

# SOUTHLAKE CAHABA CONSERVATION AREA

## Biological Assessment Shelby County, Alabama



Blue Mistflower (*Conoclinium coelestinum*)

**Prepared For:**

North American Land Trust  
P.O. Box 467, Chadds Ford, PA 19317

**Prepared By:**

Peter Smith, Conservation Biologist  
North American Land Trust  
NC Field Office  
P.O. Box 414  
Boone, NC 28607  
(828) 406.1583  
[psmith@nalt.org](mailto:psmith@nalt.org)

A handwritten signature in black ink, appearing to read 'Peter Smith', written over a horizontal line.

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**DATES VISITED:** 2016-03-10, 2016-10-03

**COUNTY:** Shelby

**CONSERVATION AREA SIZE:** 16.58 acres

**LOCATION:** Approximate property center: 33°22'03.75"N 86°46'24.94"W

**UNITED STATES ECOREGION:** Level III Ecoregion: (67) Ridge and Valley; Level IV Ecoregion: (67h) Southern Sandstone Ridges

**WATERSHED:** Cahaba River

**USGS QUAD:** Helena

### GENERAL DESCRIPTION

Contained within the ecologically unique and sensitive Cahaba River watershed, the Southlake-Cahaba Conservation Area (CA) is characterized by moderate to steep sloping forests and cliff bands bordering the Cahaba River southeast of the city of Hoover, Alabama.

Steep forested slopes along the river are best characterized as a South-Central Interior Small Stream and Riparian Forest Ecological System. Floodplain development is minimal. Typical canopy species include oaks (*Quercus* spp.), hickories (*Carya* spp.), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), southern sugar maple (*Acer barbatum*), American sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), ironwood (*Carpinus caroliniana*), and others. Portions of the property support significant amounts of American Beech (*Fagus grandifolia*) and the forest resembles more of a Piedmont Mesic Forest. Understory taxa include river oats (*Chasmanthium latifolium*), giant cane (*Arundinaria gigantea*), mountain laurel (*Kalmia latifolia*), piedmont azalea (*Rhododendron canescens*), oakleaf hydrangea (*Hydrangea quercifolia*), and others. The herb layer varies from dense to sparse. Some observed species include trailing wakerobin (*Trillium decumbens*), trout lily (*Erythronium rostratum*), sharplobe hepatica (*Hepatica acutiloba*), Christmas fern (*Polystichum acrostichoides*), Jack in the pulpit (*Arisaema triphyllum*), cardinal flower (*Lobelia cardinalis*), and little brown jug (*Hexastylis arifolia*).

Nested within the small stream riparian forest are a series of Ridge and Valley Mesic/Submesic Siltstone Cliffs. This bluff/cliff system ranges from vertical to overhanging. Taxa supported on the cliffs are largely graminoid (grass like) dominated, but supporting other herbaceous species such as small bonny bellflower (*Campanula divaricata*), rue anemone (*Thalictrum thalictroides*), wreath goldenrod (*Solidago caesia* var. *caesia*), early saxifrage (*Saxifraga virginica*), numerous lichen and bryophyte species, and others.

Upland areas support more dry site species with some notable loblolly pines (*Pinus taeda*) exceeding 30 inches diameter at breast height. The invasive/non-native Chinese privet is established throughout the property but particularly abundant in the western third of the site. Other than an unimproved road and trail, no man-made structures are present on the property.

In a region rapidly being developed by the Birmingham metropolitan area, the Cahaba River watershed has seen the disappearance or endangerment of much of the animal and plant life associated with this river system. The Cahaba has more fish species per mile than any other river in North America and a similar richness of turtle, crayfish, snail, and mussel species. That rich biodiversity has merited these recognitions:

1. Cahaba was named by The Nature Conservancy as one of eight "hotspots of aquatic biodiversity" in the U.S. that must be saved
2. Cahaba protection is part of a global partnership between The Coca-Cola Company and the World Wildlife Fund
3. Cahaba was named in the 2007 edition of National Geographic College Atlas of the World, along with southeastern rivers, as one of six global examples of biological diversity

The Cahaba is a major asset to the Birmingham urban area and Alabama. Much of the Cahaba's main channel is wild, beautiful, and very popular for canoeing, fishing, swimming, and environmental education. Protection of this river corridor supports the mission of numerous state, federal, and not-for-profit groups working to protect this essentially free flowing river. Not only will the Conservation Area aid in protecting the flora and fauna associated with the watershed, but it will also preserve the scenic beauty surrounding this river system.

### PHYSICAL DESCRIPTION

**ASPECT:** Primarily north, northeast and northwest facing slopes.

**SLOPE:** Slopes range from flat upland areas to steep (> 20 degree) slopes.

**ELEVATION:** 400-460 feet above sea level.

**TOPOGRAPHY:** Moderate to steep slopes and bluffs above river with limited floodplain development.

**HYDROLOGY AND MOISTURE:** Upland areas dry and bottomland areas and north facing slopes dry mesic to mesic.

**GEOLOGY:** Ppv2u: Pennsylvanian: shale and siltstone

### ANIMAL HABITAT FACTORS

**HABITAT HETEROGENEITY:** Fairly heterogeneous supporting dry-mesic riparian forest, dry upland forest, rock outcrop communities, and young successional areas.

**AMPHIBIAN BREEDING SITES:** None noted

**DENNING SITES:** Occasional in rock outcrop areas and excavated areas around larger trees in riparian forest.

**BIG TREES/LARGE CAVITIES:** Abundant in riparian forest.

**MAST PRODUCING SPECIES:** oaks (*Quercus spp.*), hickories (*Carya spp.*) and American beech (*Fagus grandifolia*)

### AQUATIC HABITAT FACTORS

**HYDROLOGY:** Acton Creek, a second order stream, flows out of Indian Valley Lake and due west through the Conservation Area where it empties into the Cahaba River. The hydrology of the creek is altered and controlled by the lake and dam upstream of the Conservation Area. Approximately 2800 feet of the Conservation Area borders the 3<sup>rd</sup> order Cahaba River. This section of the river is characterized by moderate gradient runs over gravel and sand and long deep pools. Cobble varies in size from sand size particles to large rocks. Sandy bars are common throughout. Various sized woody debris is present with larger downed trees commonly found in the river.

### RARE, UNCOMMON OR INDICATOR SPECIES

Global, Federal, and State ranking information for rare species is maintained by the State Natural Heritage Program and the US Fish and Wildlife Service. Any rare species discussed in the following text will follow the standardized ranking system. Global ranks are defined thusly: G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences), G2 = Imperiled globally because of rarity (6 to 20 occurrences), G3 = Rare or uncommon (localized within range or narrowly endemic to special habitats, generally 20-100 occurrences), G4 = Apparently secure, G5 = Demonstrably secure. State ranking follow the same categories: S1 = critically imperiled in state because of extreme rarity (5 or fewer occurrences), S2 = Imperiled in state because of rarity (6 to 20 occurrences), S3 = Rare or uncommon (localized within range or narrowly endemic to special habitats, generally 20-100 occurrences), S4 = Apparently secure, S5 = demonstrably secure. Watchlist status is as follows: W1 = rare, but relatively secure, W2 = rare, but taxonomically questionable, W3 = rare, but uncertain documentation, W4 = rare, but believed not native, W5A = rare because of severe decline, W5B = exploited plants, W6 = regionally rare, W7 = rare and poorly known. A "?" after a ranking indicates that the ranking is uncertain.

## SPECIAL STATUS SPECIES PRESENT:

### Partners In Flight Species Assessment Database, Species of Regional Importance

Brown Thrasher (*Toxostoma rufum*)  
Northern Flicker (*Colaptes auratus*)  
Tufted Titmouse (*Baeolophus bicolor*)  
Wood Thrush (*Hylocichla mustelina*)  
Prothonotary Warbler (*Protonotaria citrea*)  
Blue-gray Gnatcatcher (*Polioptila caerulea*)  
Belted Kingfisher (*Megaceryle alcyon*)  
Carolina Wren (*Thyothorus ludovicianus*)  
Downy Woodpecker (*Picoides pubescens*)  
Red-bellied Woodpecker (*Melanerpes carolinus*)

**POTENTIAL FOR OTHER SPECIAL STATUS SPECIES:** Additional surveys throughout the growing season may identify additional special status species.

**EXOTIC/WEEDY SPECIES:** See Plant Species Observed list

## RARE SPECIES OF THE CAHABA RIVER

### Federally Endangered

Cahaba Shiner	<i>Notropis cahabae</i>
Upland Combshell	<i>Epioblasma metastriata</i>
Southern Acornshell	<i>Epioblasma othcaloogensis</i>
Alabama Moccasinshell	<i>Medionidus acutissimus</i>
Southern Clubshell	<i>Pleurobema decisum</i>
Ovate Combshell	<i>Pleurobema perovatum</i>
Triangular Kidneyshell	<i>Ptychobranchnus greeni</i>

### Proposed for Federally Endangered Status

Alabama Shovelnose Sturgeon	<i>Scaphirhynchus suttkusi</i>
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### Federally Threatened

Goldline Darter	<i>Percina aurolineata</i>
Fine-lined Pocketbook	<i>Lampsilis altilis</i>
Orange-nacre Mucket	<i>Lampsilis perovalis</i>
Coosa Moccasinshell	<i>Medionidus parvulus</i>

### Federal Species of Concern

Alabama croton	<i>Croton alabamensis</i>
Nevius sedum	<i>Sedum nevii</i>

### State of Alabama Rare, Threatened or Endangered Species

Freckledbelly Madtom	<i>Necturus munitus</i>
Freckled Darter	<i>Percina lenticula</i>

Cahaba lily  
Cahaba Sandfiltering Mayfly

**Insects with no common name**

*Prototila cahaensis*  
*Cheumatopsyche bibbensis*

**Species Extirpated From The Cahaba River (date last observed)**

Gulf Sturgeon (1941)  
Alabama Shad (1968)  
Blue Shiner (1971)

*Hymenocallis coronaria*  
*Homoeneuria cahabensis*

*Cheumatopsyche cahaba*  
*Hydroptila patriciae*

*Acipenser oxyrhychus desotoi*  
*Alosa alabamae*  
*Notropis caeruleus*

**INTRODUCED SPECIES IN THE CAHABA RIVER:**

Grass Carp  
Goldfish  
Fathead Minnow  
Yellow Bass  
Hybrid Striped Bass  
Smallmouth Bass

*Ctenopharyngodon idellus*  
*Carassius auratus*  
*Pimephales notatus*  
*Morone mississippiensis*  
*Morone chrysops* x *M. saxatilis*  
*Micropterus dolomieu*

**LANDSCAPE FACTORS**

**ADJACENT LAND USE/OFFSITE STRESSES:** Suburban residential development and commercial business development.

**RELATION/CONNECTION TO OTHER SITES:** Conservation Area lies within two air miles of Oak Mountain State Park. The Nature Conservancy manages approximately 500 acres within the watershed including Nationally Significant areas just south in Bibb County, AL. The Cahaba River National Wildlife Refuge lies approximately 24 miles southwest (downstream) of Southlake-Cahaba Conservation Area.

PLANT SPECIES OBSERVED

Scientific Name	Common Name	Notes
<i>Acer barbatum</i>	southern sugar maple	
<i>Acer negundo</i>	box elder	
<i>Aesculus pavia</i>	red buckeye	
<i>Albizia julibrissin</i>	silktree	non-native
<i>Annenaria plantaginifolia</i>	pussytoes	
<i>Arisaema triphyllum</i>	Jack in the pulpit	
<i>Arundinaria gigantea</i>	switch cane	
<i>Arundinaria gigantea</i>	giant cane	
<i>Asimina triloba</i>	pawpaw	
<i>Asplenium platyneuron</i>	ebony spleenwort	
<i>Bignonia capreolata</i>	crossvine	
<i>Campanula divaricata</i>	small bonny bellflower	
<i>Carex digitalis</i>	slender woodland sedge	
<i>Carex</i> spp.	sedge	
<i>Carpinus caroliniana</i>	ironwood	
<i>Carya glabra</i>	pignut hickory	
<i>Carya ovata</i>	shagbark hickory	
<i>Carya tomentosa</i>	mockernut hickory	
<i>Chasmanthium latifolium</i>	Indian woodoats	
<i>Chasmanthium sessiliflorum</i>	longleaf woodoats	
<i>Claytonia virginica</i>	Virginia springbeauty	
<i>Conoclinium coelestinum</i>	blue mistflower	
<i>Coreopsis pubescens</i>	star tickseed	
<i>Cornus florida</i>	flowering dogwood	
<i>Desmodium rotundifolium</i>	prostrate tick trefoil	
<i>Dicanthelium</i> sp.	a panic grass	
<i>Diodia virginiana</i>	Virginia buttonweed	
<i>Dioscorea villosa</i>	wild yam	
<i>Diospyros virginiana</i>	persimmon	
<i>Elaeagnus pungens</i>	autumn olive	non-native/invasive
<i>Elephantopus carolinianus</i>	Carolina elephants foot	
<i>Elephantopus tomentosus</i>	devil's grandmother	
<i>Erythronium rostratum</i>	yellow troutlilly	
<i>Euonymus americanus</i>	bursting-heart	
<i>Eupatorium capillifolium</i>	dog fennel	

<i>Eupatorium hyssopifolium</i>	hyssop-leaved boneset	
<i>Eupatorium perfoliatum</i>	boneset	
<i>Eupatorium rotundifolium</i>	roundleaf thoroughwort	
<i>Eupatorium sessilifolium</i>	upland boneset	
<i>Fagus grandifolia</i>	American beech	
<i>Fraxinus americana</i>	white ash	
<i>Fraxinus pennsylvanica</i>	green ash	
<i>Geranium carolinianum</i>	Carolina geranium	
<i>Hepatica acutiloba</i>	sharplobe hepatica	
<i>Heuchera americana</i>	alumroot	
<i>Hexastylis arifolia</i>	little brown jug	
<i>Hexastylis heterophylla</i>	variableleaf heartleaf	
<i>Houstonia purpurea</i>	Venus' pride	
<i>Hydrangea quercifolia</i>	oak leaf hydrangea	
<i>Hypericum hypericoides</i>	St. Andrews cross	
<i>Hypericum prolificum</i>	bushy St. Johnswort	
<i>Hypochaeris</i> sp.	cat's ear	non-native
<i>Ilex opaca</i>	American holly	
<i>Ipomea pandurata</i>	man of the earth	
<i>Kalmia latifolia</i>	mountain laurel	
<i>Liquidambar styraciflua</i>	sweetgum	
<i>Ligustrum sinense</i>	Chinese privet	non-native/invasive
<i>Liriodendron tulipifera</i>	yellow poplar	
<i>Lobelia cardinalis</i>	cardinal flower	
<i>Lonicera japonica</i>	Japanese honeysuckle	non-native/invasive
<i>Lycopus virginicus</i>	Virginia water horehound	
<i>Mahonia</i> sp.	Oregon grape	non-native
<i>Mikania scandens</i>	climbing hempvine	
<i>Mitchella repens</i>	partridgeberry	
<i>Morus rubra</i>	red mulberry	
<i>Nyssa sylvatica</i>	black gum	
<i>Onoclea sensibilis</i>	sensitive fern	
<i>Ostrya virginiana</i>	hophornbeam	
<i>Oxydendrum arboreum</i>	sourwood	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Phytolacca americana</i>	American pokeweed	



<i>Pinus taeda</i>	loblolly pine.	
<i>Platanus occidentalis</i>	American sycamore	
<i>Polygonum pensylvanicum</i>	Pennsylvania smartweed	
<i>Polygonum virginianum</i>	jumpseed	
<i>Polypodium polypodioides</i>	resurrection fern	
<i>Polypodium virginianum</i>	rock polypody	
<i>Polystichum acrostichoides</i>	Christmas fern	
<i>Quercus alba</i>	white oak	
<i>Quercus falcata</i>	southern red oak	
<i>Quercus michauxii</i>	swamp chestnut oak	
<i>Quercus nigra</i>	water oak	
<i>Quercus phellos</i>	willow oak	
<i>Quercus rubra</i>	red oak	
<i>Rhododendron canescens</i>	azalea	
<i>Rubus</i> sp.	blackberry	
<i>Saxifraga virginica</i>	early saxifrage	
<i>Schizachyrium scoparium</i>	little bluestem	
<i>Smilax bona-nox</i>	saw greenbriar	
<i>Solidago caesia</i> var. <i>caesia</i>	goldenrod	
<i>Solidago rugosa</i> var. <i>aspera</i>	goldenrod	
<i>Symphotrichum cordifolium</i>	blue wood aster	
<i>Symphotrichum lateriflorum</i>	starved aster	
<i>Symphotrichum patens</i>	late purple aster	
<i>Thalictrum thalictroides</i>	rue anemone	
<i>Toxicodendron radicans</i>	poison ivy	
<i>Trillium decumbens</i>	trailing wakerobin	
<i>Ulmus americana</i>	American elm	
<i>Vaccinium arboreum</i>	farkleberry	
<i>Vaccinium corymbosum</i>	highbush blueberry	
<i>Vaccinium</i> sp.	a blueberry	
<i>Verbesina alternifolia</i>	wingstem	
<i>Vernonia gigantea</i>	giant ironweed	
<i>Viola sororia</i>	common blue violet	
<i>Vitis rotundifolia</i>	muscadine grape	

Description of observed plants can be found at: <http://plants.usda.gov/>

## ANIMAL SPECIES OBSERVED

### PIF: Partners In Flight

Common Name	Scientific Name	Notes
<b>Birds</b>		
American Crow	<i>Corvus brachyrhynchos</i>	
American Robin	<i>Turdus migratorius</i>	
Belted Kingfisher	<i>Megaceryle alcyon</i>	PIF
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	PIF
Blue Jay	<i>Cyanocitta cristata</i>	
Brown thrasher	<i>Toxostoma rufum</i>	PIF
Carolina Wren	<i>Thyothorus ludovicianus</i>	PIF
Cedar Waxwing	<i>Bombycilla cedrorum</i>	
Downy Woodpecker	<i>Picoides pubescens</i>	PIF
Gray Catbird	<i>Dumetella carolinensis</i>	
Northern Cardinal	<i>Cardinalis cardinalis</i>	
Northern Flicker	<i>Colaptes auratus</i>	PIF
Prothonotary Warbler	<i>Protonotaria citrea</i>	PIF
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	PIF
Red-eyed Vireo	<i>Vireo olivaceus</i>	
Scarlet Tanager	<i>Piranga olivacea</i>	
Tufted Titmouse	<i>Baeolophus bicolor</i>	PIF
White-breasted Nuthatch	<i>Sitta carolinensis</i>	
Wood Duck	<i>Aix sponsa</i>	
Wood thrush	<i>Hylocichla mustelina</i>	PIF
Yellow-rumped Warbler	<i>Setophaga coronata</i>	
<b>Butterflies</b>		
Orange Sulphur	<i>Colias eurytheme</i>	
Harvester	<i>Feniseca tarquinius</i>	
Eastern Tiger Swallowtail	<i>Papilio glaucus</i>	
Cabbage White	<i>Pieris rapae</i>	
<b>Mammals</b>		
Eastern Chipmunk	<i>Tamias striatus</i>	
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	
Opossum	<i>Didelphis marsupialis</i>	tracks
Raccoon	<i>Procyon lotor</i>	tracks
<b>Herpetiles</b>		
Broad-headed Skink	<i>Eumeces laticeps</i>	
Brownsnake	<i>Storeria dekayi</i>	
Eastern Fence Lizard	<i>Sceloporus undulatus</i>	

Eastern Ribbon Snake	<i>Thamnophis sauritus</i>	
Gray Ratsnake	<i>Elaphe obsoleta</i>	

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