

# *Abacion wilhelminae*

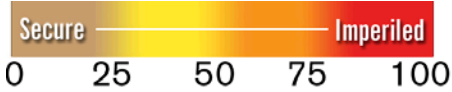
Millipede

Class: Diplopoda

Order: Callipodida

Family: Abacionidae

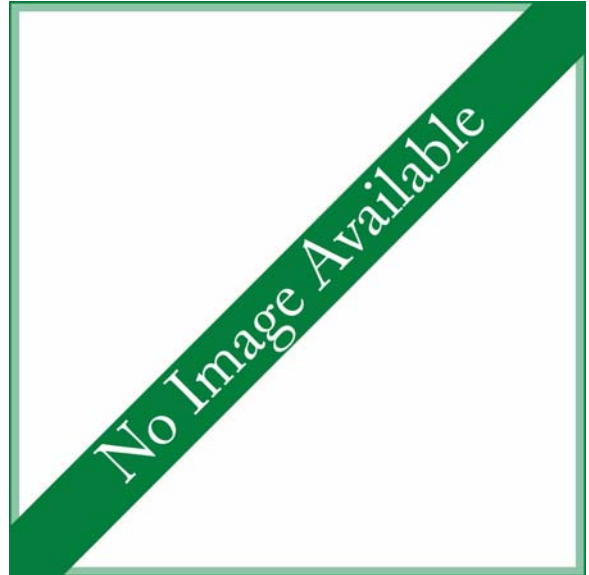
Priority Score: **23** out of 100



Population Trend: Unknown

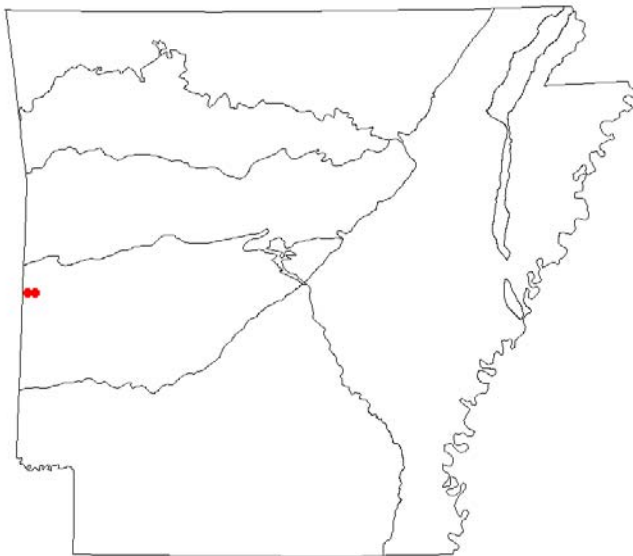
Global Rank: GNR — Not yet ranked

State Rank: S1 — Critically imperiled in Arkansas



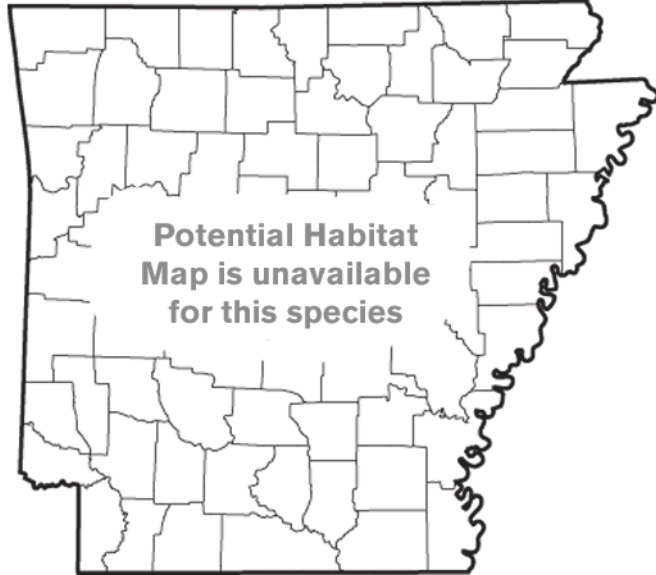
## Distribution

### Occurrence Records

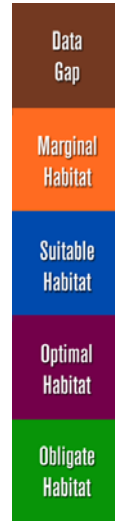


Ecoregions where the species occurs:

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



Habitat Map



**Problems Faced**

Habitat destruction.

Threat: Habitat destruction  
Source:

**Data Gaps/Research Needs**

Life history, status surveys and basic biological information needs to be obtained.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Comments**

Endemic millipede of the Ouachita Mountains of Arkansas (Robison and Allen 1995).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

## *Allocrangonyx hubrichti*

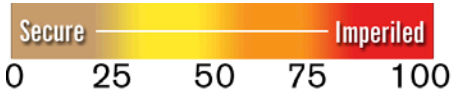
### Hubricht's Long-tailed Amphipod

**Class:** Malacostraca

**Order:** Amphipoda

**Family:** Crangonyctidae

**Priority Score:** 42 out of 100



**Population Trend:** Unknown

**Global Rank:** G2G3 — Imperiled (uncertain rank)

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



©Michael E. Slay

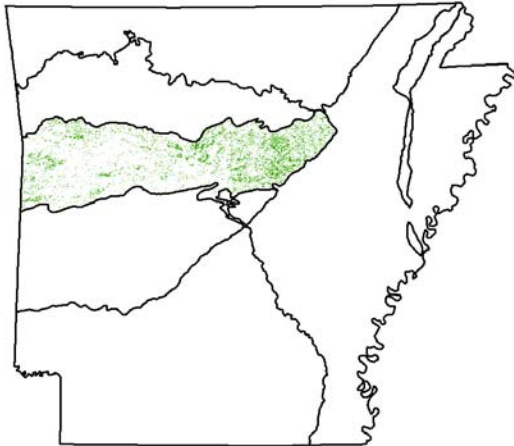
## Distribution

### Element Occurrence Records

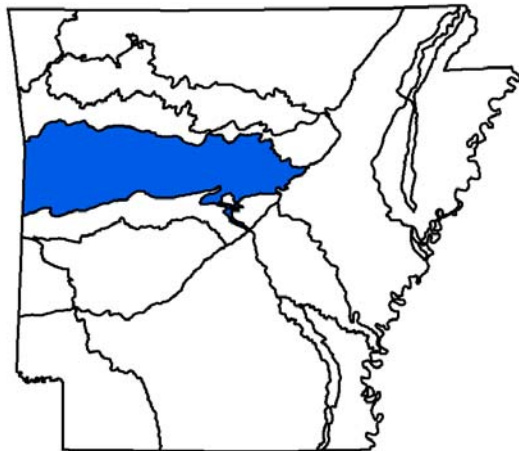


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Arkansas Valley - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Suitable

Natural Groundwater:      Optimal

Natural Seep: Headwater - Small      Suitable

Natural Spring Run: Headwater - Small      Marginal

*Allocrangonyx hubrichti*  
Hubricht's Long-tailed Amphipod

## Problems Faced

Threat: Sedimentation  
Source: Urban development

---

Threat: Toxins/contaminants  
Source: Urban development

---

## Data Gaps/Research Needs

Obtain baseline information on distribution and population status, and confirm validity of occurrence record in Arkansas Valley.

---

## Conservation Actions

Conservation Actions	Importance	Category
Maintain groundwater quality.	Medium	Habitat Protection
Protect cave habitat and recharge zone from development or disturbance.	Medium	Habitat Protection

---

## Monitoring Strategies

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

---

## Comments

Crustacean. This species' distribution may not be restricted to caves. In Missouri, it has been documented from benthic stream habitats (personal communication, Mike E. Slay).

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

## *Amnicola cora*

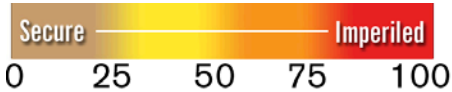
### Foushee Cavesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

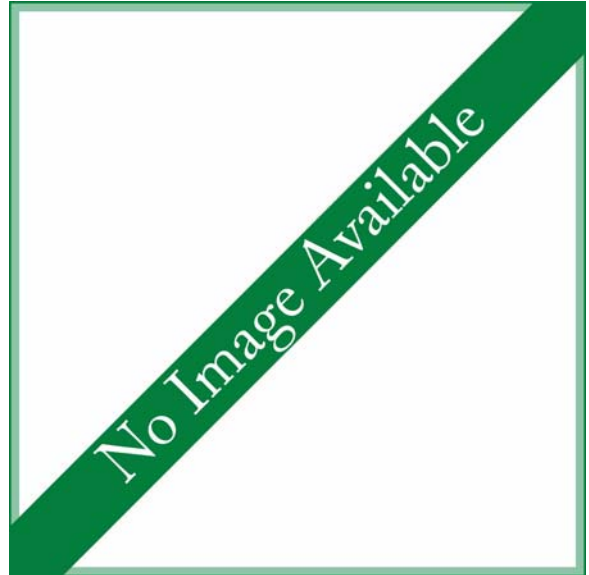
Priority Score: **80** out of 100



Population Trend: Unknown

Global Rank: G1 — Critically imperiled species

State Rank: S1 — Critically imperiled in Arkansas



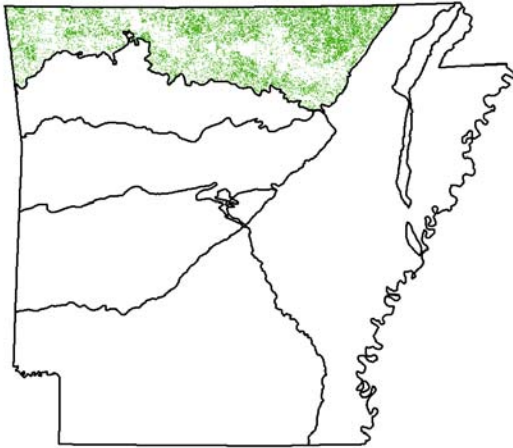
## Distribution

### Element Occurrence Records

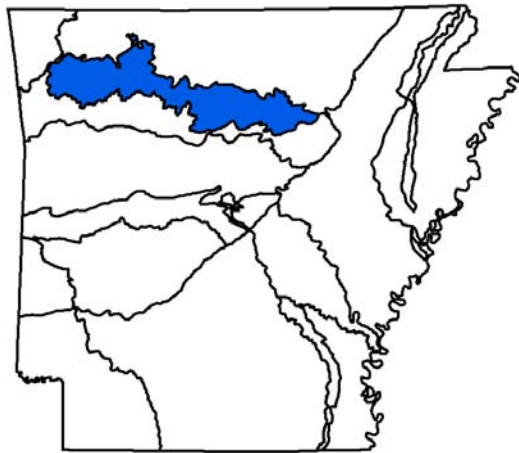


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Ozark Highlands - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Obligate

## Problems Faced

Threat: Habitat disturbance  
Source: Recreation

---

Threat: Sedimentation  
Source: Urban development

---

Threat: Toxins/contaminants  
Source: Municipal/Industrial point source

---

## Data Gaps/Research Needs

Determine life history information.

---

Obtain baseline information on distribution and population status.

---

## Conservation Actions

More data are needed to determine conservation actions.

Importance	Category
------------	----------

Medium	Data Gap
--------	----------

---

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

---

## Comments

A cave-obligate snail only known from Foushee Cave in Independence County (Hubricht 1979).

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



# *Apochthonius diabolus*

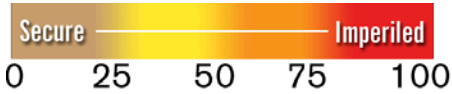
Cave Obligate Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Chthoniidae

Priority Score: **65** out of 100



Population Trend: Unknown

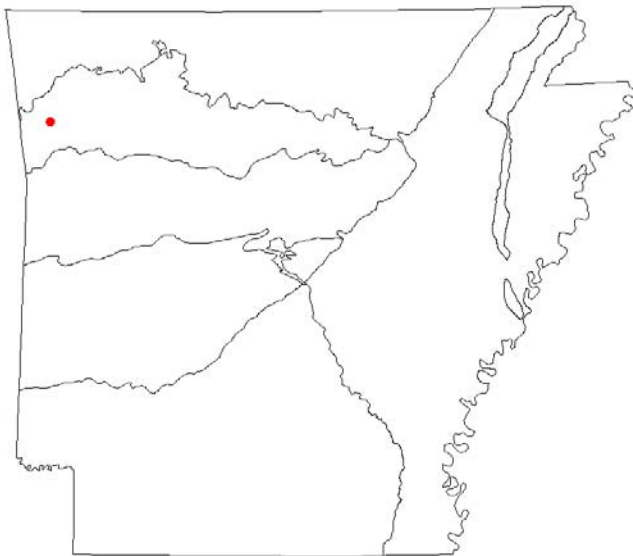
Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

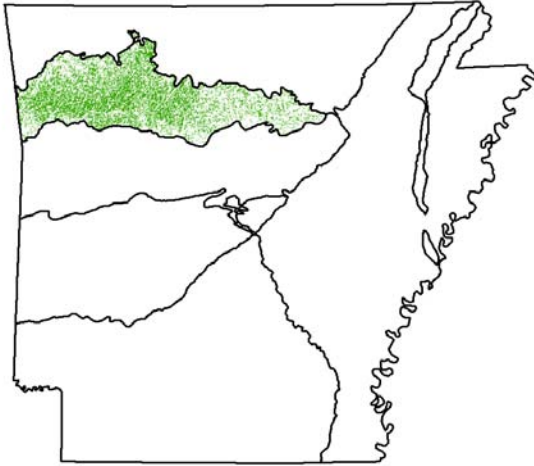
### Occurrence Records



Ecoregions where the species occurs:

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

## Habitat Map



### Habitats

Caves, Mines, Sinkholes and other Karst Features

### Weight

Obligate

### Problems Faced

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction or conversion  
Source: Urban development

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Urban development

### Conservation Actions

Maintain groundwater quality.

### Importance

Medium

### Category

Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium

Habitat Protection

### Monitoring Strategies

Survey for additional populations and monitor known occurrences

### Comments

Pseudoscorpion. No information available.

### Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Apochthonius titanicus*

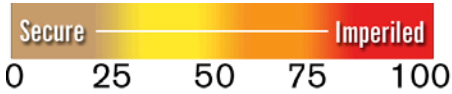
Cave Obligate Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Chthoniidae

Priority Score: **65** out of 100



Population Trend: Unknown

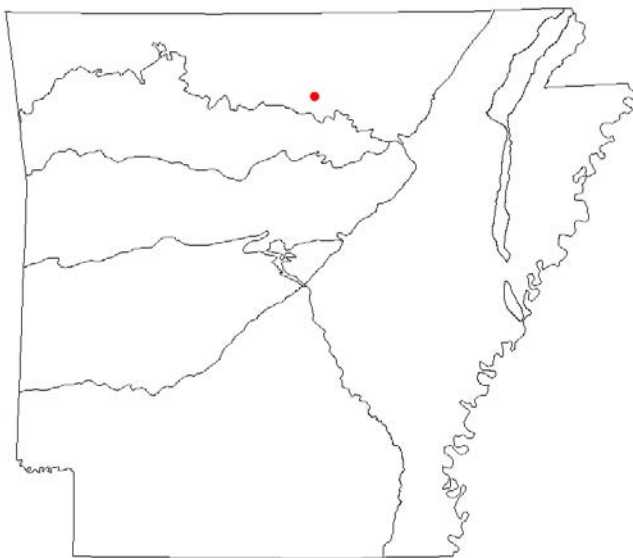
Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

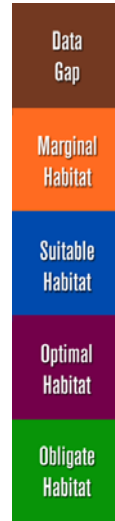
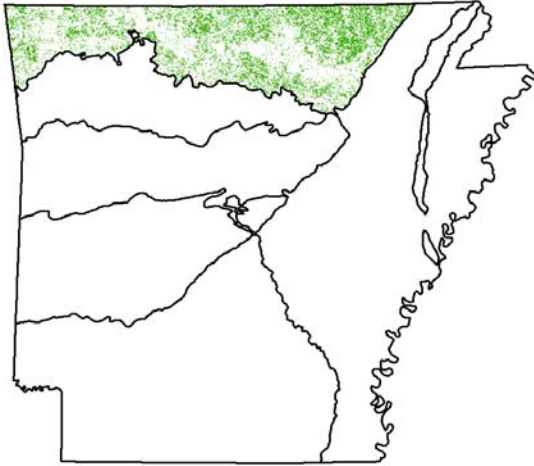
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Caves, Mines, Sinkholes and other Karst Features

**Weight**

Obligate

**Problems Faced**

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction or conversion  
Source: Urban development

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Urban development

**Data Gaps/Research Needs**

No data gaps or research needs were identified.

**Conservation Actions**

**Importance Category**

Maintain groundwater quality.

Medium Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium Habitat Protection

**Monitoring Strategies**

Survey for additional populations and monitor known occurrences.

## Comments

Pseudoscorpion.

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Batrurus pseudomucronatus*

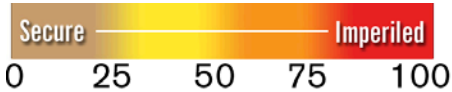
Amphipod

Class: Malacostraca

Order: Amphipoda

Family: Crangonyctidae

Priority Score: **42** out of 100



Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

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



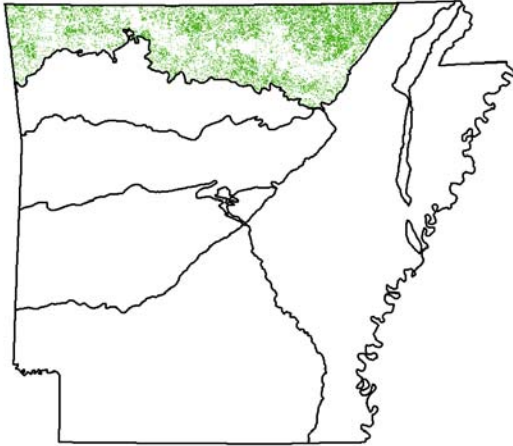
## Distribution

### Element Occurrence Records

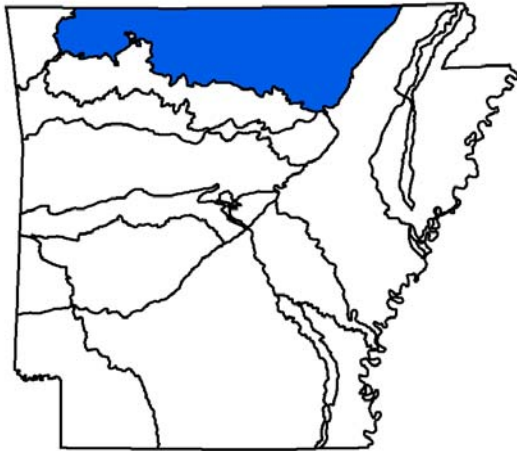


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**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:      Obligate

## Problems Faced

Threat: Sedimentation  
Source: Urban development

---

Threat: Toxins/contaminants  
Source: Urban development

---

## Data Gaps/Research Needs

Determine life history information.

---

Evaluate taxonomic relationships.

---

Survey for additional populations.

---

## Conservation Actions

### Importance Category

Maintain groundwater quality.

Medium

Habitat Protection

---

Protect cave habitat and recharge zone from development or disturbance.

Medium

Habitat Protection

---

## Monitoring Strategies

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

---

## Comments

This crustacean species is one of the largest groundwater amphipods in North America (personal communication, Mike E. Slay).

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



# *Caecidotea ancyla*

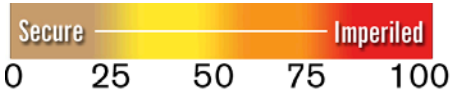
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **27** out of 100



Population Trend: Unknown

Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

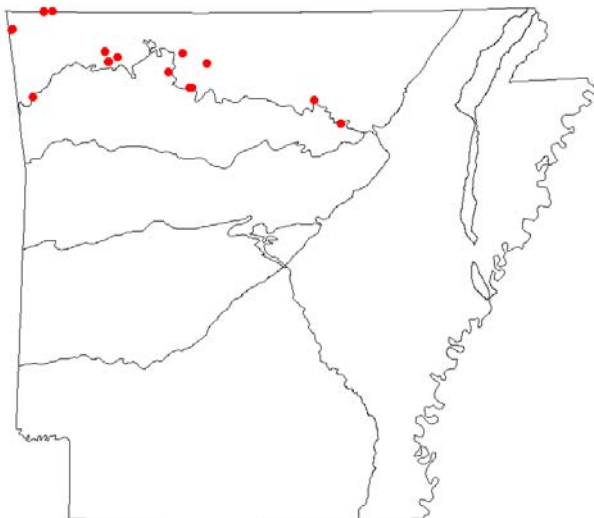
*Caecidotea* spp.



©Dante B. Fenolio

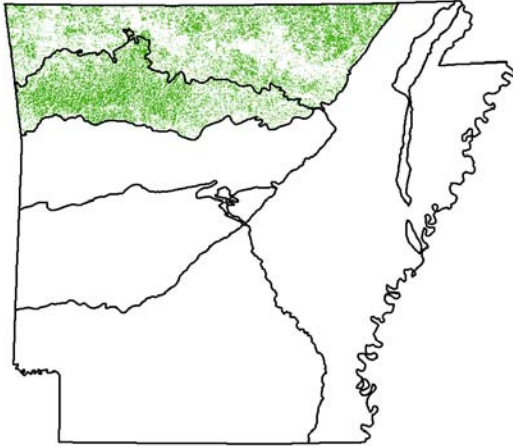
## Distribution

### Element Occurrence Records

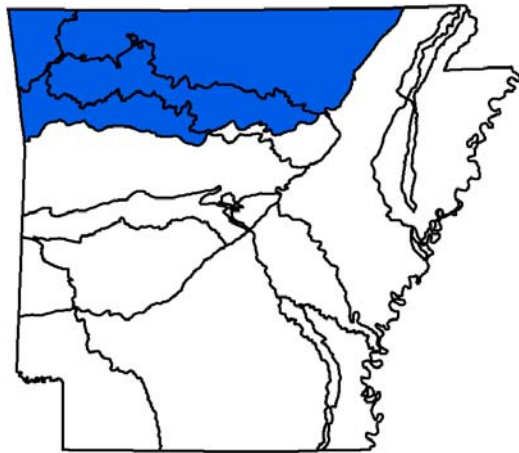


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Boston Mountains - Arkansas River

Boston Mountains - White River

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	Optimal
Natural Groundwater:	Optimal
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Marginal

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

Threat: Nutrient loading  
Source: Urban development

Threat: Sedimentation  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Survey for baseline information on distribution and population status.

## Conservation Actions

More data are needed to determine conservation actions.

### Importance Category

Medium Data Gap

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

## Comments

Crustacean. This species is a cave-adapted aquatic isopod.

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Caecidotea dimorpha*

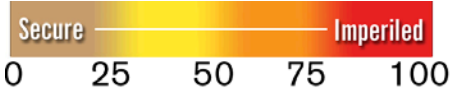
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **38** out of 100



Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

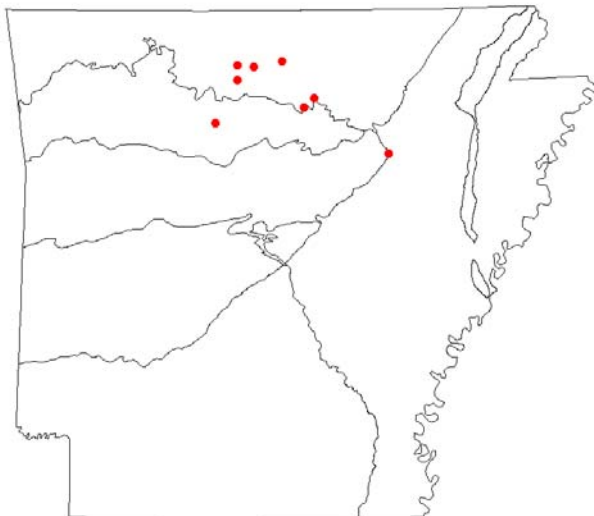
Caecidotea spp.



©Dante B. Fenolio

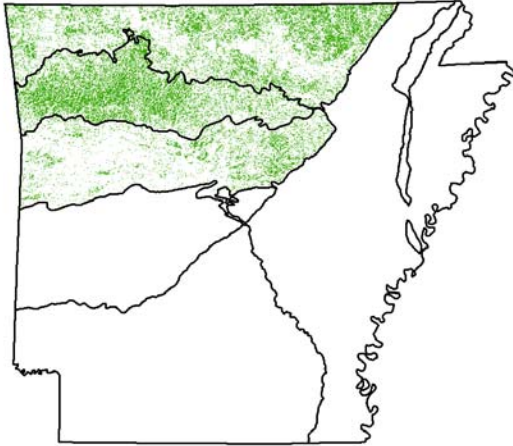
## Distribution

### Element Occurrence Records

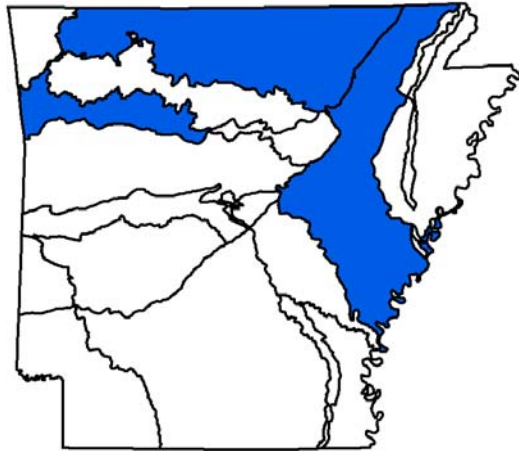


Ecoregions where the species occurs:

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



## Terrestrial Habitats



## Ecobasins where this species occurs

### Ecobasins

Arkansas Valley - White River

Boston Mountains - White River

Ozark Highlands - White River

### Terrestrial Habitats

Caves, Mines, Sinkholes and other Karst Features      Obligate

# Caecidotea fonticulus

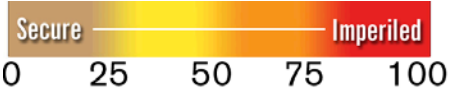
## Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **23** out of 100



Population Trend: Unknown

Gobal Rank: GNR — Not yet ranked

State Rank: S1 — Critically imperiled in Arkansas

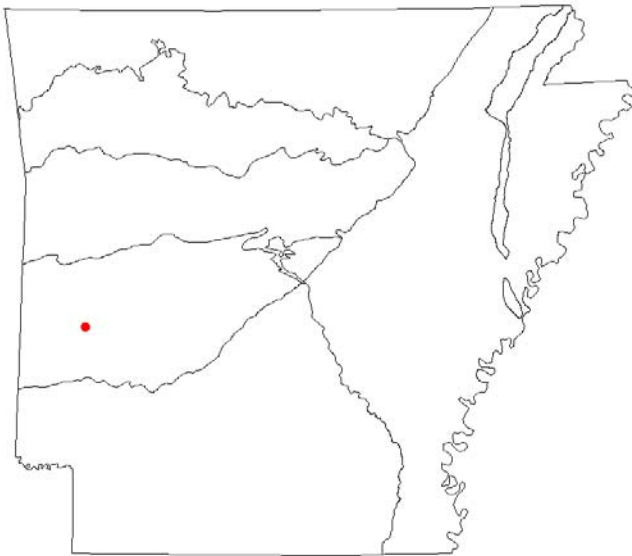
Caecidotea spp.



©Dante B. Fenolio

## Distribution

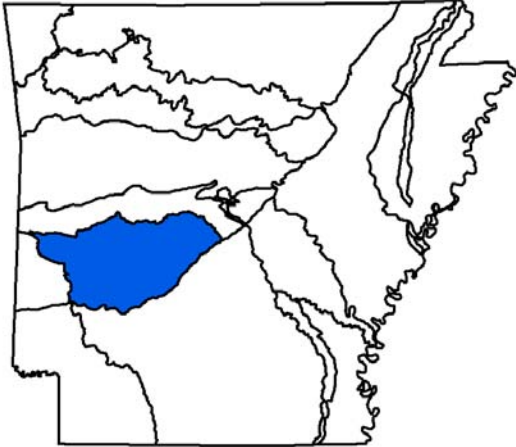
### Occurrence Records



Ecoregions where the species occurs:

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

Ecobasins where the species occurs



**Ecobasins**

Ouachita Mountains - Ouachita River

**Habitats**

Natural Groundwater: Headwater - Small  
 Natural Seep: Headwater - Small  
 Natural Spring Run: Headwater - Small

**Weight**

Data Gap  
 Data Gap  
 Obligate

**Problems Faced**

Threat: Habitat destruction or conversion  
 Source: Forestry activities

Threat: Toxins/contaminants  
 Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance**

Medium

**Category**

Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

**Comments**

An Arkansas endemic isopod known only from Abernathy Spring in Polk County (Lewis 1983).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Caecidotea fonticulus*  
 Isopod

## Aquatic Habitats

Natural Cave Stream: Headwater - Small	Optimal
Natural Groundwater: Headwater - Small	Optimal
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Marginal

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

Threat: Nutrient loading  
Source: Urban development

Threat: Sedimentation  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Survey for baseline information on distribution and population status.

## Conservation Actions

More data are needed to determine conservation actions.

Importance	Category
------------	----------

Medium	Data Gap
--------	----------

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

## Comments

Crustacean. This species is a cave-adapted aquatic isopod.

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



# *Caecidotea macropropoda*

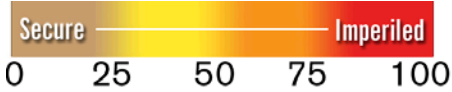
## Bat Cave Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **38** out of 100



Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

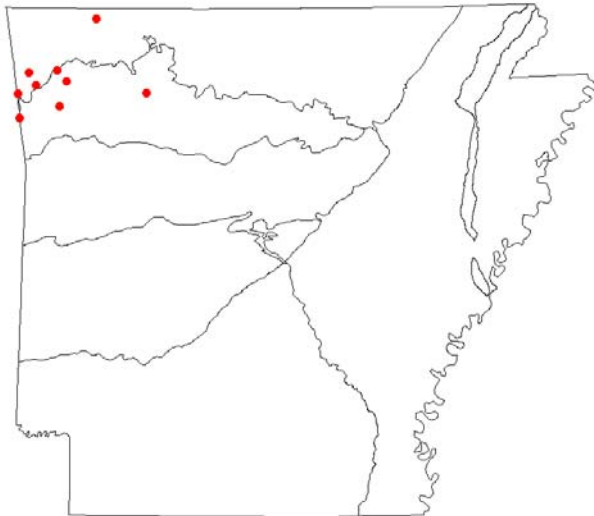
*Caecidotea* spp.



©Dante B. Fenolio

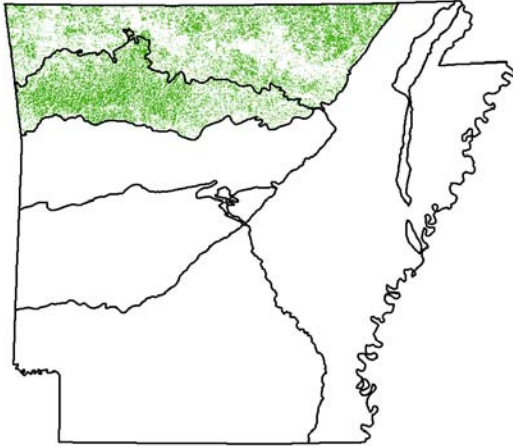
## Distribution

### Element Occurrence Records

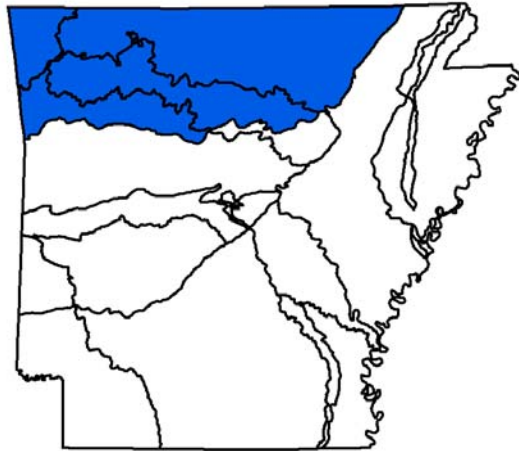


Ecoregions where the species occurs:

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



## Terrestrial Habitats



## Ecobasins where this species occurs

### Ecobasins

Boston Mountains - Arkansas River

Ozark Highlands - Arkansas River

### Terrestrial Habitats

Caves, Mines, Sinkholes and other Karst Features      Obligate

## Aquatic Habitats

Natural Cave Stream: Headwater - Small	Optimal
Natural Groundwater:	Optimal
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Marginal

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

Threat: Nutrient loading  
Source: Urban development

Threat: Sedimentation  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Survey for baseline information on distribution and population status.

## Conservation Actions

More data are needed to determine conservation actions.

### Importance Category

Medium Data Gap

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

## Comments

Crustacean.

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Caecidotea oculata*

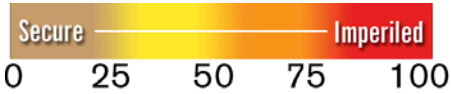
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **42** out of 100



Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

*Caecidotea* spp.



©Dante B. Fenolio

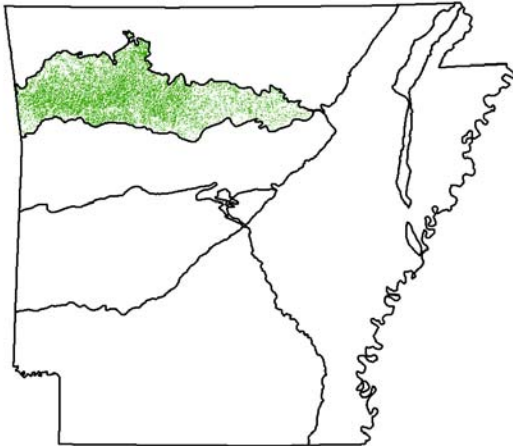
## Distribution

### Element Occurrence Records

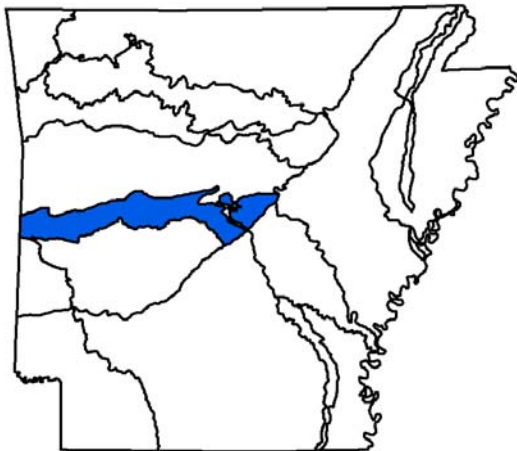


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Boston Mountains - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Data Gap

Natural Groundwater:      Data Gap

Natural Seep: Headwater - Small      Data Gap

Natural Spring Run: Headwater - Small      Obligate

*Caecidotea oculata*  
Isopod

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

---

Threat: Nutrient loading  
Source: Urban development

---

Threat: Sedimentation  
Source: Urban development

---

## Data Gaps/Research Needs

Determine life history information.

---

Survey for baseline information on distribution and population status.

---

## Conservation Actions

More data are needed to determine conservation actions.

**Importance**   **Category**

Medium   Data Gap

---

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

---

## Comments

Crustacean.

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Caecidotea salemensis*

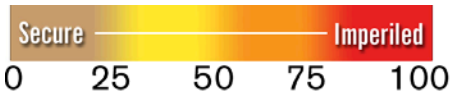
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **27** out of 100



Population Trend: Unknown

Global Rank: G4 — Apparently secure species

State Rank: S1 — Critically imperiled in Arkansas



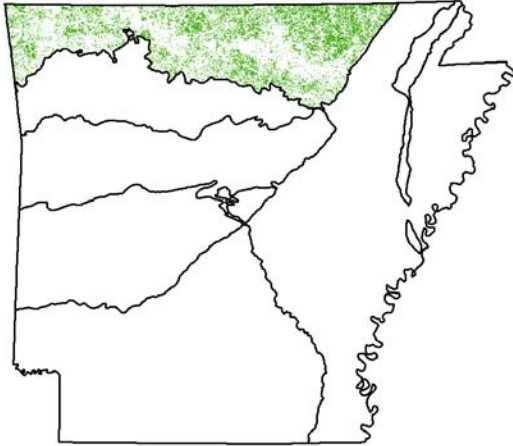
## Distribution

### Element Occurrence Records

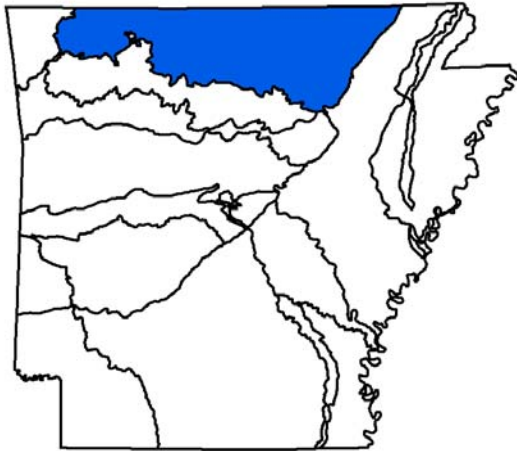


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Ozark Highlands - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Optimal

Natural Groundwater:      Optimal

Natural Seep: Headwater - Small      Suitable

Natural Spring Run: Headwater - Small      Marginal

*Caecidotea salemensis*  
Isopod



## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

---

Threat: Nutrient loading  
Source: Urban development

---

Threat: Sedimentation  
Source: Urban development

---

## Data Gaps/Research Needs

Determine life history information.

---

Survey for baseline information on distribution and population status.

---

## Conservation Actions

More data are needed to determine conservation actions.

**Importance**   **Category**

Medium   Data Gap

---

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

---

## Comments

Crustacean.

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Caecidotea simulator*

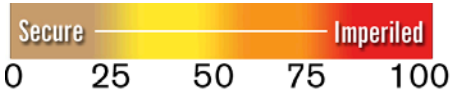
## Cave Obligate Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **42** out of 100



Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

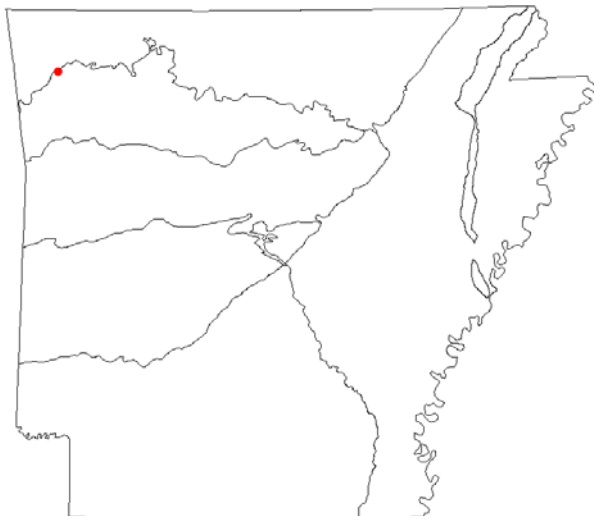
Caecidotea spp.



©Dante B. Fenolio

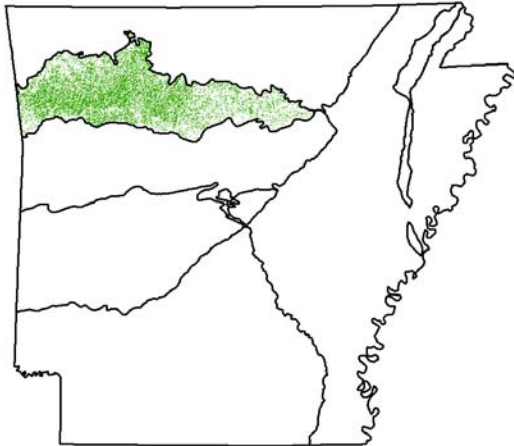
## Distribution

### Element Occurrence Records

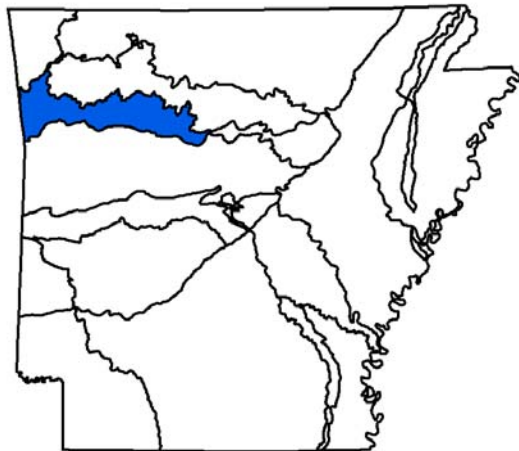


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Boston Mountains - Arkansas River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Obligate

**Aquatic Habitats**

Natural Cave Stream: Headwater - Small      Data Gap

Natural Groundwater:      Obligate

Natural Seep: Headwater - Small      Data Gap

Natural Spring Run: Headwater - Small      Data Gap

*Caecidotea simulator*  
Cave Obligate Isopod

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

---

Threat: Sedimentation  
Source: Urban development

---

Threat: Toxins/contaminants  
Source: Urban development

---

## Data Gaps/Research Needs

Determine life history information.

---

Survey for baseline information on distribution and population status.

---

## Conservation Actions

Maintain groundwater quality.

**Importance**   **Category**

Medium   Habitat Protection

---

Protect cave habitat and recharge zone from development or disturbance.

Medium   Habitat Protection

---

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

---

## Comments

This crustacean species is one of the rarest aquatic cave-adapted isopods in Arkansas.

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

## *Caecidotea steevesi*

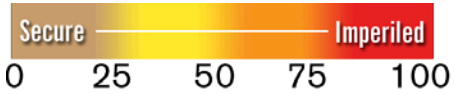
### Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

Priority Score: **31** out of 100



Population Trend: Unknown

Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

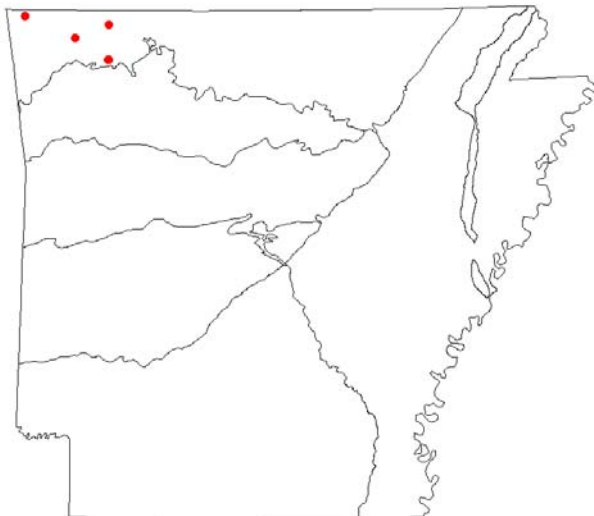
*Caecidotea* spp.



©Dante B. Fenolio

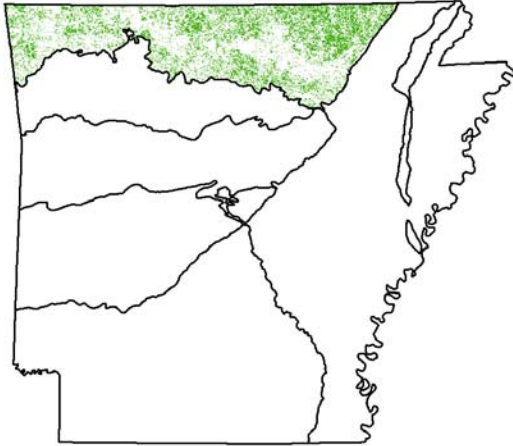
## Distribution

### Element Occurrence Records

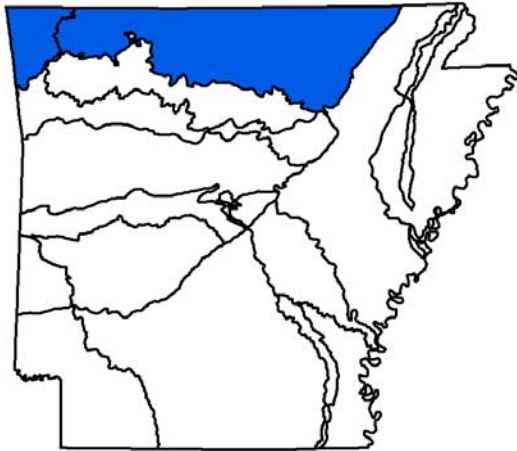


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

## 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	Optimal
Natural Groundwater:	Optimal
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Marginal

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

Threat: Nutrient loading  
Source: Urban development

Threat: Sedimentation  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Survey for baseline information on distribution and population status.

## Conservation Actions

More data are needed to determine conservation actions.

### Importance Category

Medium Data Gap

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

## Comments

This crustacean species is a cave-adapted aquatic isopod.

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

## *Caecidotea stiladactyla*

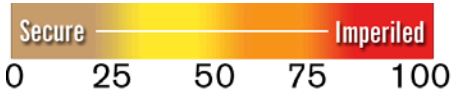
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

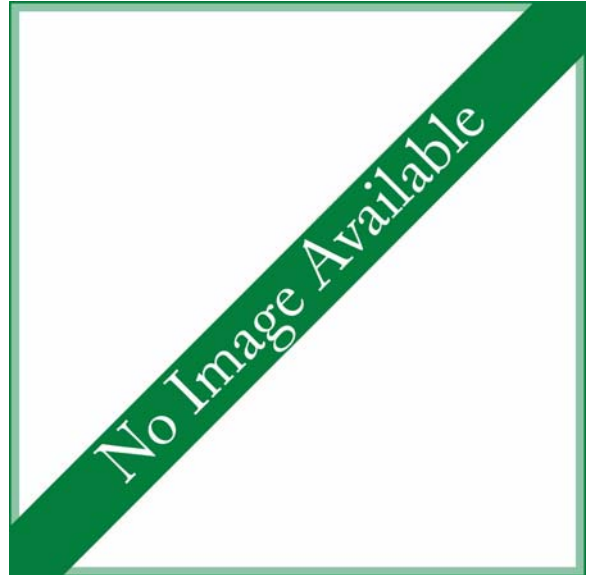
Priority Score: **23** out of 100



Population Trend: Unknown

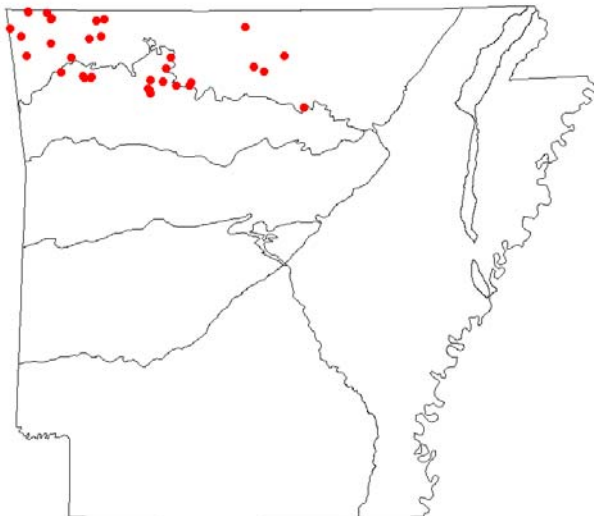
Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S3 — Vulnerable in Arkansas



## Distribution

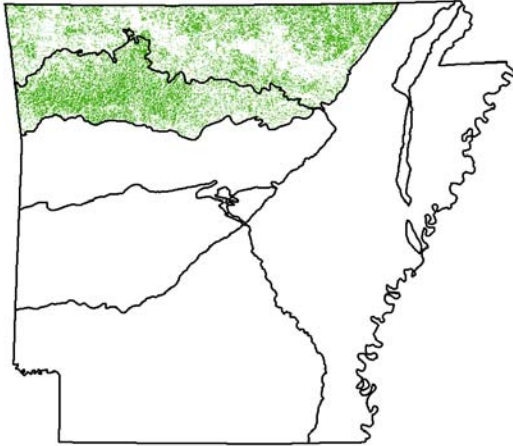
### Element Occurrence Records



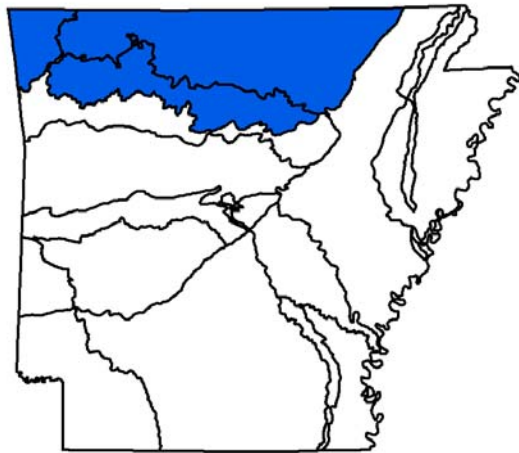
Ecoregions where the species occurs:

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





Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Boston Mountains - White River

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	Optimal
Natural Groundwater: Headwater - Small	Optimal
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Marginal

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

Threat: Nutrient loading  
Source: Urban development

Threat: Sedimentation  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Survey for baseline information on distribution and population status.

## Conservation Actions

More data are needed to determine conservation actions.

Importance	Category
------------	----------

Medium	Data Gap
--------	----------

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

## Comments

This crustacean species is a cave-adapted aquatic isopod.

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Crosbyella distincta*

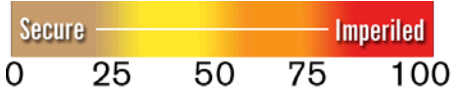
## Cave Obligate Harvestman

Class: Arachnida

Order: Opiliones

Family: Phalangodidae

Priority Score: **65** out of 100



Population Trend: Unknown

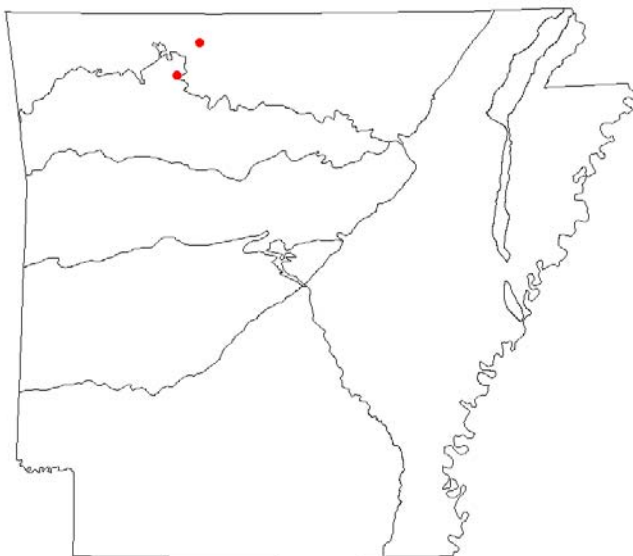
Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

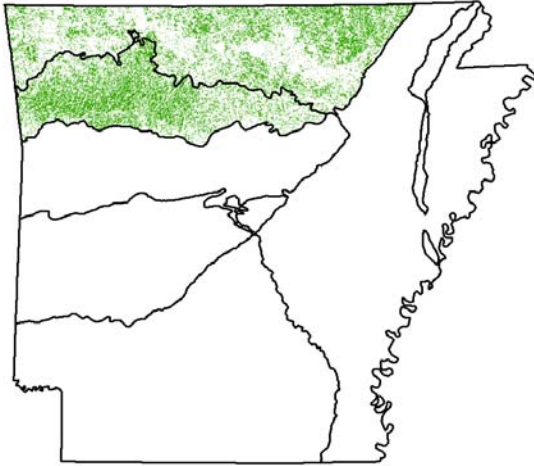
### Occurrence Records



Ecoregions where the species occurs:

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

## Habitat Map



### Habitats

Caves, Mines, Sinkholes and other Karst Features

### Weight

Obligate

### Problems Faced

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction or conversion  
Source: Urban development

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Urban development

### Conservation Actions

Maintain groundwater quality.

### Importance

Medium

### Category

Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium

Habitat Protection

### Monitoring Strategies

Survey for additional populations and monitor known occurrences.

### Comments

Arachnid.

### Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Crosbyella roeweri*

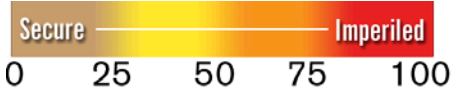
## Cave Obligate Harvestman

Class: Arachnida

Order: Opiliones

Family: Phalangodidae

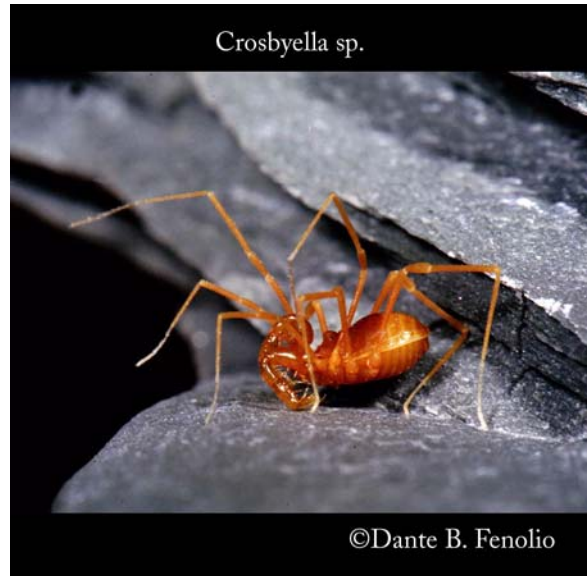
Priority Score: **65** out of 100



Population Trend: Unknown

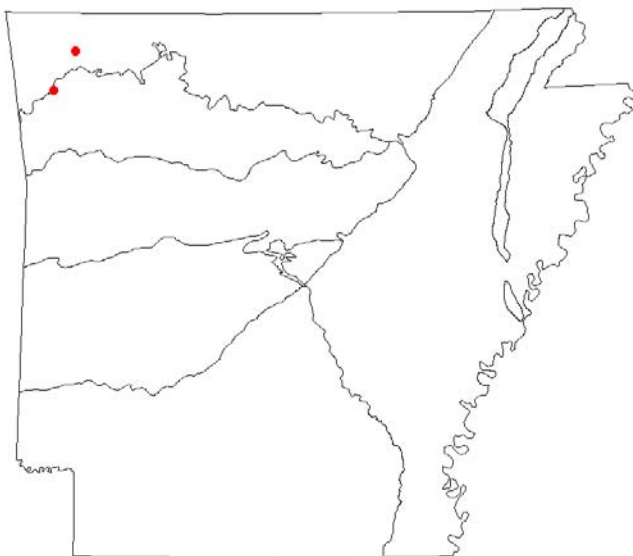
Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

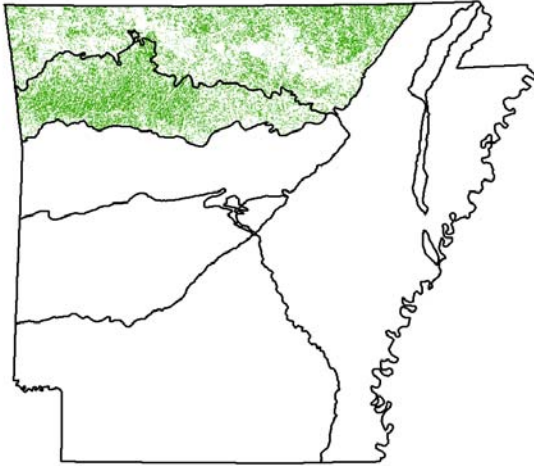
### Occurrence Records



Ecoregions where the species occurs:

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

## Habitat Map



### Habitats

Caves, Mines, Sinkholes and other Karst Features

### Weight

Obligate

### Problems Faced

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction or conversion  
Source: Urban development

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Urban development

### Conservation Actions

Maintain groundwater quality.

### Importance

Medium

### Category

Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium

Habitat Protection

### Monitoring Strategies

Survey for additional populations and monitor known occurrences.

### Comments

Arachnid.

### Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Daedalochila peregrina*

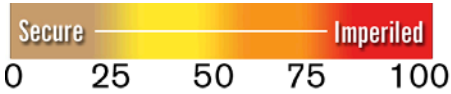
## White Liptoath

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: **34** out of 100



Population Trend: Unknown

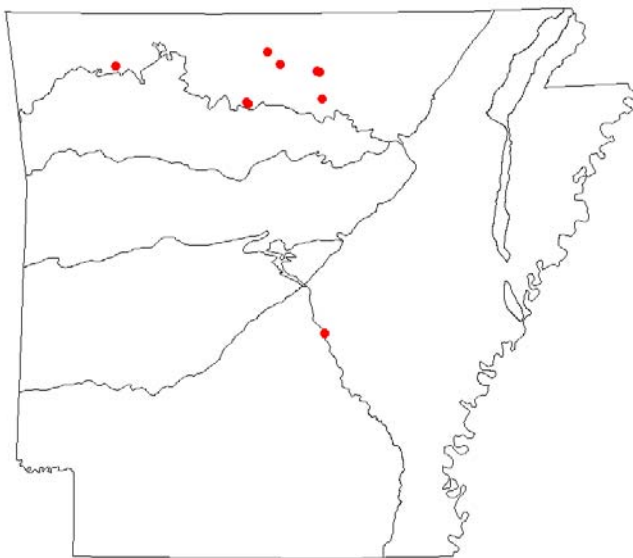
Global Rank: G2 — Imperiled species

State Rank: SNR — Species not ranked in Arkansas



## Distribution

### Occurrence Records

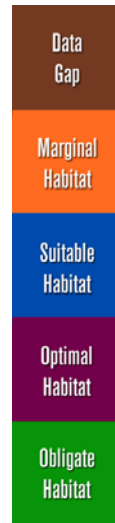


Ecoregions where the species occurs:

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



Habitat Map



**Habitats**

Ozark-Ouachita Mesic Hardwood Forest

**Weight**

Data Gap

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

**Comments**

Terrestrial snail. (Turgeon and others 1998)

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



## *Dendrocoelopsis americana*

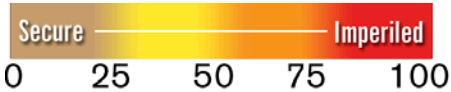
### Cave Obligate Planarian

Class: Turbellaria

Order: Tricladida

Family: Dendrocoelidae

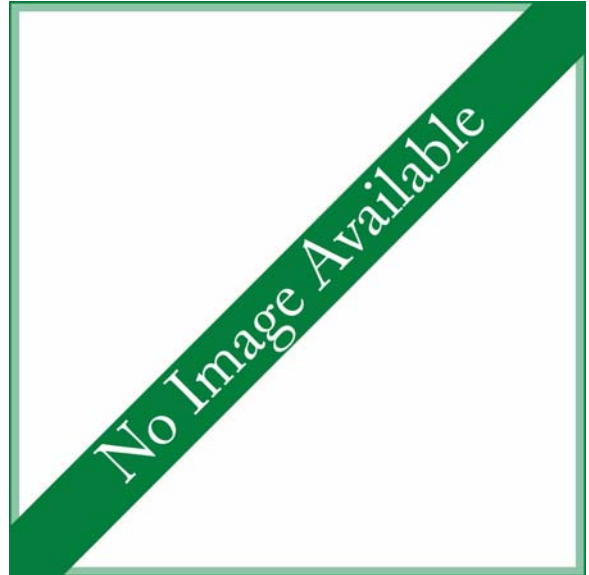
Priority Score: **42** out of 100



Population Trend: Unknown

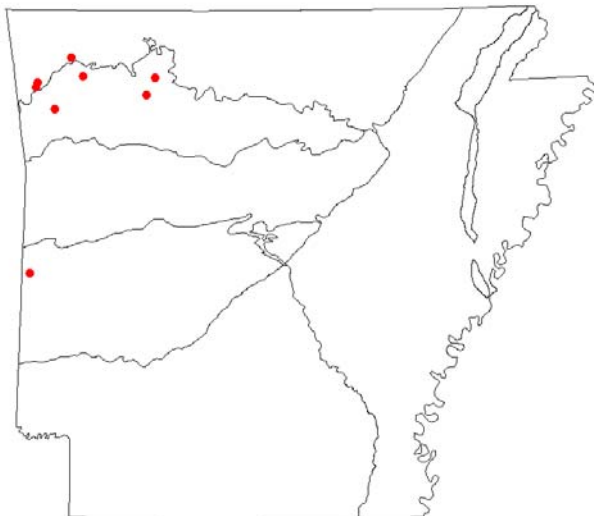
Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



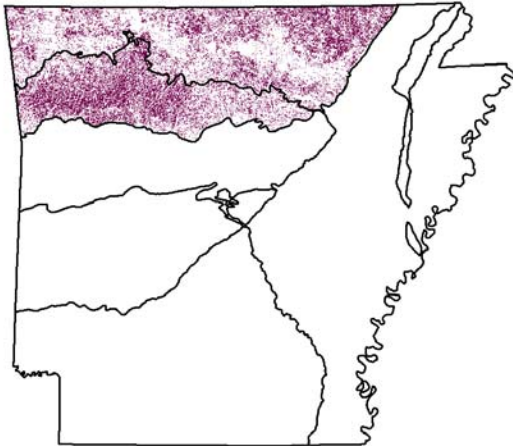
## Distribution

### Element Occurrence Records

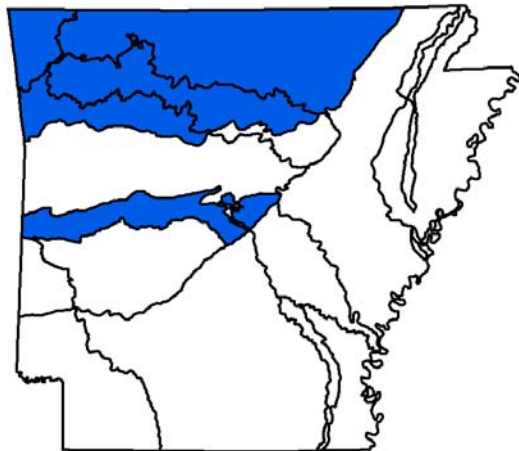


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Boston Mountains - Arkansas River

Boston Mountains - White River

Ozark Highlands - Arkansas River

Ozark Highlands - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Optimal

## Aquatic Habitats

Natural Cave Stream: Headwater - Small	Optimal
Natural Groundwater:	Optimal
Natural Seep: Headwater - Small	Optimal
Natural Spring Run: Headwater - Small	Optimal

## Problems Faced

Threat: Habitat disturbance  
Source: Urban development

Threat: Sedimentation  
Source: Urban development

Threat: Toxins/contaminants  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Survey for baseline information on distribution and population status.

## Conservation Actions

	Importance	Category
Maintain groundwater quality.	Medium	Habitat Restoration/Improvement
Protect cave habitat and recharge zone from development or disturbance.	Medium	Habitat Protection

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

## Comments

Flatworm.

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Diplocardia meansi*

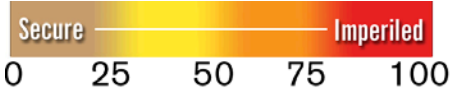
Earthworm

Class: Oligochaeta

Order: Opisthopora

Family: Acanthodrilidae

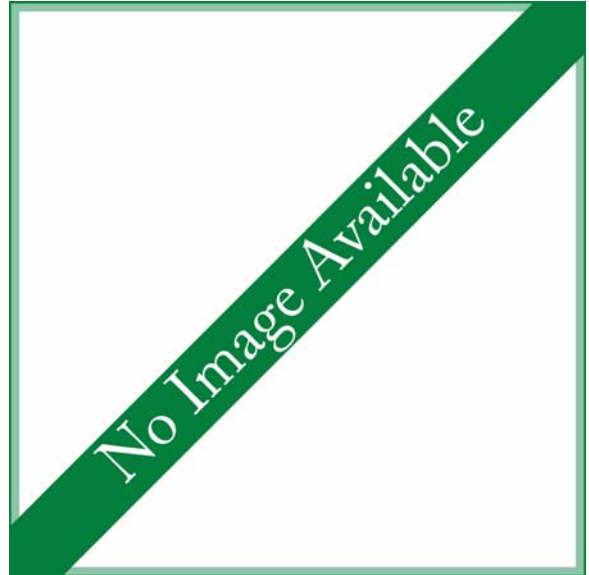
Priority Score: **17** out of 100



Population Trend: Unknown

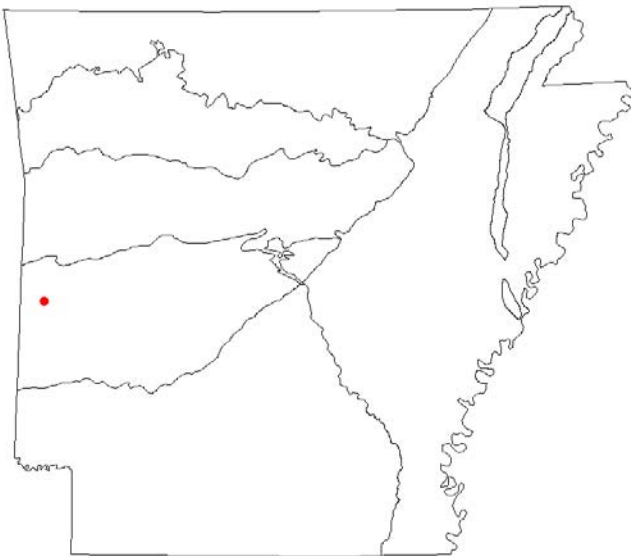
Global Rank: GNR — Not yet ranked

State Rank: S2S3 — Imperiled species in Arkansas (uncertain rank)



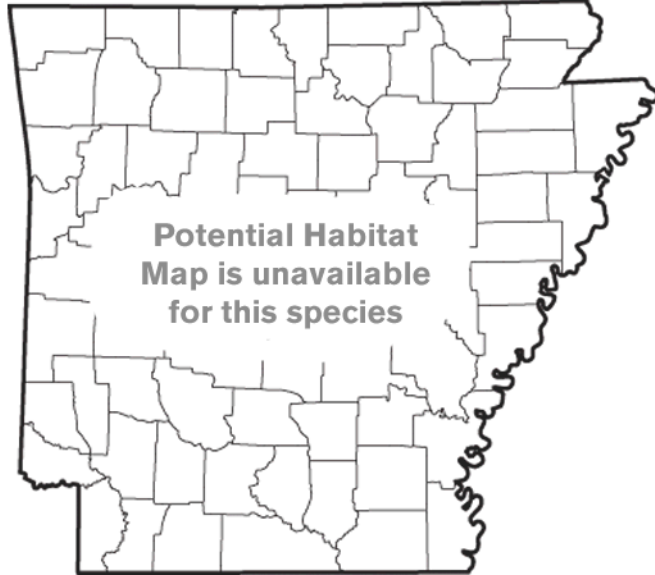
## Distribution

### Occurrence Records

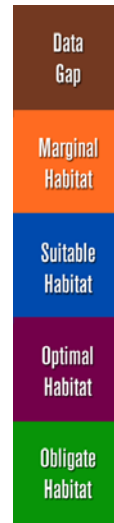


Ecoregions where the species occurs:

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



Habitat Map



**Habitats**

Ozark-Ouachita Mesic Hardwood Forest

**Weight**

Suitable

**Problems Faced**

Habitat degradation/disturbance.

Threat: Habitat disturbance  
Source: Forestry activities

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

**Importance Category**

Limit soil disturbance.

High

Habitat Protection

Suspend application of herbicides where this species occurs.

Medium

Habitat Protection

**Monitoring Strategies**

Survey for additional populations and monitor known occurrences.

**Comments**

The second largest earthworm in the United States, *D. meansi* is an Arkansas endemic only known from the slopes of Rich Mountain (Gates 1977).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Diplocardia meansi*  
Earthworm

# *Gastrocopta rogersensis*

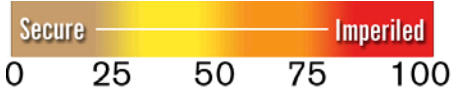
## Land Snail

Class: Gastropoda

Order: Stylommatophora

Family: Pupillidae

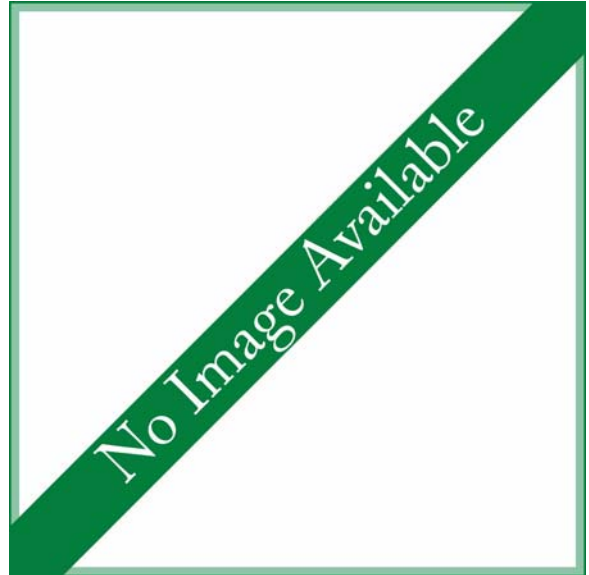
Priority Score: **27** out of 100



Population Trend: Unknown

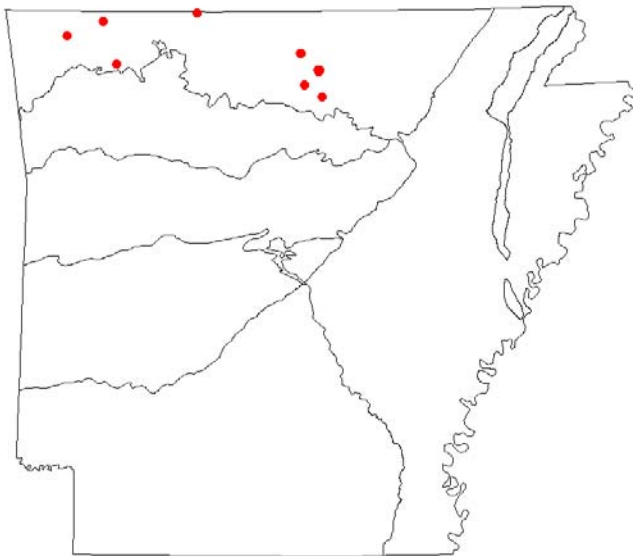
Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas



## Distribution

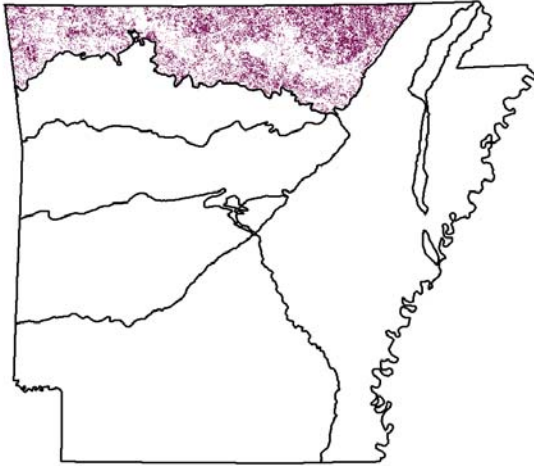
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Ozark-Ouachita Cliff and Talus

**Weight**

Optimal

**Problems Faced**

Forestry practices that disturb litter layer and create xeric conditions.

Threat: Habitat disturbance  
Source: Forestry activities

**Data Gaps/Research Needs**

Need to assess population status of known occurrences.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Survey areas near known occurrences to locate additional populations.

**Comments**

A regionally endemic (Arkansas, Missouri) terrestrial snail that occupies habitat in and along bluff lines (Nekola and Coles 2001).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Hesperochernes occidentalis*

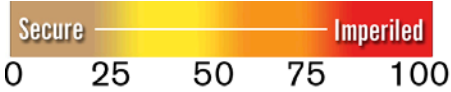
Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Chernetidae

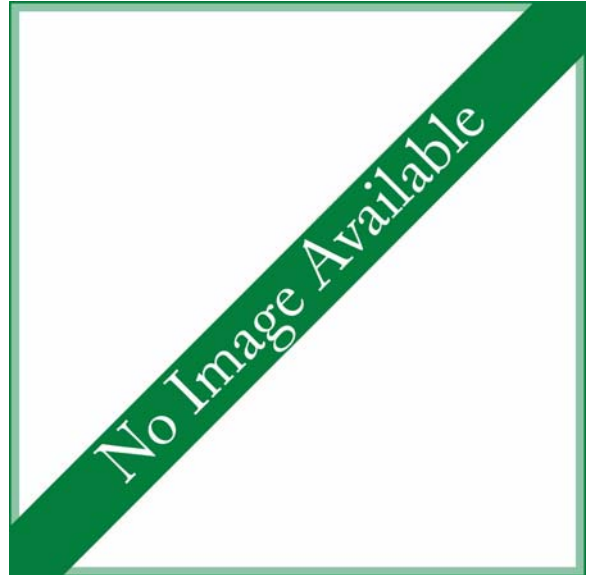
Priority Score: **23** out of 100



Population Trend: Unknown

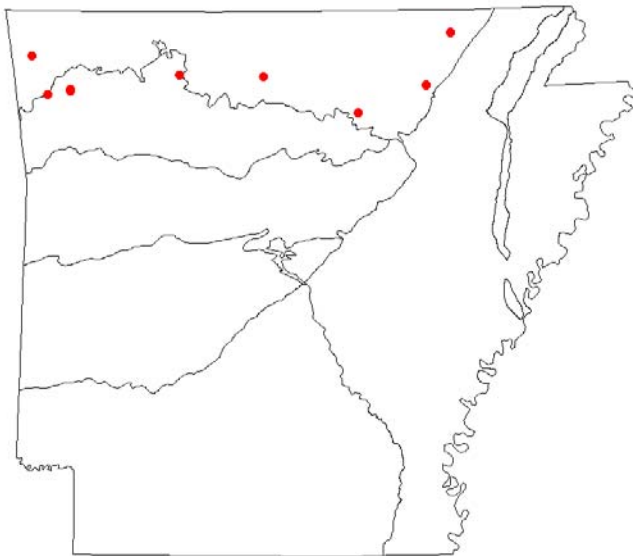
Global Rank: G5 — Secure

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

### Occurrence Records

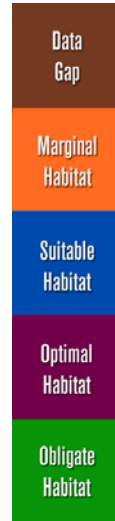
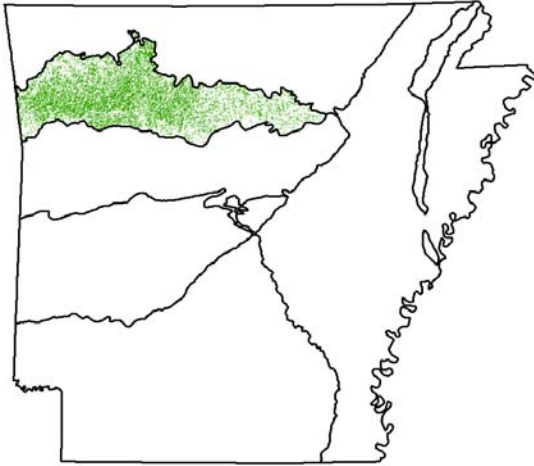


Ecoregions where the species occurs:

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



Habitat Map



**Habitats**

Caves, Mines, Sinkholes and other Karst Features

**Weight**

Obligate

**Problems Faced**

Disturbance of cave habitat and recharge zone.

Threat: Habitat disturbance  
Source: Recreation

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

**Importance Category**

Maintain groundwater quality.

Medium Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium Habitat Protection

**Monitoring Strategies**

Survey for additional populations and monitor known occurrences.

## Comments

An Arkansas endemic species, this pseudoscorpion is only known from Fincher and Carrol Caves in Washington County (Hoff and Bolsterti 1956).

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Inflectarius magazinensis*

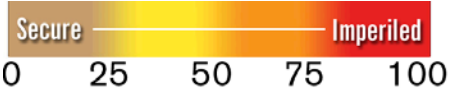
Magazine Mountain Shagreen

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

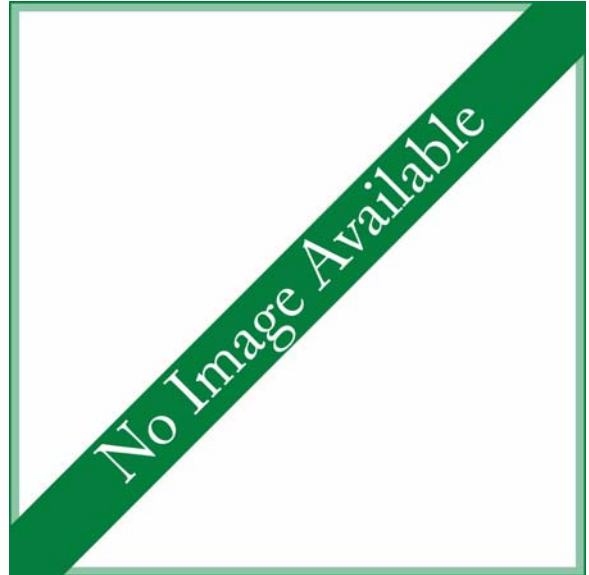
Priority Score: **80** out of 100



Population Trend: Unknown

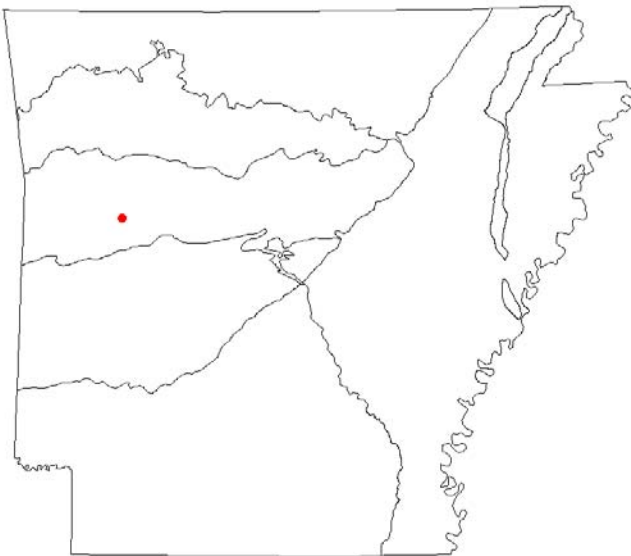
Global Rank: G1 — Critically imperiled species

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

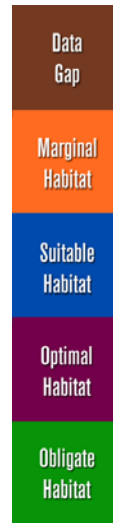
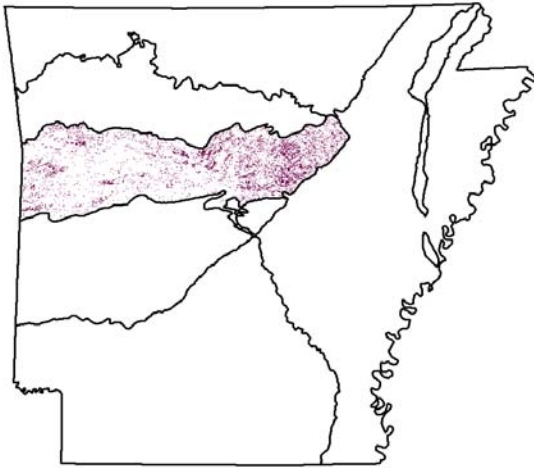
### Occurrence Records



Ecoregions where the species occurs:

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

## Habitat Map



### Habitats

Ozark-Ouachita Cliff and Talus

### Weight

Optimal

### Problems Faced

Development or activities that alter talus slopes where this species occurs.

Threat: Habitat disturbance  
Source: Forestry activities

Development or activities that alter talus slopes where this species occurs.

Threat: Habitat disturbance  
Source: Recreation

### Data Gaps/Research Needs

Need to assess population status of known occurrences.

### Conservation Actions

Protect known occurrences from development or activities that could alter talus slopes.

### Importance Category

High

Habitat Protection

### Monitoring Strategies

Survey for additional populations and monitor known occurrences.

## Comments

An Arkansas endemic species only known from sites on Magazine Mountain in Logan County (Pilsbry and Ferriss 1906).

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Lirceus bicuspidatus*

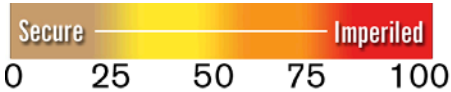
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

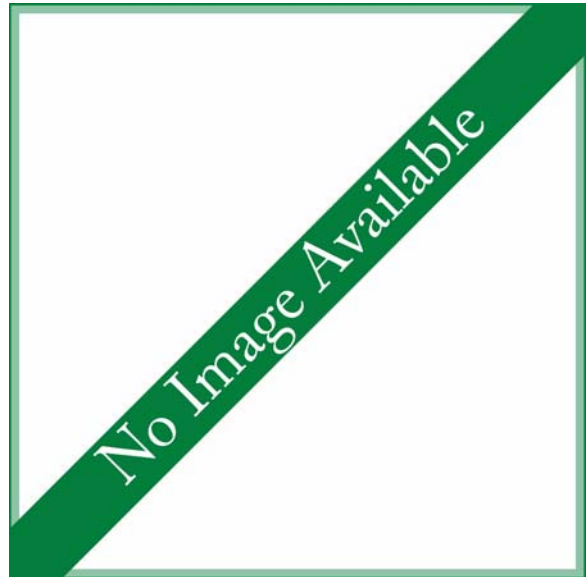
Priority Score: **31** out of 100



Population Trend: Unknown

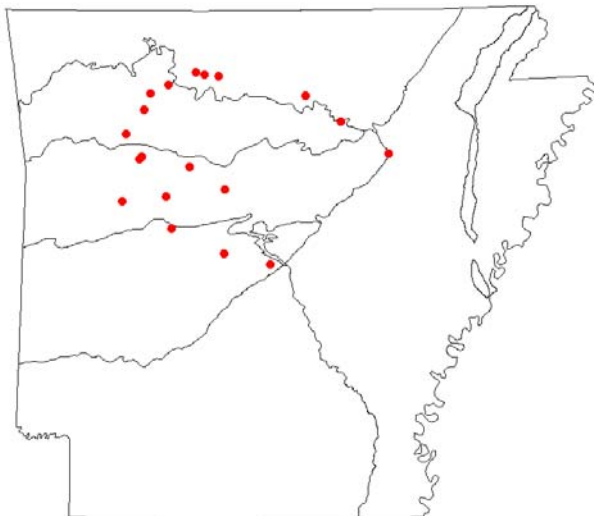
Global Rank: G3Q — Vulnerable (questionable taxonomy)

State Rank: S2 — Imperiled in Arkansas



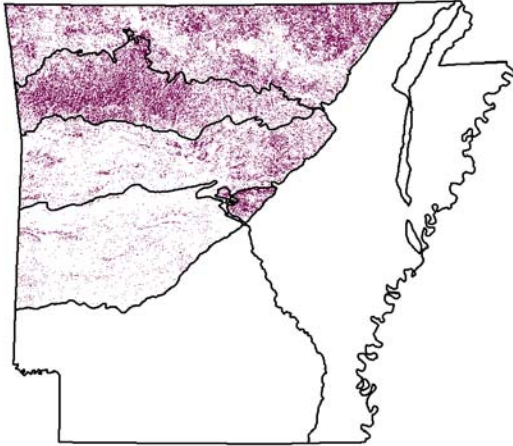
## Distribution

### Element Occurrence Records

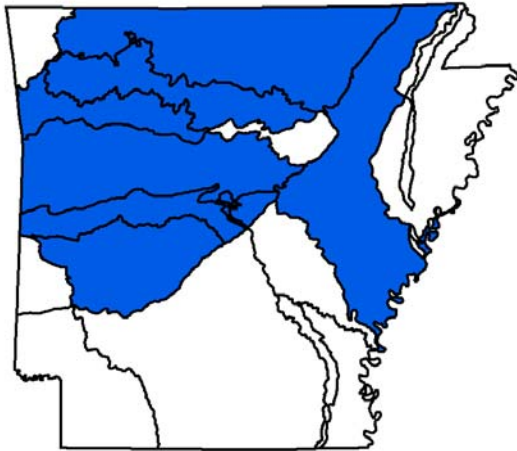


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Arkansas Valley - Arkansas River

Arkansas Valley - White River

Boston Mountains - White River

Ouachita Mountains - Arkansas River

Ozark Highlands - White River

**Terrestrial Habitats**

Caves, Mines, Sinkholes and other Karst Features      Optimal

## Aquatic Habitats

Natural Cave Stream: Headwater - Small	Suitable
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Optimal

## Problems Faced

Threat: Sedimentation  
Source: Resource extraction

Threat: Toxins/contaminants  
Source: Municipal/Industrial point source

## Data Gaps/Research Needs

Determine life history information.

Determine validity of location data for records in Arkansas Valley and Ouachita Mountains.

Surveys to locate additional populations.

## Conservation Actions

More data are needed to determine conservation actions.

### Importance Category

Medium Data Gap

## Monitoring Strategies

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

## Comments

This isopod inhabits a variety of biotopes including small seep/springs and streams, and cave streams. Nothing more is known about the biology of this species, except that it is widely known from the mountainous region of Arkansas. (ANHI 2003, Robison and Allen, 1995)

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



## *Lirceus bidentatus*

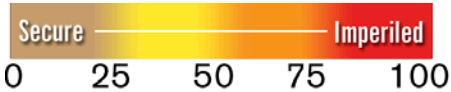
Isopod

Class: Malacostraca

Order: Isopoda

Family: Asellidae

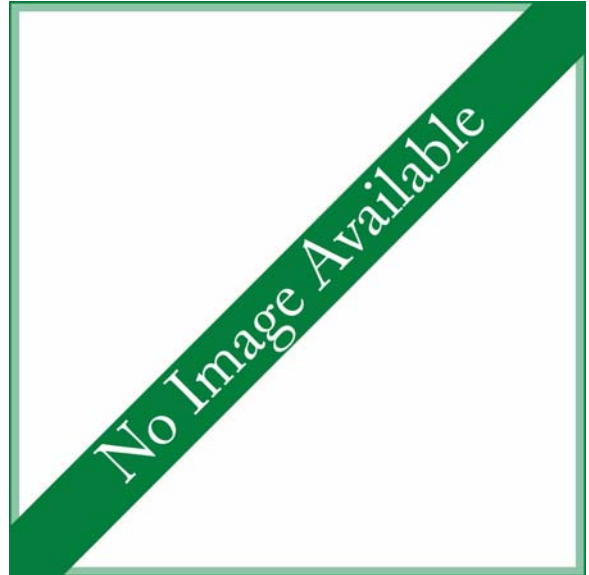
Priority Score: **80** out of 100



Population Trend: Unknown

Global Rank: G1? — Critically imperiled (inexact numeric rank)

State Rank: S1 — Critically imperiled in Arkansas



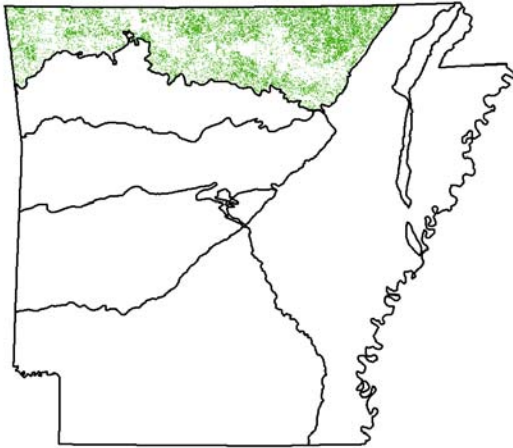
## Distribution

### Element Occurrence Records

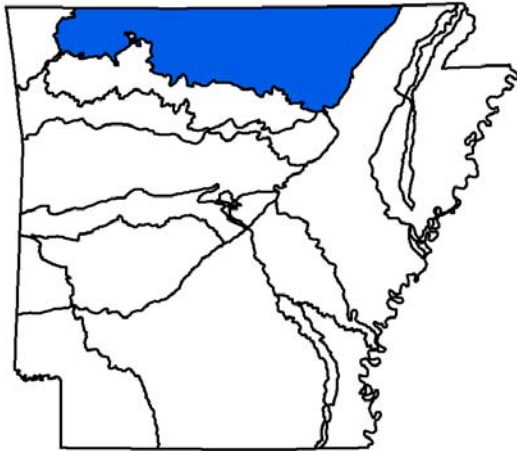


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**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:      Data Gap

Natural Seep: Headwater - Small      Data Gap

Natural Spring Run: Headwater - Small      Data Gap

*Lirceus bidentatus*  
Isopod

## Problems Faced

Threat: Sedimentation  
Source: Forestry activities

---

Threat: Toxins/contaminants  
Source: Municipal/Industrial point source

---

## Data Gaps/Research Needs

Determine life history information.

---

Determine taxonomic status. Validity of this species is in question.

---

Survey for baseline information on distribution and population status.

---

## Conservation Actions

More data are needed to determine conservation actions.

**Importance**   **Category**

Medium   Data Gap

---

## Monitoring Strategies

More data are needed before a monitoring strategy can be developed.

---

## Comments

This Arkansas endemic isopod is only known from a seep in the Ozark Mountains of Boone County (Hubricht and Mackin 1949).

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Marstonia ozarkensis*

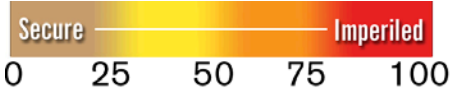
Ozark Pyrg

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

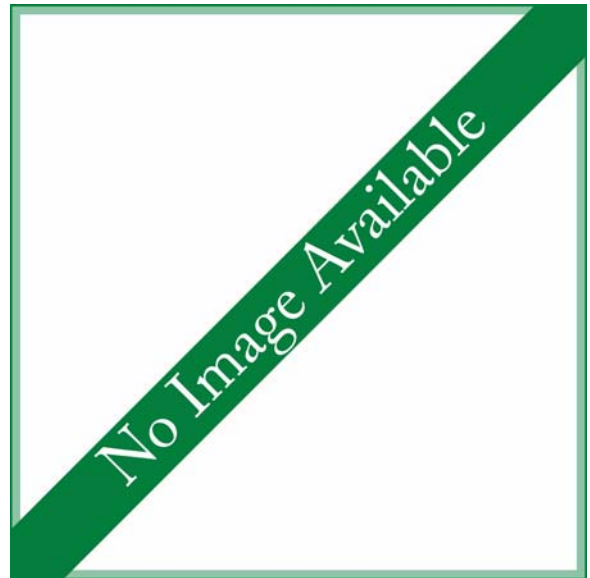
Priority Score: **80** out of 100



Population Trend: Unknown

Global Rank: G1 — Critically imperiled species

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



**Distribution**

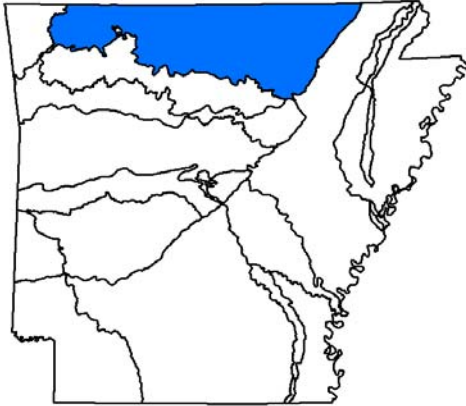
**Occurrence Records**



Ecoregions where the species occurs:

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

Ecobasins where the species occurs



**Ecobasins**

Ozark Highlands - White River

**Problems Faced**

Threat:  
Source:

**Data Gaps/Research Needs**

Conduct distribution and abundance studies.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

**Comments**

Freshwater snail reclassified as *Marstonia ozarkensis* (Hershler and Thompson 1987, Thompson and Hershler 2002, Turgeon and others 1998).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Paravitrea aulacogyra*

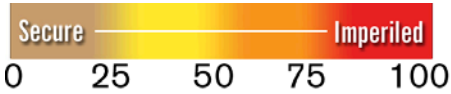
## Striate Supercoil

Class: Gastropoda

Order: Stylommatophora

Family: Zonitidae

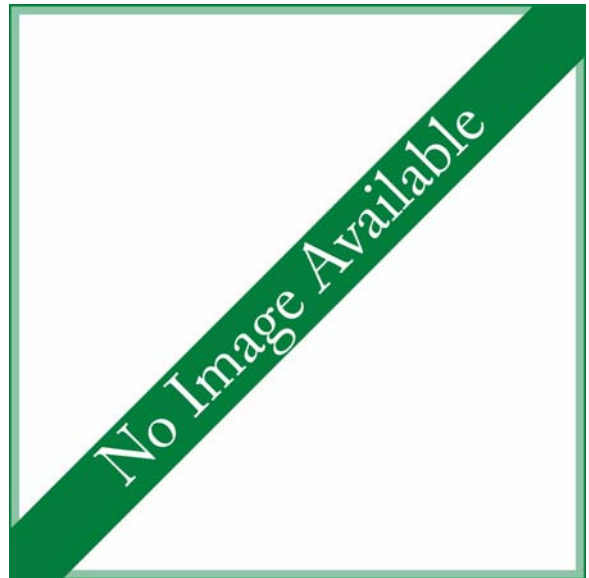
Priority Score: **80** out of 100



Population Trend: Unknown

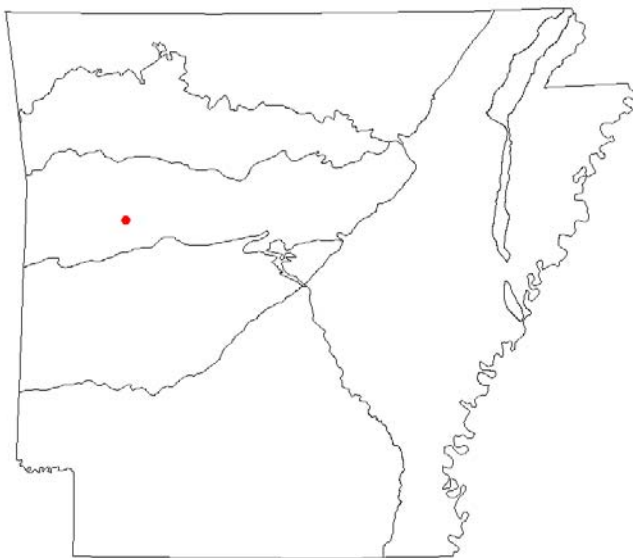
Global Rank: GHQ — Historic record of questionable taxonomy

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



## Distribution

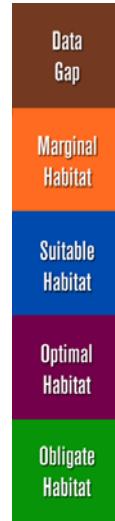
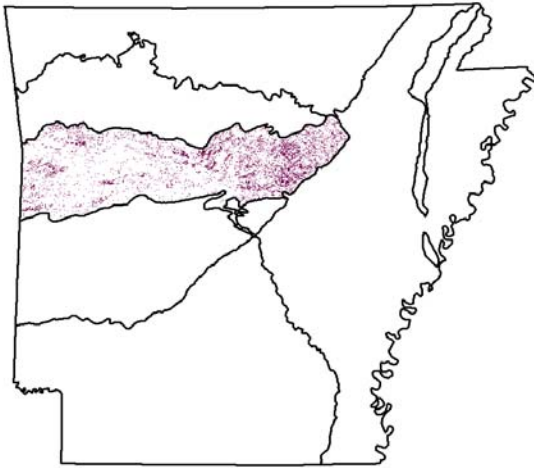
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Ozark-Ouachita Cliff and Talus

**Weight**

Optimal

**Problems Faced**

Forestry practices that disturb litter layer and create xeric conditions.

Threat: Habitat disturbance  
Source: Forestry activities

Loss of habitat to development.

Threat: Habitat destruction or conversion  
Source: Recreation

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Survey areas near known occurrences to locate additional populations.

## Comments

An Arkansas endemic species, this terrestrial snail is known only from a site on the northern summit of Magazine Mountain in Logan County (Pislbry and Ferriss 1906).

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



*Patera clenchi*

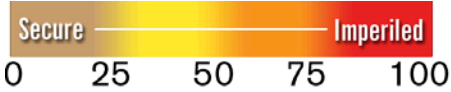
Calico Rock Oval

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

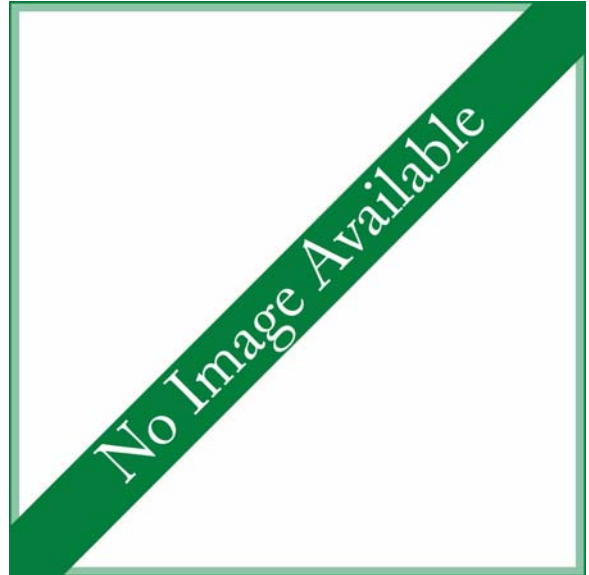
Priority Score: **65** out of 100



Population Trend: Unknown

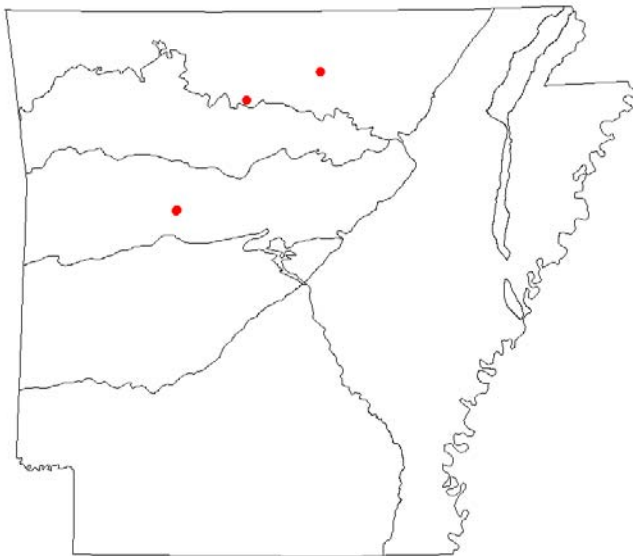
Global Rank: G1 — Critically imperiled species

State Rank: SNR — Species not ranked in Arkansas



**Distribution**

**Occurrence Records**

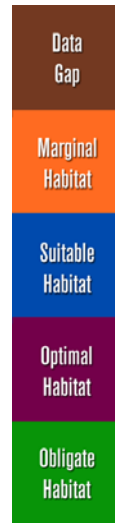


Ecoregions where the species occurs:

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



Habitat Map



**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations.

**Comments**

Terrestrial snail. (Turgeon and others 1998).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Pseudosinella dubia*

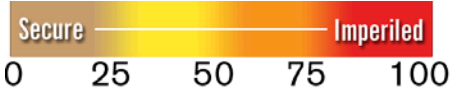
## Springtail

Class: Euliplura

Order: Collembola

Family: Entomobryidae

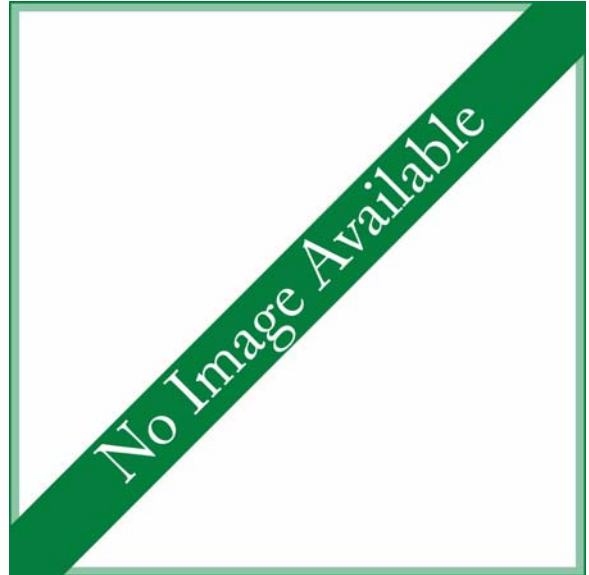
Priority Score: **50** out of 100



Population Trend: Unknown

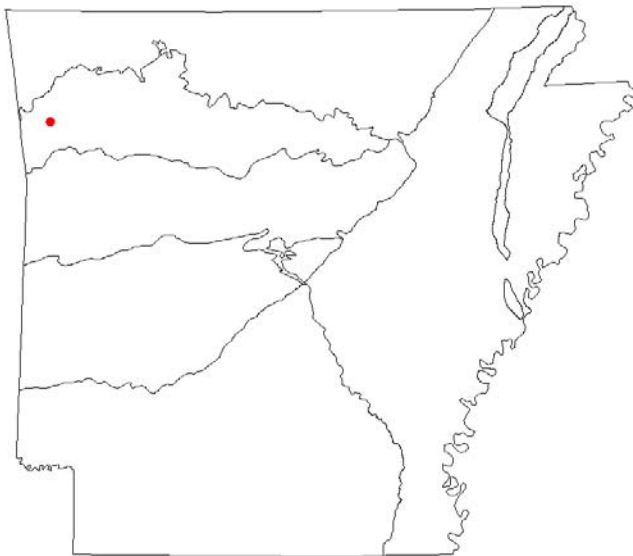
Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: SNR — Species not ranked in Arkansas



## Distribution

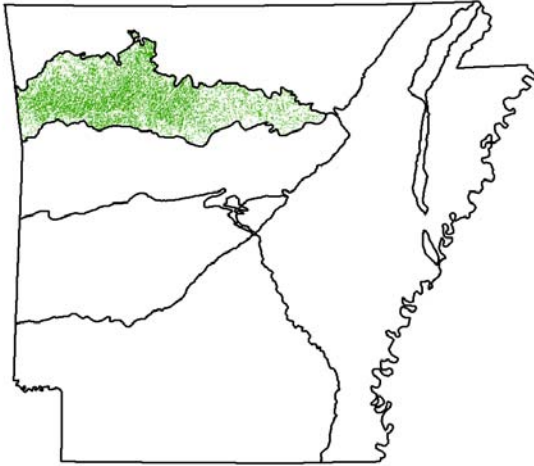
### Occurrence Records



Ecoregions where the species occurs:

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

## Habitat Map



### Habitats

Caves, Mines, Sinkholes and other Karst Features

### Weight

Obligate

### Problems Faced

Disturbed litter layer creates xeric conditions.

Threat: Habitat disturbance  
Source: Forestry activities

Loss of habitat to development.

Threat: Habitat destruction or conversion  
Source: Urban development

### Data Gaps/Research Needs

Determine life history information.

Evaluate taxonomic relationships.

Survey for additional populations.

### Conservation Actions

More data are needed to determine conservation actions.

### Importance Category

Medium Data Gap

### Monitoring Strategies

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

## Comments

Collembola.

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Pseudosinella testa*

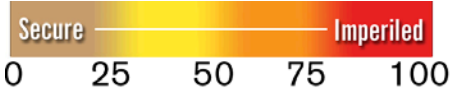
## Shelled Cave Springtail

Class: Eллиplura

Order: Collembola

Family: Entomobryidae

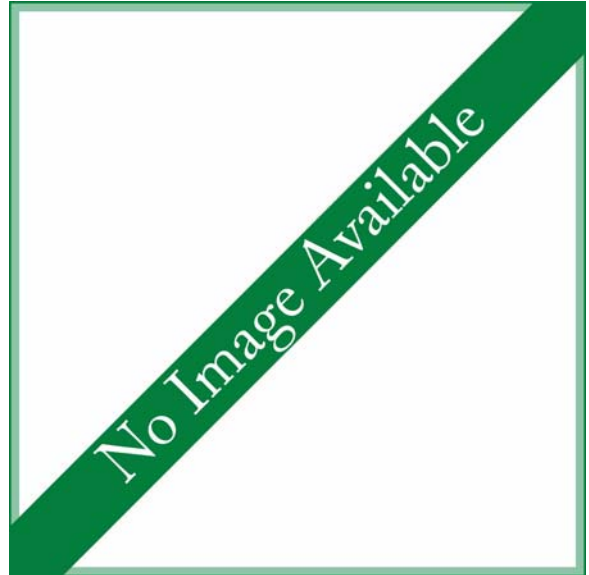
Priority Score: **27** out of 100



Population Trend: Unknown

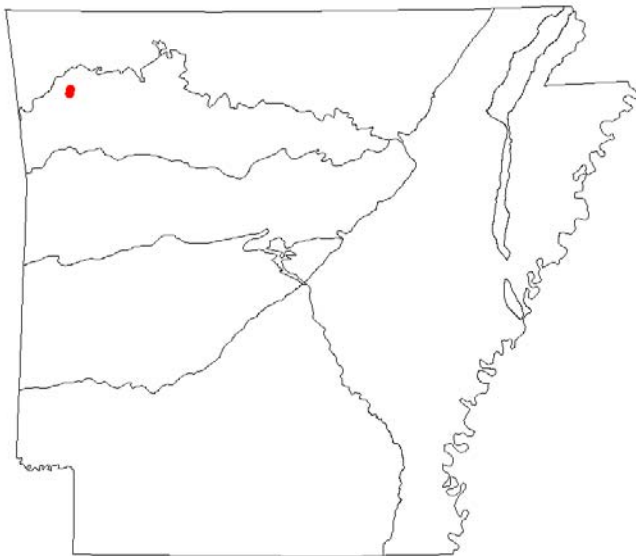
Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: SNR — Species not ranked in Arkansas



## Distribution

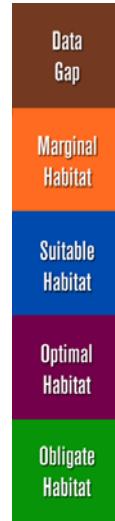
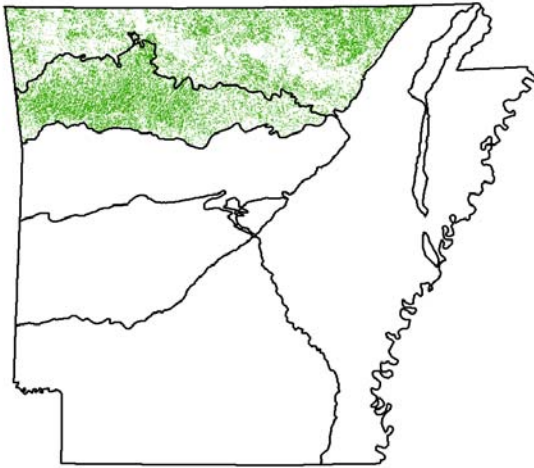
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Caves, Mines, Sinkholes and other Karst Features

**Weight**

Obligate

**Problems Faced**

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat disturbance  
Source: Urban development

Groundwater contamination.

Threat: Habitat disturbance  
Source: Urban development

**Data Gaps/Research Needs**

Determine life history information.

Obtain baseline information on distribution and population status.

**Conservation Actions**

**Importance Category**

Maintain groundwater quality.

Medium Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium Habitat Protection

**Monitoring Strategies**

More data are needed before a monitoring strategy can be developed.

## Comments

Collembola.

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

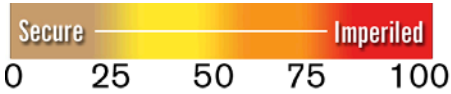


# *Pygmarrhopalites clarus*

## Springtail

Class: Eллиplura  
 Order: Collembola  
 Family: Sminthuridae

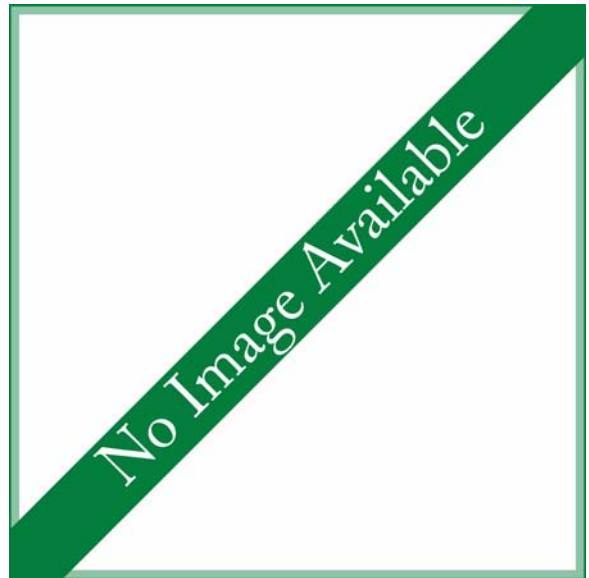
Priority Score: **25** out of 100



Population Trend: Unknown

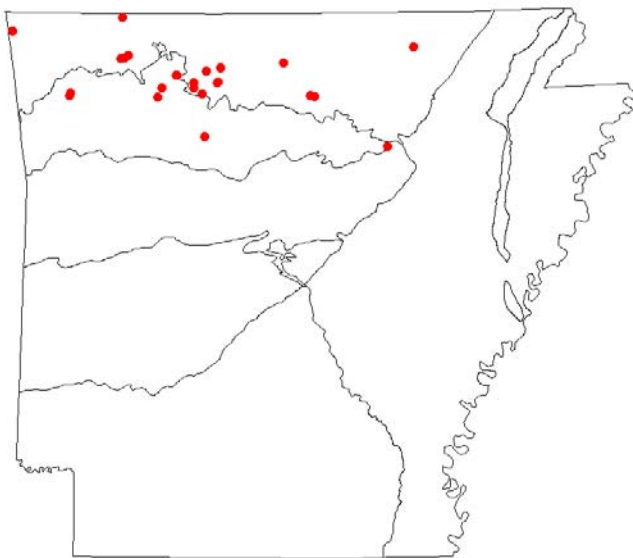
Global Rank: G4 — Apparently secure species

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



## Distribution

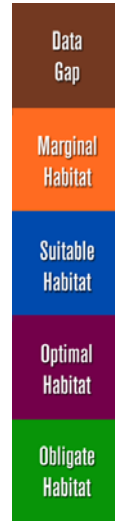
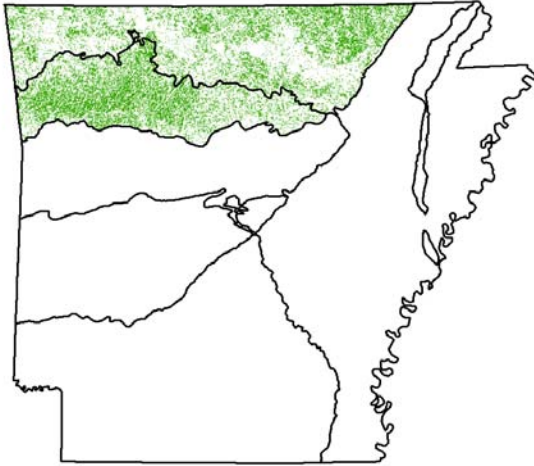
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Caves, Mines, Sinkholes and other Karst Features

**Weight**

Obligate

**Problems Faced**

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction or conversion  
Source: Urban development

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Urban development

**Data Gaps/Research Needs**

Determine life history information.

Survey for baseline information on distribution and population status.

**Conservation Actions**

**Importance Category**

Maintain groundwater quality.

Medium Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium Habitat Protection

**Monitoring Strategies**

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

## Comments

Collembola. This is a terrestrial cave adapted springtail that is only known from caves in the Ozarks (personal communication, Mike E. Slay).

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Schaefferia alabamensis*

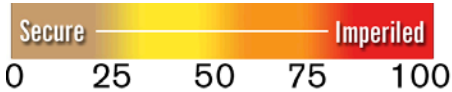
Cave Obligate Springtail

Class: Eллиplura

Order: Collembola

Family: Hypogastruridae

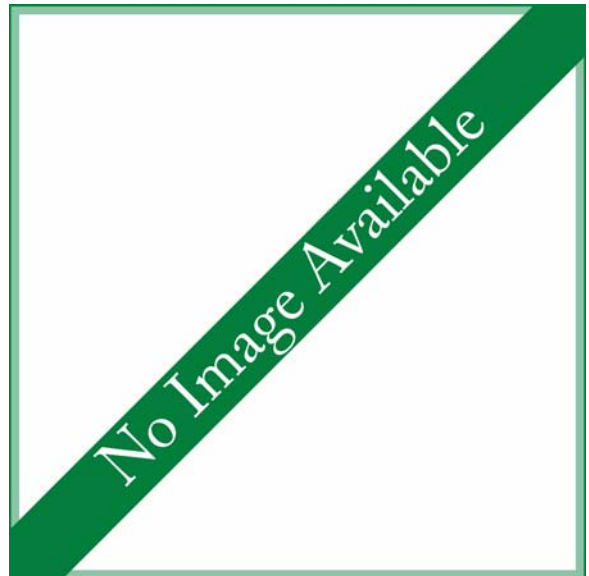
Priority Score: **50** out of 100



Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: SNR — Species not ranked in Arkansas



## Distribution

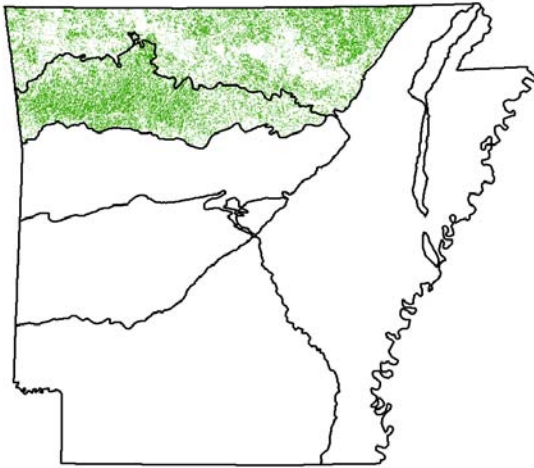
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Caves, Mines, Sinkholes and other Karst Features

**Weight**

Obligate

**Problems Faced**

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat disturbance  
Source: Urban development

Groundwater contamination.

Threat: Toxins/contaminants  
Source: Urban development

**Data Gaps/Research Needs**

Determine life history information.

Survey for baseline information on distribution and population status.

**Conservation Actions**

**Importance Category**

Maintain groundwater quality.

Medium Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium Habitat Protection

**Monitoring Strategies**

More data are needed before a monitoring strategy can be developed.

## Comments

Collembola. The Arkansas specimens that have been called this species are currently being redescribed as a new species (pers comm., Mike E. Slay).

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Somatogyrus amnicoloides*

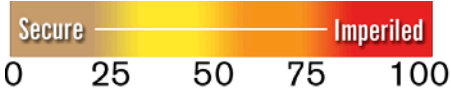
Ouachita Pebblesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

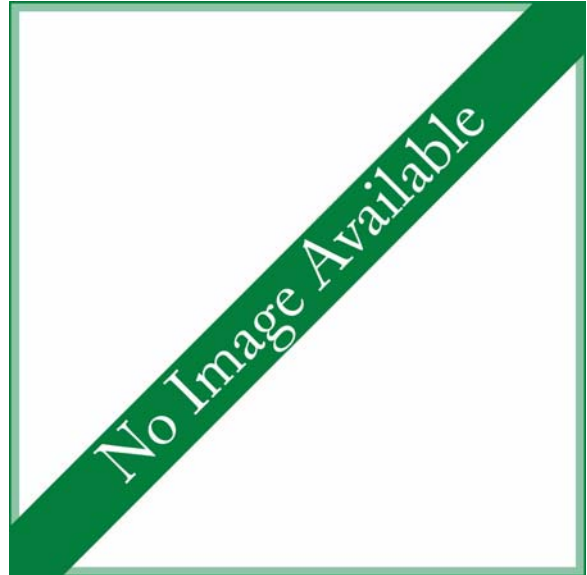
Priority Score: **80** out of 100



Population Trend: Unknown

Gobal Rank: GX — Presumed extinct

State Rank: SX — Presumed extinct



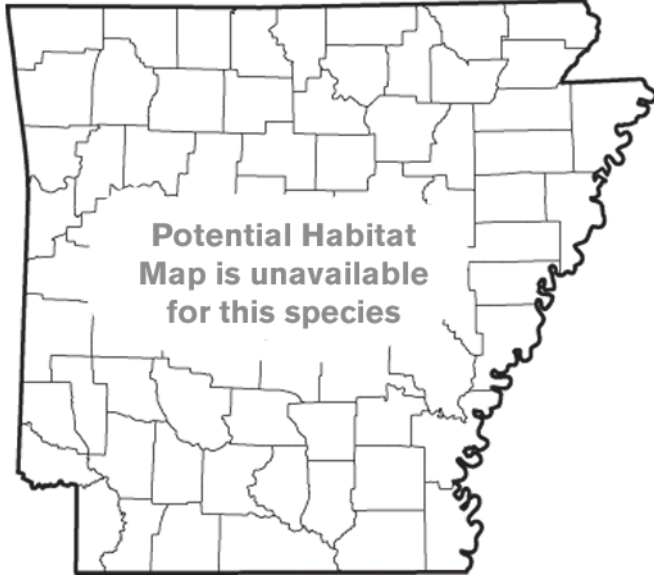
**Distribution**

**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 where the species occurs

**Problems Faced**

Threat: Toxins/contaminants  
 Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data is needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

**Comments**

An endemic freshwater snail known only from the Ouachita River at Arkadelphia in Clark County. Walker, B. 1915. Apical characters in Somatogyrus with descriptions of three new species. The Nautilus 29(4):37-41.

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



*Somatogyrus crassilabris*

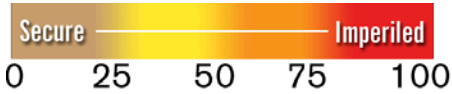
Thicklipped Pebblesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

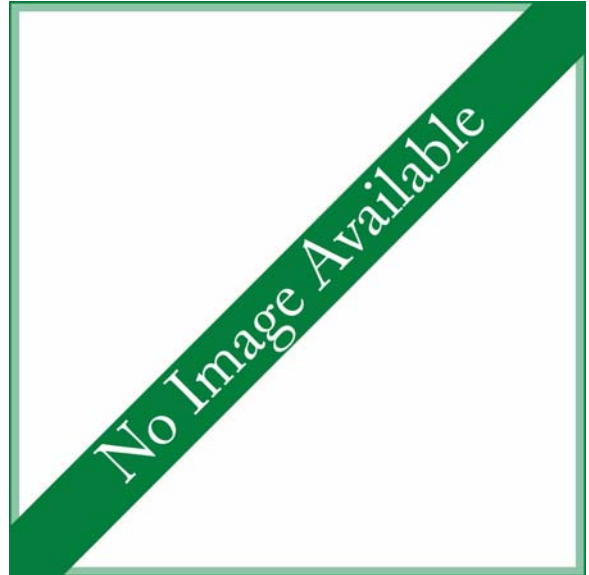
Priority Score: **80** out of 100



Population Trend: Unknown

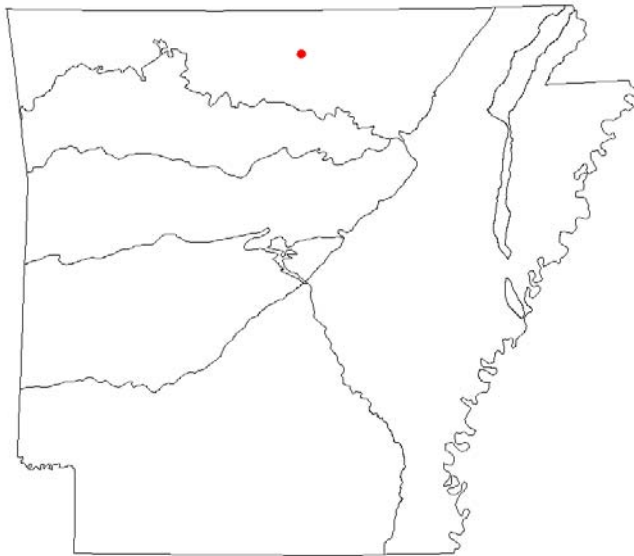
Gobal Rank: GX — Presumed extinct

State Rank: SX — Presumed extinct



**Distribution**

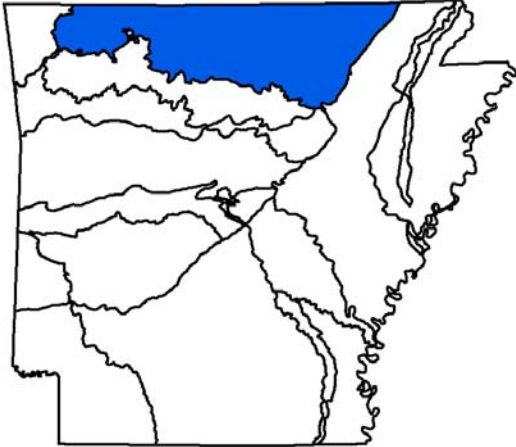
**Occurrence Records**



Ecoregions where the species occurs:

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

Ecobasins where the species occurs



**Ecobasins**

Ozark Highlands - White River

**Problems Faced**

Threat: Hydrological alteration  
Source: Dam

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations.

**Comments**

This freshwater snail species is also known as the Thick-lip Pebblesnail. It is known only from the North Fork of the White River in Baxter County, Arkansas (Robison and Allen 1995). Presumed extinct from the North Fork of the White River, Norfolk, Arkansas (Burch and Tottenham 1980).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Somatogyrus wheeleri*

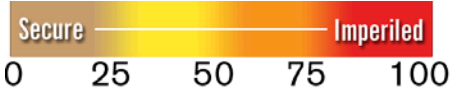
Channelled Pebblesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

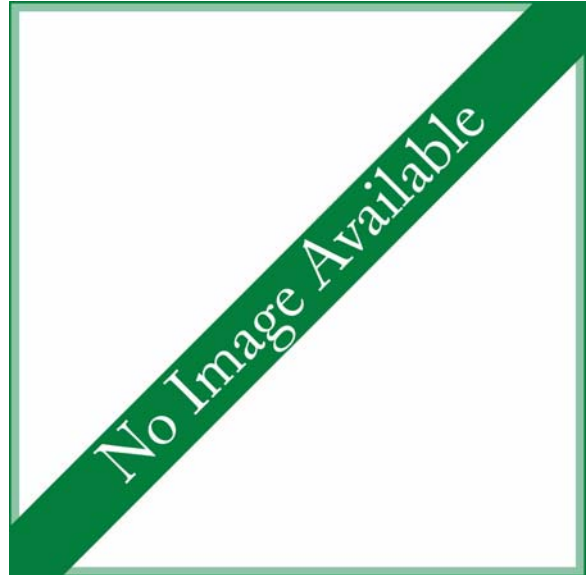
Priority Score: **80** out of 100



Population Trend: Unknown

Gobal Rank: GX — Presumed extinct

State Rank: SX — Presumed extinct



**Distribution**

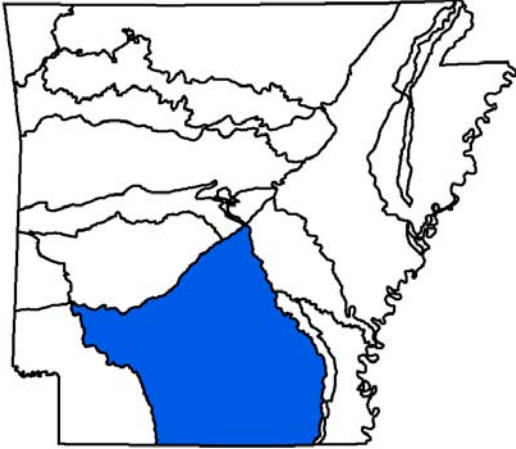
**Occurrence Records**



Ecoregions where the species occurs:

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

Ecobasins where the species occurs



**Ecobasins**

South Central Plains - Ouachita River

---

**Problems Faced**

Threat: Hydrological alteration  
 Source: Dam

---

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

---

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

---

**Monitoring Strategies**

---

**Comments**

This freshwater snail species is extirpated in the subnation. Habitat probably destroyed by reservoirs. Known only from the Ouachita River in Clark County, AR (Robison and Allen 1995, Turgeon and others 1998).

---

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Stenotrema pilsbryi*

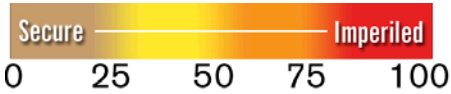
Rich Mountain Slitmouth

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: **46** out of 100



Population Trend: Unknown

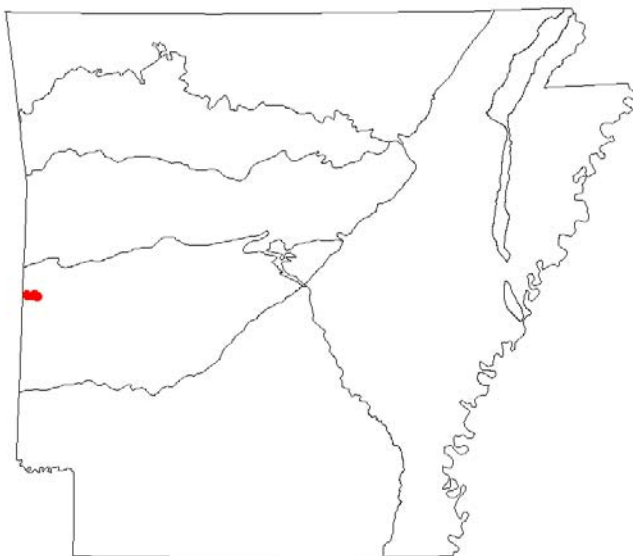
Global Rank: G2 — Imperiled species

State Rank: S2 — Imperiled in Arkansas



## Distribution

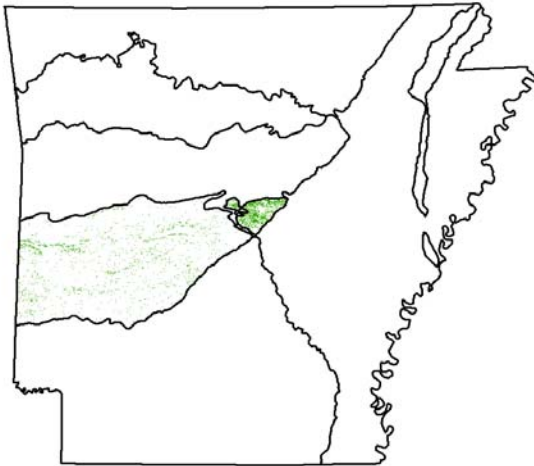
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Ozark-Ouachita Cliff and Talus

**Weight**

Obligate

**Problems Faced**

Road construction maintenance.

Threat: Habitat destruction or conversion  
Source: Road construction

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

## Comments

Terrestrial snail. It is known from numerous locations associated with rock glaciers usually above the 1600 ft. contour, and usually under hardwood forest cover, on Rich and Black Fork Mountains in AR and OK, and on Winding Stair Mountain, OK. There are no major threats to any of the populations. However, there are some activities that could conceivably impact snail habitat, including mowing, paving and repaving of the Talimena Scenic Drive, maintenance of vistas involving periodic localized vegetation management, and maintenance of hiking trails, electronic transmission sites, and one power line right-of way. Population trends are assumed to be steady (ANHI 2003, Robison and Allen 1995).

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Stenotrema unciferum*

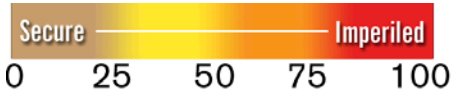
## Ouachita Slitmouth

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: **34** out of 100



Population Trend: Unknown

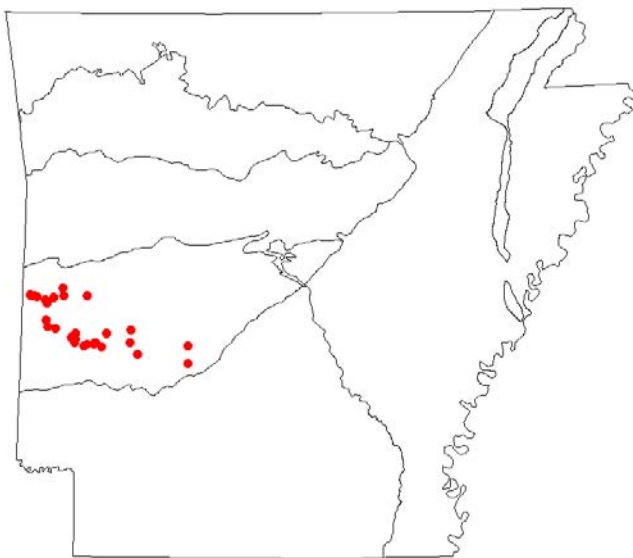
Global Rank: G2 — Imperiled species

State Rank: SNR — Species not ranked in Arkansas



## Distribution

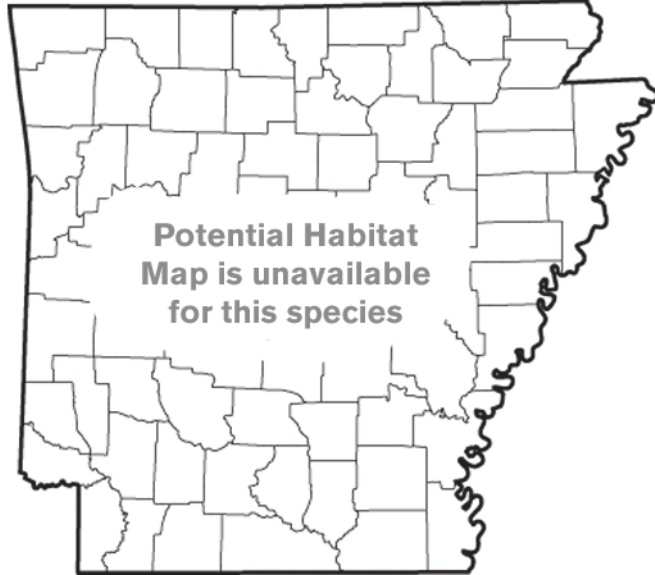
### Occurrence Records



Ecoregions where the species occurs:

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





Habitat Map



**Habitats**

Ozark-Ouachita Mesic Hardwood Forest

**Weight**

Obligate

**Problems Faced**

Habitat disturbance that limits access to dead wood and creates xeric conditions.

Threat: Habitat disturbance  
Source: Forestry activities

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

**Comments**

Terrestrial snail. Found to occur on moist slopes in rotting timbers, but most particularly under small talus (Brian Coles, pers. Comm.).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Stygobromus elatus*

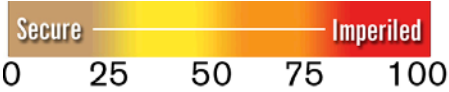
Elevated Spring Amphipod

Class: Malacostraca

Order: Amphipoda

Family: Crangonyctidae

Priority Score: **65** out of 100



Population Trend: Unknown

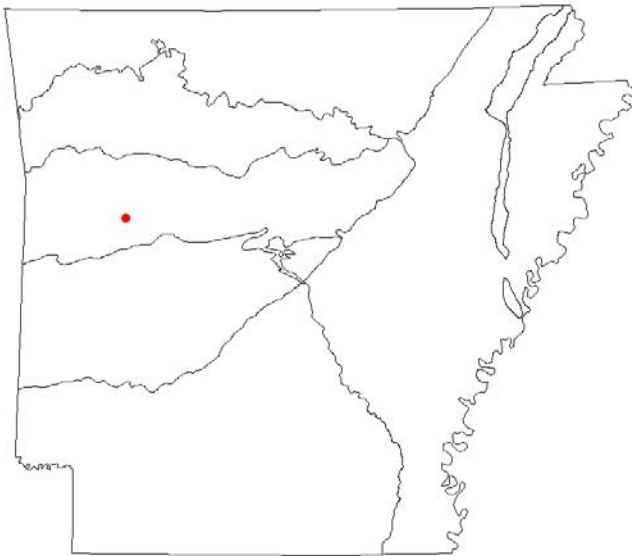
Global Rank: G1G2 — Critically imperiled (uncertain rank)

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



**Distribution**

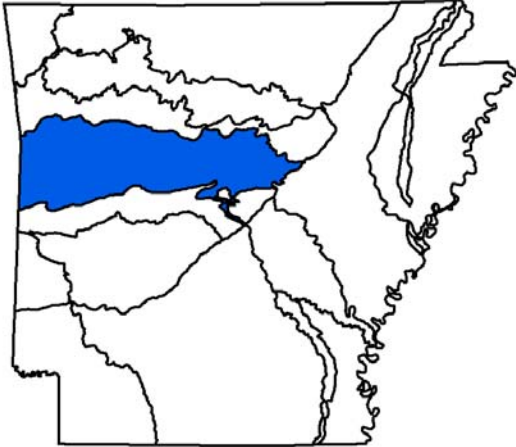
**Occurrence Records**



Ecoregions where the species occurs:

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

Ecobasins where the species occurs



**Ecobasins**

Arkansas Valley - Arkansas River

**Habitats**

Natural Groundwater:

Natural Seep: Headwater - Small

Natural Spring Run: Headwater - Small

**Weight**

Data Gap

Obligate

Data Gap

**Problems Faced**

Threat: Habitat destruction or conversion

Source: Recreation

**Data Gaps/Research Needs**

Determine life history information.

Survey for baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

More data are needed before a monitoring strategy can be developed.

**Comments**

An Arkansas endemic amphipod, this species has only been collected from a seep on Magazine Mountain in Logan County (Holsinger 1967).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Stygobromus elatus*  
Elevated Spring Amphipod

*Stygobromus montanus*

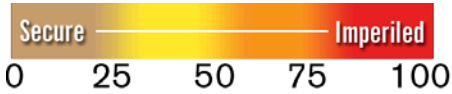
Mountain Cave Amphipod

Class: Malacostraca

Order: Amphipoda

Family: Crangonyctidae

Priority Score: **65** out of 100



Population Trend: Unknown

Gobal Rank: G1G2 — Critically imperiled (uncertain rank)

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



**Distribution**

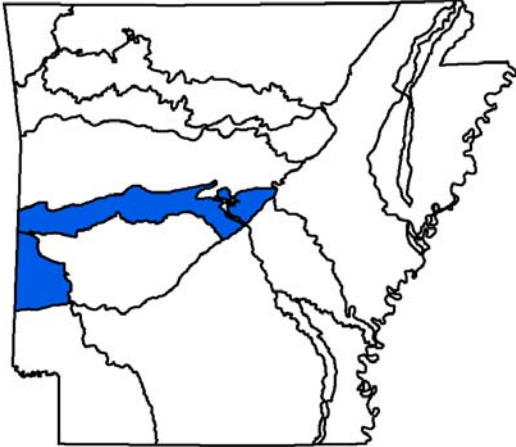
**Occurrence Records**



Ecoregions where the species occurs:

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

Ecobasins where the species occurs



**Ecobasins**

Ouachita Mountains - Arkansas River

**Habitats**

Natural Groundwater:

**Weight**

Data Gap

Natural Seep: Headwater - Small

Optimal

**Problems Faced**

Threat: Habitat disturbance

Source: Forestry activities

Threat: Toxins/contaminants

Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Determine life history information.

Survey for baseline information on distribution and population status.

**Conservation Actions**

Protect seeps and seep recharge zones.

**Importance**

Medium

**Category**

Habitat Protection

**Monitoring Strategies**

More data are needed before a monitoring strategy can be developed.

**Comments**

This Arkansas endemic amphipod has only been collected from a unidentified spring on Rich Mountain (Holsinger 1967).

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Stygobromus montanus*  
Mountain Cave Amphipod

# *Stygobromus ozarkensis*

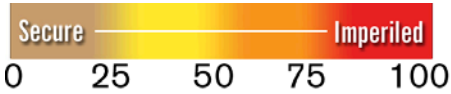
## Ozark Cave Amphipod

**Class:** Malacostraca

**Order:** Amphipoda

**Family:** Crangonyctidae

**Priority Score:** 23 out of 100



**Population Trend:** Unknown

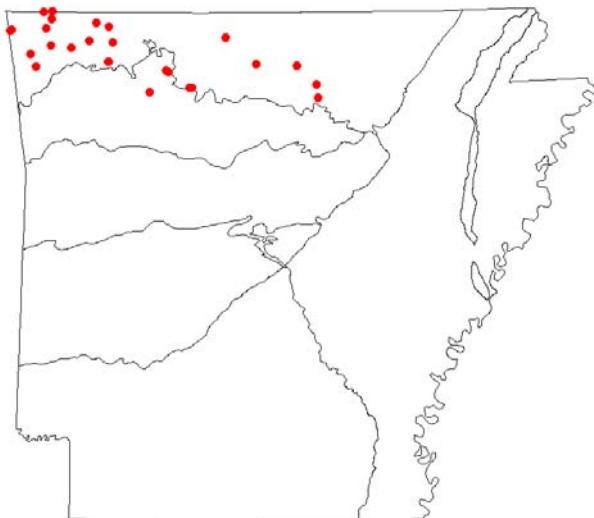
**Global Rank:** G4 — Apparently secure species

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



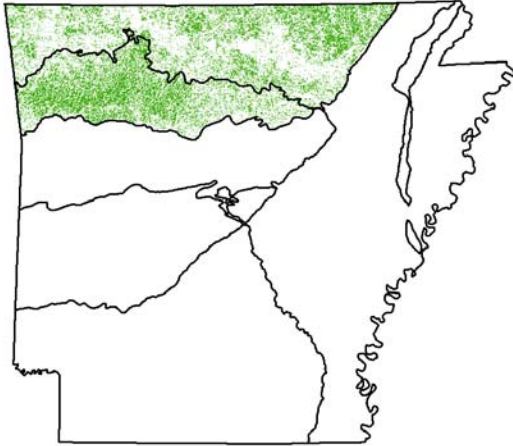
## Distribution

### Element Occurrence Records

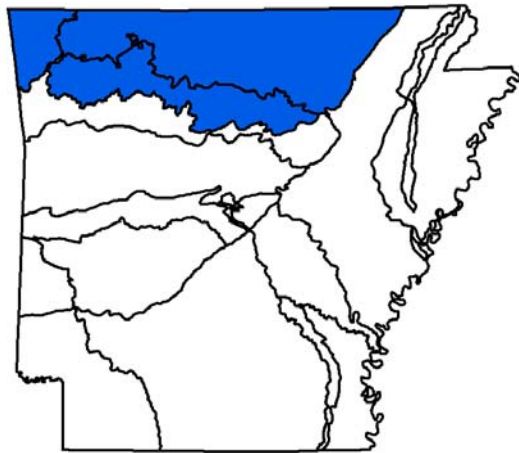


Ecoregions where the species occurs:

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



Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Boston Mountains - Arkansas River

Boston Mountains - White River

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	Optimal
Natural Groundwater:	Optimal
Natural Seep: Headwater - Small	Suitable
Natural Spring Run: Headwater - Small	Marginal

## Problems Faced

Threat: Sedimentation  
Source: Urban development

Threat: Toxins/contaminants  
Source: Urban development

## Data Gaps/Research Needs

Determine life history information.

Evaluate taxonomic relationships.

Survey and model for additional occurrences.

## Conservation Actions

Protect caves and cave recharge zones.

### Importance Category

Medium Habitat Protection

## Monitoring Strategies

Monitor known occurrences in cave surveys.

## Comments

This crustacean species is limited to groundwater habitats and occurs in fewer than 15 caves in Arkansas (personal communication, Mike E. Slay).

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner



# *Tartarocreagris ozarkensis*

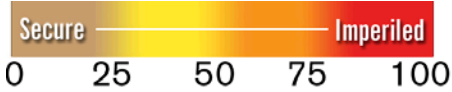
Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Neobisiidae

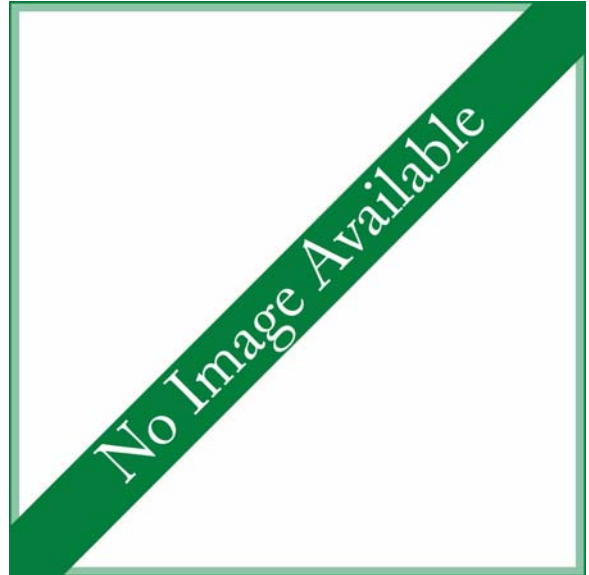
Priority Score: **23** out of 100



Population Trend: Unknown

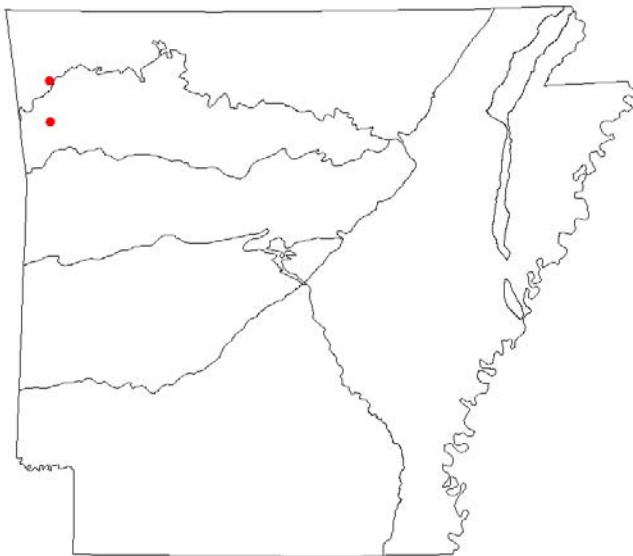
Global Rank: GNR — Not yet ranked

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

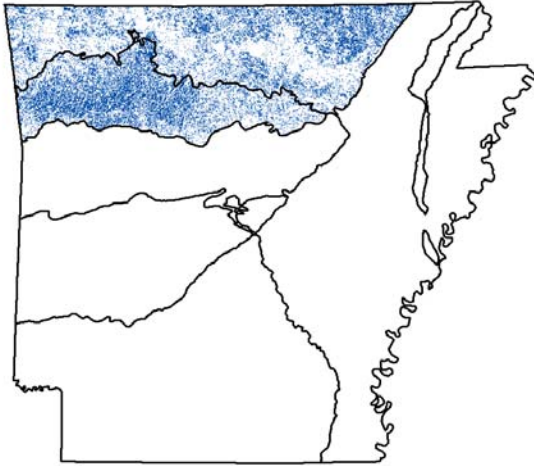
### Occurrence Records



Ecoregions where the species occurs:

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

## Habitat Map



### Habitats

Ozark-Ouachita Dry-Mesic Oak Forest

Weight

Suitable

Ozark-Ouachita Mesic Hardwood Forest

Suitable

### Problems Faced

Timber harvesting that decreases available dead wood and leads to more xeric forest conditions.

Threat: Habitat disturbance  
Source: Forestry activities

### Data Gaps/Research Needs

Need to obtain baseline information on distribution and population status.

### Conservation Actions

Limit timber harvesting in areas where this species is known to occur.

Importance Category

Medium

Habitat Protection

### Monitoring Strategies

Survey for additional populations and monitor known occurrences.

### Comments

An Arkansas endemic pseudoscorpion that has been collected only from Washington County (Hoff 1945).

### Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

*Tartarocreagris ozarkensis*  
Pseudoscorpion

# *Trigenotyla parca*

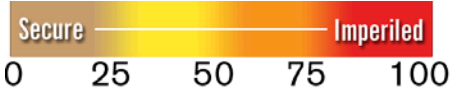
Cave Obligate Millipede

Class: Diplopoda

Order: Chordeumatida

Family: Trichopetalidae

Priority Score: **65** out of 100



Population Trend: Unknown

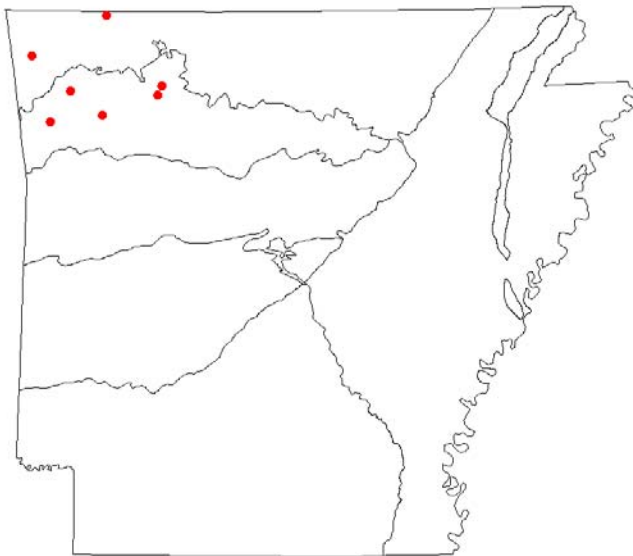
Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

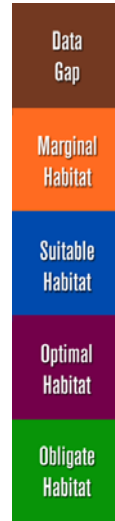
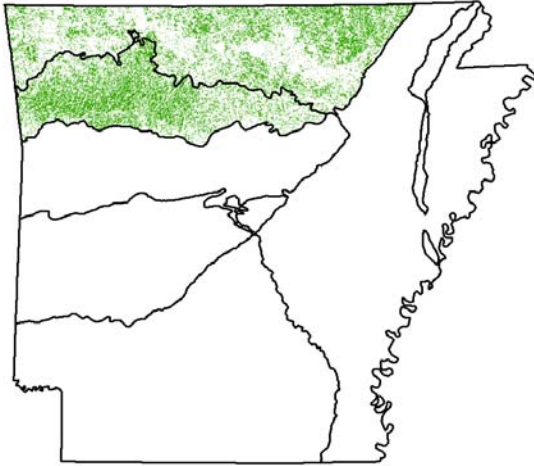
### Occurrence Records



Ecoregions where the species occurs:

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

Habitat Map



**Habitats**

Caves, Mines, Sinkholes and other Karst Features

**Weight**

Obligate

**Problems Faced**

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction  
Source: Urban development

Groundwater contamination.

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

**Data Gaps/Research Needs**

Determine life history information.

Obtain baseline information on distribution and population status.

**Conservation Actions**

**Importance Category**

Maintain groundwater quality.

Medium Habitat Protection

Protect cave habitat and recharge zone from development or disturbance.

Medium Habitat Protection

**Monitoring Strategies**

More data are needed before a monitoring strategy can be developed.

## Comments

No information available.

---

## Taxa Association Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

# *Xolotrema occidentale*

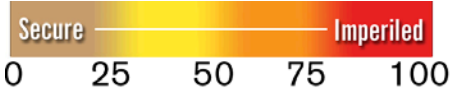
## Arkansas Wedge

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

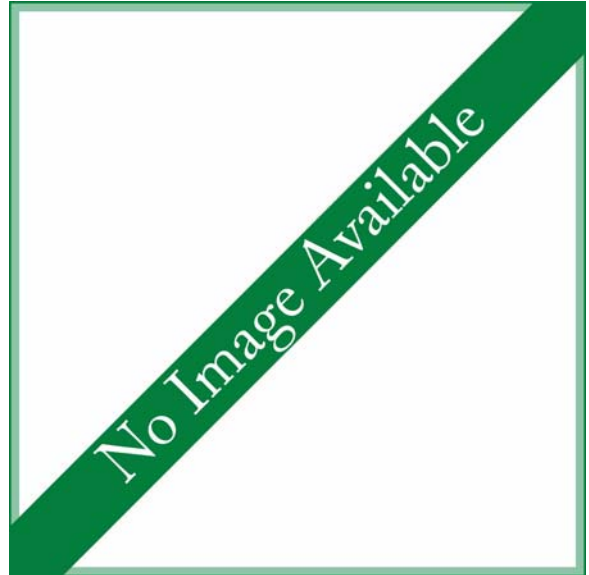
Priority Score: **65** out of 100



Population Trend: Unknown

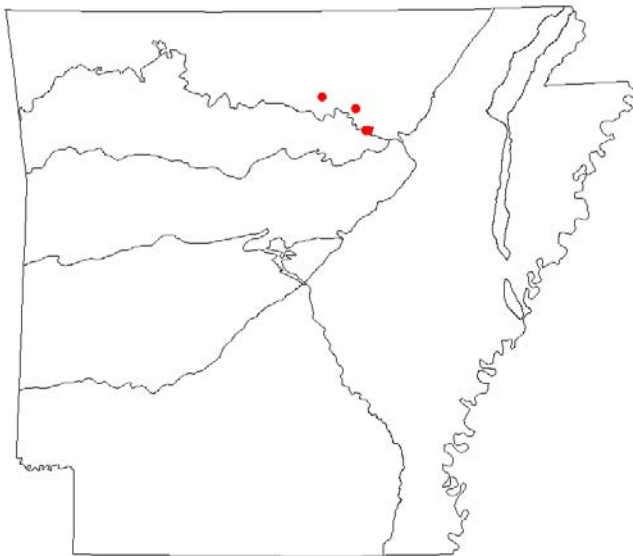
Global Rank: G1 — Critically imperiled species

State Rank: SNR — Species not ranked in Arkansas



## Distribution

### Occurrence Records



Ecoregions where the species occurs:

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



Habitat Map



**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

**Conservation Actions**

More data are needed to determine conservation actions.

**Importance Category**

Medium Data Gap

**Monitoring Strategies**

Surveys to locate additional populations and protection of stream habitats.

**Comments**

Terrestrial snail. (Turgeon and others 1998)

**Taxa Association Team and Peer Reviewers**

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner

## *Zealeuctra wachita*

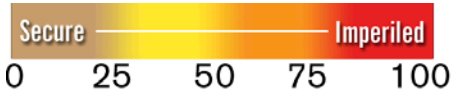
### Ouachita Needlefly

Class: Insecta

Order: Plecoptera

Family: Leuctridae

Priority Score: **50** out of 100



Population Trend: Unknown

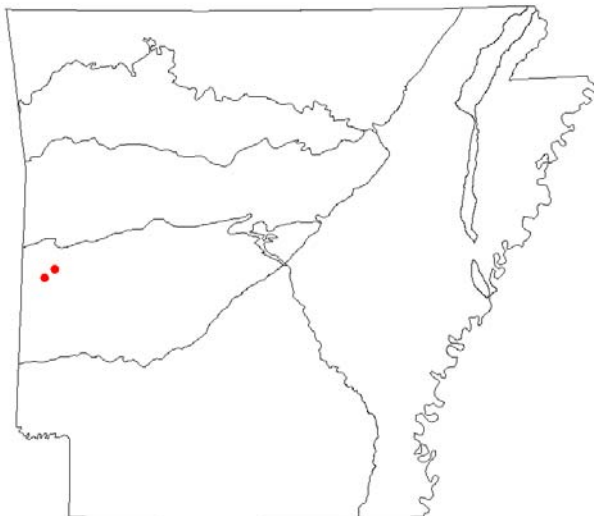
Global Rank: G2 — Imperiled species

State Rank: S1 — Critically imperiled in Arkansas



## Distribution

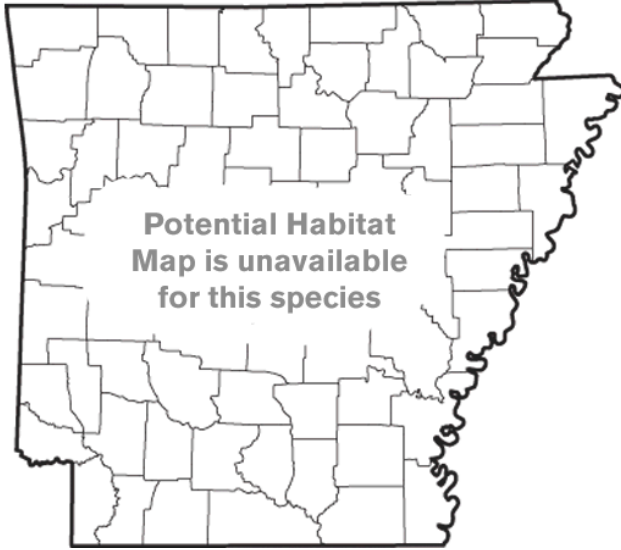
### Element Occurrence Records



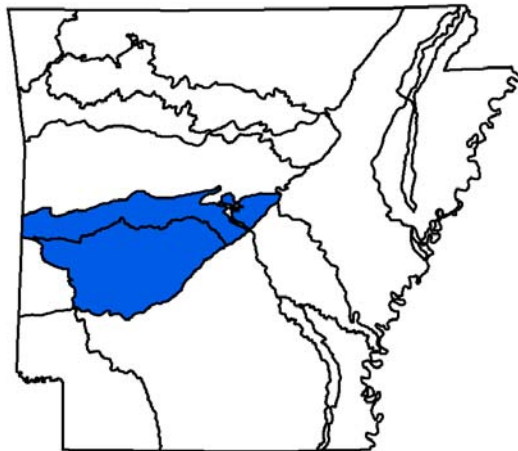
Ecoregions where the species occurs:

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





Terrestrial Habitats



Ecobasins where this species occurs

**Ecobasins**

Ouachita Mountains - Red River

**Problems Faced**

Threat: Sedimentation

Source: Resource extraction

Threat: Toxins/contaminants

Source: Municipal/Industrial point source

**Data Gaps/Research Needs**

Need to obtain baseline information on distribution and population status.

*Zealeuctra wachita*  
Ouachita Needlfly

## Conservation Actions

More data are needed to determine conservation actions.

## Importance Category

Medium Data Gap

---

## Monitoring Strategies

Surveys to locate additional populations and protection of stream habitats.

---

## Comments

Only known from Polk Co. and Scott Co., Arkansas from fewer than five occurrences. Inhabits intermittent streams (Ricker and Ross 1969).

---

## Taxa Team and Peer Reviewers

ANHC Mr. Michael Warriner, AGFC Mr. Brian Wagner