**Corynorhinus rafinesquii**

Rafinesque's Big-Eared Bat

**Class:** Mammalia  
**Order:** Chiroptera  
**Family:** Vespertilionidae

**Priority Score:** 29 out of 100

![Priority Position](image)

**Population Trend:** Decreasing

**Global Rank:** G3G4 — Vulnerable (uncertain rank)  
**State Rank:** S3 — Vulnerable in Arkansas

**Distribution**  
**Occurrence Records**

Ecoregions where the species occurs:

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

---

*Corynorhinus rafinesquii*  
Rafinesque's Big-Eared Bat
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Mississippi River Bottomland Depression</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi River Dune Woodland, Pond, and Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Lower Mississippi River High Bottomland Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi River Low Bottomland Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi River Riparian Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Large Floodplain</td>
<td>Optimal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Large River Floodplain Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Pine-Hardwood Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Red River Floodplain Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Seepage Swamp and Baygall</td>
<td>Optimal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Small Stream/River Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Wet Hardwood Flatwoods</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

*Corynorhinus rafinesquii*
Rafinesque’s Big-Eared Bat
**Problems Faced**

<table>
<thead>
<tr>
<th>Threat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat destruction or conversion</td>
<td>Conversion of riparian forest</td>
</tr>
<tr>
<td>Habitat destruction or conversion</td>
<td>Forestry activities</td>
</tr>
<tr>
<td>Toxins/contaminants</td>
<td>Agricultural practices</td>
</tr>
<tr>
<td>Biological alteration</td>
<td>Conversion of riparian forest</td>
</tr>
</tbody>
</table>

Fragmentation of habitat.  
Loss of habitat.  
Genetic diversity loss.  
Loss of old houses and wells.

**Data Gaps/Research Needs**

- Determine foraging behavior.
- Determine forest roosting ecology.
- Determine if reduction in habitat has reduced genetic diversity.

**Conservation Actions**

<table>
<thead>
<tr>
<th>Action</th>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preserve potential artificial roosts.</td>
<td>Low</td>
<td>Habitat Protection</td>
</tr>
<tr>
<td>Restore bottomland hardwoods.</td>
<td>High</td>
<td>Habitat Restoration/Improvement</td>
</tr>
</tbody>
</table>

**Monitoring Strategies**

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

Occurrence records from the Ozark Highlands and the Boston Mountains are suspect and may be Ozark Big-eared bats.


2007: S Rank changed from S2 to S3.

Research on the genetics of this species has found low genetic connectivity between populations in Arkansas, and that protection of roosts and improvement of habitat corridors could have a positive impact on this factor (Medlin and Risch 2008, Medlin and others 2010, Piaggio and others 2011). Old water wells appear to be important winter habitat for this species, and a technique developed in Arkansas to allow for their continued use by bats while addressing public safety concerns seems to be successful (Sasse and others 2011, Sasse and Saugey 2014). The known distribution of this species by county has been expanded by several studies (Fokidis and others 2005, Medlin and others 2006, Sasse and Saugey 2008).

**Taxa Association Team and Peer Reviewers**

AGFC Mr. Blake Sasse, UALR Dr. Bob Sikes, UAM Dr. Don White, UALR Dr. Gary Heidt, Mr. J. D. Wilhide, HSU Dr. Renn Tumlison, ATU Dr. Tom Nupp, ASU Dr. Thomas Risch, USFS Mr. David Saugey, USFS Dr. Roger Perry, SAU Mr. Matthew Connior, ASU Mr. Stephen Brandenbura
Corynorhinus townsendii ingens
Ozark Big-eared Bat

Class: Mammalia
Order: Chiroptera
Family: Vespertilionidae

Priority Score: 80 out of 100

Population Trend: Stable

Global Rank: G3G4T1 — Vulnerable (uncertain rank, critically imperiled subspecies)
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 Plain □
- Mississippi Alluvial Plain □
- Mississippi Valley Loess Plain □
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caves, Mines, Sinkholes and other Karst Features</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Cliff and Talus</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Dry Oak and Pine Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

**Problems Faced**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Threat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human disturbance of bats in caves.</td>
<td>Habitat disturbance</td>
<td>Recreation</td>
</tr>
<tr>
<td>White-nose Syndrome.</td>
<td>Extraordinary predation/parasitism/disease</td>
<td>Parasites/pathogens</td>
</tr>
<tr>
<td>Wind power development.</td>
<td>Collision with man-made structures</td>
<td>Commercial/industrial development</td>
</tr>
</tbody>
</table>

**Data Gaps/Research Needs**

- Address data gaps identified by national white-nose syndrome plan.
- Continue search for caves used for roosting.
- Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.

*Corynorhinus townsendii ingens*

Ozark Big-eared Bat
Conservation Actions | Importance | Category
---|---|---
Implement conservation actions recommended by national white-nose syndrome plan. | High | Threat Abatement
Protect caves used by this species. | High | Habitat Protection

Monitoring Strategies

Monitor impacts of white-nose syndrome on populations.

Monitor summer and winter caves in accordance with U.S. Fish and Wildlife Service recovery plan.

Comments

General description: Dorsal hairs brown with fuscous bases, ventral hairs cinnamon with fuscous bases; contrast between hair tips and bases is fairly sharp.

The species is more common in the western U.S. Two subspecies are listed as endangered species.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: No change in S Rank.

A long-term assessment of the overall status of this species in Arkansas and Oklahoma found that populations may be increasing though gaps in survey data make population trends difficult to determine at many sites (Graening and others 2011). Moths, the primary prey species of the Ozark big-eared bat, were found to vary in abundance by habitat type near maternity caves used by this species and that forested riparian corridors are important as foraging habitat (Dodd and Lacki 2007; Dodd and others 2008, Dodd and others 2011).

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Corynorhinus townsendii ingens
Ozark Big-eared Bat
Geomys bursarius ozarkensis

Ozark Pocket Gopher

Class: Mammalia
Order: Rodentia
Family: Geomyidae

Priority Score: **57 out of 100**

Population Trend: Unknown

Global Rank: G5T1T3 — Secure (critically imperiled or imperiled subspecies)
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 Plain ☐
- Mississippi Alluvial Plain ☐
- Mississippi Valley Loess Plain ☐

Geomys bursarius ozarkensis
Ozark Pocket Gopher
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Land</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Obligate</td>
</tr>
<tr>
<td>Pasture Land</td>
<td>Obligate</td>
</tr>
</tbody>
</table>

**Problems Faced**

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>Threat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuisance control by landowners. Restricted range.</td>
<td>Threat: Death caused by humans</td>
<td>Source: Excessive non-commercial harvest or collection</td>
</tr>
<tr>
<td>Restricted range.</td>
<td>Threat: Biological alteration</td>
<td>Source: Restricted range in Arkansas</td>
</tr>
</tbody>
</table>

**Data Gaps/Research Needs**

Determine if range restrictions have caused decline in genetic diversity.

Study fall dispersal rates.

**Conservation Actions**

Purchase conservation easements on pasture land to maintain them in grasses and to reduce mortality due to nuisance wildlife control efforts.

---

*Geomys bursarius ozarkensis*

Ozark Pocket Gopher
Monitoring Strategies

Monitor status of known locations on a regular basis.

Comments

This species has a small range and is known only from Izard County, Arkansas. The subspecies was first described in 2000.


2007: S Rank changed from S? to S1.

Projects conducted under this program have closed data gaps relating to the home range, survival, dispersal, and habitat use for this species, while developing new techniques for capture and monitoring using radiotelemetry (Connior and Risch 2009a, Connior and Risch 2009b, Connior and others 2010, Connior and Risch 2010). A wide number of other species were found to be associated with Ozark pocket gopher burrows (Connior and others 2008).

Taxa Association Team and Peer Reviewers

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Geomys bursarius ozarkensis
Ozark Pocket Gopher
**Lepus californicus**

Black-tailed Jackrabbit

Class: Mammalia  
Order: Lagomorpha  
Family: Leporidae

Priority Score: 21 out of 100

Population Trend: Unknown

Global Rank: G5 — Secure  
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 Plain □
- Mississippi Alluvial Plain □
- Mississippi Valley Loess Plain □
Habitats

Crop Land  Marginal
Ozark-Ouachita Prairie and Woodland  Suitable
Pasture Land  Suitable

Problems Faced

Threat: Habitat destruction or conversion
Source: Agricultural practices

Urbanization with habitat loss.

Threat: Habitat destruction or conversion
Source: Urban development

Data Gaps/Research Needs

Determine habitat suitability at potential reintroduction sites.

Survey hunters to obtain observation information.

Conservation Actions

<table>
<thead>
<tr>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Habitat Protection</td>
</tr>
<tr>
<td>Medium</td>
<td>Population Management</td>
</tr>
</tbody>
</table>

Lepus californicus
Black-tailed Jackrabbit
Monitoring Strategies

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

Comments

Common in western U.S. Inhabits open plains, fields and deserts, open country with scattered thickets or patches of shrubs. Rests by day in shallow depression (form).

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: S Rank changed from S3 to S1S2.

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*Lepus californicus*
Black-tailed Jackrabbit
**Mustela frenata**

Long-tailed Weasel

Class: Mammalia  
Order: Carnivora  
Family: Mustelidae

Priority Score: **15 out of 100**

Population Trend: Unknown

Global Rank: G5 — Secure  
State Rank: S3 — Vulnerable in Arkansas

**Distribution**

Occurrence Records

Ecoregions where the species occurs:

- Ozark Highlands  ✔
- Boston Mountains  ✔
- Arkansas Valley  ✔
- Ouachita Mountains  ✔
- South Central Plain  ✔
- Mississippi Alluvial Plain  ✔
- Mississippi Valley Loess Plain  ✔
<table>
<thead>
<tr>
<th>Habitats</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Land</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Crowley's Ridge Loess Slope Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Cultivated Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Interior Highlands Calcareaous Glade and Barrens</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Interior Highlands Dry Acidic Glade and Barrens</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi Alluvial Plain Grand Prairie</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi Flatwoods Woodland and Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi River Dune Woodland and Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi River Dune Woodland, Pond, and Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi River High Bottomland Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi River Low Bottomland Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Lower Mississippi River Riparian Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ouachita Montane Oak Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Dry Oak and Pine Woodland</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Dry-Mesic Oak Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Large Floodplain</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Mesic Hardwood Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine/Bluestem Woodland</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine-Oak Forest/Woodland</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Prairie and Woodland</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Data Gap</td>
</tr>
<tr>
<td>Pasture Land</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Calcareous Prairie and Woodland</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Dry Pine-Hardwood Flatwoods</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

*Mustela frenata*

Long-tailed Weasel
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Gulf Coastal Plain Large River Floodplain Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Mesic Hardwood Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Pine-Hardwood Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Red River Floodplain Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Sandhill Oak and Shortleaf Pine Forest and Woodland</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Small Stream/River Forest</td>
<td>Data Gap</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Wet Hardwood Flatwoods</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

**Problems Faced**

<table>
<thead>
<tr>
<th>Unknown</th>
<th>Threat: Source:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data Gaps/Research Needs**

Conduct status survey.

**Conservation Actions**

<table>
<thead>
<tr>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

More data are needed to determine conservation actions.

**Monitoring Strategies**

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

_Mustela frenata_

Long-tailed Weasel
Comments

Found in a wide variety of habitats, usually near water. Favored habitats include brushland and open woodlands, field edges, riparian grasslands, swamps, and marshes. Dens are in abandoned burrows made by other mammals, rock crevice, brushpile, stump hollow, or space among tree roots; one individual may use multiple dens. Tolerant of close proximity to humans.


2007: S rank changed from S2 to S3.

Taxa Association Team and Peer Reviewers

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Mustela frenata
Long-tailed Weasel
**Myotis australriparius**

Southeastern Bat

Class: Mammalia  
Order: Chiroptera  
Family: Vespertilionidae

Priority Score: **24** out of 100

Population Trend: Decreasing

Global Rank: G4 — Apparently secure species

State Rank: S3 — Vulnerable in Arkansas

**Distribution**

Occurrence Records

Ecoregions where the species occurs:

- Ozark Highlands ✅
- Boston Mountains ☐
- Arkansas Valley ✅
- Ouachita Mountains ✅
- South Central Plain ✅
- Mississippi Alluvial Plain ✅
- Mississippi Valley Loess Plain ✅
Habitats

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Mississippi Flatwoods Woodland and Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi Flatwoods Woodland and Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Lower Mississippi River Bottomland Depression</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi River High Bottomland Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Lower Mississippi River Low Bottomland Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi River Riparian Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Large River Floodplain Forest</td>
<td>Optimal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Mesic Hardwood Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Red River Floodplain Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Small Stream/River Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>West Gulf Coastal Plain Wet Hardwood Flatwoods</td>
<td>Marginal</td>
</tr>
</tbody>
</table>

Myotis austroriparius
Southeastern Bat
**Problems Faced**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Threat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragmentation of habitat.</td>
<td>Habitat fragmentation</td>
<td>Conversion of riparian forest</td>
</tr>
<tr>
<td>Loss of habitat.</td>
<td>Habitat destruction or conversion</td>
<td>Conversion of riparian forest</td>
</tr>
<tr>
<td>White-nose Syndrome (in mine-hibernating populations).</td>
<td>Extraordinary predation/parasitism/disease</td>
<td>Parasites/pathogens</td>
</tr>
<tr>
<td>Wind power development.</td>
<td>Collision with man-made structures</td>
<td>Commercial/industrial development</td>
</tr>
</tbody>
</table>

**Data Gaps/Research Needs**

- Address data gaps identified by national white-nose syndrome plan.
- Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.
- Determine roosting ecology.

**Conservation Actions**

<table>
<thead>
<tr>
<th>Action</th>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage landowners to leave roost trees.</td>
<td>Low</td>
<td>Habitat Protection</td>
</tr>
<tr>
<td>Implement conservation actions recommended by national white-nose syndrome plan.</td>
<td>Low</td>
<td>Threat Abatement</td>
</tr>
<tr>
<td>Restore bottomland hardwoods.</td>
<td>High</td>
<td>Habitat Restoration/Improvement</td>
</tr>
</tbody>
</table>

**Monitoring Strategies**

- Monitor impacts of white-nose syndrome on populations.
- More information is needed before a monitoring strategy can be developed.
Comments

General Description: A bat with dull, somewhat woolly pelage, gray to orange or russet above, tan to white below; hairs have little contrast between tip and base; hairs between the toes extend to or beyond the claw tips; calcar is unkeeled; forearm length is 36-41 mm, ear averages 15 mm, foot averages 10 mm.


Additional information on the distribution and habitat use of this species in the state has been obtained through mist net surveys in eastern and southern Arkansas, highlighting the importance of habitat connectivity (Medlin Jr. and Risch 2008, Medlin and others 2010). The known distribution of this species by county has been expanded by several studies (Fokidis and others 2005, Medlin and others 2006, Tumlison and Robison 2010).

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**Myotis grisescens**

Gray Bat

Class: Mammalia  
Order: Chiroptera  
Family: Vespertilionidae

Priority Score: **16** out of 100

Population Trend: Increasing

Global Rank: G4 — Apparently secure species  
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 Plain  
- Mississippi Alluvial Plain  
- Mississippi Valley Loess Plain  

*Myotis grisescens*  
Gray Bat
## Habitats

<table>
<thead>
<tr>
<th>Habitate</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caves, Mines, Sinkholes and other Karst Features</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Large Floodplain</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

## Problems Faced

<table>
<thead>
<tr>
<th>Threat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrological alteration</td>
<td>Dam</td>
</tr>
<tr>
<td>Habitat disturbance</td>
<td>Recreation</td>
</tr>
<tr>
<td>White-nose Syndrome</td>
<td>Extraordinary predation/parasitism/disease</td>
</tr>
<tr>
<td>Wind power development</td>
<td>Collision with man-made structures</td>
</tr>
</tbody>
</table>

## Data Gaps/Research Needs

- Address data gaps identified by national white-nose syndrome plan.
- Determine migration routes.
- Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.

*Myotis grisescens*

Gray Bat
### Conservation Actions

<table>
<thead>
<tr>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Threat Abatement</td>
</tr>
<tr>
<td>Medium</td>
<td>Habitat Protection</td>
</tr>
</tbody>
</table>

**Implement conservation actions recommended by national white-nose syndrome plan.**

**Protect caves used by this species.**

### Monitoring Strategies

**Continue monitoring caves in accordance with U.S. Fish and Wildlife Service recovery plan.**

**Monitor impacts of white-nose syndrome on populations.**

### Comments

A bat with unicolored dorsal fur (gray after the mid-summer molt, at other times sometimes chestnut brown or russet); paler below, with hairs darker basally; wing membrane (gray) connects to the foot at the ankle; calcar is unkeeled; total length 80-105 mm; forearm length 40-46 mm; ear length 14-16 mm; tail length 33-45 mm; hind foot 9-12 mm; mass 7-16 g (usually 8-10 g). wingspread 275-300. Distinct sagittal crest on skull.


2007: S Rank changed from S2 to S2S3.

An evaluation of the population trends of gray bat in the western portion of its range found that 79% of colonies were stable or increasing, and 9 of 14 actions required by the recovery plan in this region were entirely or partially completed. The dramatic decline in gray bat populations that led to its listing as endangered in 1976 may have halted, and gray bat populations appeared to be recovering (Sasse and others 2007). Pesticides, which were thought to be one of the reasons for the original decline, seem to still be present in gray bats in the state (Sasse 2005). Several counties have been added to the known distribution of this species in Arkansas (Sasse and Saugey 2008).

### Taxa Association Team and Peer Reviewers

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*Myotis grisescens*

Gray Bat
Myotis leibii
Eastern Small-Footed Bat

Class: Mammalia
Order: Chiroptera
Family: Vespertilionidae

Priority Score: **27** out of 100

Global Rank: G4 — Apparently secure species
State Rank: S1 — Critically imperiled in Arkansas

Population Trend: Unknown

Ecoregions where the species occurs:
- Ozark Highlands ✓
- Boston Mountains ✓
- Arkansas Valley ✓
- Ouachita Mountains ✓
- South Central Plain
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plain

Distribution
Occurrence Records
Habitats

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caves, Mines &amp; Karst Habitat</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Cliff and Talus</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Dry Oak and Pine Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Mesic Hardwood Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

Problems Faced

<table>
<thead>
<tr>
<th>Problem</th>
<th>Threat: Extraordinary predation/parasitism/disease Source: Parasites/pathogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>White-nose Syndrome.</td>
<td></td>
</tr>
<tr>
<td>Wind power development.</td>
<td>Threat: Collision with man-made structures Source: Commercial/industrial development</td>
</tr>
</tbody>
</table>
Data Gaps/Research Needs

Address data gaps identified by national white-nose syndrome plan.

Conduct surveys needed at caves that may be used during the fall swarming period.

Determine distribution by surveying for this species near exposed rock bluffs.

Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.

Conservation Actions

<table>
<thead>
<tr>
<th>Conservation Actions</th>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinate with the Arkansas Highway and Transportation Department to avoid disturbance of bridge roosting colonies.</td>
<td>Medium</td>
<td>Threat Abatement</td>
</tr>
<tr>
<td>Implement conservation actions recommended by national white-nose syndrome plan.</td>
<td>High</td>
<td>Threat Abatement</td>
</tr>
<tr>
<td>More data are needed to determine conservation actions.</td>
<td>Medium</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

Monitoring Strategies

Monitor impacts of white-nose syndrome on populations.

Monitor status of bridge-roosting colonies.
Comments

This is a very small bat with tiny feet and a dark mask and dark ears. The tragus is long and pointed, and the tail reaches the edge of the interfemoral membrane. There are no prominent chin or nose flaps. The dorsal pelage is pale yellowish brown to golden brown. The ears are black, and the face has a black "mask." The belly hair varies from pale buff to whitish. The bases of the hairs on the back are blackish; wing and tail membranes are very dark brown. The base of the interfemoral membrane and under surfaces of wing membranes are sparsely furred. The calcar has a definitive keel. Sexes are similar; females have two mammae. Size is very small, with total length 72 to 84 mm, tail 30 to 39 mm, hind foot 6 to 8 mm, forearm 30-36 mm, and wingspread 212 to 248 mm; adult mass is 3 to 8 g. These bats generally roost in exposed cliff faces during the summer, but are known to roost in crevices between concrete guard rails on bridges. Status survey citation.


The known distribution of this species has been greatly expanded to include the entire Ozark and Ouachita regions (Sasse and others 2013).

Taxa Association Team and Peer Reviewers

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**Myotis lucifugus**

Little Brown Bat

Class: Mammalia
Order: Chiroptera
Family: Vespertilionidae

Priority Score: **33 out of 100**

Population Trend: Decreasing

Global Rank: G3 — Vulnerable species
State Rank: S3 — Vulnerable in Arkansas

**Distribution**

**Occurrence Records**

Ecoregions where the species occurs:
- Ozark Highlands ✔
- Boston Mountains ✔
- Arkansas Valley ✔
- Ouachita Mountains ✔
- South Central Plain ✔
- Mississippi Alluvial Plain ✔
- Mississippi Valley Loess Plain ✔
### Habitats

<table>
<thead>
<tr>
<th>Habitats</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caves, Mines, Sinkholes and other Karst Features</td>
<td>Optimal</td>
</tr>
<tr>
<td>Ozark-Ouachita Cliff and Talus</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine-Oak Forest/Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Urban/Suburban</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

### Problems Faced

<table>
<thead>
<tr>
<th>Problem</th>
<th>Threat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human disturbance of bats in caves in winter.</td>
<td>Habitat disturbance</td>
<td>Recreation</td>
</tr>
<tr>
<td>White-nose Syndrome.</td>
<td>Extraordinary predation/parasitism/disease</td>
<td>Parasites/pathogens</td>
</tr>
<tr>
<td>Wind power development.</td>
<td>Collision with man-made structures</td>
<td>Commercial/industrial development</td>
</tr>
</tbody>
</table>

### Data Gaps/Research Needs

- Address data gaps identified by national white-nose syndrome plan.
- Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.
- Determine summer habitat use.

**Myotis lucifugus**  
Little Brown Bat
**Conservation Actions**

<table>
<thead>
<tr>
<th>Action</th>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement conservation actions recommended by national white-nose syndrome plan.</td>
<td>High</td>
<td>Threat Abatement</td>
</tr>
<tr>
<td>Protect hibernacula.</td>
<td>High</td>
<td>Habitat Protection</td>
</tr>
</tbody>
</table>

**Monitoring Strategies**

- Monitor impacts of white-nose syndrome on populations.
- Monitor winter cave hibernacula.

**Comments**

This is a medium-sized brown bat that weighs between 5-12 grams. In the winter it hibernates in caves and in the summer roosts in forest trees and commonly in buildings (Sealander and Heidt 1990; Fletcher and others 1991). Though most winter hibernacula are found in the Ozarks, it has been known to winter in mines in the Ouachitas and during the summer can sometimes be found in forested areas far from known wintering sites (Fokidis and others 2005, Medlin Jr. and others 2006, Sasse and Saugey 2008, Sasse and others 2011).

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Myotis septentrionalis
Northern Long-eared Bat

Class: Mammalia
Order: Chiroptera
Family: Vespertilionidae

Priority Score: 63 out of 100

Population Trend: Unknown

Global Rank: G1G2 — Critically imperiled (uncertain rank)
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 Plain ✓
- Mississippi Alluvial Plain ✓
- Mississippi Valley Loess Plain □
### Habitats

<table>
<thead>
<tr>
<th>Habitats</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caves, Mines, Sinkholes and other Karst Features</td>
<td>Optimal</td>
</tr>
<tr>
<td>Lower Mississippi River Riparian Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine-Oak Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine-Oak Forest/Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ponds, Lakes, and Water Holes</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

### Problems Faced

White-nose Syndrome.  
**Threat:** Extraordinary predation/parasitism/disease  
**Source:** Parasites/pathogens

### Data Gaps/Research Needs

- Address data gaps identified by national white-nose syndrome plan.
- Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.
- Determine roosting ecology in bottomland forests.
- Determine spring and fall migration patterns.
- Develop appropriate summer monitoring strategies.

*Myotis septentrionalis*  
Northern Long-eared Bat
Conservation Actions

Implement conservation actions recommended by national white-nose syndrome plan.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Threat Abatement</td>
</tr>
</tbody>
</table>

Monitoring Strategies

Monitor impacts of white-nose syndrome on populations.

Monitor summer distribution and abundance using mist-net surveys.

Monitor winter populations at accessible sites.

Comments

The northern long-eared bat has been a common insectivorous bat in much of eastern North America, including Arkansas, which is located near the southwestern edge of its range. The species is predominantly found in the Ozarks and Ouachitas, though they have been observed in bottomland hardwood forests of northeastern Arkansas (Sealander and Heidt 1990, Fokidis and others 2005, Medlin Jr. and others 2006, Sasse and others 2014). This species hibernates in caves in winter and generally roosts in trees during summer months, though one Arkansas maternity colony was found in a private house (Grippo and Massa 2000, Jackson 2004, Perry and Thill 2007, Perry et al. 2008).

Taxa Association Team and Peer Reviewers

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Myotis septentrionalis
Northern Long-eared Bat
**Myotis sodalis**

Indiana Bat

Class: Mammalia  
Order: Chiroptera  
Family: Vespertilionidae

Priority Score: 62 out of 100

Population Trend: Decreasing

Global Rank: G2 — 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 Plain □
- Mississippi Alluvial Plain ✓
- Mississippi Valley Loess Plain □
Habitats

- Caves, Mines, Sinkholes and other Karst Features: Optimal
- Ozark-Ouachita Cliff and Talus: Marginal
- Ozark-Ouachita Dry Oak and Pine Woodland: Optimal
- Ozark-Ouachita Dry-Mesic Oak Forest/Woodland: Suitable
- Ozark-Ouachita Mesic Hardwood Forest: Suitable
- Ozark-Ouachita Riparian: Suitable
- Ponds, Lakes, and Water Holes: Suitable

Problems Faced

- Human disturbance of bats in caves during winter. Threat: Habitat disturbance
  Source: Recreation
- White-nose Syndrome. Threat: Extraordinary predation/parasitism/disease
  Source: Parasites/pathogens
- Wind power development. Threat: Collision with man-made structures
  Source: Commercial/industrial development

Myotis sodalis
Indiana Bat
Data Gaps/Research Needs

Address data gaps identified by national white-nose syndrome plan.

Determine if additional maternity colonies are present, especially in the southern Ozarks.

Determine impacts of habitat management near hibernacula.

Determine migration patterns of female Indiana bats in spring and fall.

Determine presence of white-nose syndrome or the fungus that causes it in hibernacula.

Conservation Actions

<table>
<thead>
<tr>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Threat Abatement</td>
</tr>
<tr>
<td>High</td>
<td>Habitat Protection</td>
</tr>
</tbody>
</table>

Implement conservation actions recommended by national white-nose syndrome plan.

Protect hibernacula.

Monitoring Strategies

Monitor impacts of white-nose syndrome on populations.

Monitor in accordance with U.S. Fish and Wildlife Service recovery plan.
Comments

General Description: Pelage very fine and fluffy, dull grayish chestnut above (hair tips slightly glossy; basal two-thirds blackish, followed by a grayish band and cinnamon tip), pinkish white underparts; membranes and ears blackish-brown; total length 75-102 mm; tail length 27-44 mm; wingspread 240-267 mm; length of head and body 41-49 mm; ear 10-15 mm, does not extend past end of nose when laid forward; forearm 36-41 mm; calcar obviously keeled (not always evident in dried study skins); hind foot small, 7-11 mm, hairs do not extend beyond toes; mass 5-11 g; greatest length of skull 14.2-15.0 mm, usually greater than 14.5 mm; length of maxillary toothrow 5.2-5.6 mm; complete sagittal crest usually present in adults;


2007: S Rank changed to S1.

The known distribution of this species was expanded following the discovery of a maternity colony of this species in a bottomland hardwood forest (Brandebura and others 2006, Brandebura and others 2011).

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Myotis sodalis
Indiana Bat
**Notiosorex crawfordi**  
Crawford’s Gray Shrew

Class:  Mammalia  
Order:  Soricomorpha  
Family:  Soricidae

Priority Score:  **19 out of 100**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Secure</td>
</tr>
<tr>
<td>25</td>
<td>Imperiled</td>
</tr>
</tbody>
</table>

Population Trend:  Unknown

Global Rank:  G5 — Secure  
State Rank:  S2 — Imperiled in Arkansas

### Distribution

Occurrence Records

Ecoregions where the species occurs:
- Ozark Highlands ✓
- Boston Mountains ✓
- Arkansas Valley ✓
- Ouachita Mountains ✓
- South Central Plain ✓
- Mississippi Alluvial Plain ☐
- Mississippi Valley Loess Plain ☐
Habitats

| Interior Highlands Calcareous Glade and Barrens | Suitable |
| Interior Highlands Dry Acidic Glade and Barrens | Suitable |
| Ozark-Ouachita Cliff and Talus | Suitable |
| Ozark-Ouachita Pine/Bluestem Woodland | Suitable |
| Ozark-Ouachita Prairie and Woodland | Suitable |
| West Gulf Coastal Plain Calcareous Prairie and Woodland | Suitable |

Problems Faced

Unknown

Source:

Data Gaps/Research Needs

Additional information about habitat relationships is needed.

Conservation Actions

More data are needed to determine conservation actions.

Importance: Medium  Category: Data Gap
Monitoring Strategies

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

Comments

More commonly found in western United States. 2007: S Rank changed from S1? to S2.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

Name revised from Desert Shrew.

Only a few specimens from Miller, Sebastian, and Ouachita counties have been collected in Arkansas in recent years, and a status survey indicates that they are rare even in good habitat in western Arkansas (Thomas 2005, Connior and others 2012).

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Notiosorex crawfordi
Crawford's Gray Shrew
Mammal Report

Reithrodontomys humulis
Eastern Harvest Mouse

Class: Mammalia
Order: Rodentia
Family: Cricetidae

Priority Score: 19 out of 100

Population Trend: Unknown

Global Rank: G5 — Secure
State Rank: S2 — Imperiled in Arkansas

Distribution
Occurrence Records

Ecoregions where the species occurs:
- Ozark Highlands ✓
- Boston Mountains □
- Arkansas Valley ✓
- Ouachita Mountains □
- South Central Plain ✓
- Mississippi Alluvial Plain ✓
- Mississippi Valley Loess Plain ✓
Habitats

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Mississippi River Dune Woodland, Pond, and Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Lower Mississippi River High Bottomland Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Prairie and Woodland</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

Problems Faced

Unknown

Threat: Source:

Data Gaps/Research Needs

Conduct status survey.

Determine habitat use relationships.

Conservation Actions

More data are needed to determine conservation actions.

Importance Category

<table>
<thead>
<tr>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

Monitoring Strategies

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

Reithrodontomys humulis

Eastern Harvest Mouse
Comments
Prefers old fields, marshes, and wet meadows. Climbs among herbaceous vegetation. Nests are placed in tangled vegetation under debris or above ground. (Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: S Rank changed from S1? To S2.

A few additional specimens of this species have been located in recent years (Connior and others 2011, Connior and others 2012).

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Reithrodontomys megalotis
Western Harvest Mouse

Class: Mammalia
Order: Rodentia
Family: Cricetidae

Priority Score: **15 out of 100**

Population Trend: Unknown

Global Rank: G5 — Secure
State Rank: S3 — Vulnerable in Arkansas

Ecoregions where the species occurs:
- Ozark Highlands ✓
- Boston Mountains □
- Arkansas Valley □
- Ouachita Mountains □
- South Central Plain □
- Mississippi Alluvial Plain ✓
- Mississippi Valley Loess Plain ✓
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Land</td>
<td>Marginal</td>
</tr>
<tr>
<td>Pasture Land</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

**Problems Faced**

Unknown.

**Data Gaps/Research Needs**

Conduct status survey.

**Conservation Actions**

<table>
<thead>
<tr>
<th>Action</th>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restore native warm season grasses and forbs.</td>
<td>Low</td>
<td>Habitat Restoration/Improvement</td>
</tr>
</tbody>
</table>

**Monitoring Strategies**

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

*Reithrodontomys megalotis*

Western Harvest Mouse
Comments
Habitats include old fields, meadows, weedy roadsides, agricultural areas, grassy situations within pine-oak forest, and riparian borders. Prefers dense vegetative cover. Also may be found in shrubby, arid regions.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: Status changed from S3S4 to S3.

A museum specimen was collected in Sharp county in 1987, but only recently reported on is the first record of this species in the Ozark highland ecosystem (Connior and others 2012).

Taxa Association Team and Peer Reviewers
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Reithrodontomys megalotis
Western Harvest Mouse
Reithrodontomys montanus
Plains Harvest Mouse

Class: Mammalia
Order: Rodentia
Family: Cricetidae

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 Plain
- Mississippi Alluvial Plain
- Mississippi Valley Loess Plain

Reithrodontomys montanus
Plains Harvest Mouse
Habitats

- Ozark-Ouachita Dry Oak and Pine Woodland: Marginal
- Pasture Land: Suitable

Problems Faced

- Invasive non-native grasses. Threat: Habitat destruction or conversion. Source: Exotic species
- Urbanization and habitat loss. Threat: Habitat destruction or conversion. Source: Urban development

Data Gaps/Research Needs

Determine if species is still present in Arkansas.

Conservation Actions

- Encourage conservation easements on open land. Importance: Medium. Category: Habitat Restoration/Improvement
- Restore native warm season grasses and forbs. Importance: Medium. Category: Habitat Restoration/Improvement

Monitoring Strategies

More information is needed before a monitoring strategy can be developed.
Comments
Occupies areas with less than 50 percent bare soil; weedy situations. Old hayfields, highway medians, cultivated fields (wheat, sorghum), grazed riparian woodland. May nest in grass on or above ground, in underground burrow, beneath rock in stony pasture, under log or discarded lumber, or in other object on or near ground.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: S Rank changed from S1? to S1.

Several specimens were recently captured in cool-season grass habitat at the Pea Ridge National Military Park in Benton county (Reddin 2014).

Taxa Association Team and Peer Reviewers
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Reithrodontomys montanus
Plains Harvest Mouse
**Sorex longirostris**
Southeastern Shrew

**Class:** Mammalia  
**Order:** Soricomorpha  
**Family:** Soricidae

**Priority Score:** 19 out of 100

**Population Trend:** Unknown

**Global Rank:** G5 — Secure  
**State Rank:** S2 — Imperiled in Arkansas

---

**Distribution**

**Occurrence Records**

Ecoregions where the species occurs:

- Ozark Highlands ✓
- Boston Mountains ✓
- Arkansas Valley ✓
- Ouachita Mountains ✓
- South Central Plain □
- Mississippi Alluvial Plain □
- Mississippi Valley Loess Plain □
### Habitats

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caves, Mines, Sinkholes and other Karst Features</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ouachita Montane Oak Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ouachita Mountain Forested Seep</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Mesic Hardwood Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine/Bluestem Woodland</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine-Oak Forest/Woodland</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Prairie and Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

### Problems Faced

Unknown.  

### Data Gaps/Research Needs

Records of this species in the state are sparse.

### Conservation Actions

<table>
<thead>
<tr>
<th>Description</th>
<th>Importance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>More data are needed to determine conservation actions.</td>
<td>Medium</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

*Sorex longirostris*  
Southeastern Shrew
Monitoring Strategies

Continue to opportunistically compile records of collections in the state.

Comments

A smallish shrew with a sharply pointed snout, beady eyes, and small ears nearly hidden in the fine soft pelage; pelage brown above, cinnamon brown or ochraceous tawny below; five small unicuspidate teeth behind the upper incisors (the fifth is minute, the fourth generally is larger than [less commonly equal to] the third, and both of these are smaller than the first and second; tips of teeth are dark chestnut; feet are delicate, with slender weak claws; condylobasal length of skull 13.8-15.5 mm.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: S Rank changed from S2? to S2.

A status survey for this species was performed from 2007-2009, and after completing 17,983 trap nights at 329 locations with only 2 shrew captures, concluded that the species is rare in the state (Mikel and others 2010). It has also been recently collected from Pope County (Showen 2006).

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Sorex longirostris
Southeastern Shrew
**Spilogale putorius**

**Eastern Spotted Skunk**

**Class:** Mammalia  
**Order:** Carnivora  
**Family:** Mephitidae  

**Priority Score:** 21 out of 100  

**Population Trend:** Unknown

**Global Rank:** G4 — Apparently secure species  
**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 Plain ✓
- Mississippi Alluvial Plain □
- Mississippi Valley Loess Plain ✓

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Spilogale putorius  
Eastern Spotted Skunk
Spilogale putorius
Eastern Spotted Skunk

**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Land</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Cliff and Talus</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Dry Oak and Pine Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Dry-Mesic Oak Forest/Woodland</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Mesic Hardwood Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Ozark-Ouachita Pine-Oak Forest/Woodland - Woodland Condition</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

**Problems Faced**

High avian and terrestrial predation rates.

Threat: Extraordinary predation/parasitism/disease
Source: Predation

**Data Gaps/Research Needs**

Determine habitat use relationships in the Ozarks.

Determine home range in the Ozarks.

**Conservation Actions**

Manage shortleaf pine forests to provide a mixture of young stands with a woody vegetative understory and closed canopy.

Importance: Medium
Category: Habitat Restoration/Improvement
Monitoring Strategies

Monitor harvest of spotted skunk in fur dealer reports.

Comments

Prefers forested areas or habitats with significant cover. Also open and brushy areas, rocky canyons and outcrops in woodlands and prairies. When inactive or bearing young, occupies den in burrow abandoned by other mammal, under brushpile, in hollow log or tree, in rock crevice, under building, or in similar protected site. Occasionally reported in Arkansas fur sales records. Possibly in decline.


2007: S Rank changed from S4 to S2S3.

A major study of the home range, habitat use, denning habits, and survival of this species was conducted in the Ouachitas and found that spotted skunks tend to prefer early successional forest habitats, probably due to high predation rates that can occur in more open areas (Hackett and others 2007; Lesmeister and others 2008a and 2008b; Lesmeister and others 2009, Lesmeister and others 2010, Lesmeister and others 2013).

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Synaptomys cooperi
Southern Bog Lemming

Class: Mammalia
Order: Rodentia
Family: Muridae

Priority Score: 19 out of 100

Population Trend: Unknown

Global Rank: G5 — Secure
State Rank: S2 — Imperiled in Arkansas

Distribution
Occurrence Records

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

Arkansas Natural Heritage Commission does not have element occurrence data for this species
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Mississippi Flatwoods Woodland and Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Lower Mississippi River Bottomland Depression</td>
<td>Suitable</td>
</tr>
<tr>
<td>Lower Mississippi River High Bottomland Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Lower Mississippi River Low Bottomland Forest</td>
<td>Marginal</td>
</tr>
<tr>
<td>Lower Mississippi River Riparian Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Lower Mississippi River Riparian Forest</td>
<td>Suitable</td>
</tr>
<tr>
<td>Pasture Land</td>
<td>Suitable</td>
</tr>
</tbody>
</table>

**Problems Faced**

Habitat loss and conversion. Threat: Habitat destruction or conversion. Source: Agricultural practices

**Data Gaps/Research Needs**

- Confirm museum specimen identification.
- Determine effects of isolation on genetic diversity.
- Determine habitat use relationships.
**Conservation Actions**

More data are needed to determine conservation actions.

<table>
<thead>
<tr>
<th>Importance</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Data Gap</td>
</tr>
</tbody>
</table>

**Monitoring Strategies**

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

**Comments**

Prefers boggy habitat but also common in marshes, meadows, and upland forests with thick humus layer (especially when conditions not hot and dry); areas with intermixture of herbaceous/shrubby vegetation. Occupies burrow systems usually 6-12 inches deep and surface runways (e.g., beneath sphagnum and among roots of shrubs). Young are born in nests placed on the surface in grassy vegetation or in underground burrows.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: S Rank changed from S2S3 to S2.

**Taxa Association Team and Peer Reviewers**

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*Synaptomys cooperi*
Southern Bog Lemming
**Taxidea taxus**  
American Badger

**Class:** Mammalia  
**Order:** Carnivora  
**Family:** Mustelidae

**Priority Score:** 16 out of 100

**Population Trend:** Increasing

**Global Rank:** G5 — Secure  
**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 Plain
- Mississippi Alluvial Plain ✅
- Mississippi Valley Loess Plain ✅
**Habitats**

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Crop Land</td>
<td>Suitable</td>
</tr>
<tr>
<td>Ozark-Ouachita Riparian</td>
<td>Suitable</td>
</tr>
<tr>
<td>Pasture Land</td>
<td>Optimal</td>
</tr>
</tbody>
</table>

**Problems Faced**

Unknown.

**Conservation Actions**

More data are needed to determine conservation actions.

**Monitoring Strategies**

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

**Taxidea taxus**

American Badger
Comments

A heavy-bodied, short-legged mammal with long fore claws, long fur (longest on the sides), and a short bushy tail; upperparts are yellowish gray to reddish brown, with a white middorsal stripe extending from the snout to the neck or shoulders in the north and usually to the rump in the south; black patches are present on the face and cheeks; underparts are buffy, except for the whitish chin, throat, and mid-ventral region; feet are dark brown to black; head and body length 42-72 cm, tail length 10-15.5 cm, mass 4-12 kg. Rarely encountered in northern Arkansas. Recent records may indicate that a population has been established in Arkansas.

(Natureserve 2005, Sasse and others 2004, Sealander and Heidt 1990)

2007: S Rank changed from SA (accidental) to S1S2.

A recent review of the status of this species in Arkansas found that it was expanding in the northeastern portion of the state along Crowley’s Ridge (Tumlison and others 2012).

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