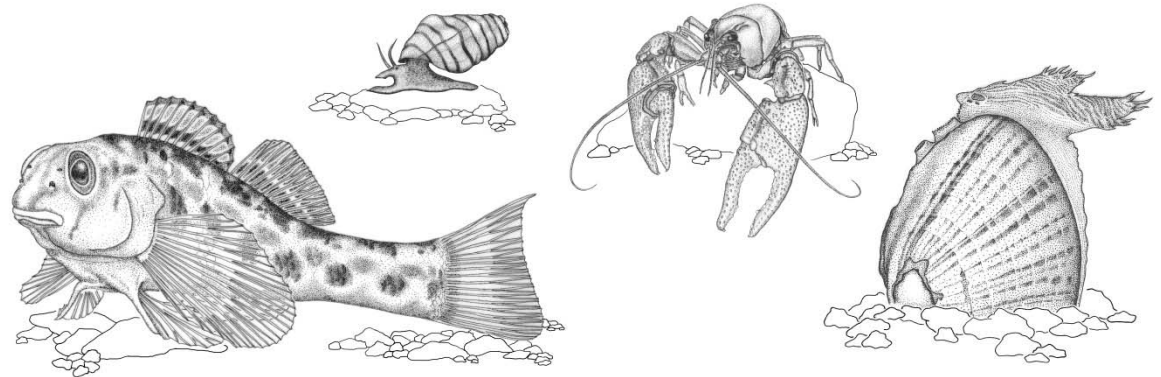




Alabama Aquatic Biodiversity Center



Cahaba River, Shelby Co., AL

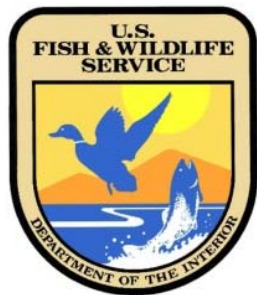
- Alabama Aquatic Biodiversity Center (AABC)
- Established October 2005
- Division of Wildlife and Freshwater Fisheries
- Department of Conservation and Natural Resources
- Primary funding state wildlife grants and other external funds
- <http://www.outdooralabama.com>

Mission Statement:

The mission of the Wildlife and Freshwater Fisheries Division is to manage, protect, conserve, and enhance the wildlife and aquatic resources of Alabama for the sustainable benefit of the people of Alabama

Strategic Habitat Units (SHU)

- Critical Habitat segments remaining
- Many drainages considered state channel bottom
- Prioritize watershed recovery efforts with multiple partners
- Additional T&E species don't change regulatory burden
- SHU mapper operational <http://alh2o.org>



Strategic Habitat and River Reach Units for Aquatic Species of Conservation Concern in Alabama, 2015

E. Anne Wynn, Patrick E. O'Neil, and Stuart W. McGregor - Geological Survey of Alabama; Jeffrey R. Powell, Jennifer Grunewald, and Anthony D. Ford - U.S. Fish and Wildlife Service; Paul D. Johnson - Alabama Department of Conservation and Natural Resources

The U.S. Fish and Wildlife Service, Alabama Department of Conservation and Natural Resources, and Geological Survey of Alabama selected watersheds and river sections in five HUC 4 subregions in Alabama to prioritize conservation efforts for managing, recovering, and restoring populations of rare fishes, mussels, snails, and crayfishes. These Strategic Habitat Units (SHUs) and Strategic River Reach Units (SRRUs) were selected based on the:

- presence of federally listed and state imperiled species
- potential threats to the species
- essential habitat components required by these species to survive

Need to include 4 pics of Representative habitat types- please pass along any you have showing the variety and diversity of the HUC 4 subregions

Examples include pics of clear cobble substrate or a nice coastal stream reach

a crayfish species here a mussel species here
a small species here a fish species here

The SHUs and SRRUs include a substantial part of Alabama's remaining high-quality water courses and reflect the variety of aquatic habitats occupied by these species historically & presently. These habitats include:

- geomorphically stable stream and river channels
- acceptable stream flow regimes and water-quality conditions necessary for normal behavior, growth, and viability of all life stages of these animals
- diversity of channel substrate types, with minimal amounts of fine sediment and filamentous algae
- fish hosts that have adequate foraging and spawning areas
- few or no competitive or predaceous nonnative species

The map below displays the locations of the 51 SHUs and SRRUs in Alabama and its neighboring states. The colored polygons are the contributing watershed area of each SHU. Each SRRU represents the main channel of a major river. All of the SHUs and SRRUs currently support one or more federally and/or state protected species.

The SHU logo above represents the collective efforts of watershed stakeholders to investigate, manage, and develop our water resources in a comprehensive way to minimize their degradation, maximize their availability for all users, & restore aquatic habitats and species. Visit alh2o.org for more info!

Index Map of National Hydrologic Dataset HUC 4 Subregions in Alabama

- Middle Tennessee - Elk (0603), units 1-10
- Mobile-Tombigbee (0316), units 11-23
- Alabama River (0315), units 24-41
- Choctawhatchee-Escambia (0314), units 42-49
- Apalachicola (0313), units 50-51

The tables below list Strategic River Reach Units (SRRUs) by HUC 4 subregion (see index map above). Abbreviations: T - Tennessee, R - River, tw-talwaters, bp-bypass, Cr - Creek.

Unit	Name	Unit	Name
2	T.R.-Wilson Dam tw	31	Coosa R-
7	T.R.-Guntersville Dam tw	31	Logan Martin Dam tw
10	T.R.-Nickajack Dam tw	33	Lower Choccolocco Cr
11	Lower Tombigbee River	37	Wells Lake bp (Dead R)
24	Lower Alabama River	42	Conochee River
28	Coosa R.-Jordan Dam tw	46	Lower Pea River
		48	Choctawhatchee River

The 2 tables below list Strategic Habitat Units (SHUs) by HUC 4 subregion (see index map above).

Unit	Name	Unit	Name
1	Bear Creek	25	Big Flat Creek
3	Cypress Creek	26	Bogue Chitto Creek
4	Shoal Creek	27	Cahaba River
5	Elk River	29	Hatchet Creek
6	Limestone/Piney/Beaverdam Creeks	32	Yellowleaf Creek
8	Flint River	34	Kelly Creek
9	Paint Rock River	34	Cheaha Creek
12	Sucamoochee River	35	Shoal Creek
13	Trussells Creek	36	Big Canoe Creek
14	Sipsy River	38	Terrapin Creek
15	Lubbug Creek	39	Upper Coosa River tributaries
17	Coalfire Creek	40	Uphabee Creek
17	Luspatita Creek	41	Tallapoosa River
18	Bullhatchee River	43	Murder Creek
19	East Fork Tombigbee River	44	Amos Mills Creek
20	Bull Mountain Creek	45	Five Runs Creek
21	North River	47	Upper Pea River
22	Upper Sipsy Fork	49	Choctawhatchee River, West Fork
23	Locust Fork	50	Chipola River
		51	Uchee Creek

Map Explanation

- Strategic Habitat Unit (SHU) and Strategic River Reach Unit (SRRU)
- Open water
- Hydrologic Unit Code (HUC 4) subregion boundary
- Rivers
- State lines
- County lines

Tennessee River Basin Reintroductions

Species	Localities / SHU's	Number
Alabama Lampmussel – E *	Bear Creek, Elk River, Sequatchie River, Paint Rock, Shoal Creek	38,961
Oyster Mussel – E *	Paint Rock River	1,007
Cumberland Moccasinshell - P1*	Bear Creek	402
Pale Lilliput – E *	Paint Rock River, Duck River, Bear Creek	5,687
Cumberland Bean – E *	Paint Rock River	387
Rabbitsfoot - T	Limestone Creek	270
Painted Creekshell – P2	Limestone Creek	470
Total Releases		47,184



Pale Lilliput, *Toxolasma cylindrellus* – Bear Creek, Colbert Co., AL

Alabama River Basin Reintroductions

Species	Localities / SHU's	Number
Alabama Rainbow – P2 *	Choccolocco Creek, Little River, Coosa River	11,362
Southern Rainbow *	Little River	183
Fine-lined Pocketbook – T *	Little River	382
Alabama Creekmussel	Choccolocco Creek, Little River, Coosa River	803
Interrupted Rocksnail – E	Coosa River	2,034
Spindle Elimia	Coosa River	2,886
Total Coosa Releases		17,834

Species	Localities / SHU's	Number
Southern Combshell – E *	Cahaba River	659
Coosa Mocassinshell – E *	Little Cahaba River	59
Spotted Rocksnail – P2 *	Cahaba River - Established	42,186
Oblong Rocksnail – P1	Little Cahaba River	3,768
Total Cahaba Releases		46,672

Species	Localities / SHU's	Number
Orangenacre Mucket – T *	Tallatchee Creek (Alabama River)	330
Total Releases		64,082

Tombigbee River Basin Reintroductions

Species	Localities / SHU's	Number
Orangenacre Mucket – T *	Locust Fork	2,976
Alabama Rainbow – P2 *	Locust Fork, Turkey Creek, Blackburn Fork	16,250
Plicate Rocksnail – E *	Locust Fork - Established	18,483
Locust Fork Releases		37,709

Species	Localities / SHU's	Number
Southern Combshell - E	Bull Mountain Creek (Tombigbee)	548
Total Releases		36,764



Hamiota perovalis, Orangenacre Mucket
Locust Fork Reintroduction October 2014

18 Species Released
Total Animals Released 179,437
2010-2017



AABC –

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Research – Recovery Partnerships



Smithsonian
Institution

- Species reviews for Periwinkles and Pebblesnails
- Periwinkle Type Catalog



- Species reviews for Periwinkles
- Status Reviews and Recovery Efforts
- Southern Elktoe Host Fish Review



- Microbial Gut Symbionts
- Fish DO requirements
- Morphometrics for Round Rocksnail

THE UNIVERSITY OF
ALABAMA

- Energy Budget and Nutrient Affects
- Transcriptome Development
- Respiration, Metabolism, Feeding



- Mollusk Toxicology
- Mussel Microhabitat Relationships
- Mussel host fish displays
- Gastropod species evaluation

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