

Final Report
Illinois Wildlife Preservation Fund Small Project Grant
Herpetofaunal Survey along the Illinois River
in Woodford and Marshall Counties

Prepared for the
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By

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INTRODUCTION

The area to the east of the Illinois River in northern Woodford and southern Marshall counties is very diverse in its herpetofauna (D. Shepard, pers. obs.). However, with the exception of Smith (1961), little work has been done in this area and the diversity of amphibian and reptile species is poorly characterized.

The objective of this study was to survey the adjacent area east of the Illinois River in northern Woodford and southern Marshall counties (Fig. 1) for amphibians and reptiles to determine which species occur in the area. This information should help in future conservation decisions by delineating areas of high species diversity.

METHODS AND MATERIALS

In 1998 and 1999, areas were searched by foot or by vehicle where permitted. Frogs and toad species were identified by hand capture, or by breeding call. Turtles species were identified using daytime basking surveys, or hand capture. Lizards and snakes were identified by hand capture. Species of all groups were also identified using Dead-On-Road (DOR) individuals. Voucher specimens of most species were collected and deposited in the Illinois Natural History Survey collection.

RESULTS

A total of 23 species of amphibian and reptile were found in the study area. The Marshall county portion of the study area contained 21 species (Table 1). The Woodford county portion of the study area contained 15 species (Table 2). No amphibian and reptile species currently

listed as endangered or threatened in Illinois (Illinois Endangered Species Protection Board 1994) were found in the study area.

DISCUSSION

Of the 23 species found in this study, 7 species were previously unrecorded from Marshall county, and 3 species were previously unrecorded from Woodford county (Phillips et al. 1999). The results demonstrate the high amphibian and reptile species diversity in this small area. I expect that there are still several species present in this area that were not encountered in my study, including species listed as state endangered or threatened. In particular, my results probably underestimated the number of turtle and snake species. Due to the secretive nature of snakes, they are often difficult to adequately survey. Likewise, a better method for surveying turtles would have been to use baited hoop traps. My methods were also not ideal for surveying salamanders, although only a few species may possibly occur in the area (Phillips et al. 1999). Frog and toad species were probably the most accurately surveyed because of the ease of identification through calling surveys. However, explosive breeding species may still go undetected due to their short period of activity.

The study area is primarily a transition zone between flood plain and topographically diverse upland forest. Specific habitats include bottomland forest, wetlands, ponds, upland forest, agriculture, and sand areas. With such an array of habitats, the area has the potential to support a high diversity of species. Most of the study area can still be considered as rural, but there are still several threats to amphibian and reptile species diversity. Agriculture is a major threat to amphibians and reptiles. Habitat loss due to draining and tiling of land, and the application of pesticides, herbicides and fertilizers is a severe threat. Also, the possibility of

railroad car spills along the heavily used Atchison, Topeka, and Sante Fe line through southern Marshall county is a potential threat since the railroad runs adjacent to several wetlands and creeks. Another evident threat to amphibians and reptiles is road mortality. An example is Illinois Highway 26 which runs north-south along the border between the upland and bottomland areas. On this road it is common to find dead frogs, snakes, and turtles particularly during the spring and fall when they are moving to and from breeding and wintering sites.

The land around the study area has historically been a renowned waterfowl hunting area. Large parcels of land in this area are state owned or owned by duck hunting clubs. These areas are maintained to attract and conserve waterfowl. The general public usually cannot see the value in managing for amphibians and reptiles, but luckily conservation of these areas for waterfowl should also benefit the amphibians and reptiles.

SUMMARY

The adjacent area east of the Illinois River in southern Marshall and northern Woodford counties was surveyed for amphibians and reptiles in 1998 and 1999. A total of 23 species were found in the study area with 7 species previously unrecorded from Marshall county and 3 species previously unrecorded from Woodford county. This small area has a relatively high species diversity and probably contains several more species that were not encountered. Agricultural development and practices, and road mortality are currently the most serious threats to the amphibians and reptiles in this area.

LITERATURE CITED

Illinois Endangered Species Protection Board. 1994. Checklist of endangered and threatened animals and plants of Illinois. State of Illinois: Springfield.

Phillips, C.A., R.A. Brandon, and E.O. Moll. 1999. Field guide to amphibians and reptiles of Illinois. Ill. Nat. Hist. Surv. Manual 8.

Smith, P.W. 1961. The amphibians and reptiles of Illinois. Ill. Nat. Hist. Surv. Bull. 28(1): 1-298.

Figure 1. Map of Study Area

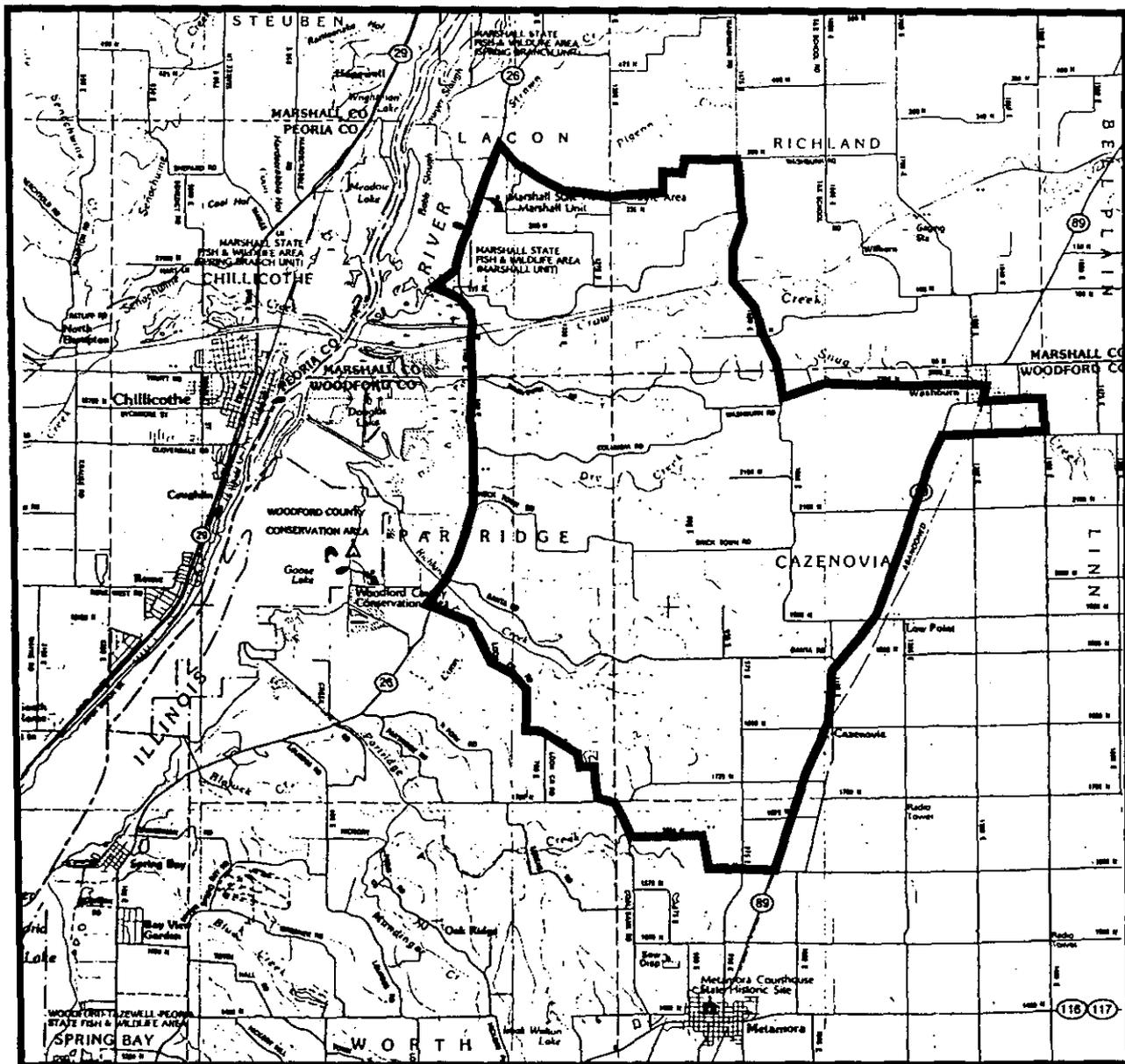


Table 1. Amphibians and Reptiles Found in the Study Area of Marshall County, Illinois.

Order	Family	Genus	species
Anura	Bufonidae	<i>Bufo</i>	<i>americanus</i>
		<i>Bufo</i>	<i>woodhousei</i>
	Hylidae	<i>Acris</i>	<i>crepitans</i>
		<i>Hyla</i>	<i>crucifer*</i>
		<i>Hyla</i>	<i>versicolor*</i>
		<i>Pseudacris</i>	<i>triseriata*</i>
	Ranidae	<i>Rana</i>	<i>blairi</i>
		<i>Rana</i>	<i>catesbeiana</i>
		<i>Rana</i>	<i>clamitans</i>
	Lacertilia	Teiidae	<i>Cnemidophorus</i>
Serpentes	Colubridae	<i>Elaphe</i>	<i>obsoleta*</i>
		<i>Elaphe</i>	<i>vulpina</i>
		<i>Heterodon</i>	<i>platyrhinus</i>
		<i>Nerodia</i>	<i>rhombifer*</i>
		<i>Nerodia</i>	<i>sipedon</i>
		<i>Regina</i>	<i>septemvittata*</i>
		<i>Storeria</i>	<i>dekayi</i>
		<i>Thamnophis</i>	<i>sirtalis</i>
Testudines	Chelydridae	<i>Chelydra</i>	<i>serpentina*</i>
	Emydidae	<i>Chrysemys</i>	<i>picta</i>
		<i>Trachemys</i>	<i>scripta</i>

* indicates previously unrecorded from county

Table 2. Amphibians and Reptiles Found in the Study Area of Woodford County, Illinois.

Order	Family	Genus	species
Anura	Bufonidae	<i>Bufo</i>	<i>americanus</i>
		<i>Bufo</i>	<i>woodhousei</i>
	Hylidae	<i>Acris</i>	<i>crepitans</i>
		<i>Hyla</i>	<i>crucifer*</i>
		<i>Hyla</i>	<i>versicolor</i>
		<i>Pseudacris</i>	<i>triseriata*</i>
		<i>Rana</i>	<i>blairi</i>
	Ranidae	<i>Rana</i>	<i>catesbeiana</i>
		<i>Rana</i>	<i>clamitans*</i>
Serpentes	Colubridae	<i>Coluber</i>	<i>constrictor</i>
		<i>Elaphe</i>	<i>obsoleta</i>
		<i>Elaphe</i>	<i>vulpina</i>
		<i>Heterodon</i>	<i>platyrhinos</i>
		<i>Lampropeltis</i>	<i>triangulum</i>
		<i>Thamnophis</i>	<i>sirtalis</i>

* indicates previously unrecorded from county