Abacion wilhelminae

Millipede

Class: Diplopoda
Order: Callipodida
Family: Abacionidae

Priority Score: 23 out of 100



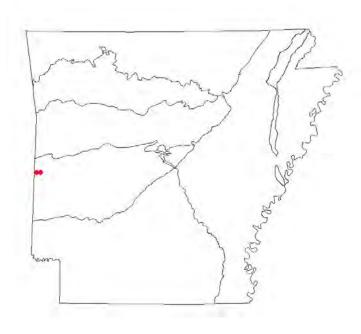
Population Trend: Unknown

Global Rank: GNR — Not yet ranked

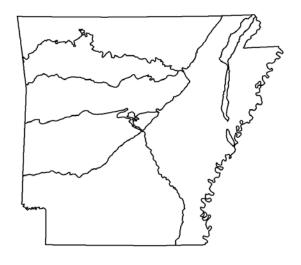
State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



| Ecoregions where the species occurs: | |
|--------------------------------------|---|
| Ozark Highlands | |
| Boston Mountains | |
| Arkansas Valley | |
| Ouachita Mountains 🗹 | |
| South Central Plains | |
| Mississippi Alluvial Plain \Box | |
| Mississippi Valley Loess Plain | ĺ |



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

Importance Category

More data are needed to determine conservation actions.

Medium Data Gap

Comments

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

Taxa Association Team and Peer Reviewers

Allocrangonyx hubrichti

Hubricht's Long-tailed Amphipod

Class: Malacostraca
Order: Amphipoda
Family: Crangonyctidae

Priority Score: 42 out of 100

| Sec | ште — | - 4 | Im | periled |
|-----|-------|-----|----|---------|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

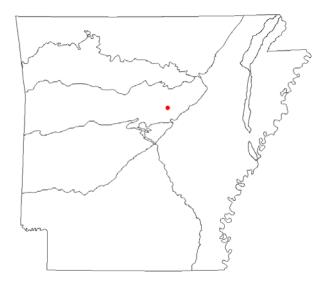
Global Rank: G2G3 — Imperiled (uncertain rank)

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

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 |

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 | 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 resticted to caves. In Missouri, it has been documented from benthic stream habitats (personal communication, Mike E. Slay).

Taxa Team and Peer Reviewers

Amnicola cora

Foushee Cavesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

Priority Score: 80 out of 100

| Sec | ште — | - 4 | —— Im | periled |
|-----|-------|-----|-------|---------|
| 0 | 25 | 50 | 75 | 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
- Juachita 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

Importance Category

More data are needed to determine conservation actions.

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

Apochthonius diabolus

Cave Obligate Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Chthoniidae

Priority Score: 65 out of 100

| Sec | ште — | - 4 | —— Im | periled |
|-----|-------|-----|-------|---------|
| 0 | 25 | 50 | 75 | 100 |

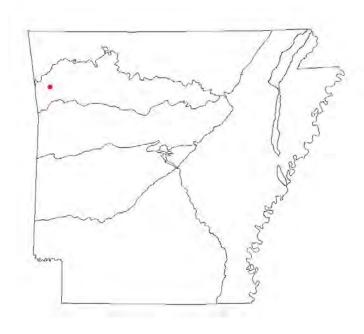
Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗸

Arkansas Valley

Ouachita Mountains \Box

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain $\ \Box$



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features Obligate

Problems Faced

Development/disturbance of cave habitat and Threat: Habitat destruction or recharge zone.

Source: Urban development

Groundwater contamination. Threat: Toxins/contaminants

Source: Urban development

| 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. No information available.

Taxa Association Team and Peer Reviewers

Apochthonius titanicus

Cave Obligate Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Chthoniidae

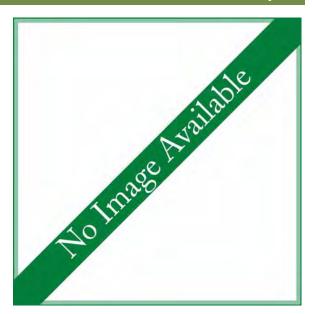
Priority Score: 65 out of 100

| Sec | ште — | - 4 | Im | periled |
|-----|-------|-----|----|---------|
| 0 | 25 | 50 | 75 | 100 |

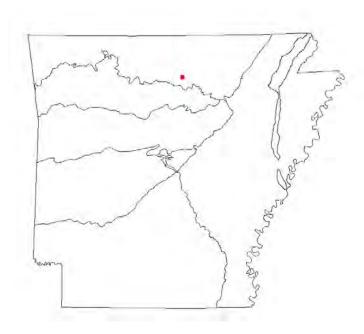
Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

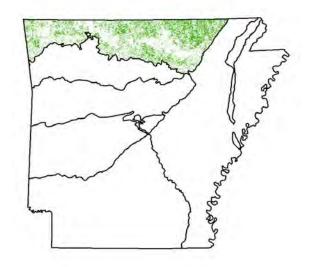
Arkansas Valley

Ouachita Mountains

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features 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

Bactrurus pseudomucronatus

Amphipod

Class: Malacostraca
Order: Amphipoda
Family: Crangonyctidae

Priority Score: 42 out of 100

| Sec | ште — | - 4 | Im | periled |
|-----|-------|-----|----|---------|
| 0 | 25 | 50 | 75 | 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

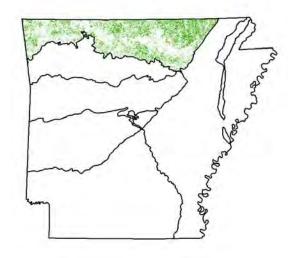
Arkansas Valley

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

Caecidotea ancyla

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 27 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G3G4 — Vulnerable (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

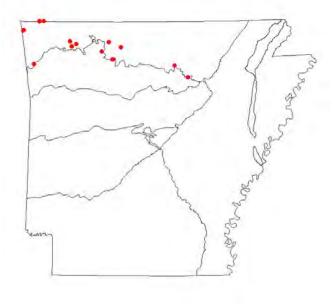
Caecidotea spp.



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Distribution

Element Occurrence Records



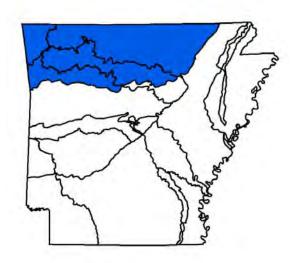
Ecoregions where the species occurs:

- Ozark Highlands
- ✓ Boston Mountains
- Arkansas Valley
- ☐ Juachita 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 ActionsImportanceCategoryMore data are needed to determine conservation actions.MediumData 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

Caecidotea dimorpha

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 38 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S2 — Imperiled in Arkansas

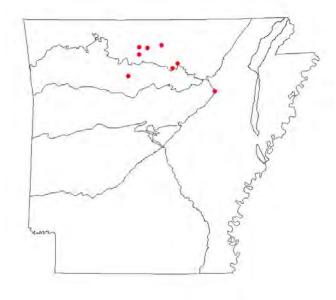
Caecidotea spp.



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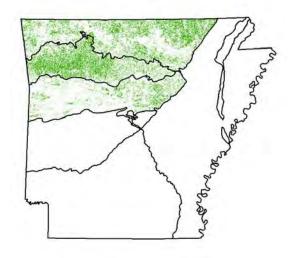
Distribution

Element Occurrence Records



Ecoregions where the species occurs:

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



Terrestrial Habitats





Ecobasins 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

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 ActionsImportanceCategoryMore data are needed to determine conservationMediumData Gap

Monitoring Strategies

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

Comments

actions.

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

Taxa Team and Peer Reviewers

Caecidotea fonticulus

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 23 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Gobal Rank: GNR — Not yet ranked

State Rank: S1 — Critically imperiled in Arkansas



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Distribution

Occurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

Ouachita Mountains

Arkansas Valley

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plains

Ecobasins where the species occurs



Ecobasins

Ouachita Mountains - Ouachita River

| Habitats | Weight |
|--|----------|
| Natural Groundwater: Headwater - Small | Data Gap |
| Natural Seep: Headwater - Small | Data Gap |
| Natural Spring Run: Headwater - Small | 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 | Importance Cate | egory |
|--|-----------------|-------|
| More data are needed to determine conservation | Medium 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

Caecidotea macropropoda

Bat Cave Isopod

Class: Malacostraca

Isopoda Order: Family: Asellidae

Priority Score: 38 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S2 — Imperiled in Arkansas



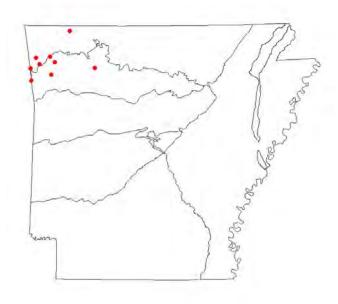
Caecidotea spp.



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Distribution

Element Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- **Boston Mountains**
- Arkansas Valley
- *<u>Ouachita Mountains</u>*
- 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.

| ance Category |
|---------------|
| m Data Gap |
| m |

Monitoring Strategies

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

Comments

Crustacean.

Taxa Team and Peer Reviewers

Caecidotea oculata

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 42 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

Caecidotea spp.



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Distribution

Element Occurrence Records



Ecoregions where the species occurs:

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



Terrestrial Habitats





Ecobasins 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 |

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

Importance Category

More data are needed to determine conservation actions.

Medium Data Gap

Monitoring Strategies

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

Comments

Crustacean.

Taxa Team and Peer Reviewers

Caecidotea salemensis

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 27 out of 100

| Secure - | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 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



No Ecobasin Map is available

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 |

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

Importance Category

More data are needed to determine conservation actions.

Medium Data Gap

Monitoring Strategies

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

Comments

Crustacean.

Taxa Team and Peer Reviewers

Caecidotea simulator

Cave Obligate Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 42 out of 100

| Secure — | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas

Caecidotea spp.

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Distribution

Element Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- ✓ Boston Mountains
- Arkansas Valley
- Juachita 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 |

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 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

Caecidotea steevesi

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 31 out of 100

| Secure — | | | —— (m | periled |
|----------|----|----|-------|---------|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G3G4 — Vulnerable (uncertain rank)State Rank: S1 — Critically imperiled in Arkansas

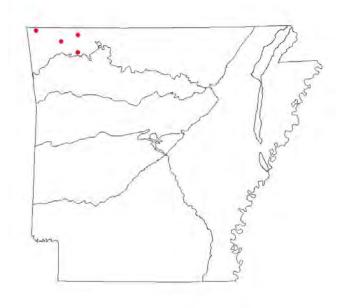
Caecidotea spp.



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Distribution

Element Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- ☐ Boston Mountains
- Arkansas Valley
- ☐ Juachita Mountains
- □ South Central Plains
- ☐ Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

Aquatic/Terrestrial Invertebrate Report



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/Terrestrial Invertebrate Report

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

Caecidotea stiladactyla

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

Priority Score: 23 out of 100

| Secure - | | | Im | periled |
|----------|----|----|----|---------|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

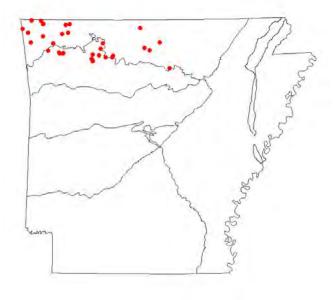
Global Rank: G3G4 — Vulnerable (uncertain rank)

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

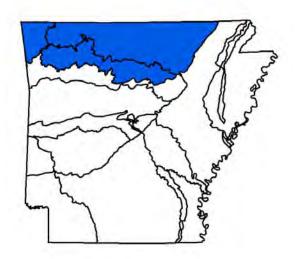
Mississippi Valley Loess Plains

Aquatic/Terrestrial Invertebrate Report



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 ActionsImportanceCategoryMore data are needed to determine conservation actions.MediumData 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

Crosbyella distincta

Cave Obligate Harvestman

Class: Arachnida
Order: Opiliones

Family: Phalangodidae

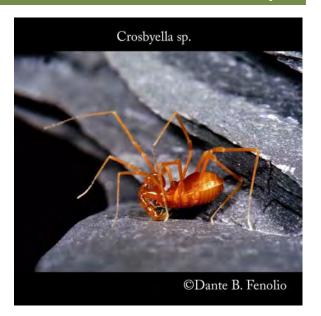
Priority Score: 65 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

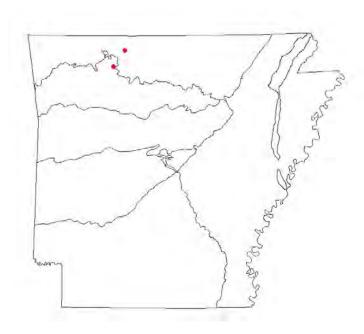
Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗹

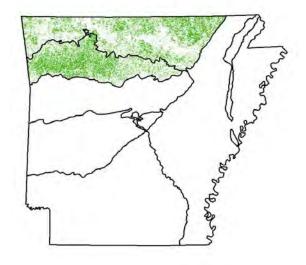
Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features 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 | 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

Arachnid.

Taxa Association Team and Peer Reviewers

Crosbyella roeweri

Cave Obligate Harvestman

Class: Arachnida
Order: Opiliones

Family: Phalangodidae

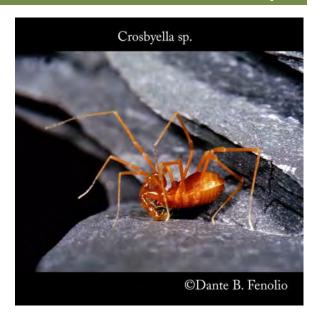
Priority Score: 65 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

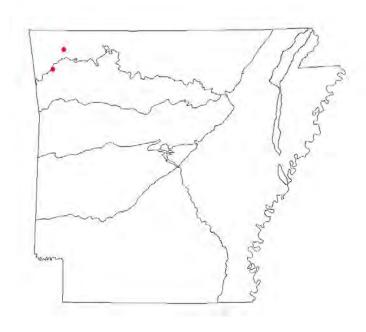
Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗹

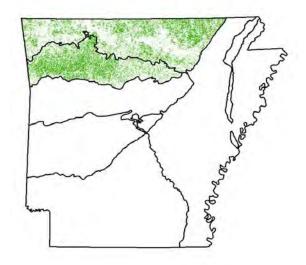
Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain $\ \Box$



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features Obligate

Problems Faced

Development/disturbance of cave habitat and Threat: Habitat destruction or recharge zone. conversion

Source: Urban development

Groundwater contamination. Threat: Toxins/contaminants

Source: Urban development

| 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

Arachnid.

Taxa Association Team and Peer Reviewers

Daedalochila peregrina

White Liptooth

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: 34 out of 100

| Secure - | | Im | periled | |
|----------|----|----|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G2 — Imperiled species

State Rank: SNR — Species not ranked in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

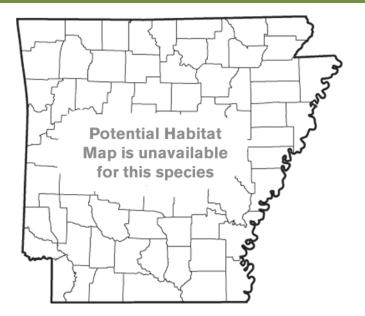
Arkansas Valley

Ouachita Mountains

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Ozark-Ouachita Mesic Hardwood Forest Data Gap

Conservation Actions Importance Category

More data are needed to determine conservation Medium Data Gap actions.

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

Dendrocoelopsis americana

Cave Obligate Planarian

Class: Turbellaria
Order: Tricladida

Family: Dendrocoelidae

Priority Score: 42 out of 100

| Secure - | | | —— (m | periled |
|----------|----|----|-------|---------|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

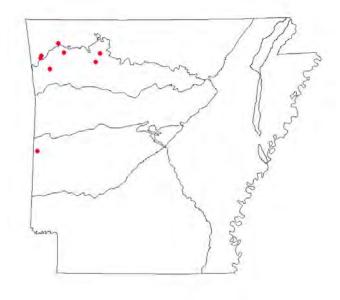
Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



Distribution

Element Occurrence Records



Ecoregions where the species occurs:

Ozark Highlands

✓ Boston Mountains

Arkansas Valley

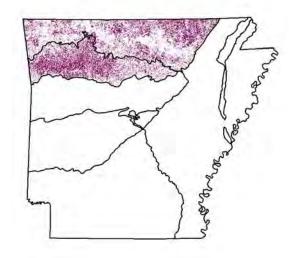
Juachita Mountains

☐ South Central Plains

☐ Mississippi Alluvial Plain

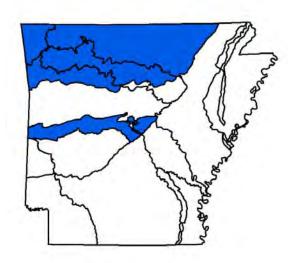
Mississippi Valley Loess Plains

Aquatic/Terrestrial Invertebrate Report



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/Terrestrial Invertebrate Report

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

Diplocardia meansi

Earthworm

Class: Oligochaeta
Order: Opisthopora
Family: Acanthodrilidae

Priority Score: 17 out of 100

| Secure — | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: GNR — Not yet ranked

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



DistributionOccurrence 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 Weight

Ozark-Ouachita Mesic Hardwood Forest 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

Gastrocopta rogersensis

Land Snail

Class: Gastropoda

Order: Stylommatophora

Family: Pupillidae

Priority Score: 27 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

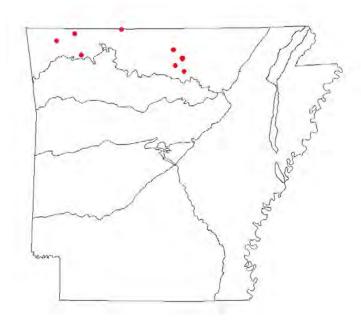
Population Trend: Unknown

Global Rank: G3G4 — Vulnerable (uncertain rank)

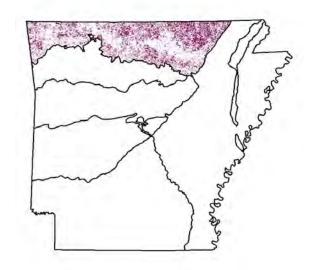
State Rank: S2 — Imperiled in Arkansas



DistributionOccurrence Records



| Ecoregions where the species occurs: |
|--------------------------------------|
| Ozark Highlands 🗹 |
| Boston Mountains |
| Arkansas Valley |
| Ouachita Mountains |
| South Central Plains |
| Mississippi Alluvial Plain \square |
| Mississippi Valley Loess Plain |



Habitat Map



Habitats Weight

Ozark-Ouachita Cliff and Talus 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

Hesperochernes occidentalis

Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Chernetidae

Priority Score: 23 out of 100

| Secure - | | Im | periled | |
|----------|----|----|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G5 — Secure

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗸

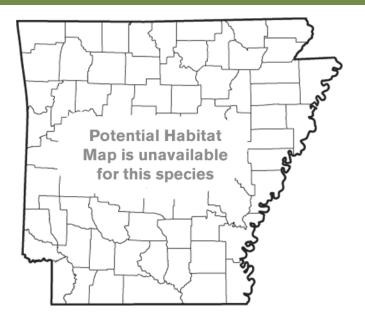
Arkansas Valley

Ouachita Mountains

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features 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

Inflectarius magazinensis

Magazine Mountain Shagreen

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: 80 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G1 — Critically imperiled species

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

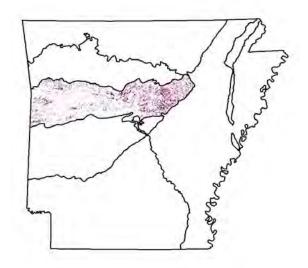
Arkansas Valley

Ouachita Mountains

South Central Plains

Mississippi Valley Loess Plain

Mississippi Alluvial Plain



Habitat Map



Habitats Weight

Ozark-Ouachita Cliff and Talus Optimal

Problems Faced

Development or activities that alter talus slopes Threat: Habitat disturbance where this species occurs. Source: Forestry activities

Development or activities that alter talus slopes Threat: Habitat disturbance where this species occurs. Source: Recreation

Data Gaps/Research Needs

Need to assess population status of known occurrences.

Conservation Actions Importance Category

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

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 Ferris 1906).

Taxa Association Team and Peer Reviewers

Lirceus bicuspidatus

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

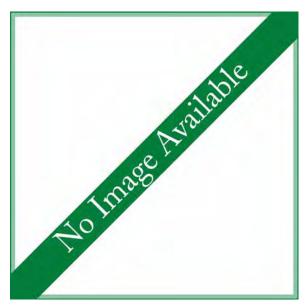
Priority Score: 31 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

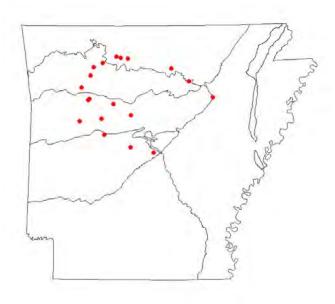
Global Rank: G3Q — Vulnerable (questionable taxonomy)

State Rank: S2 — Imperiled in Arkansas



Distribution

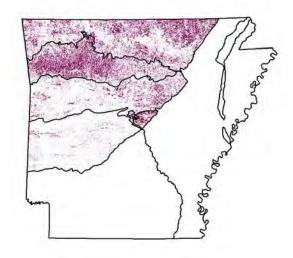
Element Occurrence Records



Ecoregions where the species occurs:

- Ozark Highlands
- ✓ Boston Mountains
- ✓ Arkansas Valley
- Juachita Mountains
- South Central Plains
- ☐ Mississippi Alluvial Plain
- Mississippi Valley Loess Plains

Aquatic/Terrestrial Invertebrate Report



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/Terrestrial Invertebrate Report

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

Medium Data Gap

Importance

Category

More data are needed to determine conservation actions.

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

Paravitrea aulacogyra

Striate Supercoil

Class: Gastropoda

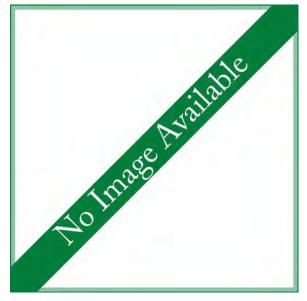
Order: Stylommatophora

Family: Zonitidae

Priority Score: 80 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

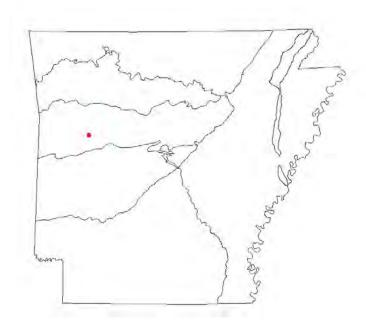
Population Trend: Unknown



Global Rank: GHQ — Historic record of questionable taxonomy

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

DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

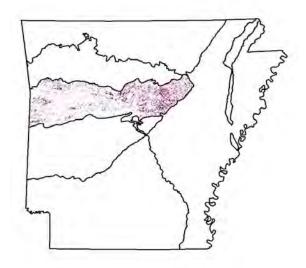
Arkansas Valley

Ouachita Mountains \Box

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain $\ \Box$



Habitat Map



Habitats Weight

Ozark-Ouachita Cliff and Talus 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

Importance Category

More data are needed to determine conservation actions.

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 Ferris 1906).

Taxa Association Team and Peer Reviewers

Patera clenchi

Calico Rock Oval

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

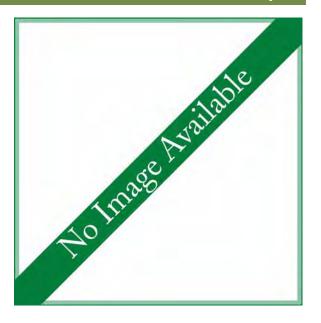
Priority Score: 65 out of 100



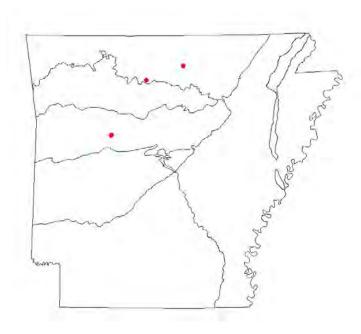
Population Trend: Unknown

Global Rank: G1 — Critically imperiled species

State Rank: SNR — Species not ranked in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

Arkansas Valley 🗹

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain $\ \Box$

The second of th

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

Pseudosinella dubia

Springtail

Class: Elliplura
Order: Collembola
Family: Entomobryidae

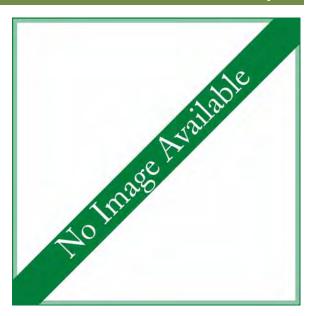
Priority Score: 50 out of 100

| Secure - | | Im | periled | |
|----------|----|----|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: SNR — Species not ranked in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗸

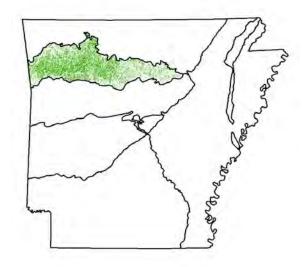
Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features 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 Importance Category

More data are needed to determine conservation actions.

Medium Data Gap

Monitoring Strategies

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

Comments

Collembola.

Taxa Association Team and Peer Reviewers

Pseudosinella testa

Shelled Cave Springtail

Class: Elliplura
Order: Collembola
Family: Entomobryidae

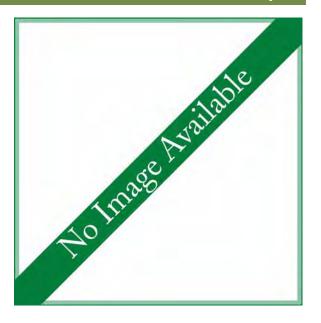
Priority Score: 27 out of 100



Population Trend: Unknown

Global Rank: G2G3 — Imperiled (uncertain rank)

State Rank: SNR — Species not ranked in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗹

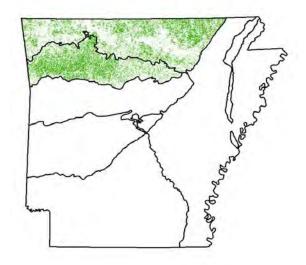
Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features Obligate

Problems Faced

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat disturbance Source: Urban development

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

Pygmarrhopalites clarus

Springtail

Class: Elliplura
Order: Collembola
Family: Sminthuridae

Priority Score: 25 out of 100

| Secure - | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G4 — Apparently secure species

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



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands <a> ✓

Boston Mountains 🗹

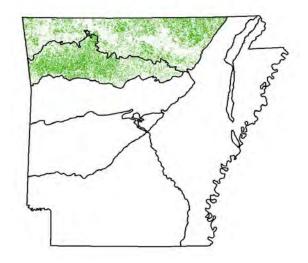
Arkansas Valley

Ouachita Mountains \Box

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features 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

Schaefferia alabamensis

Cave Obligate Springtail

Class: Elliplura
Order: Collembola

Family: Hypogastruridae

Priority Score: 50 out of 100

| Secure - | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: SNR — Species not ranked in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗹

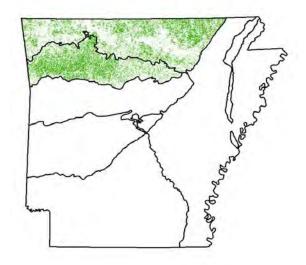
Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features Obligate

Problems Faced

Development/disturbance of cave habitat and recharge zone.

Groundwater contamination.

Threat: Habitat disturbance 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 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

Lirceus bidentatus

Isopod

Class: Malacostraca

Order: Isopoda Family: Asellidae

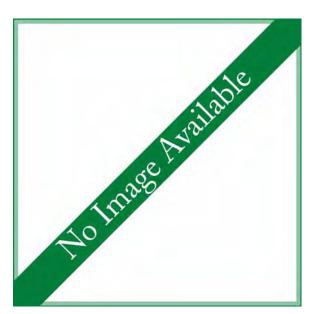
Priority Score: 80 out of 100

| Secure - | | —— (m | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 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

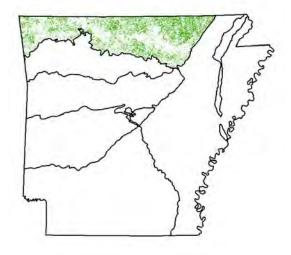
Duachita Mountains

☐ South Central Plains

☐ Mississippi Alluvial Plain

Mississippi Valley Loess Plains

Aquatic/Terrestrial Invertebrate Report



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 |

Aquatic/Terrestrial Invertebrate Report

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

Importance Category

More data are needed to determine conservation actions.

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

Marstonia ozarkensis

Ozark Pyrg

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

Priority Score: 80 out of 100

| Secure - | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

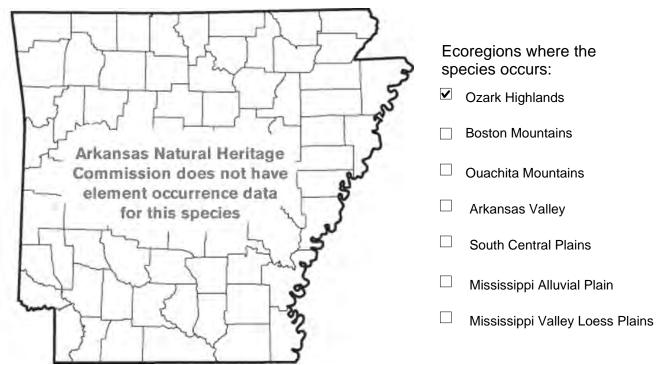
Gobal Rank: G1 — Critically imperiled species

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



Distribution

Occurrence Records



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

Somatogyrus crassilabris

Thicklipped Pebblesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

Priority Score: 80 out of 100



Population Trend: Unknown

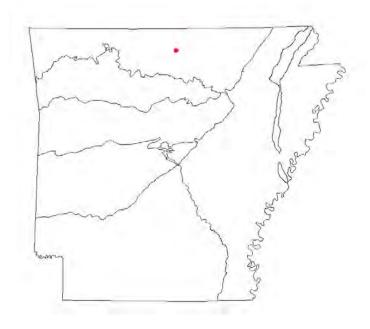
Gobal Rank: GX — Presumed extinct

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

Somatogyrus wheeleri

Channelled Pebblesnail

Class: Gastropoda

Order: Neotaenioglossa

Family: Hydrobiidae

Priority Score: 80 out of 100

| Secure — | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 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

Importance Category

Medium Data Gap

More data are needed to determine conservation

actions.

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

Stenotrema pilsbryi

Rich Mountain Slitmouth

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: 46 out of 100



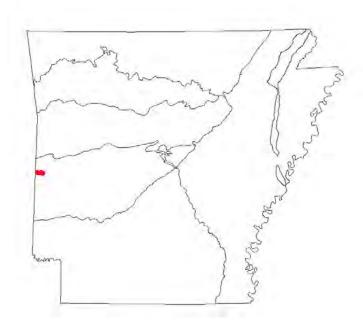
Population Trend: Unknown

Global Rank: G2 — Imperiled species

State Rank: S2 — Imperiled in Arkansas



DistributionOccurrence Records



| Ecoregions where the species occurs: |
|--------------------------------------|
| Ozark Highlands $\ \Box$ |
| Boston Mountains |
| Arkansas Valley |
| Ouachita Mountains |
| South Central Plains |
| Mississippi Alluvial Plain \square |
| Mississippi Valley Loess Plain ☐ |



Habitat Map



Habitats Weight

Ozark-Ouachita Cliff and Talus 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 Importance Category

More data are needed to determine conservation actions.

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, Rich Mountain Slitmouth Snail MOU 2001, Robison and Allen 1995).

Taxa Association Team and Peer Reviewers

Stenotrema unciferum

Ouachita Slitmouth

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

Priority Score: 34 out of 100



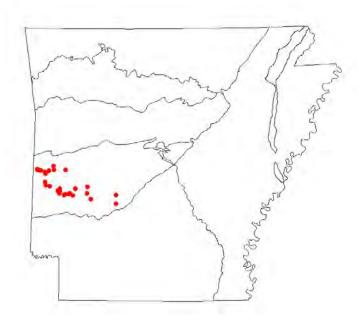
Population Trend: Unknown

Global Rank: G2 — Imperiled species

State Rank: SNR — Species not ranked in Arkansas

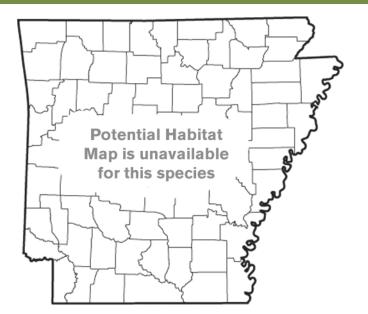


DistributionOccurrence Records



| Ecoregions where the species occurs: |
|--------------------------------------|
| Ozark Highlands 🗆 |
| Boston Mountains |
| Arkansas Valley |
| Ouachita Mountains 🗹 |
| South Central Plains |
| Mississippi Alluvial Plain \square |
| |

Mississippi Valley Loess Plain $\ \square$



Habitat Map



Habitats Weight

Ozark-Ouachita Mesic Hardwood Forest 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

Aquatic Invertebrate Report

Stygobromus elatus

Elevated Spring Amphipod

Class: Malacostraca
Order: Amphipoda
Family: Crangonyctidae

Priority Score: 65 out of 100

| Secure - | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 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

Arkansas Valley - Arkansas River

| Habitats | Weight |
|---------------------------------------|----------|
| Natural Groundwater: | Data Gap |
| Natural Seep: Headwater - Small | Obligate |
| Natural Spring Run: Headwater - Small | 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 | Importance | Category |
|---|------------|----------|
| More data are needed to determine conservation actions. | 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

Aquatic Invertebrate Report

Stygobromus montanus

Mountain Cave Amphipod

Class: Malacostraca
Order: Amphipoda

Family: Crangonyctidae

Priority Score: 65 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 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

HabitatsWeightNatural Groundwater:Data GapNatural Seep: Headwater - SmallOptimal

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
 Importance
 Category

 Protect seeps and seep recharge zones.
 Medium
 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

Stygobromus ozarkensis

Ozark Cave Amphipod

Class: Malacostraca
Order: Amphipoda

Family: Crangonyctidae

Priority Score: 23 out of 100

Secure ______ Imperiled O 25 50 75 100

Population Trend: Unknown

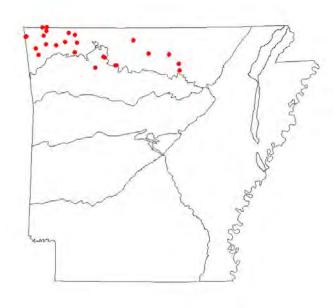
Global Rank: G4 — Apparently secure species

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

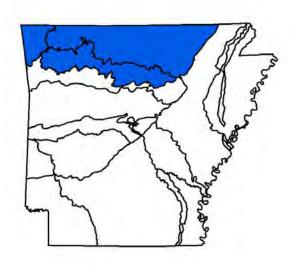
Mississippi Valley Loess Plains

Aquatic/Terrestrial Invertebrate Report



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/Terrestrial Invertebrate Report

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 Importance Category

Protect caves and cave recharge zones. 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

Tartarocreagris ozarkensis

Pseudoscorpion

Class: Arachnida

Order: Pseudoscorpiones

Family: Neobisiidae

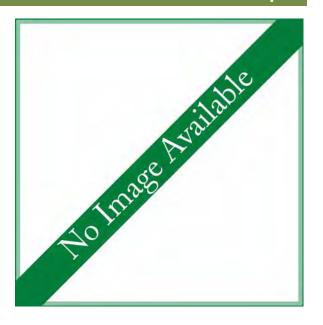
Priority Score: 23 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

Population Trend: Unknown

Global Rank: GNR — Not yet ranked

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗸

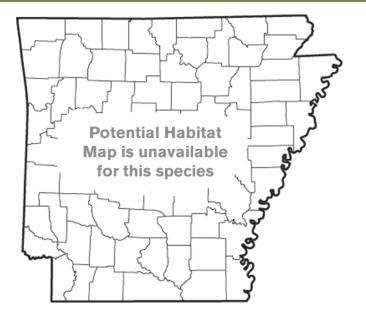
Arkansas Valley

Ouachita Mountains \Box

South Central Plains \Box

Mississippi Alluvial Plain

Mississippi Valley Loess Plain



Habitat Map



Habitats Weight

Ozark-Ouachita Dry-Mesic Oak Forest 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.

Medium

Importance

Habitat Protection

Category

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

Trigenotyla parca

Cave Obligate Millipede

Class: Diplopoda

Order: Chordeumatida Family: Trichopetalidae

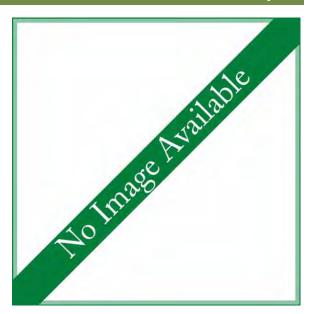
Priority Score: 65 out of 100

| Secure - | | —— Im | periled | |
|----------|----|-------|---------|-----|
| 0 | 25 | 50 | 75 | 100 |

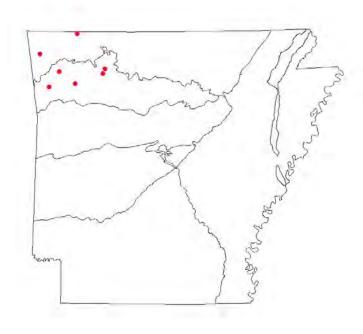
Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)

State Rank: S1 — Critically imperiled in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains 🗹

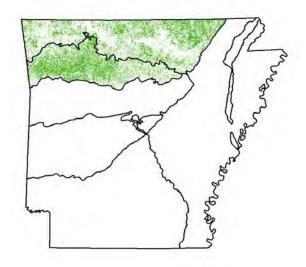
Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain $\ \Box$



Habitat Map



Habitats Weight

Caves, Mines, Sinkholes and other Karst Features Obligate

Problems Faced

Development/disturbance of cave habitat and recharge zone.

Threat: Habitat destruction Source: Urban development

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

Xolotrema occidentale

Arkansas Wedge

Class: Gastropoda

Order: Stylommatophora

Family: Polygyridae

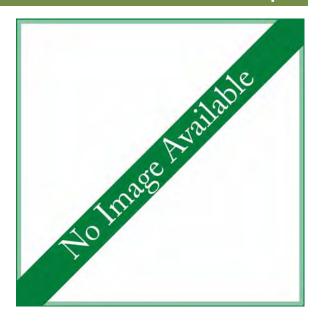
Priority Score: 65 out of 100



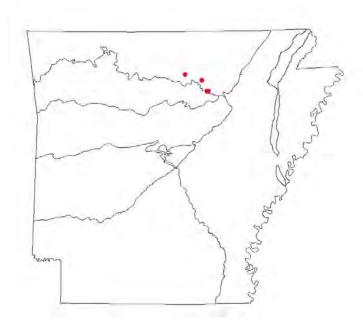
Population Trend: Unknown

Global Rank: G1 — Critically imperiled species

State Rank: SNR — Species not ranked in Arkansas



DistributionOccurrence Records



Ecoregions where the species occurs:

Ozark Highlands

Boston Mountains

Arkansas Valley

Ouachita Mountains \square

South Central Plains

Mississippi Alluvial Plain

Mississippi Valley Loess Plain

The second of th

Habitat Map



Data Gaps/Research Needs

Need to obtain baseline information on distribution and population status.

| Conservation Actions | Importance | Category |
|---|------------|----------|
| More data are needed to determine conservation actions. | 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

Zealeuctra wachita

Ouachita Needlefly

Class: Insecta
Order: Plecoptera
Family: Leuctridae

Priority Score: 50 out of 100

| Secure - | | Imperiled | | |
|----------|----|-----------|----|-----|
| 0 | 25 | 50 | 75 | 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

Aquatic/Terrestrial Invertebrate Report



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.

Aquatic/Terrestrial Invertebrate Report

Conservation Actions

Importance Category

More data are needed to determine conservation actions.

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