

**DRAFT PRELIMINARY REPORT**  
**June 30, 2022**  
**AQUATIC AND TERRESTRIAL VERTEBRATES OF THE BLACK RIVER CYPRESS**  
**PRESERVE (BRCP)**

by

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The following report includes photographs and information on the natural history, ecology, habitats, GPS locations, and geographic distribution in South Carolina of all aquatic and terrestrial vertebrates documented on the BRCP, a 1040-acre tract bordering the Black River near Andrews (Georgetown County, SC), as well as species expected to be found based on their documented presence in the Francis Marion National Forest located in adjoining counties.

Field sampling is planned from January 1 – December 31, 2022, using standard vertebrate survey techniques, in order to maximize documentation of as many species as feasible.

Note: Locations and seasonal information of reptiles and amphibians identified as protected in the report should not be broadly distributed.

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## **ACKNOWLEDGMENTS**

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### COMPLEMENTARY INFORMATION

The links below are free to share with the public

Gibbons, Parker. Website photographs of mammals, reptiles, amphibians, and fishes found on the Black River Cypress Preserve - <https://www.cypresspreserve.org/photo-gallery> **In Preparation**

Gibbons, Parker. Laminated Cards for Visitors at Information Pavilion **In Preparation**

Gibbons, Parker. Website Checklist of all species of reptiles, amphibians, fishes, and mammals known to be present on BRCP **www.xxx In Preparation**

Gibbons, Parker. Visitor tour brochures with photographs and explanatory ecological and behavioral material on reptiles, amphibians, fishes, and mammals known or expected to be present on BRCP **www.xxx In Preparation**

Gibbons, Parker. Podcasts of ecology and behavior of BRCP reptiles, amphibians, fishes, and mammals **In Preparation**

Gibbons, Whit. Photograph of John's Lake on BRCP in Tuscaloosa News **In Preparation**

### TAXONOMIC REFERENCES

The following references were used for purposes of identification of BRCP vertebrates and for taxonomic terminology. **In Preparation**

Buhlmann, Kurt, Tracey Tuberville, and Whit Gibbons. 2008. *Turtles of the Southeast*.

University of Georgia Press. Athens, GA.

Dorcas, Mike, and Whit Gibbons. 2008. *Frogs and Toads of the Southeast*. University of Georgia Press. Athens, GA.

Gibbons, Whit, Judy Greene and Tony Mills. 2009. *Lizards and Crocodilians of the Southeast*. University of Georgia Press. Athens, GA.

Gibbons, Whit. 2017. *Snakes of the Eastern United States*. University of Georgia Press.

- Jensen, J., C. Camp, M. Elliott, and Whit Gibbons. 2008. *Amphibians and Reptiles of Georgia*. 2008. University of Georgia Press. Athens, GA.
- Marcy et al., 2012. *Fishes of the Savannah River Basin*. University of Georgia Press. Athens, GA.
- Mitchell, Joe, and Whit Gibbons. 2010. *Salamanders of the Southeast*. University of Georgia Press. Athens, GA.
- etc. – OTHERS TO BE ADDED

## **CHECKLIST OF BRCP AQUATIC AND TERRESTRIAL VERTEBRATES**

**January 1 – June 30, 2022**

### **REPTILES DOCUMENTED**

**28 species**

**22 genera**

**9 families**

#### **TURTLES – 10 species**

Family Kinosternidae (Mud and Musk Turtles)

Eastern Mud Turtle (*Kinosternon subrubrum*)

Striped Mud Turtle (*Kinosternon baurii*)

Musk Turtle, Stinkpot (*Sternotherus odoratus*)

Family Chelydridae (Snapping Turtles)

Common Snapping Turtle (*Chelydra serpentina*)

Family Emydidae (Basking Turtles)

Slider Turtle (*Trachemys scripta*)

Spotted Turtle (*Clemmys guttata*)

Box Turtle (*Terrapene carolina*)

Florida cooter (*Pseudemys floridana*)

Chicken Turtle (*Deirochelys reticularia*)

Family Trionychidae (Softshell Turtles)

Spiny Softshell Turtle (*Trionyx spinifer*)

#### **LIZARDS – 5 species**

Family Dactyloidae (Anoles)

Green Anole (*Anolis carolinensis*)

Family Scincidae (Skinks)

Ground Skink (*Scincella lateralis*)

Broadheaded Skink (*Eumeces laticeps*)

Five-lined Skink (*Eumeces fasciatus*)

Southeastern Five-lined Skink (*Eumeces inexpectatus*)

### SNAKES – 12 species

Family Colubridae (Non-venomous Snakes)

Red-bellied Watersnake (*Nerodia erythrogaster*)  
 Rat Snake (*Pantherophis* [aka *Elaphe*] *obsoleta*)  
 Red-bellied Snake (*Storeria occipitomaculata*)  
 Black Racer (*Coluber constrictor*)  
 Banded Watersnake (*Nerodia fasciata*)  
 Ribbon Snake (*Thamnophis sauritus*)  
 Eastern Garter Snake (*Thamnophis sirtalis*)  
 Brown Watersnake (*Nerodia taxispilota*)  
 Rough Green Snake (*Opheodrys aestivus*)  
 Eastern Kingsnake (*Lampropeltis getula*)

Family Viperidae (Vipers)

Cottonmouth (*Agkistrodon piscivorus*)  
 Copperhead (*Agkistrodon contortrix*)

### CROCODILIANS – 1 species

Family Alligatoridae

American alligator (*Alligator mississippiensis*)

### REPTILES LIKELY TO BE PRESENT BUT NOT YET DOCUMENTED

Family Emydidae (Basking Turtles)

River Cooter (*Pseudemys concinna*)

Family Dactyloidae (Anoles)

Brown Anole (*Anolis sagrei*) – Introduced

Family Phrynosomatidae (Spiny and Horned Lizards)

Eastern Fence Lizard (*Sceloporus undulatus*)

Family Teiidae (Racerunners)

Six-Lined Racerunner (*Cnemidophorus* [*Aspidoscelis*] *sexlineatus*)

Family Anguidae (Legless and Alligator Lizards)

Eastern Glass Lizard (*Ophisaurus ventralis*)  
 Slender Glass Lizard (*Ophisaurus attenuatus*)

Family Gekkonidae (Geckos)

Mediterranean Gecko (*Hemidactylus turcicus*) - Introduced

Family Colubridae (Non-venomous Snakes)

Worm Snake (*Carphophis amoenus*)  
 Scarlet Snake (*Cemophora coccinea*)  
 Ringneck Snake (*Diadophis punctatus*)  
 Corn Snake (*Elaphe [Pantherophis] guttata*)  
 Mud Snake (*Farancia abacura*)  
 Rainbow Snake (*Farancia erytrogramma*)  
 Eastern Hognose Snake (*Heterodon platirhinos*)  
 Scarlet Kingsnake (*Lampropeltis elapsoides*)  
 Coachwhip (*Masticophis flagellum*)  
 Rough Green Snake (*Opheodrys aestivus*)  
 Pine Snake (*Pituophis melanoleucus*)  
 Glossy Crayfish Snake (*Regina rigida*)  
 Pine Woods Snake (*Rhadinaea flavilata*)  
 Black Swamp Snake (*Seminatrix pygaea*)  
 Rough Earth Snake (*Virginia striatula*)

Family Viperidae (Vipers)

Canebrake/Timber Rattlesnake (*Crotalus horridus*) - Venomous  
 Pigmy Rattlesnake (*Sistrurus miliarius*) – Venomous

**REPTILES NOT LIKELY TO BE PRESENT BUT POSSIBLE**

Family Anguillidae (Legless and Alligator Lizards)

Mimic Glass Lizard (*Ophisaurus mimicus*)  
 Island Glass Lizard (*Ophisaurus compressus*)

Family Colubridae (Non-venomous Snakes)

Southern Hognose Snake (*Heterodon simus*)  
 Mole Kingsnake (*Lampropeltis calligaster*)  
 Green Watersnake (*Nerodia floridana*)  
 Smooth Earth Snake (*Virginia valeriae*)

Family Viperidae (Vipers)

Eastern Diamondback Rattlesnake (*Crotalus adamanteus*) - Venomous

Family Elapidae (Coral Snakes)

Coral Snake (*Micrurus fulvius*) – Venomous

**AMPHIBIANS DOCUMENTED**

**18 species**

**9 genera**

**7 families**

### **FROGS AND TOADS – 12 species**

Family Bufonidae (Toads)

Southern Toad (*Bufo [Anaxyrus] terrestris*)

Family Microhylidae (Narrowmouth Toads)

Eastern Narrowmouth Toad (*Gastrophryne carolinensis*)

Family Hylidae (Treefrogs)

Southern Cricket Frog (*Acris gryllus*)

Cope's Gray Treefrog (*Hyla chrysoscelis*)

Green Treefrog (*Hyla cinerea*)

Pine Woods Treefrog (*Hyla femoralis*)

Squirrel Treefrog (*Hyla squirella*)

Spring Peeper (*Pseudacris crucifer*)

Little Grass Frog (*Pseudacris ocularis*)

Family Ranidae (True Frogs)

Bullfrog (*Rana [Lithobates] catesbeiana*)

Green/Bronze Frog (*Rana [Lithobates] clamitans*)

Southern Leopard Frog (*Rana [Lithobates] sphenoccephala*)

### **SALAMANDERS – 6 species**

Family Sirenidae (Sirens)

Lesser Siren (*Siren intermedia*)

Family Ambystomatidae (Mole Salamanders)

Spotted Salamander (*Ambystoma maculatum*)

Marbled Salamander (*Ambystoma opacum*)

Family Plethodontidae (Lungless Salamanders)

Southern Two-lined Salamander (*Eurycea cirrigera*)

Three-lined Salamander (*Eurycea guttolineata*)

Dwarf Salamander (*Eurycea quadridigitata*)

### **AMPHIBIANS LIKELY TO BE PRESENT BUT NOT YET DOCUMENTED**

Family Bufonidae (Toads)

Oak Toad (*Bufo [Anaxyrus] quercicus*)

Family Pelobatidae (Spadefoot Toads)

Eastern Spadefoot Toad (*Scaphiopus holbrookii*)

Family Hylidae (Treefrogs)

Northern Cricket Frog (*Acris crepitans*)

Barking Treefrog (*Hyla gratiosa*)  
 Brimley's Chorus Frog (*Pseudacris brimleyi*)  
 Southern Chorus Frog (*Pseudacris nigrita*)  
 Ornate Chorus Frog (*Pseudacris ornata*)

Family Ranidae (True Frogs)  
 Pig Frog (*Rana [Lithobates] grylio*)  
 River Frog (*Rana [Lithobates] hecksheri*)  
 Pickerel Frog (*Rana [Lithobates] palustris*)  
 Carpenter Frog (*Rana [Lithobates] virgatipes*)

Family Amphiumidae (Amphiumas)  
 Two-toed Amphiuma (*Amphiuma means*)

Family Sirenidae (Sirens)  
 Greater Siren (*Siren lacertina*)

Family Proteidae (Mudpuppies and Waterdogs)  
 Dwarf Waterdog (*Necturus punctatus*)

Family Ambystomatidae (Mole Salamanders)  
 Mole Salamander (*Ambystoma talpoideum*)  
 Mabee's Salamander (*Ambystoma mabeei*)

Family Plethodontidae (Lungless Salamanders)  
 Southern Dusky Salamander (*Desmognathus auriculatus*)  
 Slimy Salamander (*Plethodon glutinosus complex*)  
 Mud Salamander (*Pseudotriton montanus*)  
 Many-lined Salamander (*Stereochilus marginatus*)

Family Salamandridae (Newts)  
 Red-spotted Newt (*Notophthalmus viridescens*)

### **AMPHIBIANS NOT LIKELY TO BE PRESENT BUT POSSIBLE**

Family Hylidae (Treefrogs)  
 Upland Chorus Frog (*Pseudacris feriarum*)

Family Ranidae (True Frogs)  
 Gopher Frog (*Rana [Lithobates] capito*)

Family Leptodactylidae  
 Greenhouse Frog (*Eleutherodactylus planirostris*) – Introduced



Family Sirenidae (Sirens)  
Dwarf Siren (*Pseudobranchius striatus*)

Family Ambystomatidae (Mole Salamanders)  
Flatwoods Salamander (*Ambystoma cingulatum*)  
Tiger Salamander (*Ambystoma tigrinum*)

Family Plethodontidae (Lungless Salamanders)  
Chamberlain's Dwarf Salamander (*Eurycea chamberlaini*)  
Four-toed Salamander (*Hemidactylium scutatum*)  
Red Salamander (*Pseudotriton ruber*)

### **FISHES DOCUMENTED**

**17 species**

**15 genera**

**11 families**

Family Amiidae  
Bowfin (*Amia calva*)

Family Anguillidae  
American Eel (*Anguilla rostrata*)

Family Aphredoderidae  
Pirate Perch (*Aphredoderus sayanus*)

Family Atherinopsidae  
Brook Silversides (*Labidesthes sicculus*)

Family Centrarchidae  
Flier (*Centrarchus macropterus*)  
Bluegill (*Lepomis macrochirus*)  
Dollar Sunfish (*Lepomis marginatus*)  
Spotted Sunfish (*Lepomis punctatus*)  
Largemouth Bass (*Micropterus salmoides*)  
Mud Sunfish (*Acantharchus pomotis*)  
Blue-spotted Sunfish (*Enneacanthus gloriosus*)

Family Elasmobranchidae  
Banded Pigmy Sunfish (*Elassoma zonatum*)

Family Fundulidae  
Golden topminnow (*Fundulus chrysotus*)

Family Lepistoeidae  
Longnose gar (*Lepisosteus osseus*)

Family Mugilidae  
Striped Mullet (*Mugil cephalus*)

Family Percidae  
Redfin Pickerel (*Esox americanus*)

Family Poeciliidae  
Eastern Mosquitofish (*Gambusia holbrooki*)

### **FISHES LIKELY TO BE PRESENT BUT NOT YET DOCUMENTED**

Family Cyprinidae  
Lowland Shiner (*Pteronotropis stonei*)

Family Catostomidae  
Creek Chubsucker (*Erimyzon oblongus*)

Family Ictaluridae  
Yellow Bullhead (*Ameiurus natalis*)  
Brown Bullhead (*Ameiurus nebulosus*)  
Speckled Madtom (*Noturus leptacanthus*)

Family Umbridae  
Eastern Mudminnow (*Umbra pygmaea*)

Family Centrarchidae  
Redbreast Sunfish (*Lepomis auritus*)  
Pumpkinseed (*Lepomis gibbosus*)

Family Percidae  
Swamp Darter (*Etheostoma fusiforme*)  
Chain Pickerel (*Esox niger*)

Family Fundulidae  
Lined Topminnow (*Fundulus lineolatus*)

### **Additional species to be added**

**FISHES NOT LIKELY TO BE PRESENT BUT POSSIBLE**

**List in preparation**

**MAMMALS DOCUMENTED**

**13 species**

**13 genera**

**11 families**

Family Canidae

Coyote (*Canis latrans*)

Red fox (*Vulpes vulpes*)

Family Castoridae

American beaver (*Castor canadensis*)

Family Cervidae

White-tailed deer (*Odocoileus virginianus*)

Family Didelphidae

Virginia opossum (*Didelphis virginiana*)

Family Felidae

Bobcat (*Lynx rufus*)

Family Leporidae

Eastern cottontail (*Sylvilagus floridanus*)

Family Muridae

White-footed mouse (*Peromyscus leucopus*)

Hispid cotton rat (*Sigmodon hispidus*)

Family Mustelidae

North American river otter (*Lontra canadensis*)

Family Procyonidae

Raccoon (*Procyon lotor*)

Family Sciuridae

Gray squirrel (*Sciurus carolinensis*)

Family Soricidae

Southern short-tailed shrew (*Blarina carolinensis*) – wildlife camera, ID tentative

## MAMMALS LIKELY TO BE PRESENT BUT NOT YET DOCUMENTED

### Family Canidae

Gray fox (*Urocyon cinereoargenteus*)

### Family Dasypodidae

Nine-banded armadillo (*Dasypus novemcinctus*)

### Family Leporidae

Marsh rabbit (*Sylvilagus palustris*)

### Family Mephitidae

Striped skunk (*Mephitis mephitis*)

### Family Muridae

Pine vole (*Microtus pinetorum*)

Eastern woodrat (*Neotoma floridana*)

Golden mouse (*Ochrotomys nuttalli*)

Marsh rice rat (*Oryzomys palustris*)

Cotton mouse (*Peromyscus gossypinus*)

Oldfield mouse (*Peromyscus polionotus*)

Eastern harvest mouse (*Reithrodontomys humulis*)

### Family Mustelidae

American mink (*Neogale vison*)

### Family Sciuridae

Southern flying squirrel (*Glaucomys volans*)

Fox squirrel (*Sciurus niger*)

### Family Soricidae

Least shrew (*Cryptotis parva*)

Southeastern shrew (*Sorex longirostris*)

### Family Talpidae

Star-nosed mole (*Condylura cristata*)

Eastern mole (*Scalopus aquaticus*)

### Family Ursidae

Black bear (*Ursus americanus*)

### Introduced Non-native Species

#### Family Muridae

House mouse (*Mus musculus*) introduced  
Black rat (*Rattus rattus*) introduced  
Norway rat (*Rattus norvegicus*) introduced

Family Suidae  
Wild boar (*Sus scrofa*) introduced

### **MAMMALS NOT LIKELY TO BE PRESENT BUT POSSIBLE**

Family Mephitidae  
Spotted skunk (*Spilogale putorius*)

Family Muridae  
Meadow vole (*Microtus pennsylvanicus*)  
Muskrat (*Ondatra zibethiscus*)

Family Mustelidae  
Long-tailed weasel (*Neogale frenata*)

Family Trichechidae  
West Indian manatee (*Trichechus manatus*)

## **INTRODUCTION**

### **Introduction**

The goal of the project has been to conduct wildlife surveys to document as thoroughly as feasible with standard field techniques the distribution and abundance of terrestrial and aquatic vertebrates (reptiles, amphibians, fishes, and mammals,) on the Black River Cypress Preserve. Determining species richness of hidden biodiversity requires numerous field approaches. Procedures for conducting the project have included a variety of standard techniques used by professional herpetologists, mammologists, and ichthyologists. To acquire a comprehensive species inventory for each of the classes of vertebrates it is necessary to sample and survey during different seasons.

Field data collected for species documentations include GPS coordinates, photographs, and audio recordings (frogs), in addition to standard information (collectors, date, time, weather conditions, etc.). A reference database and field notes is being maintained and will be available to BRCP personnel. Photographs will be available for the website.

### **In Preparation**

The following sections are In Preparation

#### **Sampling Techniques**

- Aquatic hoop traps
- Coverboards
- Wildlife cameras
- GPS coordinates
- Photographs,
- Audio recordings (frog loggers)
- etc.

#### **Habitats of Vertebrates on the BRCP**

#### **Species Accounts**

- General Ecology
- Geographic Distribution and BRCP Records

#### **Special Commentaries**

- Rare or Protected Species
- Introduced Vertebrate Species
- Notable Species

#### **Suggested Reading**

#### **Wildlife Management Recommendations**