknown
Threat: Temperature alteration Source: Dam

Data Gaps/Research Needs

Conduct status and distribution surveys.
Study migration, fish passage, and mortality at hydropower dams.

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
Work across political boundaries to manage an interjurisdictional fish.	High	Public Relations/Education

Monitoring Strategies

Monitor presence through general stream faunal surveys.
Monitor stream flow.
Monitor water quality on a regular basis.

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).

Taxa Association Team and Peer Reviewers

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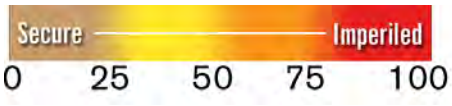
Ameiurus nebulosus

Brown Bullhead

Class: Actinopterygii
Order: Siluriformes
Family: Ictaluridae

Priority Score: 19 out of 100



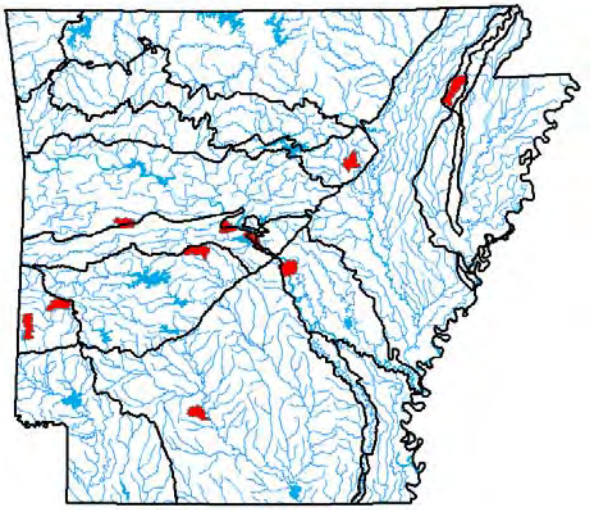
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [x] Boston Mountains
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] Mississippi Alluvial Plain
- [x] 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

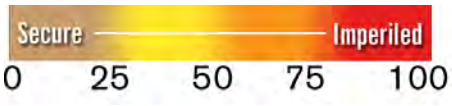
Ameiurus nebulosus
Brown Bullhead

Ammocrypta clara

Western Sand Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **33** out of 100



©Konrad P. Schmidt

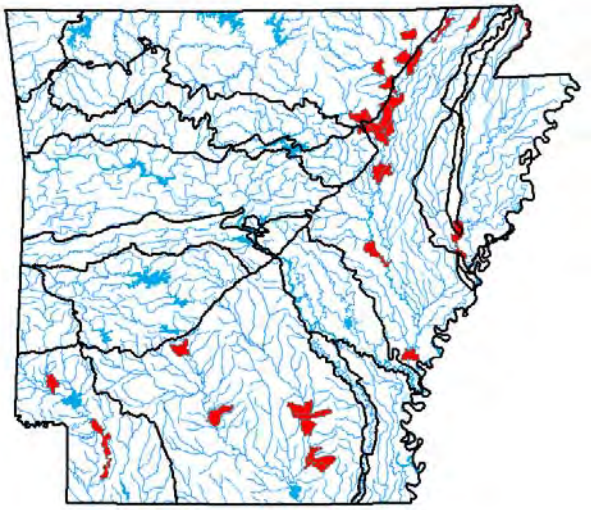
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [ ] Arkansas Valley
- [x] South Central Plains
- [x] 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
South Central Plains - Ouachita River
South Central Plains - Red River

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
Threat: Hydrological alteration Source: Dam
Threat: Sedimentation Source: Unknown

Data Gaps/Research Needs

Conduct genetic study.
Conduct status survey.

Conservation Actions

	Importance	Category
Implement best management practices during road construction.	High	Threat Abatement
Maintain riparian habitats.	High	Habitat Restoration/Improvement

Monitoring Strategies

Monitor population distribution and abundance in large river faunal surveys.
Monitor water quality in darter habitats on a regular basis.

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.

Taxa Association Team and Peer Reviewers

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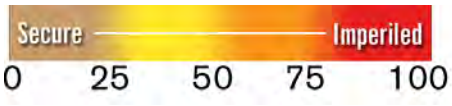
Anguilla rostrata

American Eel

Class: Actinopterygii
Order: Anguilliformes
Family: Anguillidae

Priority Score: **24** **out of 100**



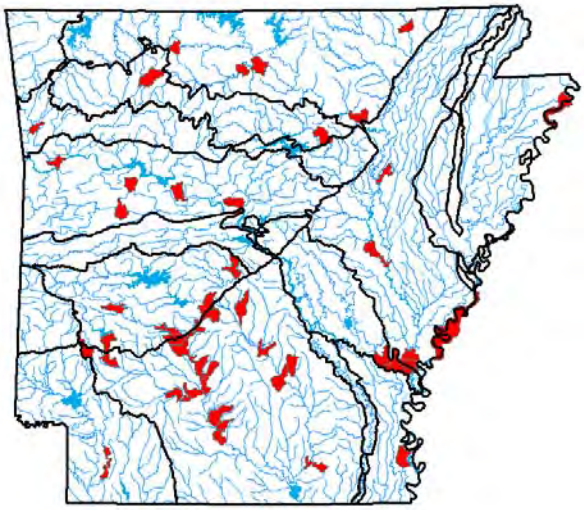
Population Trend: Decreasing

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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
Mississippi River Alluvial Plain - St. Francis River
Mississippi River Alluvial Plain - White River
Mississippi River Alluvial Plain (Lake Chicot) - Mississippi River
Ouachita Mountains - Arkansas River
Ouachita Mountains - Ouachita River
Ozark Highlands - Arkansas River
Ozark Highlands - White River
South Central Plains - Ouachita River
South Central Plains - Red River

Problems Faced

Threat: Habitat fragmentation
Source: Dam

Data Gaps/Research Needs

Conduct status surveys, especially for the St. Francis River.
Determine downstream eel mortality through turbines at Arkansas and Ouachita River system dams.
Determine the timing and magnitude of out-migration of eels to spawning grounds.

Conservation Actions

	Importance	Category
Create fish passage at Ouachita and Arkansas River navigation systems dams.	High	Habitat Restoration/Improvement
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.

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.

Taxa Association Team and Peer Reviewers

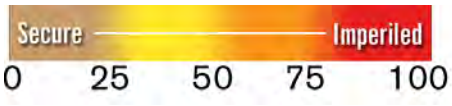
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Atractosteus spatula

Alligator Gar

Class: Actinopterygii
Order: Lepisosteiformes
Family: Lepisosteidae

Priority Score: 27 out of 100



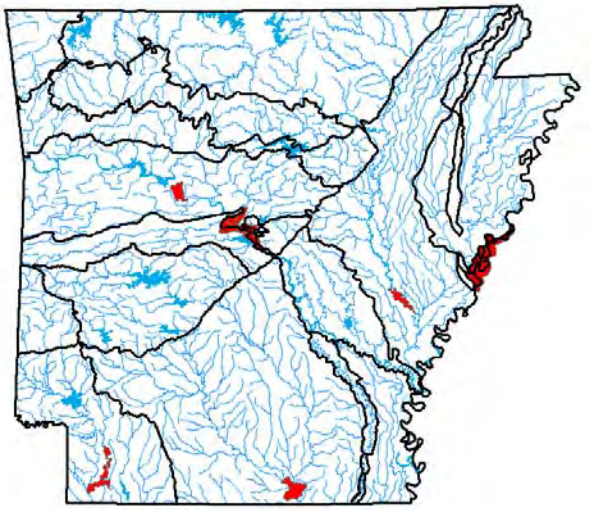
Population Trend: Stable

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
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

	Importance	Category
Augment natural populations.	Low	Population Management
Restore connectivity to wetland ecosystems.	High	Habitat Restoration/Improvement
Restore natural hydrologic and thermal regimes.	High	Habitat Restoration/Improvement
Restore sinuousity 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 Fave 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

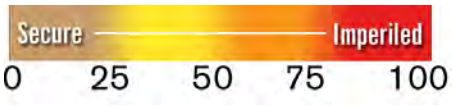
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry, AGFC Mr. Eric Brinkman

Carpiodes velifer

Highfin Carpsucker

Class: Actinopterygii
Order: Cypriniformes
Family: Catostomidae

Priority Score: 17 out of 100



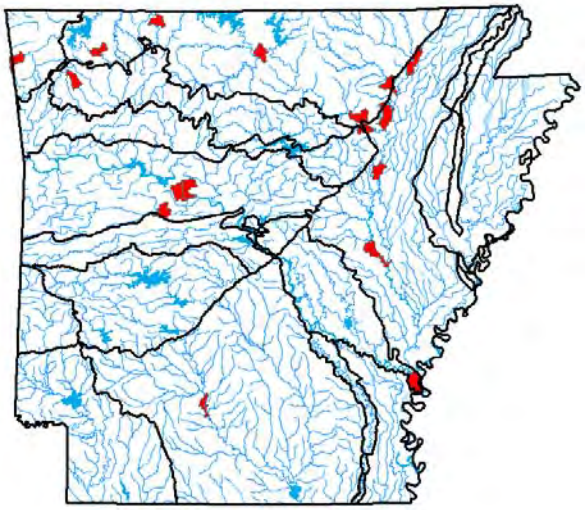
Population Trend: Unknown

Gobal Rank: G4G5 — Apparently secure (uncertain rank)

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

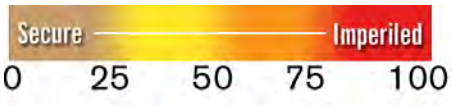
Crystal Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **38** **out of 100**



Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records

Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [ ] Arkansas Valley
- [x] South Central Plains
- [x] 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
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.

Conservation Actions

	Importance	Category
Maintain or, where necessary, restore water quality to state standards.	High	Habitat Restoration/Improvement
Protect river corridors using appropriate buffer widths relative to stream size.	High	Habitat Protection

Monitoring Strategies

Ensure location/occurrence records are compiled into the Arkansas Fish Database.
Monitor population distribution and abundance in ongoing stream faunal surveys.
Monitor water quality on a regular basis.

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.

Taxa Association Team and Peer Reviewers

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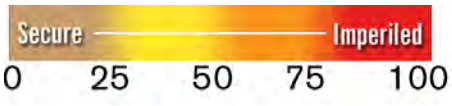
Cycleptus elongatus

Blue Sucker

©John Harris

Class: Actinopterygii
Order: Cypriniformes
Family: Catostomidae

Priority Score: **23** **out of 100**



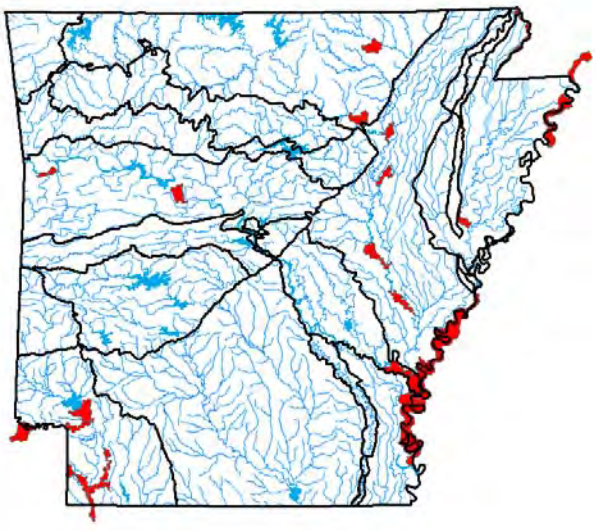
Population Trend: Stable

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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 (Lake Chicot) - Mississippi River
Ouachita Mountains - Arkansas River
Ozark Highlands - White River
South Central Plains - Red River

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
Threat: Hydrological alteration Source: Dam
Threat: Hydrological alteration Source: Water diversion

Data Gaps/Research Needs

Conduct genetic/ taxonomic studies.
Conduct life history studies.
Conduct population surveys.

Conservation Actions

	Importance	Category
Coordinate with U.S. Army Corps of Engineers regarding channel alteration and maintenance.	Medium	Threat Abatement
Coordinate with Water Districts and Arkansas Soil and Water Conservation Commission regarding irrigation projects.	Medium	Threat Abatement

Monitoring Strategies

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

Monitor population distribution and abundance in large river faunal surveys.

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).

Taxa Association Team and Peer Reviewers

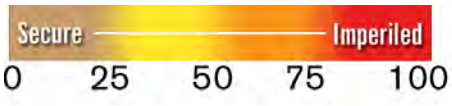
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

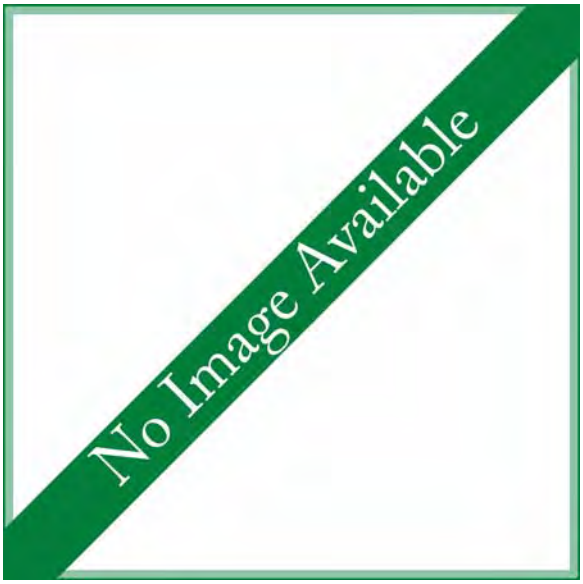
Cyprinella camura

Bluntface Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **23** **out of 100**





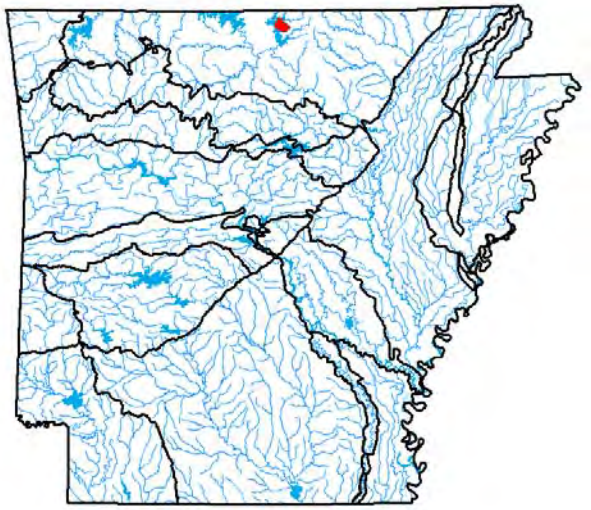
Population Trend: Unknown

Gobal Rank: G5 — Secure

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

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [x] 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	Optimal
Natural Pool: - Small - Medium	Suitable
Natural Riffle: - Small - Medium	Suitable
Natural Run: - Small - Medium	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

	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 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).

Taxa Association Team and Peer Reviewers

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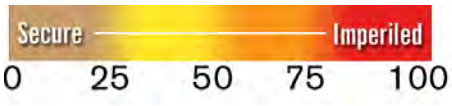
Cyprinella spiloptera

Spotfin Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **23** **out of 100**



©Konrad P. Schmidt

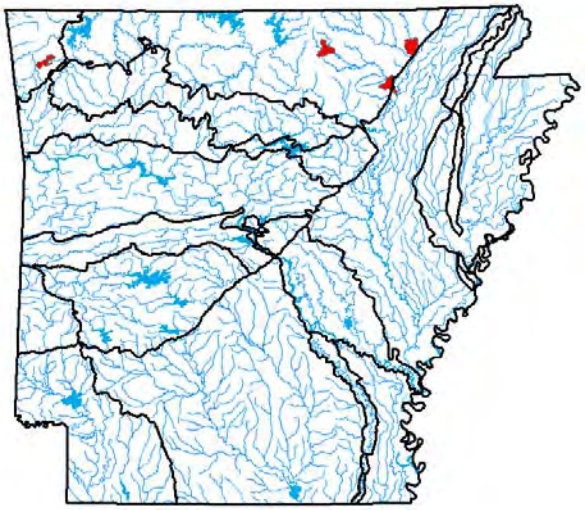
Population Trend: Unknown

Gobal Rank: G5 — Secure

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

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] 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).

Taxa Association Team and Peer Reviewers

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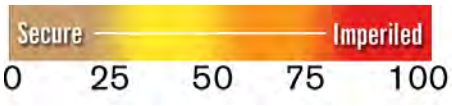
Erimyzon sucetta

Lake Chubsucker

Class: Actinopterygii
Order: Cypriniformes
Family: Catostomidae

Priority Score: **15** out of 100



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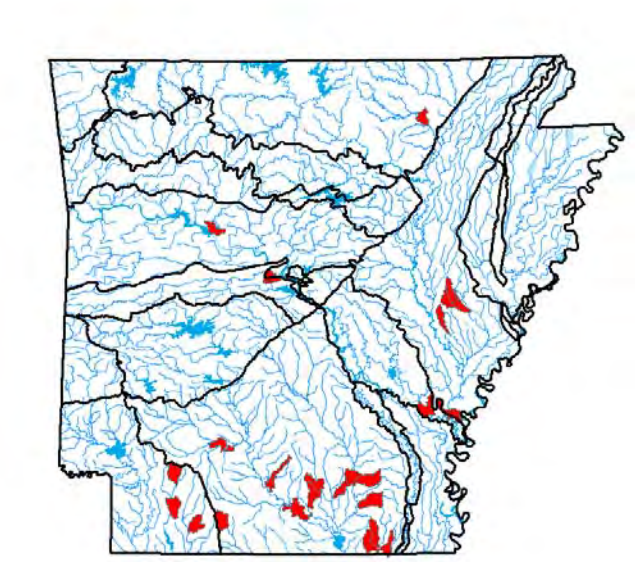
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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.

Taxa Association Team and Peer Reviewers

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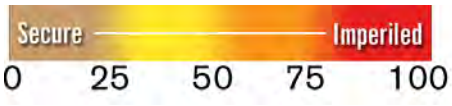
Etheostoma autumnale

Autumn Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 19 out of 100



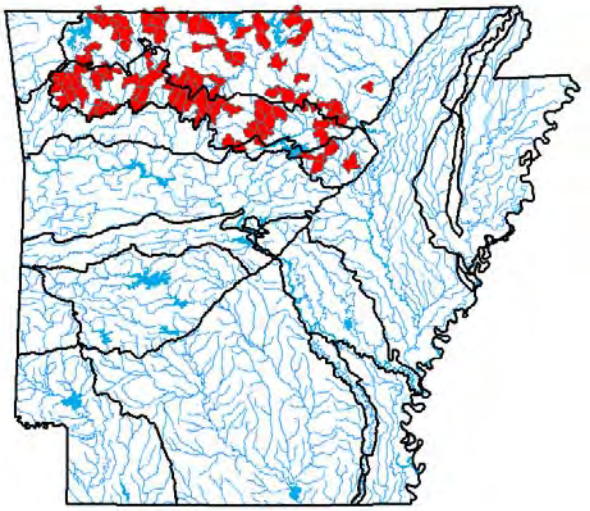
Population Trend: Stable

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [x] 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	Weight
Natural Glide: - Small - Medium	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	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). 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

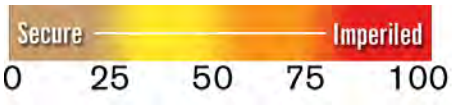
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma clinton

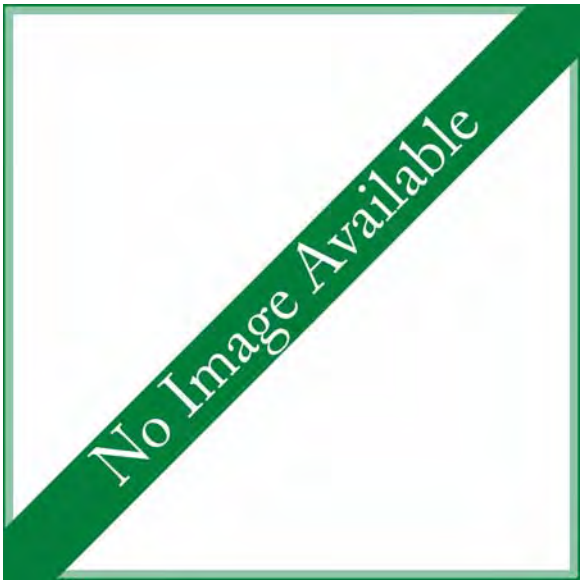
Beaded Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 19 out of 100



Population Trend: Stable

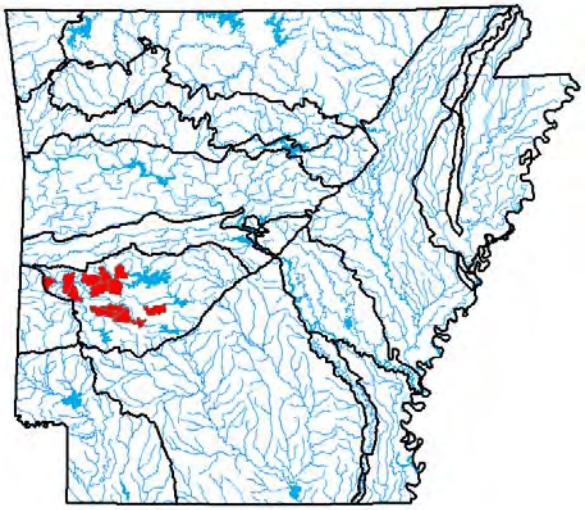


Gobal Rank: GNR — Not yet ranked

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [ ] Boston Mountains
- [x] 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 scare or uncommon across its limited range (Layman and Mayden 2012).

Taxa Association Team and Peer Reviewers

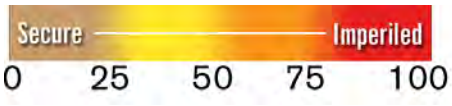
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma cragini

Arkansas Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **38** **out of 100**



Population Trend: Decreasing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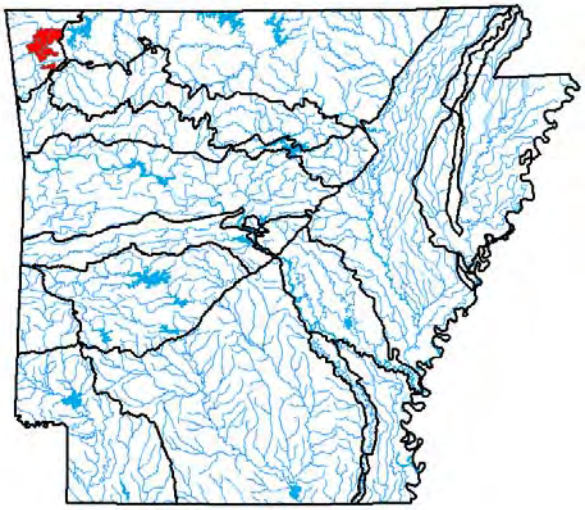
Gobal Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] 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 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

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.).

Taxa Association Team and Peer Reviewers

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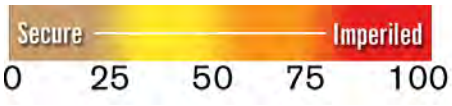
Etheostoma fragi

Strawberry River Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 29 out of 100



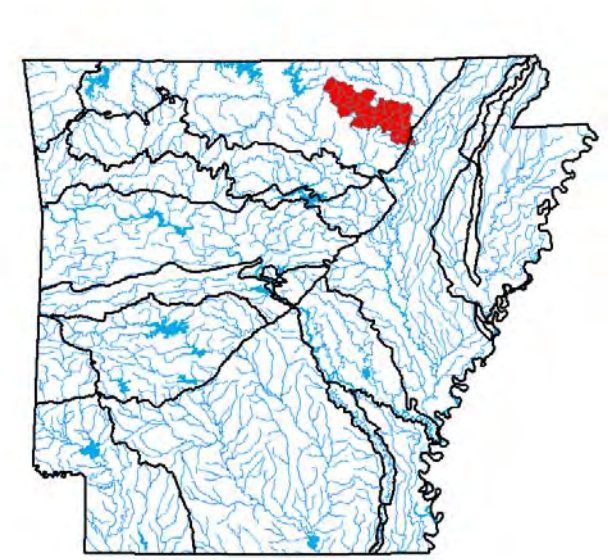
Population Trend: Decreasing

Gobal Rank: G4 — Apparently secure species

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] 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

	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.

Taxa Association Team and Peer Reviewers

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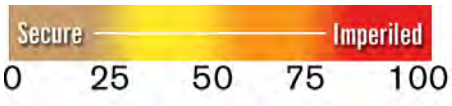
Etheostoma fusiforme

Swamp Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **15** **out of 100**



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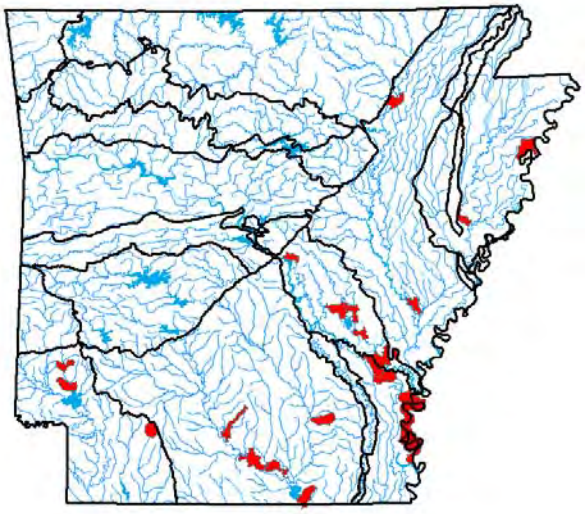
Population Trend: Unknown

Gobal 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
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.

Taxa Association Team and Peer Reviewers

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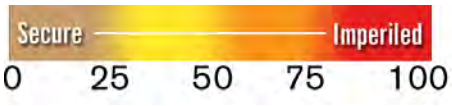
Etheostoma microperca

Least Darter


©Doyle Crosswhite

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 29 **out of 100**



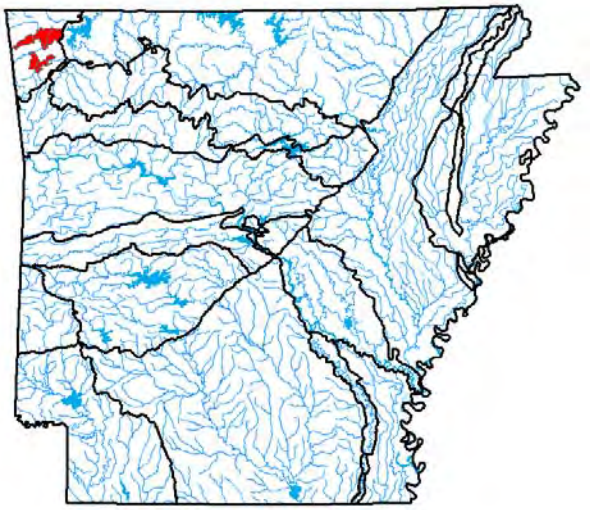
Population Trend: Decreasing

Gobal Rank: G5 — Secure

State Rank: S1 — Critically imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] 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.

Taxa Association Team and Peer Reviewers

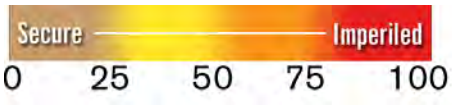
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma mihileze

Sunburst Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 19 out of 100



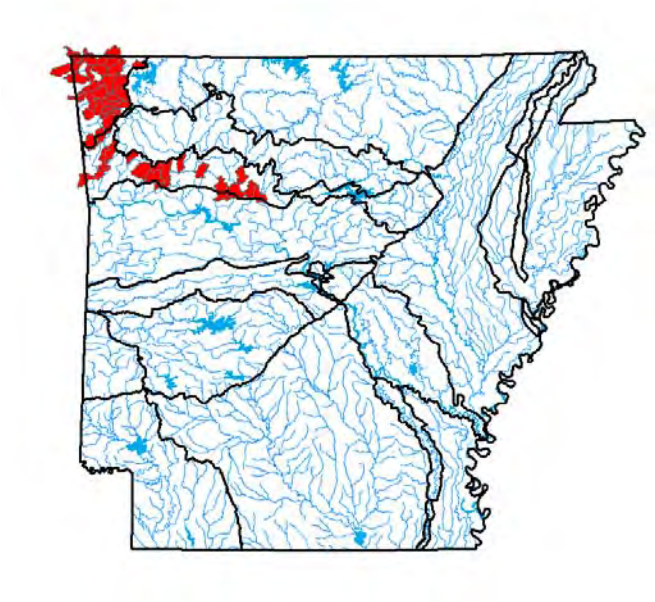
Population Trend: Stable

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [x] 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 tributatries 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.

Taxa Association Team and Peer Reviewers

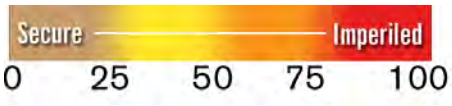
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma moorei

Yellowcheek Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 100 out of 100



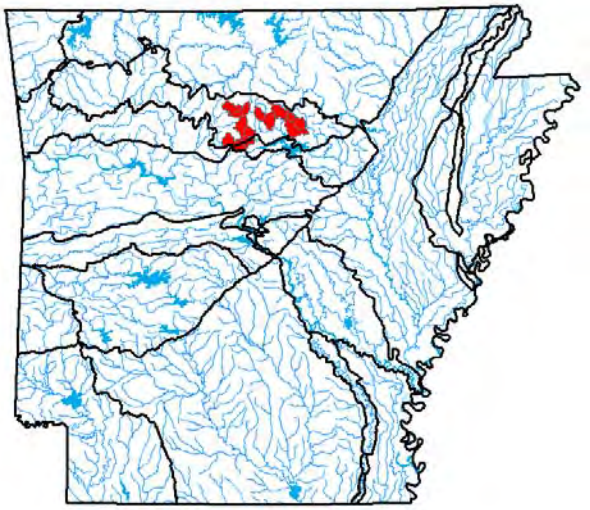
Population Trend: Decreasing

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

	Weight
Natural Riffle: - Small - Medium	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.

Taxa Association Team and Peer Reviewers

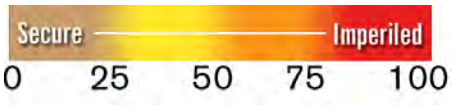
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma pallididorsum

Paleback Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 46 out of 100




©John Harris

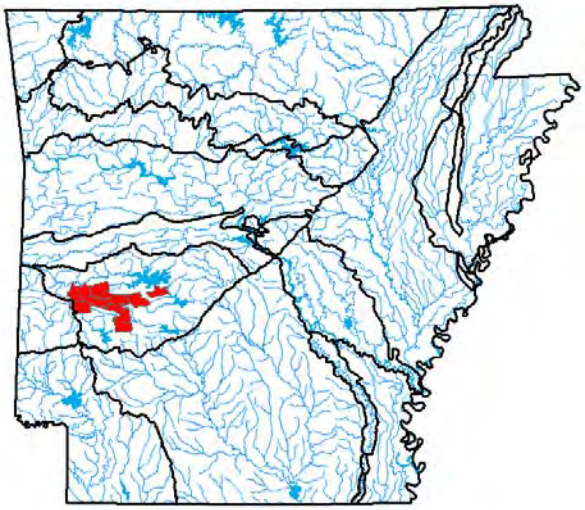
Population Trend: Stable

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 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 biennually.

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).

Taxa Association Team and Peer Reviewers

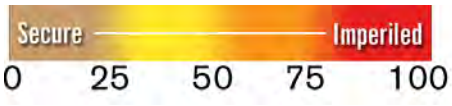
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma parvipinne

Goldstripe Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 17 out of 100



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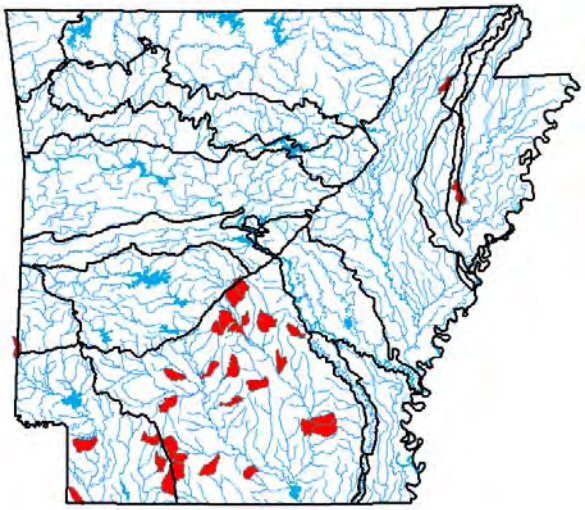
Population Trend: Stable

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
- [x] South Central Plains
- [x] Mississippi Alluvial Plain
- [x] Mississippi Valley Loess Plains

Ecobasins

Mississippi River Alluvial Plain - White River
Mississippi River Alluvial Plain (Bayou Bartholomew) - Ouachita River
Mississippi Valley Loess Plains - St. Francis River
South Central Plains - Ouachita River
South Central Plains - Red River

Habitats

	Weight
Natural Pool: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Data Gap

Problems Faced

Threat:
Source:

Data Gaps/Research Needs

Conduct distribution survey.
Conduct life history study.

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.

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).

Taxa Association Team and Peer Reviewers

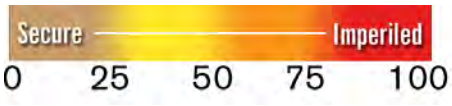
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma teddyroosevelt

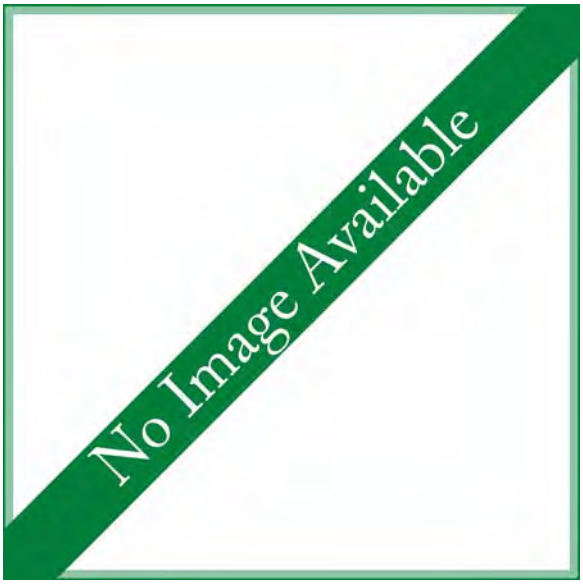
Highland Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 15 out of 100



Population Trend: Unknown

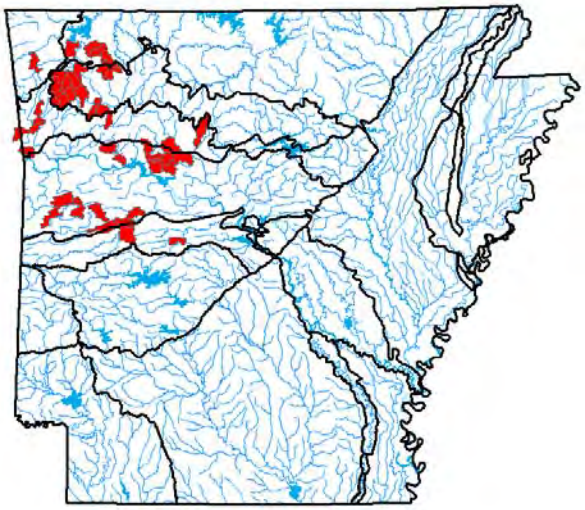


Gobal Rank: GNR — Not yet ranked

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [x] 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.

Etheostoma teddyroosevelt
Highland Darter

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.

Taxa Association Team and Peer Reviewers

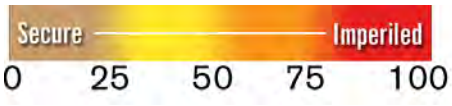
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Etheostoma uniporum

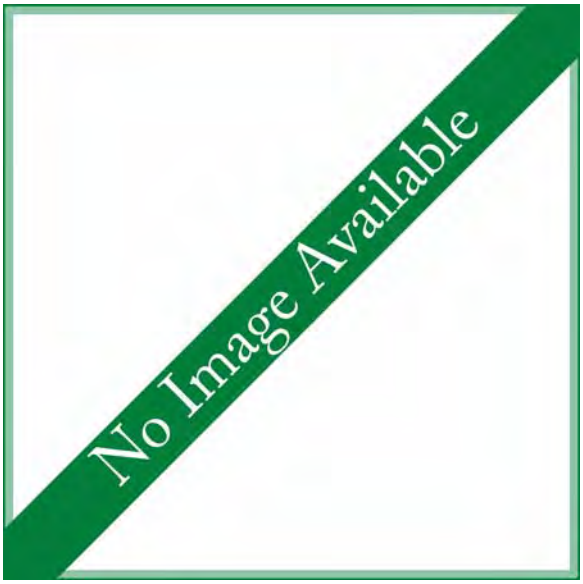
Current Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **19** **out of 100**



Population Trend: Unknown

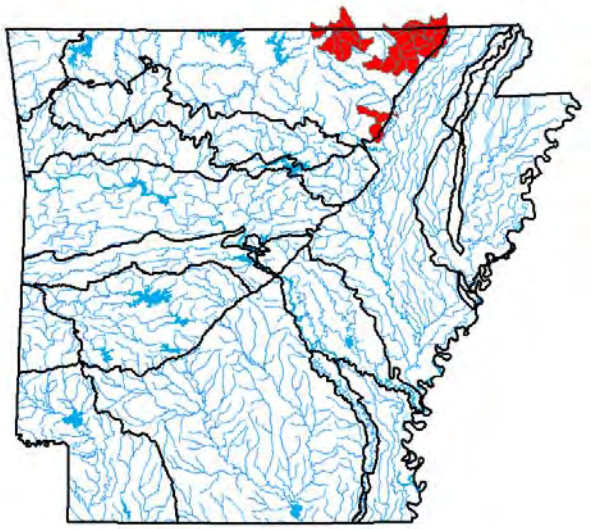


Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] 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: 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

	Importance	Category
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).

Taxa Association Team and Peer Reviewers

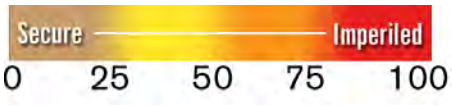
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Fundulus blairae

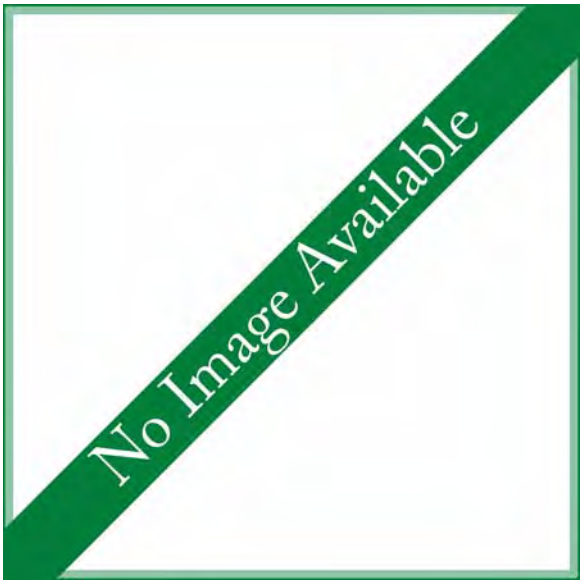
Lowland Topminnow

Class: Actinopterygii
Order: Cyprinodontiformes
Family: Fundulidae

Priority Score: **23** **out of 100**



Population Trend: Unknown

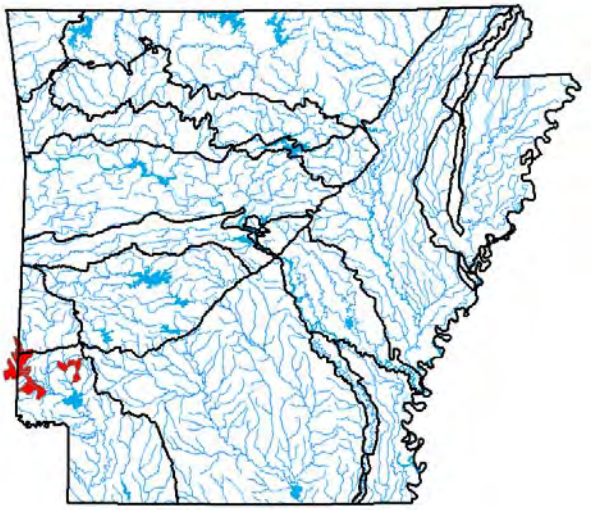


Gobal Rank: G4 — Apparently secure species

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [ ] Arkansas Valley
- [x] 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 (1985) collected 50 individuals from Millwood Lake.

Taxa Association Team and Peer Reviewers

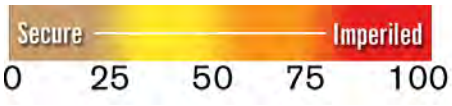
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Hiodon alosoides

Goldeye

Class: Actinopterygii
Order: Osteoglossiformes
Family: Hiodontidae

Priority Score: 19 **out of 100**



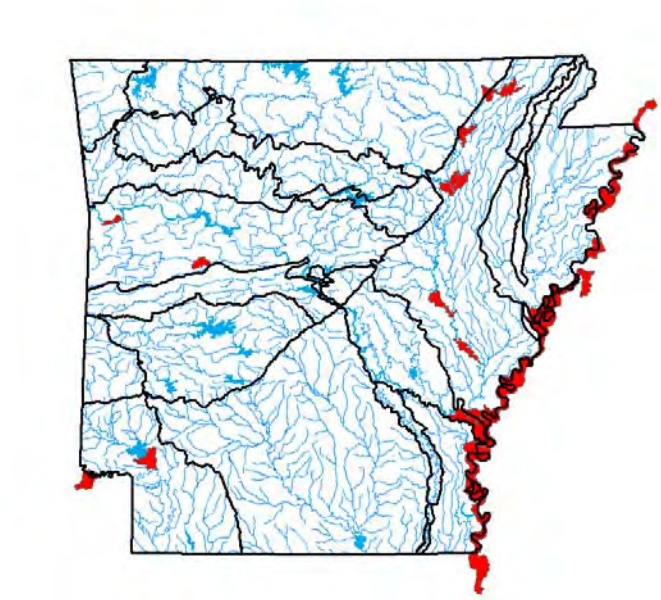
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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.

Taxa Association Team and Peer Reviewers

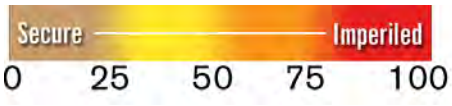
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Hiodon tergisus

Mooneye

Class: Actinopterygii
Order: Hiodontiformes
Family: Hiodontidae

Priority Score: 19 **out of 100**



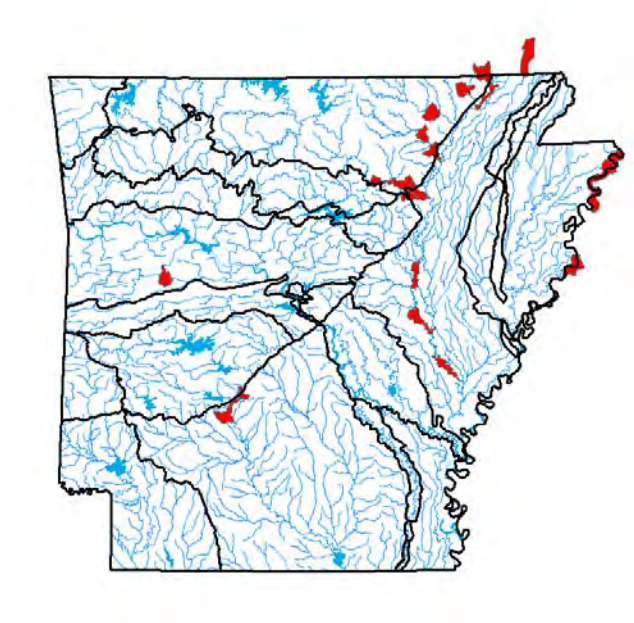
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

	Weight
Natural Riffle: - Large	Obligate
Natural Shoal: - Large	Suitable

Problems Faced

Threat: Hydrological alteration
Source: Dam

Data Gaps/Research Needs

Conduct baseline population surveys.

Conduct life history study.

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

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

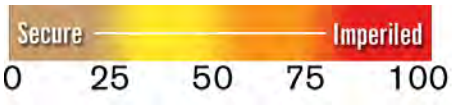
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Hybognathus placitus

Plains Minnow

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: 27 out of 100



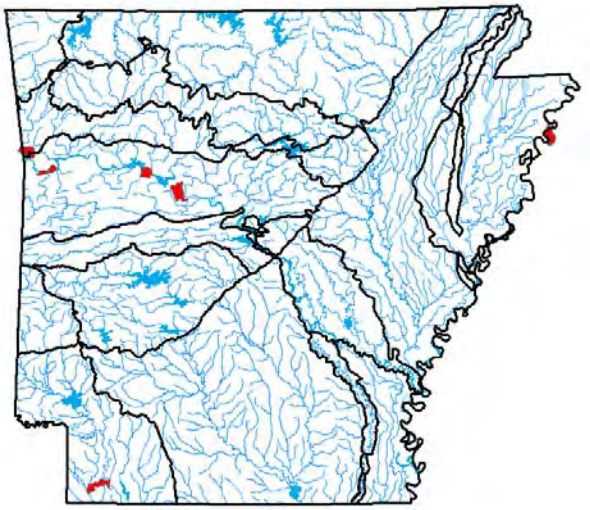
Population Trend: Unknown

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

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

	Importance	Category
More data are needed to determine conservation actions.	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

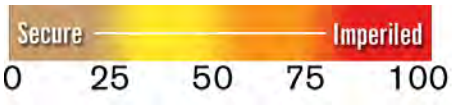
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Lampetra aepyptera

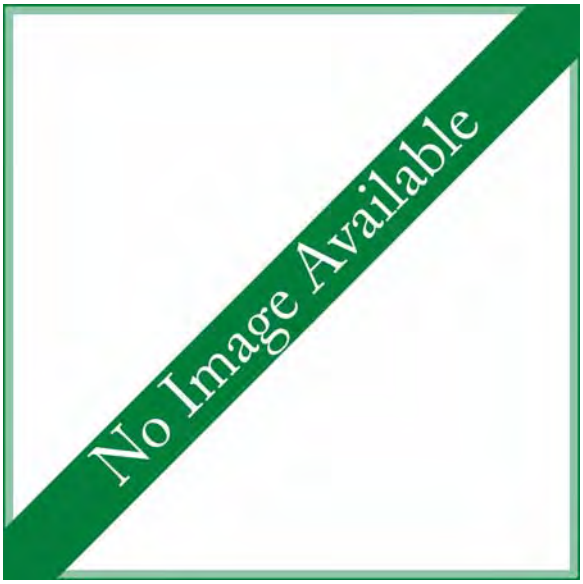
Least Brook Lamprey

Class: Petromyzontida
Order: Petromyzontiformes
Family: Petromyzontidae

Priority Score: 15 out of 100



Population Trend: Unknown

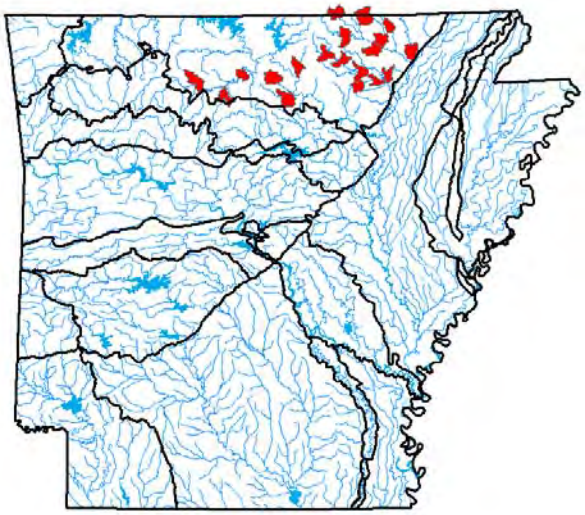


Gobal Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] 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: - Medium	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

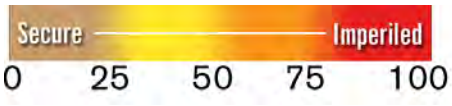
Lethenteron appendix

American Brook Lamprey

©Konrad P. Schmidt

Class: Petromyzontida
Order: Petromyzontiformes
Family: Petromyzontidae

Priority Score: **19** **out of 100**



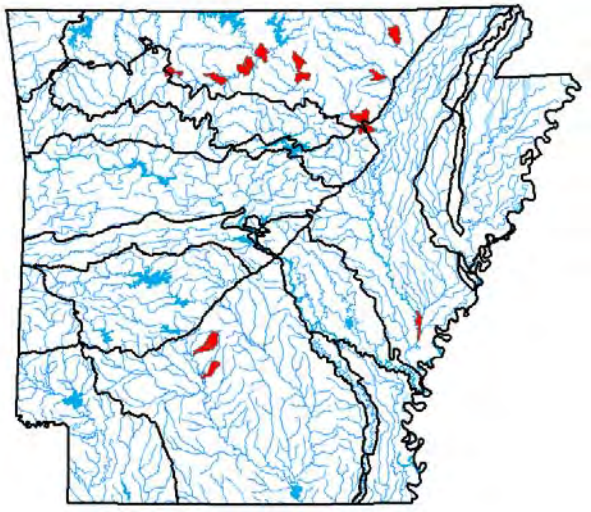
Population Trend: Unknown

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [ ] Arkansas Valley
- [x] South Central Plains
- [x] 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

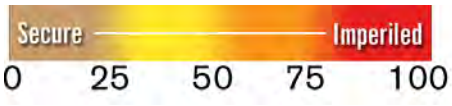
Lythrurus snelsoni

Ouachita Shiner

©Daniel Fenner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: 27 out of 100



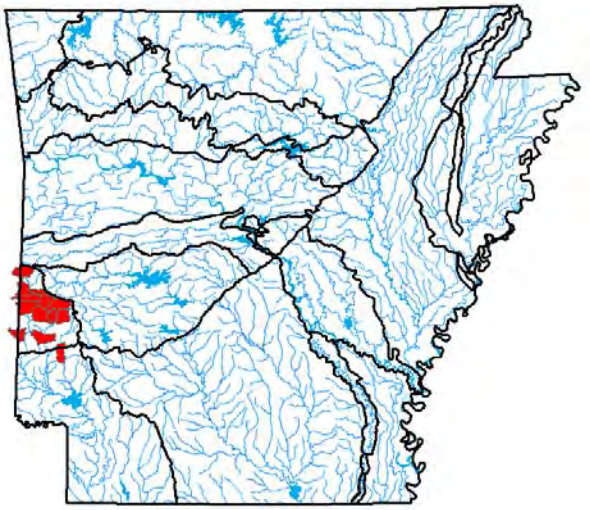
Population Trend: Unknown

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [ ] Arkansas Valley
- [x] 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

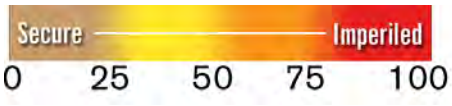
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Macrhybopsis hyostoma

Shoal Chub

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: 15 out of 100



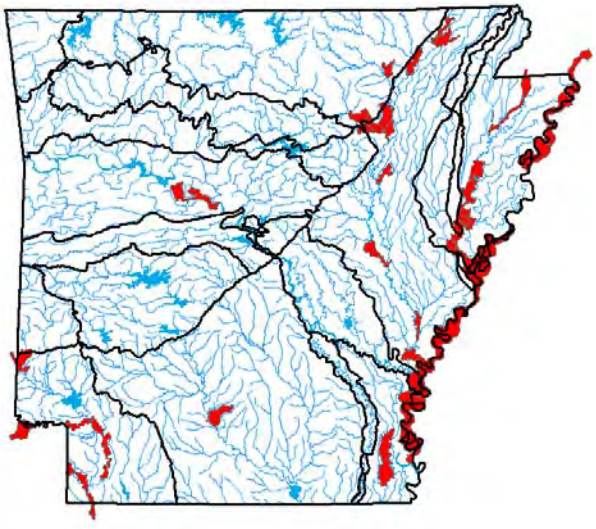
Population Trend: Stable

Gobal Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

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

Macrhybopsis meeki

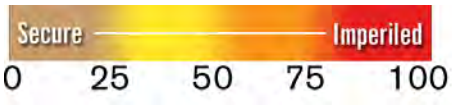
Sicklefin Chub

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **43** **out of 100**



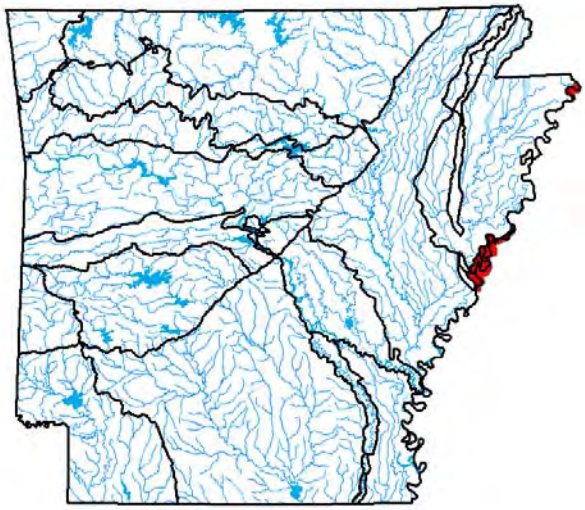
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S1 — Critically imperiled in Arkansas

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 istorical 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

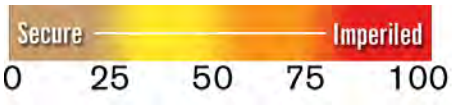
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Moxostoma anisurum

Silver Redhorse

Class: Actinopterygii
Order: Cypriniformes
Family: Catostomidae

Priority Score: 29 out of 100



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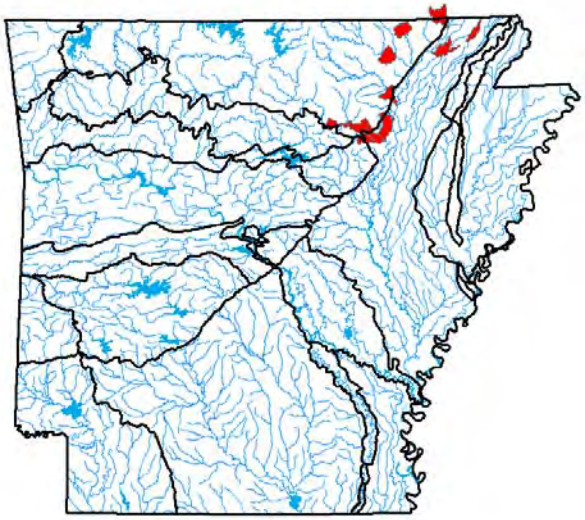
Population Trend: Decreasing

Gobal Rank: G5 — Secure

State Rank: S1 — Critically imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

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

Ecobasins

Mississippi River Alluvial Plain - White River
Ozark Highlands - White River

Habitats

	Weight
Natural Pool: - Medium - Large	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 redhorse 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

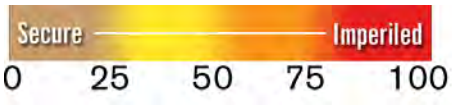
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Moxostoma pisolabrum

Pealip Redhorse

Class: Actinopterygii
Order: Cypriniformes
Family: Catostomidae

Priority Score: 19 out of 100



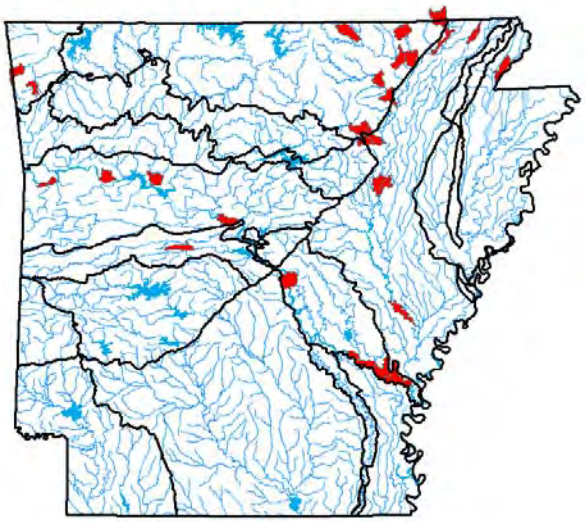
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [ ] South Central Plains
- [x] 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).

Taxa Association Team and Peer Reviewers

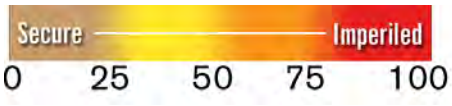
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Mugil cephalus

Striped Mullet

Class: Actinopterygii
Order: Mugiliformes
Family: Mugilidae

Priority Score: 19 out of 100



Population Trend: Stable

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records

Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

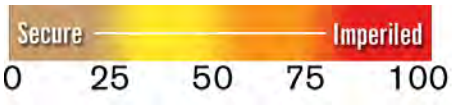
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Nocomis asper

Redspot Chub

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **19** **out of 100**



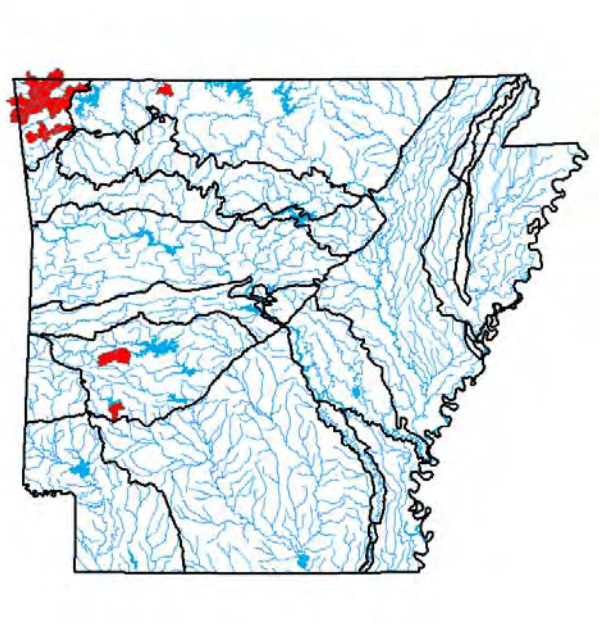
Population Trend: Unknown

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [x] 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

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

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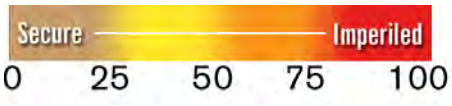
Priority Score: 19 out of 100



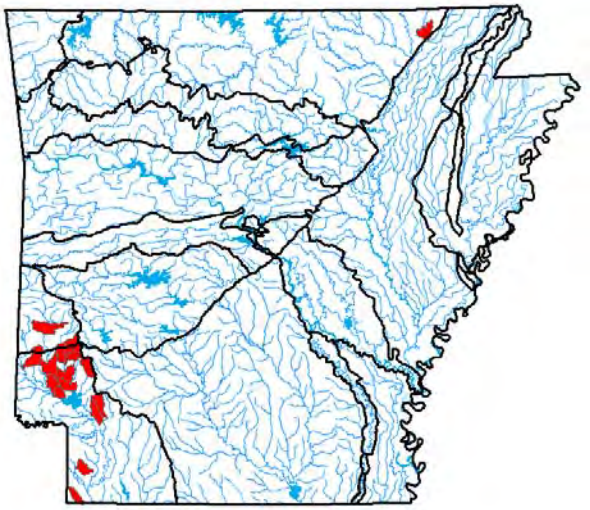
Population Trend: Unknown

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 - 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.

Taxa Association Team and Peer Reviewers

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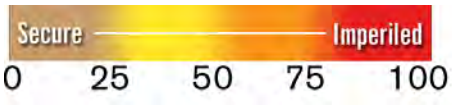
Notropis bairdi

Red River Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: 27 out of 100



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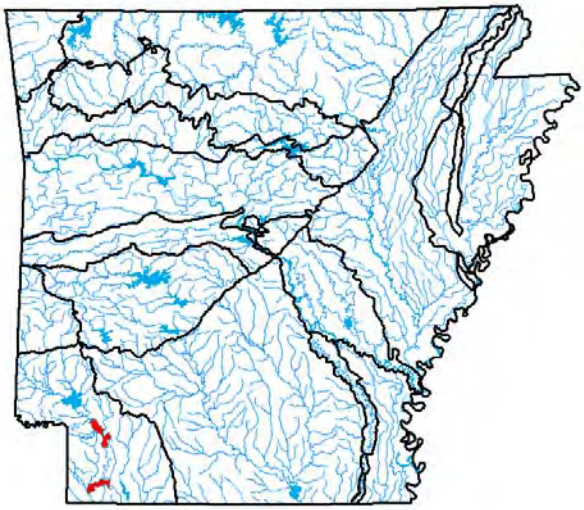
Population Trend: Unknown

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

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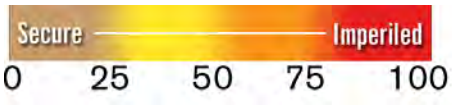
Notropis girardi

Arkansas River Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **50** **out of 100**



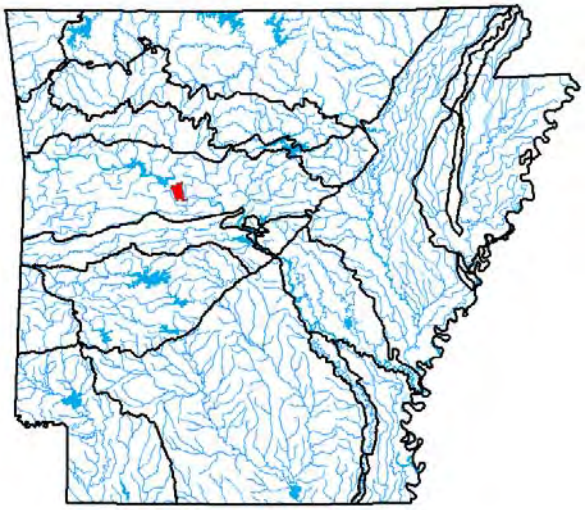
Population Trend: Unknown

Gobal 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
- [x] Arkansas Valley
- [ ] South Central Plains
- [ ] Mississippi Alluvial Plain
- [ ] Mississippi Valley Loess Plains

Ecobasins

Arkansas Valley - Arkansas River

Habitats

	Weight
Natural Pool: - Large	Data Gap
Natural Shoal: - Large	Data Gap
Natural Side channel: - Large	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

	Importance	Category
More data is needed to determine conservation actions.	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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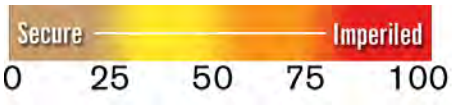
Notropis ortenburgeri

Kiamichi Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **33** out of 100



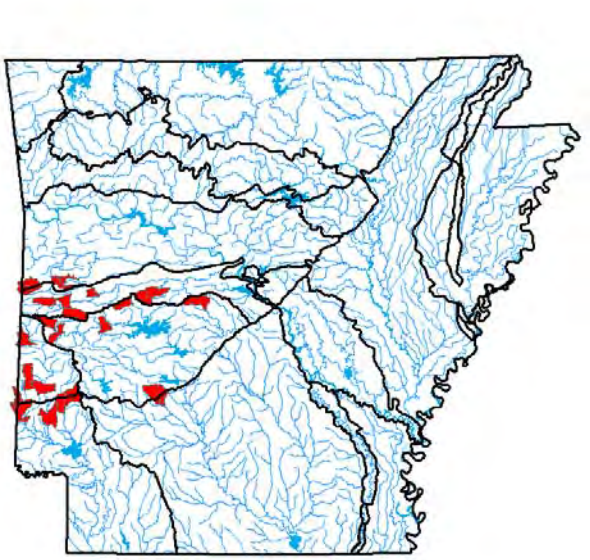
Population Trend: Decreasing

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

	Weight
Natural Pool: - Small - Medium	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

	Importance	Category
More data are needed to determine conservation actions.	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.

Taxa Association Team and Peer Reviewers

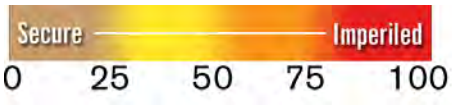
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Notropis ozarcanus

Ozark Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **33** out of 100



©John Harris

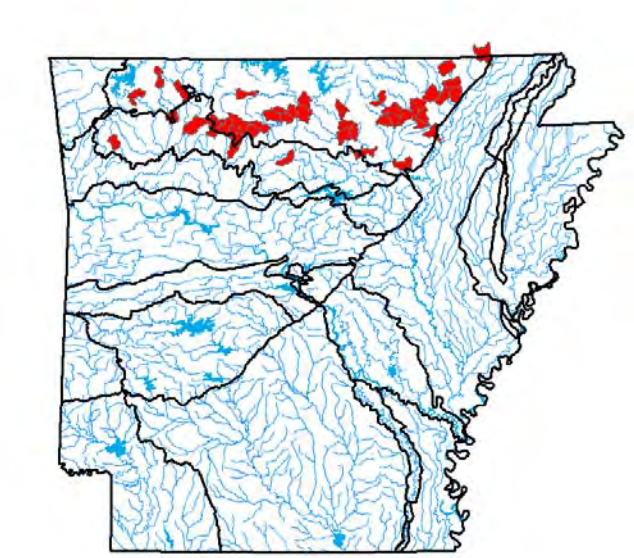
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] 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 sedimetation.	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.

Taxa Association Team and Peer Reviewers

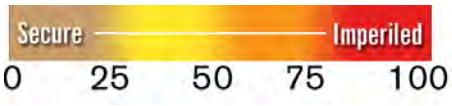
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

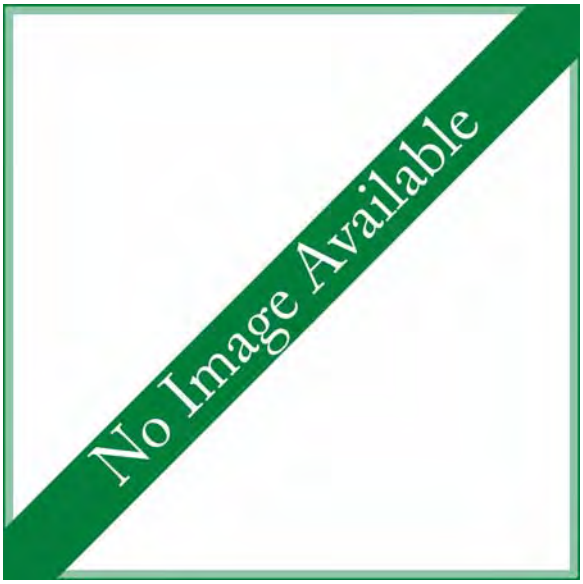
Notropis perpallidus

Peppered Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **33** out of 100





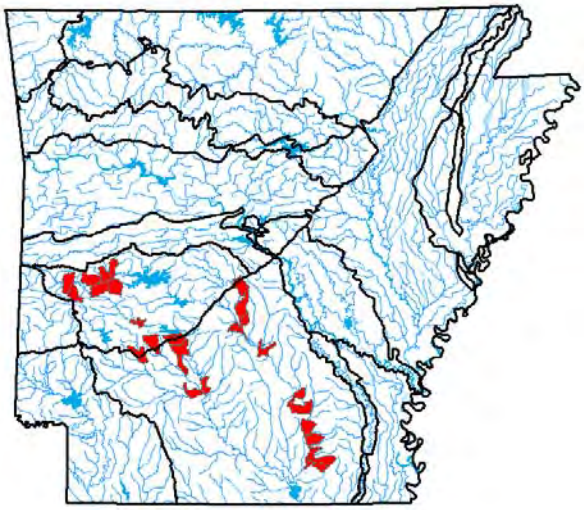
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

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

Ecobasins

Ouachita Mountains - Ouachita River

South Central Plains - Ouachita River

Habitats

	Weight
Natural Pool: - Medium	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

	Importance	Category
More data are needed to determine conservation actions.	High	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.

Taxa Association Team and Peer Reviewers

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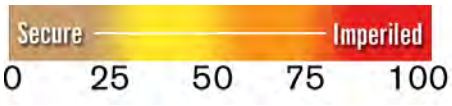
Notropis potteri

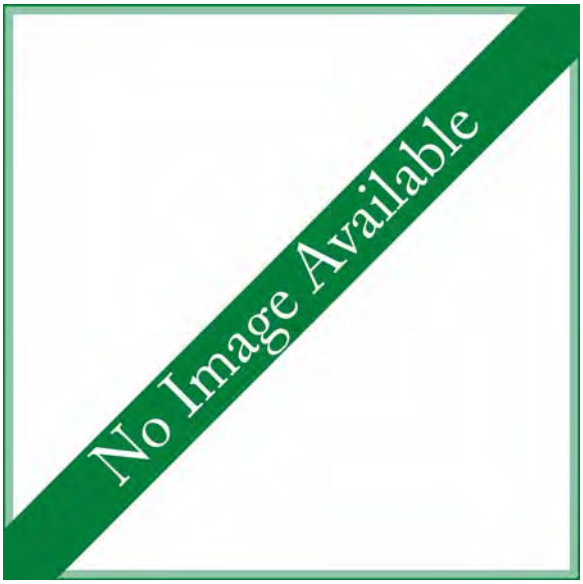
Chub Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **23** **out of 100**



Population Trend: Stable

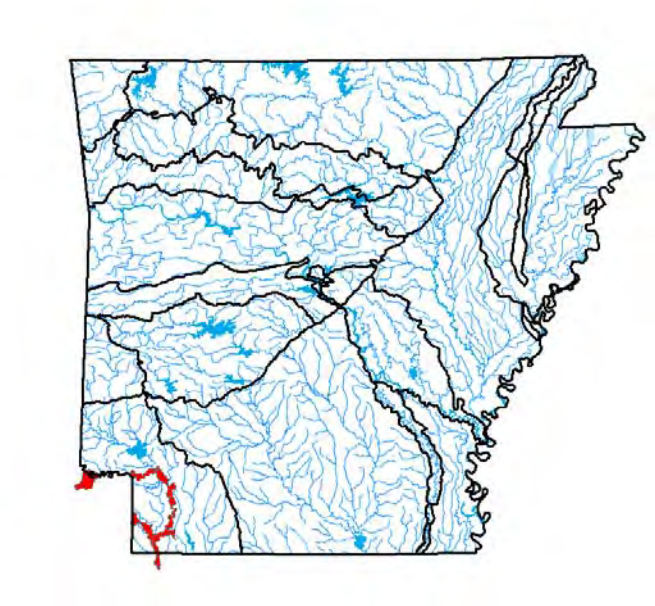


Gobal Rank: G4 — Apparently secure species

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

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

Problems Faced

Threat: Hydrological alteration
Source: Dam

Data Gaps/Research Needs

Conduct baseline surveys.

Conduct life history study.

Conservation Actions

	Importance	Category
More data are needed to determine conservation actions.	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

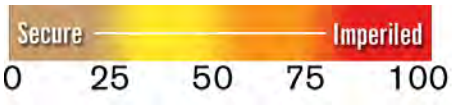
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Notropis sabinae

Sabine Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: **23** **out of 100**



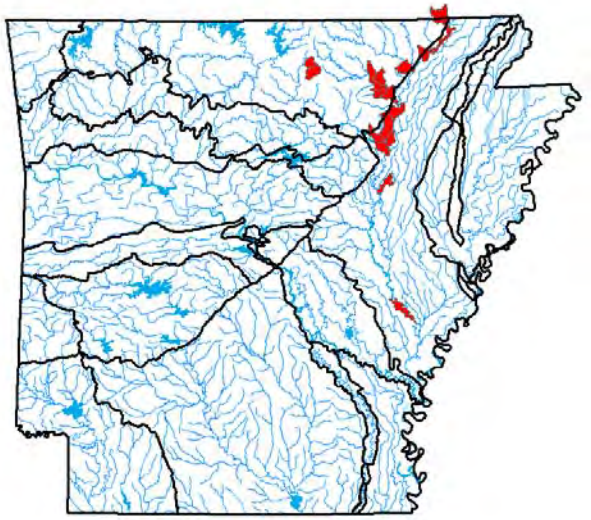
Population Trend: Unknown

Gobal Rank: G4 — Apparently secure species

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [ ] Arkansas Valley
- [ ] South Central Plains
- [x] 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

	Weight
Natural Glide: - Small - Medium	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).

Taxa Association Team and Peer Reviewers

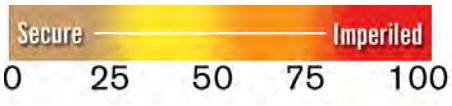
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Notropis suttkusi

Rocky Shiner

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

Priority Score: 27 out of 100



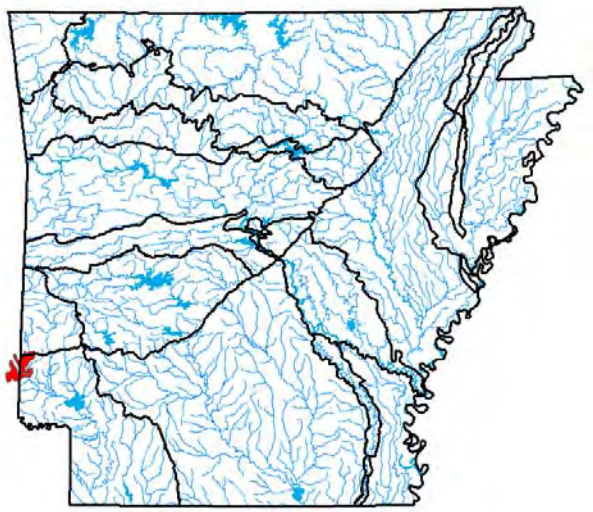
Population Trend: Unknown

Gobal Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [ ] Boston Mountains
- [x] 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 wickliffi

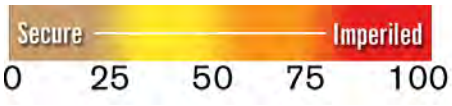
Channel Shiner

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

Priority Score: **19** **out of 100**



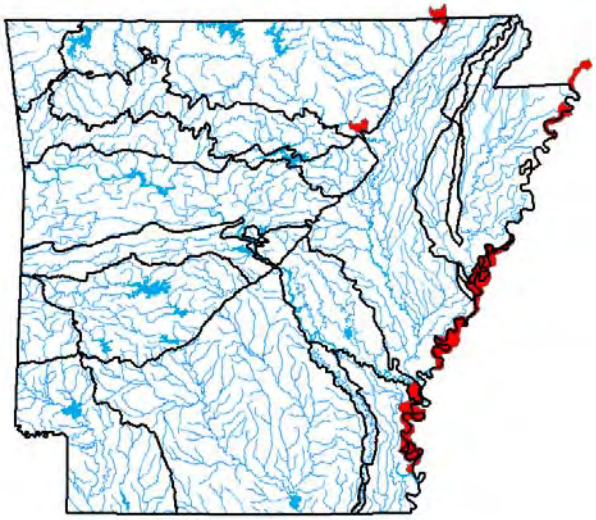
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [ ] Arkansas Valley
- [ ] South Central Plains
- [x] 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

	Weight
Natural Shoal: - Medium - Large	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

	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

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

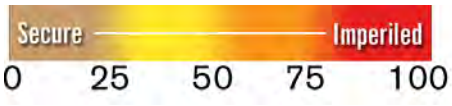
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Noturus flavus

Stonecat

Class: Actinopterygii
Order: Siluriformes
Family: Ictaluridae

Priority Score: 29 out of 100



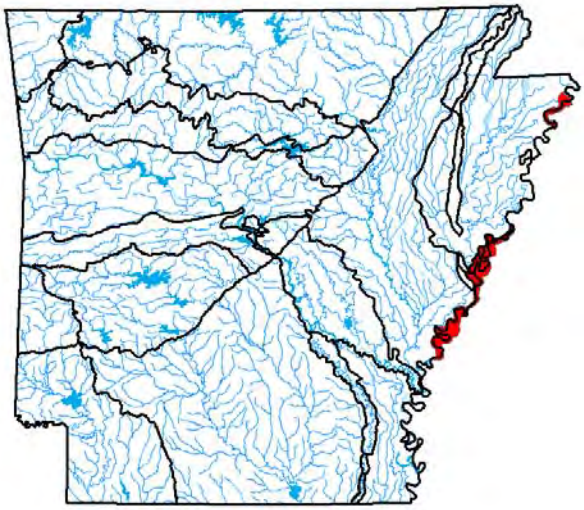
Population Trend: Decreasing

Gobal 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

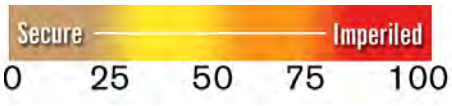
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Noturus lachneri

Ouachita Madtom

Class: Actinopterygii
Order: Siluriformes
Family: Ictaluridae

Priority Score: 46 out of 100



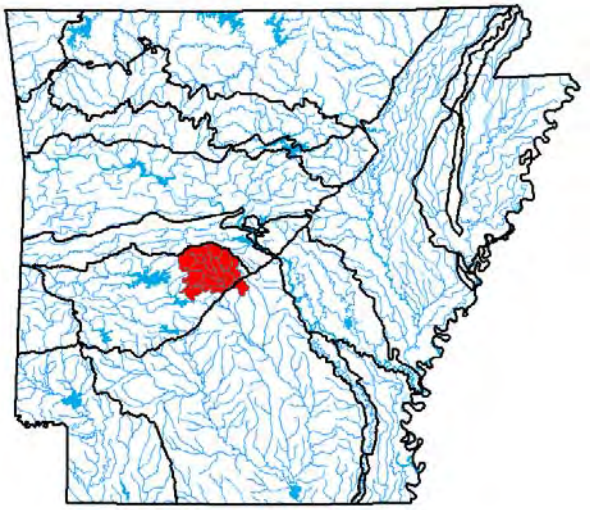
Population Trend: Unknown

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

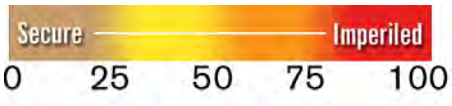
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Noturus phaeus

Brown Madtom

Class: Actinopterygii
Order: Siluriformes
Family: Ictaluridae

Priority Score: 27 out of 100



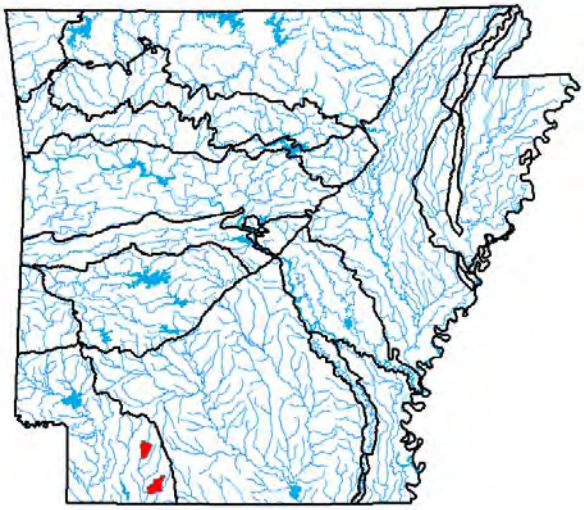
Population Trend: Unknown

Gobal 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	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

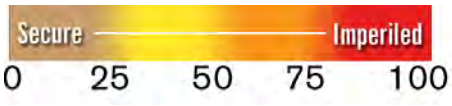
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Noturus taylori

Caddo Madtom

Class: Actinopterygii
Order: Siluriformes
Family: Ictaluridae

Priority Score: **80** out of 100



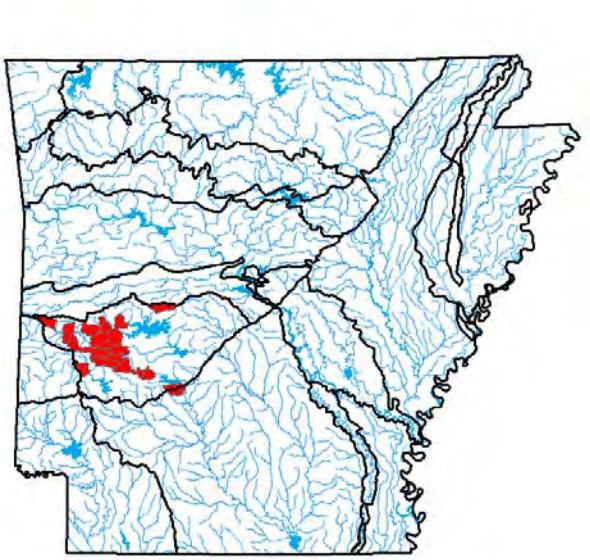
Population Trend: Stable

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 form 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 Misouri and Ouachita rivers. Turner and Robison (2006) found high genetic divergence for the Caddo madtom between Ouachita and Caddo river systems (Fst = 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.

Taxa Association Team and Peer Reviewers

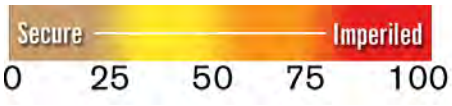
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Percina brucethompsoni

Ouachita Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **46** **out of 100**



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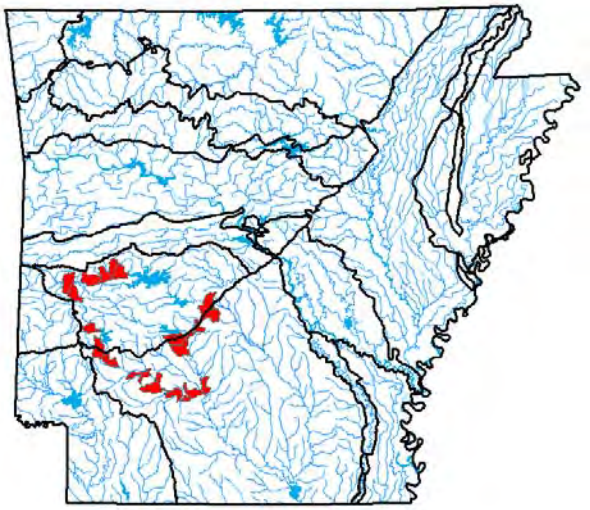
Gobal Rank: G2? — Imperiled (inexact numeric rank)

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [ ] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [ ] Arkansas Valley
- [x] 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 m2) than in the upstream Ouachita River (0.24 fish/100 m2).

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

Taxa Association Team and Peer Reviewers

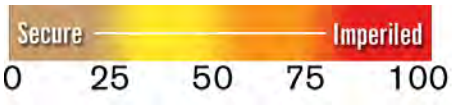
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Percina evides

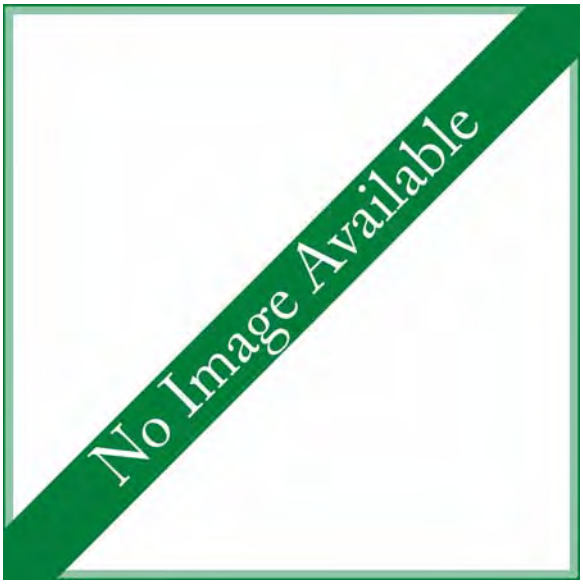
Gilt Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 19 out of 100



Population Trend: Unknown

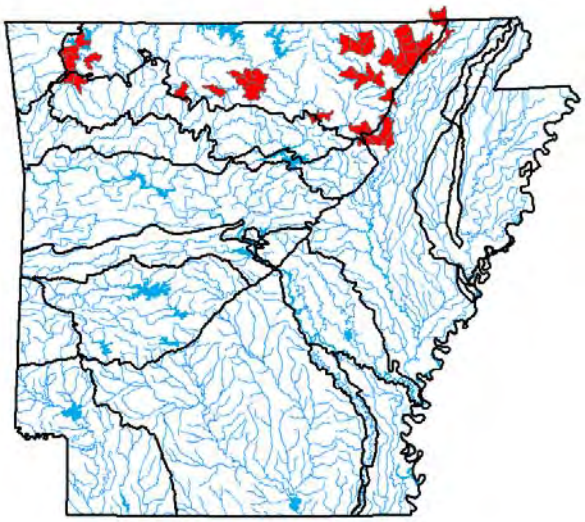


Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [ ] Ouachita Mountains
- [ ] Arkansas Valley
- [ ] South Central Plains
- [x] 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

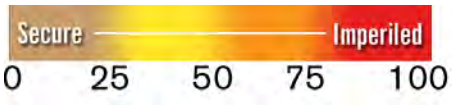
AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Percina nasuta

Longnose Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 27 out of 100



Population Trend: Stable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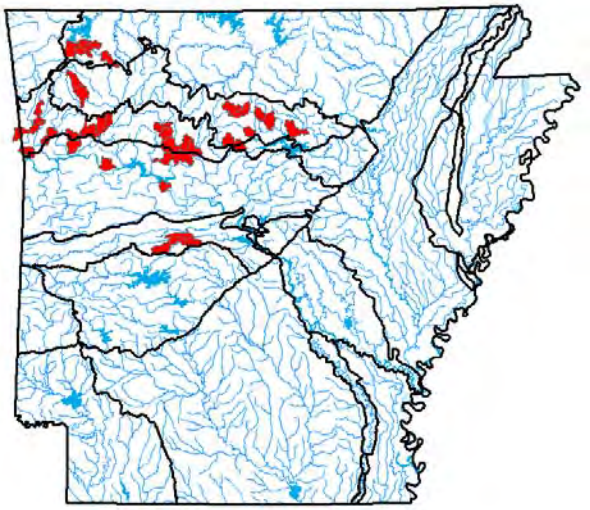
Gobal Rank: G3 — Vulnerable species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [x] Ouachita Mountains
- [x] 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.

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

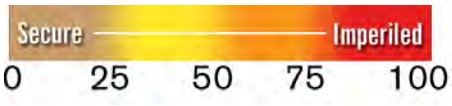
Percina pantherina

Leopard Darter


©Richard Standage

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **62** **out of 100**



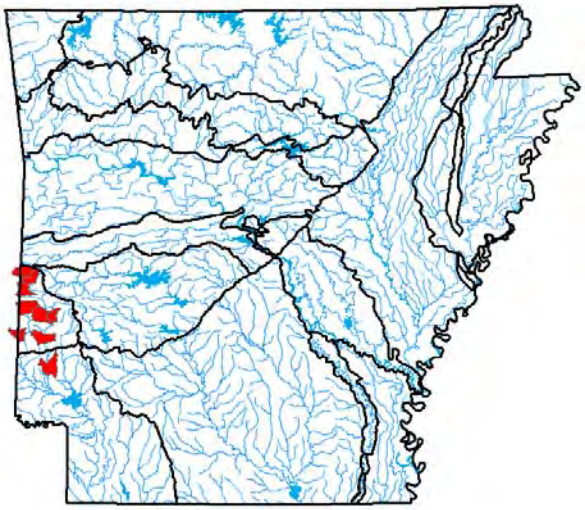
Population Trend: Decreasing

Gobal Rank: G2 — 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 - 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.

Taxa Association Team and Peer Reviewers

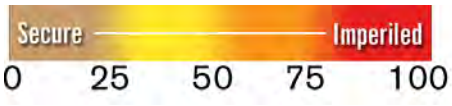
AGFC - retired Mr. Steve Filipek, SAU Dr. Henry Robison, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner, ANHC Mr. Jason Throneberry

Percina phoxocephala

Slenderhead Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: 19 out of 100



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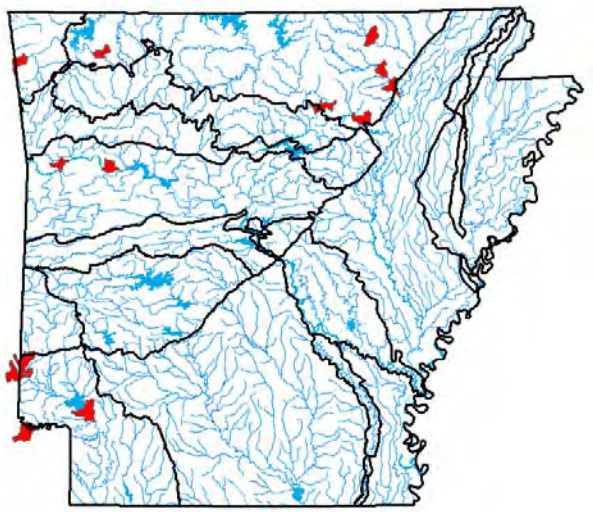
Population Trend: Unknown

Gobal Rank: G5 — Secure

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [ ] Ouachita Mountains
- [x] Arkansas Valley
- [x] 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).

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 uranidea

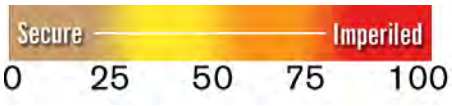
Stargazing Darter

Class: Actinopterygii

Order: Perciformes

Family: Percidae

Priority Score: **38** **out of 100**



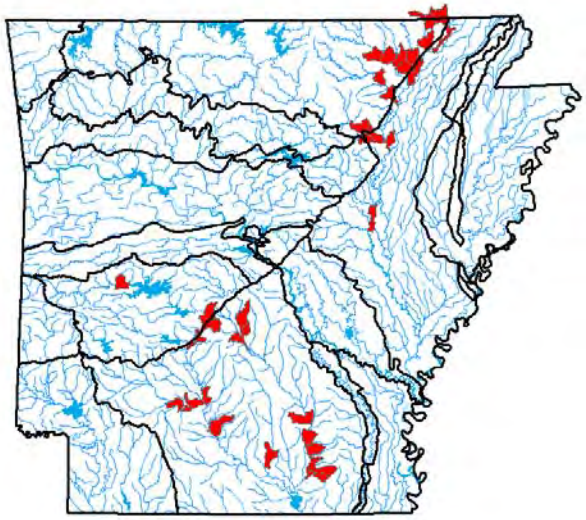
Population Trend: Decreasing

Gobal Rank: G3 — Vulnerable species

State Rank: S2 — Imperiled in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [ ] Arkansas Valley
- [x] South Central Plains
- [x] 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 m2) in the transition area of the Ouachita River that is flooded by Lake Ouachita.

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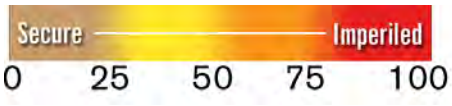
Percina vigil

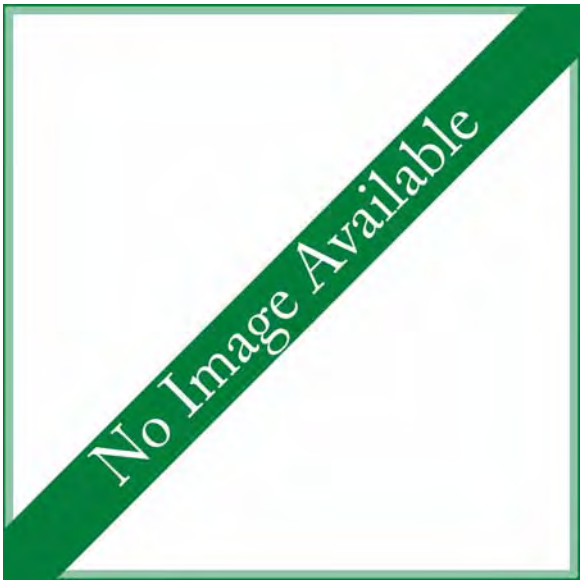
Saddleback Darter

Class: Actinopterygii
Order: Perciformes
Family: Percidae

Priority Score: **15** **out of 100**



Population Trend: Stable

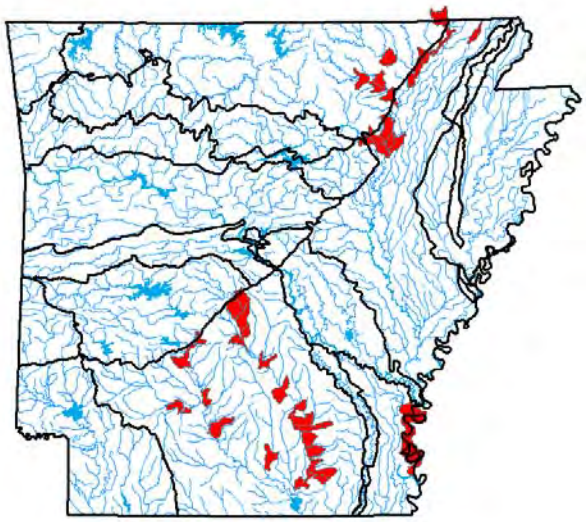


Gobal Rank: G5 — Secure

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [ ] Boston Mountains
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

	Weight
Natural Glide: - Medium	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.

Percina vigil
Saddleback Darter

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.

Taxa Association Team and Peer Reviewers

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

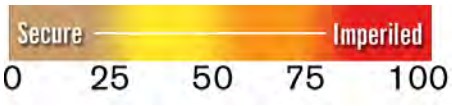
Phenacobius mirabilis

Suckermouth Minnow

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae


©G. W. Sneegas

Priority Score: **23** **out of 100**



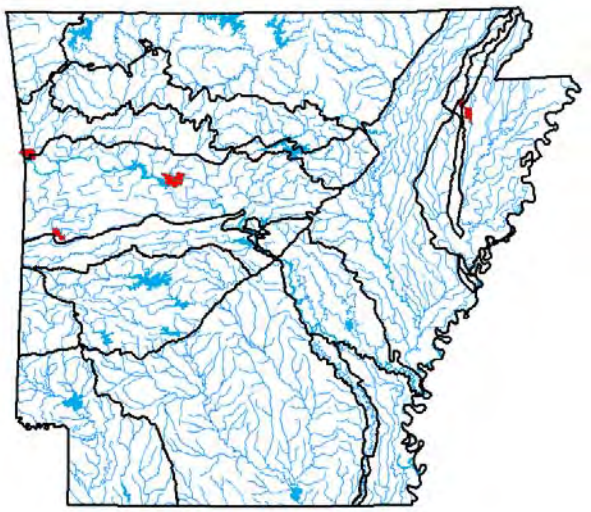
Population Trend: Unknown

Gobal 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
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [ ] South Central Plains
- [x] Mississippi Alluvial Plain
- [ ] Mississippi Valley Loess Plains

Ecobasins

Arkansas Valley - Arkansas River

Mississippi River Alluvial Plain - St. Francis River

Ouachita Mountains - Arkansas River

Habitats

	Weight
Natural Riffle: - Small - Medium	Obligate
Natural Run: - Small - Medium	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

	Importance	Category
Maintain or, where necessary, restore habitat.	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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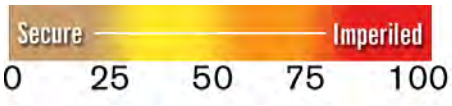
Platygobio gracilis

Flathead Chub

Class: Actinopterygii
Order: Cypriniformes
Family: Cyprinidae

©G. W. Sneegas

Priority Score: 23 out of 100



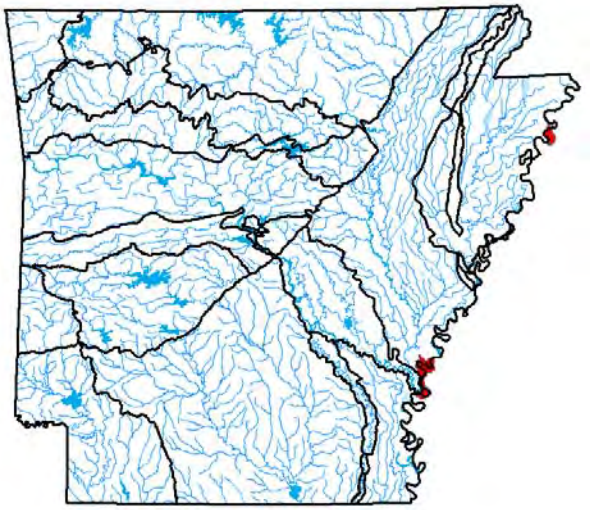
Population Trend: Unknown

Gobal 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).

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Polyodon spathula

Paddlefish

Class: Actinopterygii
Order: Acipenseriformes
Family: Polyodontidae

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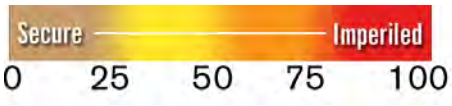
Priority Score: 24 out of 100



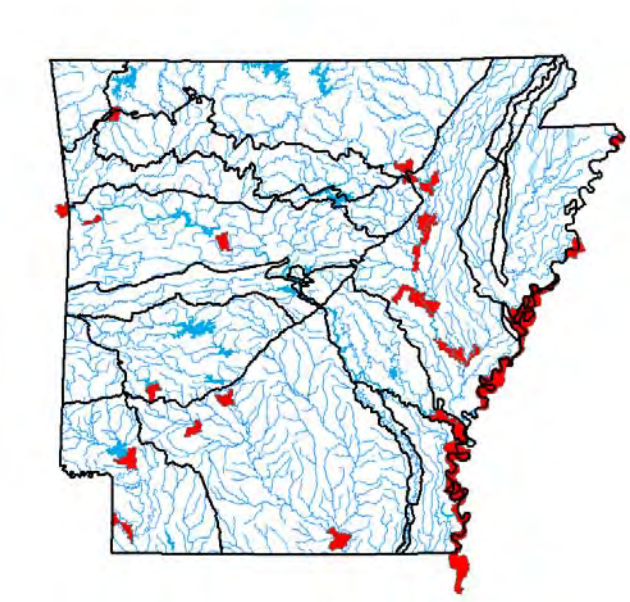
Population Trend: Decreasing

Gobal Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

Distribution

Occurrence Records



Ecoregions where the species occurs:

- [x] Ozark Highlands
- [x] Boston Mountains
- [x] Ouachita Mountains
- [x] Arkansas Valley
- [x] South Central Plains
- [x] 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

	Importance	Category
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

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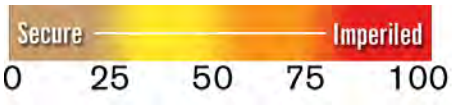
Priority Score: 33 out of 100



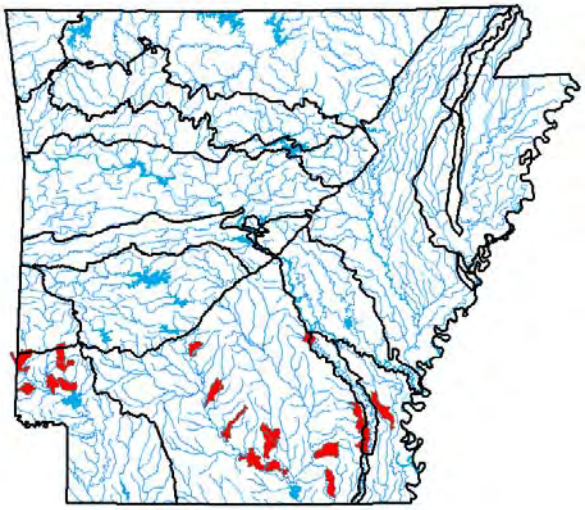
Population Trend: Decreasing

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

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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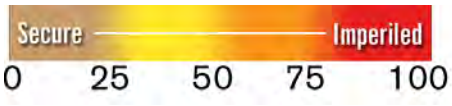
Scaphirhynchus albus

Pallid Sturgeon

Class: Actinopterygii
Order: Acipenseriformes
Family: Acipenseridae

Priority Score: 48 out of 100



Population Trend: Unknown

Gobal 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

	Weight
Natural Pool: - Large	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 Herrala 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.

Taxa Association Team and Peer Reviewers

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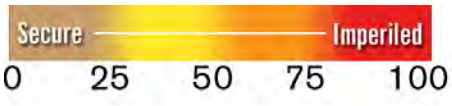
Troglichthys rosae

Ozark Cavefish

Class: Actinopterygii
Order: Percopsiformes
Family: Amblyopsidae

Priority Score: **43** out of 100



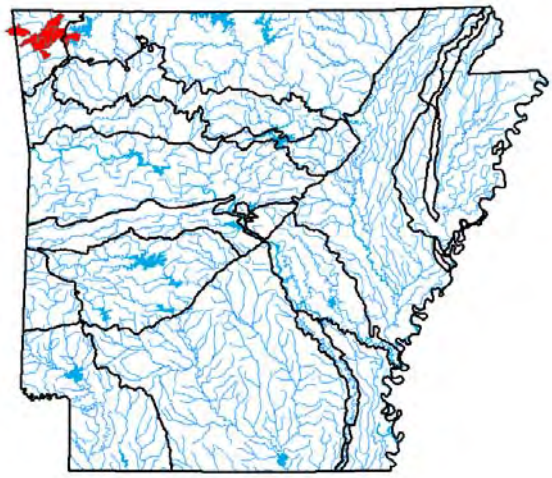
Population Trend: Decreasing

Global Rank: G3 — Vulnerable species

State Rank: S1 — Critically imperiled in Arkansas

Distribution

Element Occurrence Records



Ecoregions where the species occurs:

- [x] 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

Troglichthys rosae
Ozark Cavefish

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
Restrict access to caves with sensitive species.	High	Threat Abatement

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).

Taxa Team and Peer Reviewers

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Typhlichthys subterraneus

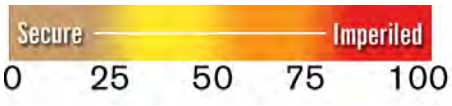
Southern Cavefish

Class: Actinopterygii

Order: Percopsiformes

Family: Amblyopsidae

Priority Score: 27 out of 100



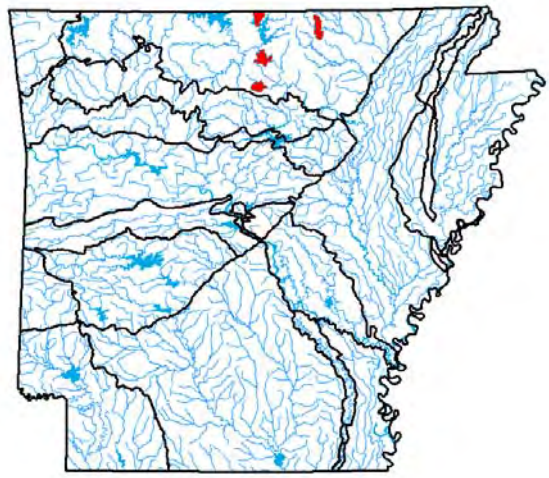
Population Trend: Unknown

Global Rank: G4 — Apparently secure species

State Rank: S1 — Critically imperiled in Arkansas

Distribution

Element Occurrence Records



Ecoregions where the species occurs:

- [x] 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

Typhlichthys subterraneus
Southern Cavefish

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

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

Umbra limi

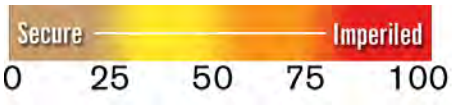
Central Mudminnow

Class: Actinopterygii

Order: Esociformes

Family: Esocidae

Priority Score: **23** **out of 100**



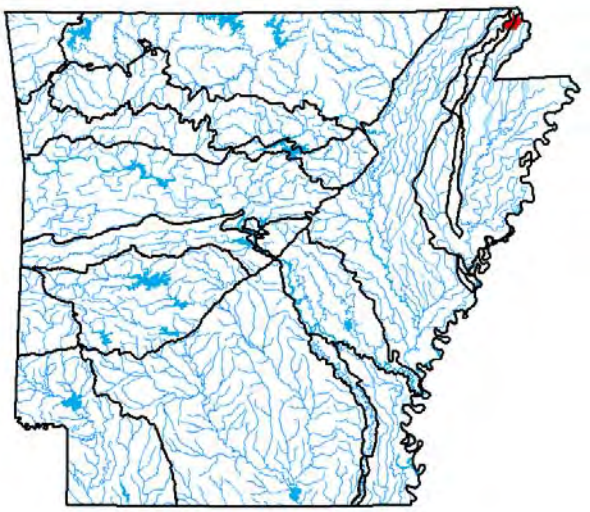
Population Trend: Unknown

Gobal Rank: G5 — Secure

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

Distribution

Occurrence Records



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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.

Taxa Association Team and Peer Reviewers

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