

# *Biodiversity conservation: the role of the Oklahoma Natural Heritage Inventory*

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# “To inventory the Natural Features of the State ...”

- ❖ 3 January 1977: Oklahoma Natural Heritage Program
  - ❖ *“Inventory of the state's habitats and species, ...”*
  - ❖ *“Provide information that promotes the wise and rational use of land and water resources.”*
- ❖ 1 July 1987: Our legislative mandate (§70-3314. C. 6.):
  - ❖ *“... will provide a centralized and continually updated inventory of the biological diversity of Oklahoma ...”*
  - ❖ *“...state-mandated archive of biological data for the state...”*
  - ❖ *“... accurate and timely information for environmental planning, resource management, protection of significant natural areas, endangered species review, and biological research and education.”*



# Who is the Oklahoma Natural Heritage Inventory?



Amy Buthod  
Botanist/Collections  
Manager



Liz Bergey  
Invertebrate Zoologist



Todd Fagin  
Conservation Data Analyst



Brue Hoagland  
Coordinator/Plant Ecologist

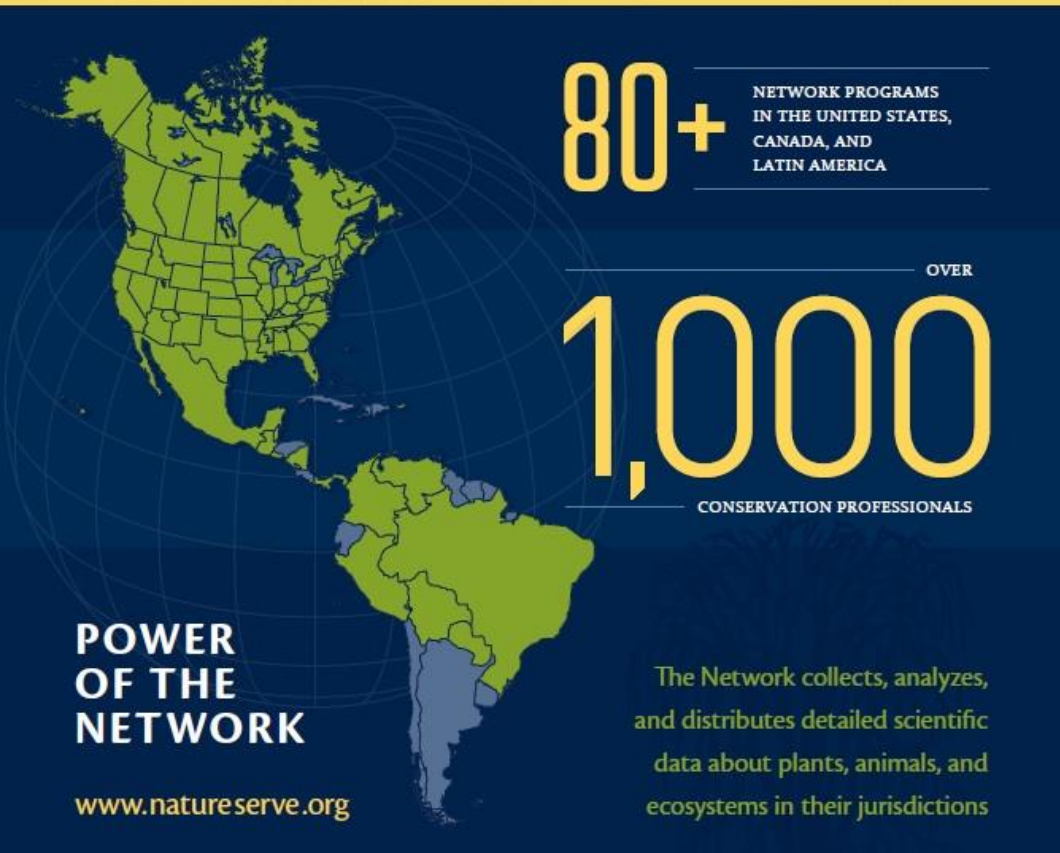


Brenda Smith-Patten  
Vertebrate/Invertebrate  
Zoologist

# *“Inventory of the state's habitats and species, ...”*



A Network Connecting Science with Conservation



**70,000+** Species Assessed

**1,600+** Ecosystems Mapped



OVER 6 MILLION  
ANNUAL DATA  
REQUESTS

11 INTERACTIVE  
ONLINE DATA  
TOOLS

OVER 1 MILLION  
MAPPED LOCATIONS  
OF AT-RISK SPECIES

OVER 2,000  
SCIENTIFIC  
PUBLICATIONS

OVER 5,000  
PARTNER  
ORGANIZATIONS

NETWORK-WIDE  
BUDGET OF OVER  
\$60 MILLION

0  
LOBBYISTS

0  
LAWYERS

**WINNER OF THE MACARTHUR AWARD FOR CREATIVE AND EFFECTIVE INSTITUTIONS**

# *“Inventory of the state's habitats and species, ...”*

## ❖ Conservation Ranking



- 1 ***Critically imperiled by extreme rarity*** or by some critical biological factor making element especially vulnerable to extinction
- 2 ***Imperiled by rarity*** or by other factors demonstrably making element vulnerable to extinction
- 3 ***Either very rare and local throughout or found locally*** in restricted range, or by other factors making element vulnerable to extinction
- 4 ***Apparently secure***, though may be rare in parts of range, especially periphery
- 5 ***Demonstrably secure throughout range***, though may be rare in parts of range, especially periphery

# “Inventory of the state's habitats and species, ...”

## ❖ Elements of Biodiversity

Category

Animals: Invertebrate

Animals: Vertebrate

Communities: Animal

Communities: Vegetation

Plants: Vascular

### TRACKING LIST OF RARE OKLAHOMA VERTEBRATES Oklahoma Natural Heritage Inventory

Common Name	Scientific Name	Status			Conservation Rank	
		Federal	ODWC	Global	National	State
Amphibians						
Bird-voiced Treefrog	<i>Hyla avivoca</i>		III	G5	N5	S2
Cajun Chorus Frog	<i>Pseudacris fouquettei</i>			G5	N5	S3
Cave Salamander	<i>Eurycea lucifuga</i>			G5	N5	S3
Chihuahuan Green Toad	<i>Anaxyrus debilis</i>			G5	N4	S3
Dark-sided Salamander	<i>Eurycea longicauda melanopleura</i>			G5T4	N4	S3
Eastern Newt	<i>Natophthalmus viridescens</i>			G5	N4	S3
Four-toed Salamander	<i>Hemidactylium scutatum</i>	III		G5	N5	S1
Green Treefrog	<i>Hyla cinerea</i>			G5	N5	S3
Grotto Salamander	<i>Eurycea spelaea</i>	I		G4	N4	S3
Hurter's Spadefoot	<i>Scaphiopus hurteri</i>			G5	N5	S2S3
Kiamichi Slimy Salamander	<i>Plethodon kiamichi</i>			G5	N3	S2
Lesser Siren	<i>Siren intermedia</i>			G5	N5	S2S3
Long-tailed Salamander	<i>Eurycea longicauda</i>			G5	N4	S2S3
Mexican Spadefoot	<i>Spea multiplicata</i>			G5	N5	S3?
Mole Salamander	<i>Ambystoma talpoideum</i>	III		G5	N5	S1
Mudpuppy	<i>Necturus maculosus</i>			G5	N5	S3
Oklahoma Salamander	<i>Eurycea tynerensis</i>	I		G3	N3	S3
Ouachita Dusky Salamander	<i>Desmognathus brimleyorum</i>	II		G4	N4	S3
Ozark Zigzag Salamander	<i>Plethodon angusticlavius</i>	II		G4	N4	S2
Pickrel Frog	<i>Lithobates palustris</i>			G5	N5	S2S3
Red-spotted Toad	<i>Anaxyrus punctatus</i>			G5	N5	S3
Rich Mountain Salamander	<i>Plethodon ouachitae</i>	I		G2G3	N3	S2
Ringed Salamander	<i>Ambystoma annulatum</i>	I		G4	N4	S2S3
Sequoiah Slimy Salamander	<i>Plethodon sequoyah</i>	I		G2	N2	S2

### TRACKING LIST OF RARE OKLAHOMA INVERTEBRATES Oklahoma Natural Heritage Inventory

		Status		Conservation Rank			
	Common Name	Scientific Name	Federal	ODWC	Global	National	State
ARTHROPODA							
Chelicerata: Arachnida							
	harvestman, unnamed	<i>Crosbyella spinturnix</i>			GNR	NR	S1
	spider, unnamed	<i>Islandiana unicornis</i>			G2G3	2N3	S1
	Appalachian Cave Spider	<i>Porhomma cavernicola</i>			G5	NR	S1
	troglolithic false scorpion	<i>Hesperochernes occidentalis</i>			G5	5	S1
Crustacea (crustaceans)							
Amphipoda (amphipods)							
	Oklahoma Cave Amphipod	<i>Allocrangonyx pellucidus</i>	I	G2G3		2N3	S2
	Kansas Well Amphipod	<i>Bactrurus hubrichti</i>	II	G4		4	S1
	Forbes Crangonyctid	<i>Crangonyx forbesi</i>				5	S2
	Minor Cave Amphipod	<i>Crangonyx minor</i>				5	S2
	Northern River Crangonyctid	<i>Crangonyx pseudogracilis</i>				5	S2
	amphipod, unnamed	<i>Gammarus locustalis</i>			GNR	NR	S1
	Northern Spring Amphipod	<i>Gammarus pseudolimnaeus</i>			G5	NR	S1
	Alabama Groundwater Amphipod	<i>Stygobromus alabamensis</i>			G5	5	S3
	Bowman's Cave Amphipod	<i>Stygobromus bowmani</i>	I	G1G2		1N2	S1
	Onondaga Cave Amphipod	<i>Stygobromus onondagaensis</i>				3	S2
	Ozark Cave Amphipod	<i>Stygobromus ozarkensis</i>	II			4	S3
Decapoda (crayfish)							
	Swamp Dwarf Crayfish	<i>Cambarillus puer</i>			G5	5	S1
	Devil Crayfish	<i>Cambarus diogenes</i>			G5	N5	S3?
	Bristly Cave Crayfish	<i>Cambarus setosus</i>			G3	N3	ne
	Delaware County Cave Crayfish	<i>Cambarus subterraneus</i>	I	G1		N1	S1

Number Tracked

293

421

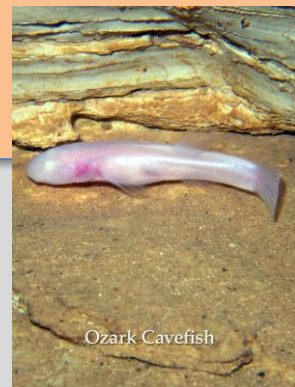
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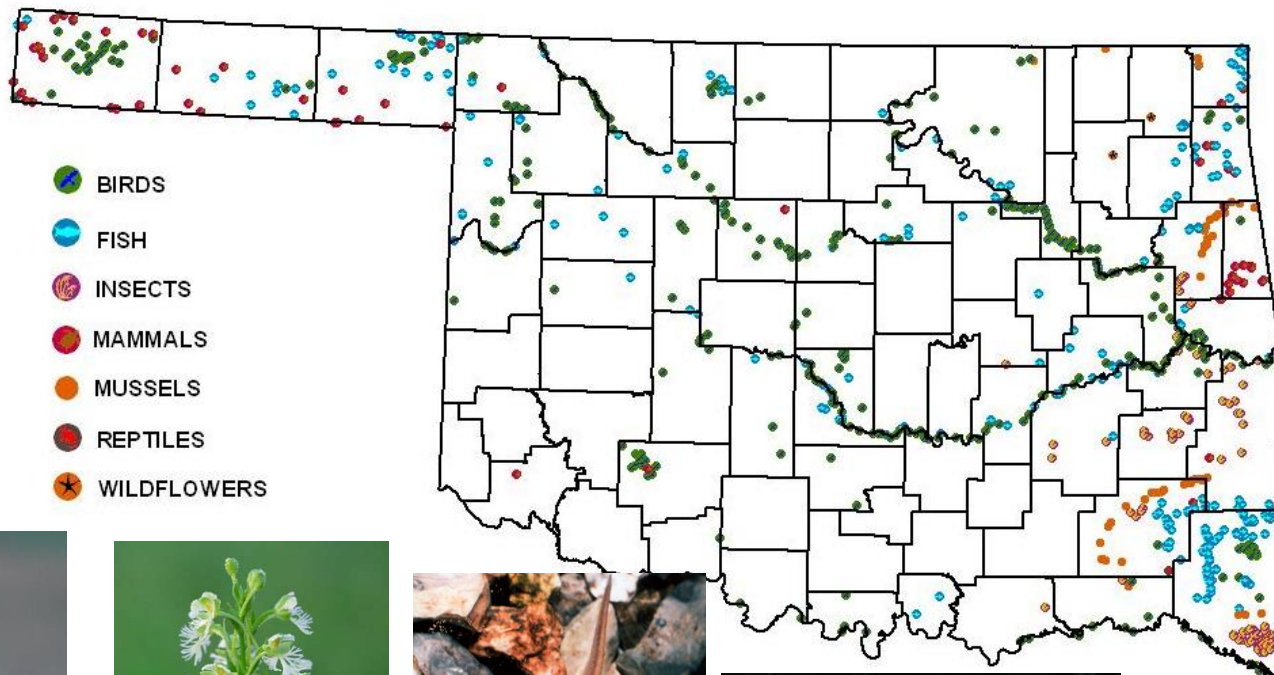
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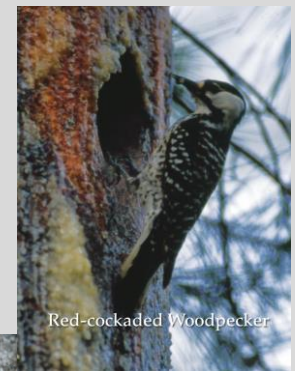
# *“Inventory of the state's habitats and species, ...”*



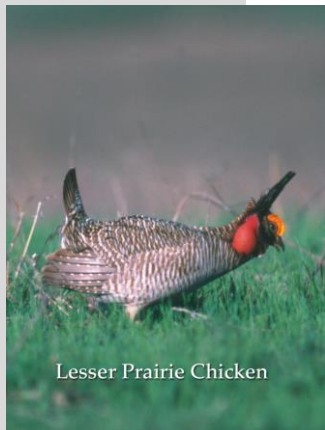
Ozark Cavefish



Ozark Big-eared Bat



Red-cockaded Woodpecker



Lesser Prairie Chicken



Oklahoma Salamander



Long-tailed Weasel



Rich Mountain Slitmouth

# *“...accurate and timely information...”*

## ❖ Information requests

✧ 2014	770
✧ 2015	601
✧ 2016	576
✧ 2017	675
✧ 2018	503
✧ 2019	644
✧ 2020	509 (as of Sept. 9)



*“...archive of biological data for the state...”*

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