

Trip Report
Crayfish Survey at Morgan Brake National Wildlife Refuge

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From February 24 – 27, 2014, we surveyed five sites on Morgan Brake National Wildlife Refuge. The primary objective was to capture the vernal crayfish (*Procambarus viaeviridis*) to compare the external morphology of individuals from this population with individuals from a hill population (Vaiden, MS), a Delta population (Dahomey NWR, Boyle, MS), and the type specimen (St. Francis River, Greenway, Clay County, AR). A secondary objective was to collect information on crayfish and amphibian species present on the refuge.

Sites surveyed on the refuge included three tupelo brakes, a stream crossing a gravel road, and a shallowly flooded hardwood stand. Table 1 below details the location of each site. Sites 1 – 3 were trapped during the entire sampling period. However additional traps were set out the second day. Sites 4 and 5 were only trapped from February 25 – 27. Three to 15 minnow traps were placed at each site, baited with commercial dogfood, and checked daily. All traps were removed at the end of the sampling period. All crayfish captured were removed and preserved in 70% EtOH. All amphibian species captured were photo documented and released near the point of capture.

Table 1: Site descriptions, locations and sampling effort for areas sampled from February 24 – 27, 2014. One trap night is equal to one trap set for one night.

Site No.	Name	Location	Latitude	Longitude	Number of Trap Nights
1	Tupelo Brake	Approximately 0.2 miles northeast of logging road entrance, east side of Hwy 49, approximately 2.2 miles north of junction of Hwy 49 and Providence Road.	N 33.24799	W 90.2243	40
2	Morgan Bayou	Approximately 0.5 miles northeast from Morgan Bayou Trailhead, east side of Hwy 49, approximately 1.6 miles north of junction of Hwy 49 and Providence Road.	N 33.24379	W 90.21923	40
3	Providence Road	Just north of ATV trailhead, east of Providence Road, approximately 1.6 miles northeast of the Morgan Brake headquarters office.	N 33.23829	W 90.18446	39
4	ATV Trail	North of ATV trail, approximately 0.8 miles east of junction with Providence Road.	N 33.23571	W 90.17167	10
5	Stream Crossing	Approximately 0.25 miles northeast from Morgan Bayou Trailhead, east side of Hwy 49, approximately 1.6 miles north of junction of Hwy 49 and	N 33.24047	W 90.22187	6

		Providence Road, at first stream crossing gravel trail.			
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Table 2 below details the species captured by site for this survey. The crayfish collection was sent to the U.S.D.A. Forest Service Hydrology Lab in Oxford, MS for species verification. Initial results indicate a total of six crayfish species and seven amphibian species documented during the sampling period. These are tentative results, pending verification from the Forest Survey. In addition to the crayfish and amphibian captured, we were able to locate bats roosting in 3 trees in the Providence Road tupelo brake (site 3). One southeastern myotis (*Myotis austroriparius*) and 5 other bats tentatively identified as tri-colored bats (*Perimyotis subrubrum*) were using these roosts.

Table 2: Species captured by site for sampling conducted from February 24 – 27, 2014 at Morgan Brake National Wildlife Refuge.

Species	Site 1 Tupelo Brake	Site 2 Morgan Bayou	Site 3 Providence Road	Site 4 ATV Trail	Site 5 Stream Crossing
<i>Camberellus puer</i> Swamp dwarf crayfish		X			X
<i>C. shufeldtii</i> Cajun dwarf crayfish	X				
<i>Fallicambarus fodiens</i> Digger crayfish				X	
<i>Procambarus acutus</i> White river crayfish		X	X	X	X
<i>P. clarkii</i> Red swamp crayfish	X	X	X		X
<i>P. viaeviridis</i> Vernal crayfish				X	
<i>Siren intermedia nettingi</i> Western lesser siren	X				
<i>Amphiuma tridactylum</i> Three-toed amphiuma		X	X		
<i>Notophthalmus viridescens</i> Eastern newt	X	X	X		
<i>Ambystoma opacum</i> Marbled salamander		X	X		
<i>A. talpoideum</i> Mole salamander	X	X			
<i>Lithobates clamitans</i> Bronze frog	X				
<i>L. sphenoccephala</i> Southern leopard frog (eggs)			X		