

Annual Report to the Big Thicket Association for Big Thicket National Preserve, Turkey Creek subunit Herpetofauna inventory



Submitted by

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From the 17th of October 2008 to the 20th of August 2009, the principal investigators, along with volunteers and cooperators, spent a total of 40 days in the Turkey Creek subunit of the Big Thicket National Preserve in an attempt to document the contemporary herpetofauna assemblage. The Turkey Creek subunit is a heterogeneous parcel with over 20 different forest types assigned within its boundaries. The gradients of soil moisture are extreme, ranging from the sodden clays of the bottomlands to the friable sand of the upland pine forest. This diversity in habitat equals diversity in the fauna that dwell within those habitats. Cumulatively, according to National Park Service data, 30 species of amphibian and 64 species of reptile have been, or should be found within the preserve borders.

A variety of methods were employed to detect as many taxa as possible from within the Turkey Creek subunit. Passive methods, which rely primarily upon the movements of the animals themselves to be detected, were used. These included cover board arrays, PVC pipe arrays, drift fence and pit fall trap arrays, minnow, crab and hoop nets. Active detection methods included visual encounter surveys, both on foot and in a vehicle, and dip netting.

From the beginning of the project in November 2008, we recorded the following trap effort,

Minnow and Crab – 436 trap days or ~1.2 years (10464 hours), 70% in 2009.

Pitfall – 415 trap days or ~1.1 years (9963 hours), 87% in 2009

Hoop and Bask – 29 days (696 hours), 100% in 2009

The total trap effort for the project thus far is 880 trap days resulting in the capture of 109 individuals of 21 reptile species and 14 amphibian species. This confirms or reconfirms the known or presumed presence of 33% of the reptile species and 46% of the amphibian species. Not all individuals were captured (~5%) as they escaped or were too far away upon first observation. Pertinent morphological measurements were taken on individuals that were captured and a small subset of amphibians that were detected were swabbed for amphibian chytrid fungus.

Table 1. Reptile species documented during report period (November 2008 to September 2009)

#	Genus	species	sub-species	n
1	<i>Agkistrodon</i>	<i>contortrix</i>	<i>contortrix</i>	2
2	<i>Agkistrodon</i>	<i>piscivorous</i>	<i>leucostoma</i>	4
3	<i>Cnemidophorus</i>	<i>sexlineatus</i>	<i>sexlineatus</i>	5
4	<i>Coluber</i>	<i>constrictor</i>	<i>etheridgei</i>	2
5	<i>Elaphe</i>	<i>guttata</i>		1
6	<i>Elaphe</i>	<i>obsoleta</i>	<i>lindhiemeri</i>	1
7	<i>Eumeces</i>	<i>faciatus</i>		5
8	<i>Eumeces</i>	<i>laticeps</i>		2
9	<i>Masticophis</i>	<i>flagellum</i>	<i>flaggelum</i>	2
10	<i>Micrurus</i>	<i>fulvius</i>	<i>tener</i>	1
11	<i>Nerodia</i>	<i>erythrogastor</i>	<i>flavigastor</i>	1
12	<i>Nerodia</i>	<i>fasciata</i>	<i>confluens</i>	1
13	<i>Ophisaurus</i>	<i>attenuatus</i>	<i>attenuatus</i>	1
14	<i>Pseudemys</i>	<i>concinna</i>	<i>metteri</i>	1
15	<i>Sceloporus</i>	<i>undulatus</i>	<i>hyacinthinus</i>	7
16	<i>Scincella</i>	<i>lateralis</i>		7
17	<i>Sternothus</i>	<i>odoratus</i>		1
18	<i>Storeria</i>	<i>dekayi</i>		1
19	<i>Terrapene</i>	<i>carolina</i>	<i>triunguis</i>	1
20	<i>Thamnophis</i>	<i>proximus</i>	<i>orarius</i>	2
21	<i>Trachemys</i>	<i>scripta</i>	<i>elegans</i>	1

Table 2. Amphibian species during report period (November 2008 to September 2009)

#	Genus	species	sub-species	n
1	<i>Ambystoma</i>	<i>opacum</i>		8
2	<i>Amphiuma</i>	<i>tridactylum</i>		3
3	<i>Bufo</i>	<i>velatus</i>		11
4	<i>Eurycea</i>	<i>quadridigitata</i>		11
5	<i>Gastrophryne</i>	<i>carolinensis</i>		4
6	<i>Necturus</i>	<i>beyeri</i>		6
7	<i>Pseudacris</i>	<i>crucifer</i>		4
8	<i>Pseudacris</i>	<i>triseriata</i>		1
9	<i>Rana</i>	<i>clamitans</i>	<i>clamitans</i>	1
10	<i>Rana</i>	<i>sphenocephala</i>		2
11	<i>Siren</i>	<i>intermedia</i>	<i>nettingi</i>	7
12	<i>Hyla</i>	<i>squirella</i>		Chorus
13	<i>Hyla</i>	<i>cinerea</i>		Chorus
14	<i>Hyla</i>	<i>versicolor</i>		Chorus