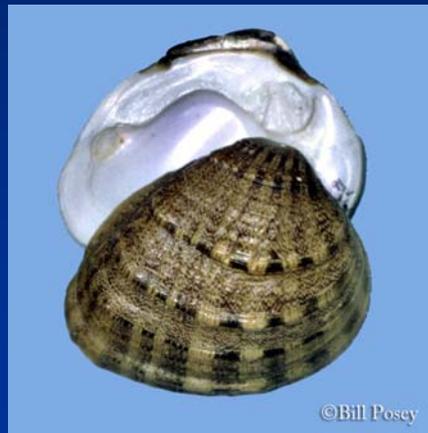


Arkansas' Wildlife Action Plan



Presented at the Ozark Summit,
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West Plains, Missouri

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Dr. Henry Robison >Southern Arkansas University
Dr. Tom Buchanan >University of Arkansas at Ft. Smith
Lindsey Lewis & Chris Davidson >US Fish and Wildlife Service
Drs. Stan Trauth and Al Christian >Arkansas State University
And a slew of others including The Nature Conservancy, USGS, +++



2001- October 1, 2005

- Congress charged each state and territory with developing a state “Comprehensive Wildlife Conservation Strategy”



- Now “Arkansas Wildlife Action Plan”

What is the Arkansas Wildlife Action Plan?

- **A science-based set of priorities designed to guide efficient decision-making for Arkansas' species of concern.**



Konrad P. Schmidt

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Arkansas' Strategy: The Short of It

- Focus on GOAL of “Keeping Common Species Common”
- Utilize all Conservation Expertise from Agencies, Universities, NGOs and Keep Partners through Whole Process
- Involve the Public and Value their Opinion
- Identify Data Gaps
- Utilize Good Science to Answer Questions
- Base Solutions on an Ecoregion Approach



Taxa Teams

- Amphibians and Reptiles Team
- Fishes
- Insects and Select Invertebrates (Aquatic & Terrestrial)
- Mussels and Snails



Crystal Darter (*Crystallaria asprella*)
Konrad P. Schmidt

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Partners

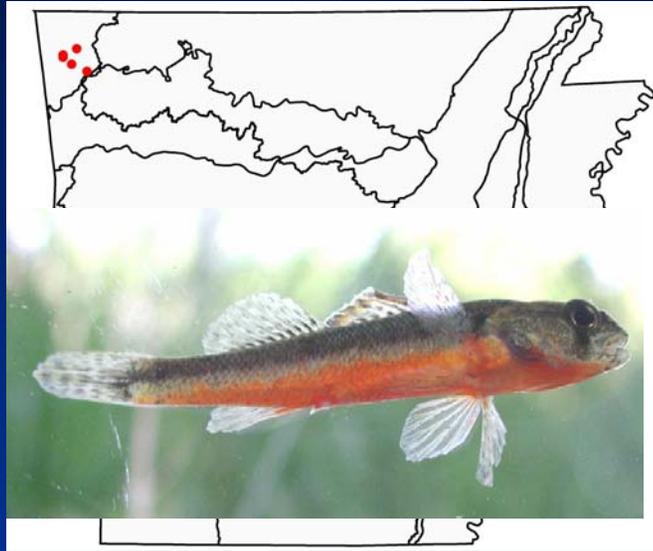
- **Identified and prioritized Arkansas' 369 species of greatest conservation need**
- **Determined species' distribution**
- **Using expert assessments, developed and prioritized**
 - Research needs**
 - Conservation actions called**
 - Monitoring requirements**



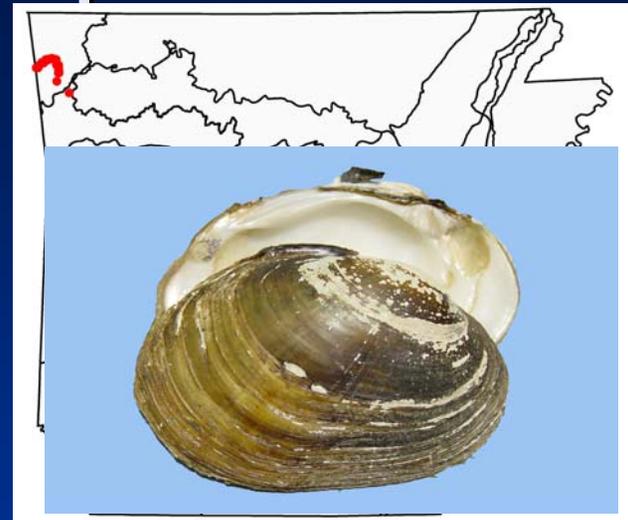
Distribution of Aquatic Species

- The First Spatial Scale – Element Occurrence
- Second Spatial Scale – Ecoregions
- Third Spatial Scale – Ecobasins
- Fourth Spatial Scale – Specific Aquatic Habitats (i.e. littoral lentic, shoal lotic)

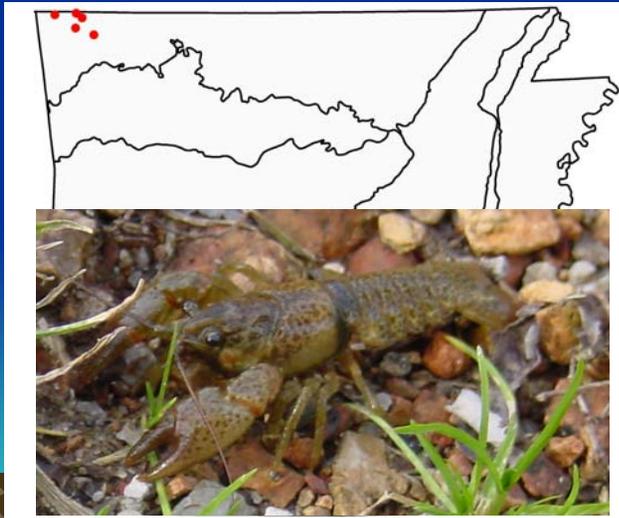
Ozark Highlands Aquatic SGCN



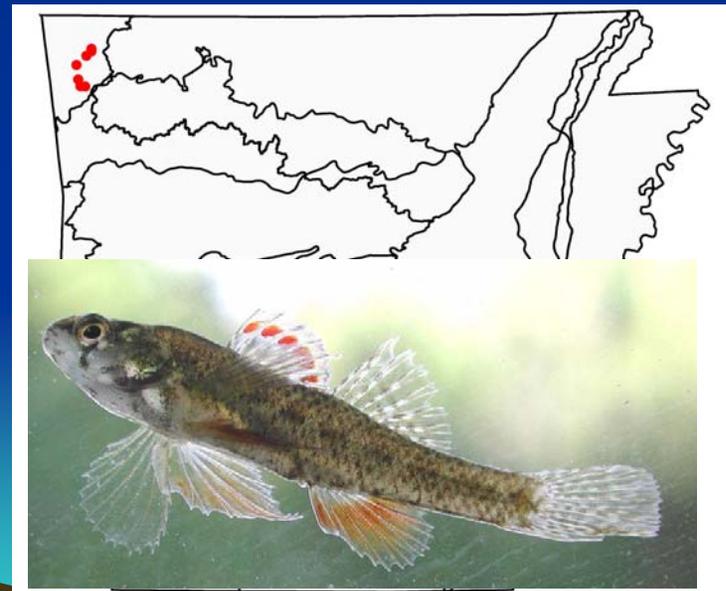
Ark. darter



Neosho mucket



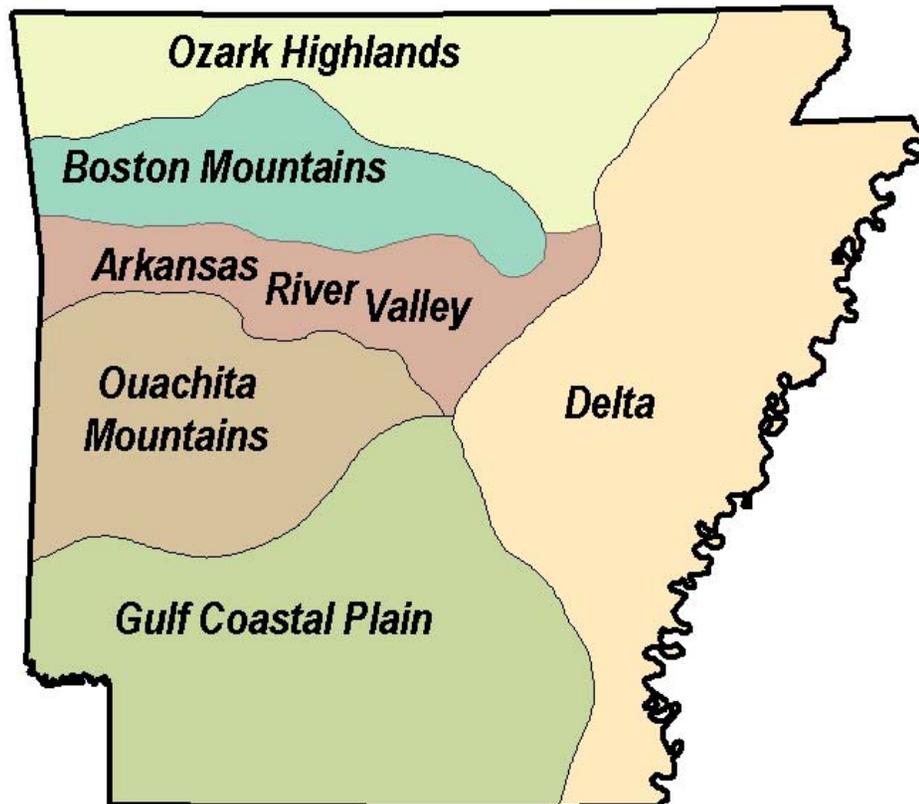
Neosho midget crayfish



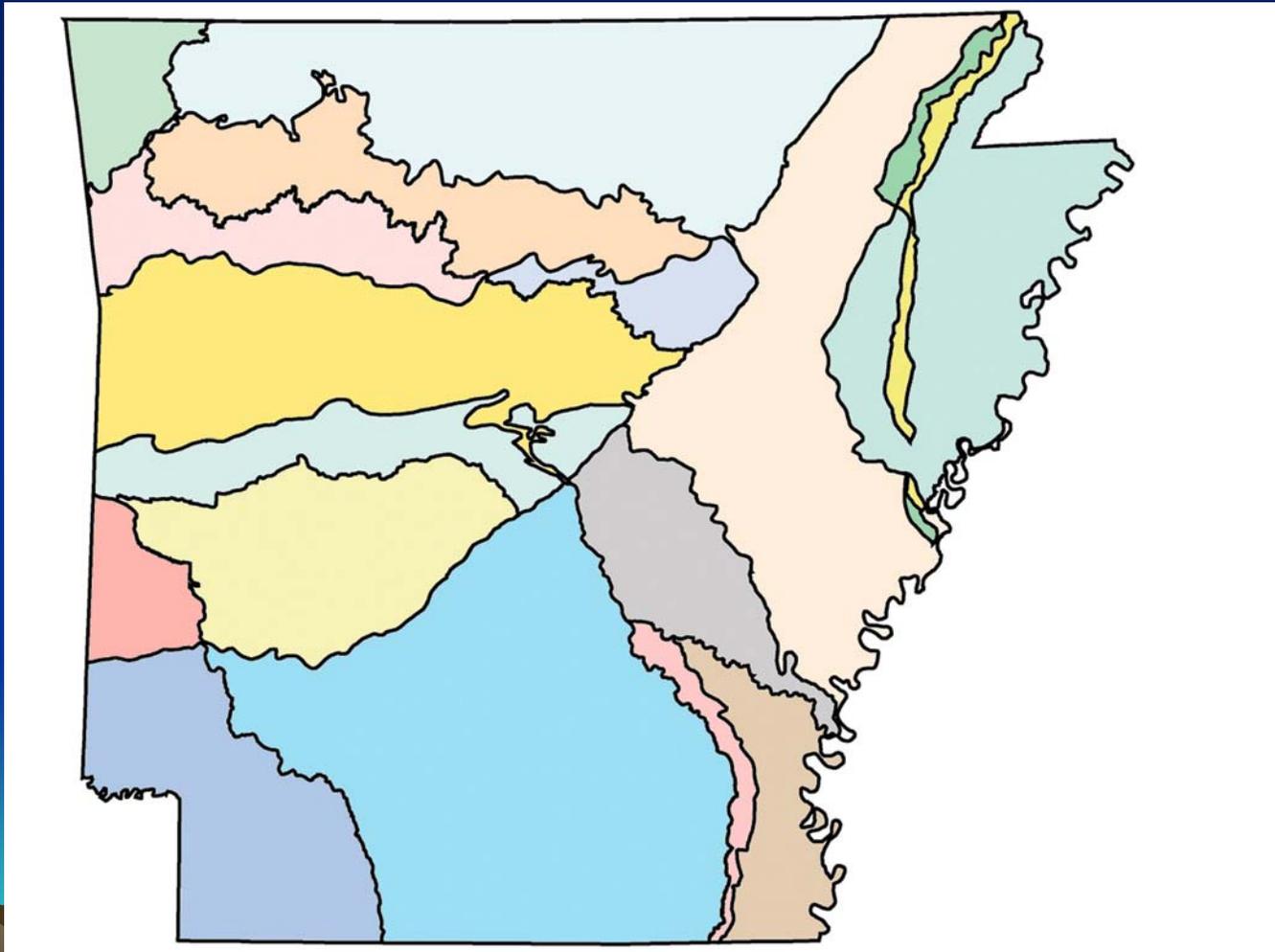
Least darter

Ecoregions in Arkansas

ARKANSAS ECOREGIONS



Map of Arkansas' Aquatic Ecobasins



Aquatic Habitat – Shoal, Lotic



Aquatic Issues that Bring Us Together

- **Aquatic Species Distributions and Gaps**
(amphibians, reptiles, crayfish, fish, mussels, insects)
- **Water Quality & Quantity**
(sedimentation, nutrients, instream flow)
- **Riparian Habitat/Restoration**
(the stream's buffer, filter, energy source, +)
- **Recreational/Commercial Fisheries**
(impacts and benefits)



Impacts to Aquatic Species Distribution

- Habitat Degradation
- Roading and Low Water Bridges (slabs)
- Resource Extraction (gravel mining, natural gas)
- Dams
- Exotic Species
- Incompatible Agricultural, Industrial or Silvicultural Practices
- Climate Change
- Multitude of other Impacts



Impacts to Water Quality and Quantity

- Roading
- Water for and from Incompatible Agriculture, Industry, Silviculture
- Sedimentation
- Water Diversions
- Natural Gas Exploration/Extraction
- Dams, flows, and reduced metals
- Climate Change



Impacts to Riparian Habitat

- Inadequate Riparian Zones
- Sedimentation
- Incompatible Agriculture/Silviculture
- Resource Extraction
- Land Clearing and Development
- Roads/Bridges within Riparian Zone
- Stream Energy Implications
- Climate Change



Relation to Recreational/Commercial Fisheries

- Importance for public, especially anglers and fishers, to understand waterbodies as “systems”
- Impact of commercial fishers on SGCN (pallid sturgeon, paddlefish, alligator snapping turtles)
- Importance of agency administrators, both at the state & federal level, to understand the linkages between improving habitat for SGCN and other biota, including sport species
- Working together, game & nongame species and their managers for a win-win situation



GIS/Areal Photo/Map Analysis

- % of Adequately Vegetated Riparian Zone (>30m)
- Bridge Crossings across Streams
- Roads in Riparian Zone
- Dams on Streams
- % Forest in Land Use
- % Cleared Fields



Road Crossings in Ecobasin

Ecobasin Rank	Total Area (Sq. Miles)	Rd. Dens.	
Ozark Highlands (AR River)	984	2.05	1
Ouachita Mountains (Ouachita River)	3,367	1.42	2
Ozark Highlands (White River)	6,553	1.09	3
South Central Plains (Red River)	3,466	1.00	4
Miss. Alluvial Plain (Ouachita River)	491	0.77	5

Forested Areas (sq.mi.) within Riparian Zones

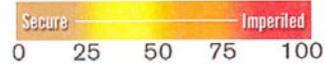
Ecobasin	Total Ripar. Area	% Forested	Rank
Miss. Alluvial Plain (Lake Chicot) – Miss. River	412	18	1
Ozark Highlands Arkansas River	177	32	2
Arkansas Valley Arkansas River	1,221	58	3
South Central Plains Red River	734	68	4
Ozark Highlands White River	1,364	70	4
Ouachita Mountains Ouachita River	730	88	5
Boston Mountains Arkansas River	309	90	5

Atractosteus spatula

Alligator Gar

Class: Actinopterygii
 Order: Lepisosteiformes
 Family: Lepisosteidae

Priority Score: **33 out of 100**



Population Trend: Decreasing

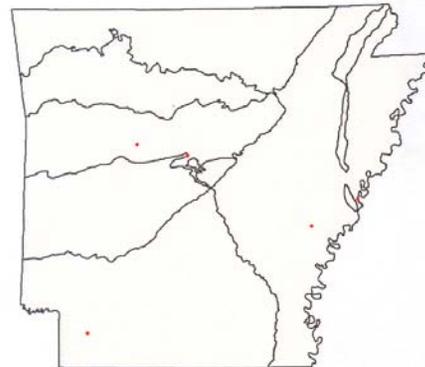


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G Rank: G3G4 – Vulnerable (uncertain rank)

S Rank: S2? – Imperiled in Arkansas (inexact numeric rank)

Distribution



Ecoregions where the species occurs:

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

Element Occurrence Records

Taxa Association Team and Reviewers

AGFC Mr. Steve Filipek, SAU Dr. Henry Robinson, UA/Ft. Smith Dr. Tom Buchanan, AGFC Mr. Jeff Quinn, AGFC Mr. Brian Wagner

Taxa Priority Scores

Priority Score

Taxa

56

Crayfish

47

Inverts – other

41

Mussels

34

Fish

33

Insects

32

Amphibians

25

Mammals

19

Birds

19

Reptiles

Aquatic Ecobasins Ranked by Priority Points

<u>Ecobasin</u>	<u>Sum of Priority Pts.</u>
Ozark Highlands, White R.	2520
Ouachita Mts., Ouach. R.	1694
South Central Plain, Red R.	1457
Miss. Alluv. Pl., White R.	1210
Ozark Highlands, Ark. R.	1196
Arkansas Valley, Ark. R.	1052
Ouachita Mts., Red R.	611
Miss. Alluv. Pl., Miss. R..	402
Ark. Valley, White R.	110



Conservation Actions/Targets

- Sedimentation issues->revegetate 25% more riparian zones/minimize roading/rehabilitate streambank erosion/encourage watershed conservation practices=stream teams & watershed groups, farm bill programs->+AR darter habitat 15%



Conservation Actions/Targets

Habitat alteration-
>restrict gravel mining
to floodplains or
quarries/use BMPs
for roads and bridge
construction/decrease
cattle use of stream
by 50%/increase PR
efforts->+OZ
hellbender habitat x%



©Stan Trauth

Climate Change???????



What is next?

Implement projects:

- 26 SWG proposals reviewed for 2007

On congressional front:

- Influence legislators

On state level:

- Communications

What are State Wildlife Grants?

- **A federal funding program to promote the conservation of species that are not (usually) funded by**
 - Pittman-Robertson
 - Dingell-Johnson
 - Endangered Species Act



Where Do WE Go From Here?

?HOW can WE at this forum in West Plains, MO,
help EACH OTHER & the RESOURCE?

??HOW can WE keep COMMON SPECIES
Common??

???HOW can WE keep our NATURAL STATES
Natural???



More information?

- www.WildlifeArkansas.Com

Questions???

