

Relative Abundance of Furbearers in Northeastern Oklahoma

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Raccoons (*Procyon lotor*), opossums (*Didelphis virginiana*), skunks (*Mephitis mephitis*), coyotes (*Canis latrans*), and bobcats (*Lynx rufus*) are upland furbearers legally hunted and trapped statewide in Oklahoma. Gray foxes (*Urocyon cinereoargenteus*) can only be harvested east of Interstate Highway 35, and red foxes (*Vulpes vulpes*) are a protected species in Oklahoma. In addition, season bag limits are imposed on raccoons, bobcats, and gray foxes.

This study was conducted in northeastern Oklahoma during the furbearer trapping seasons in 1994-95 and 1995-96 on 65 ha near Grand Lake O' the Cherokees in northwestern Delaware County. Habitat was typical of the Ozark Highlands ecoregion (1) and consisted of approximately 40% oak-hickory forest (*Quercus* and *Carya* spp.) interspersed within rolling hills, hay meadows, and intermittent streams.

Trapping locations were selected along habitat edges, ridgelines, stream beds, and abandoned roads within the study area both seasons. Natural baits (carrion) and #2 coil spring leg-hold traps were used to attract and capture furbearers. Traps were checked before daylight every 24 h. Except for red foxes, captured furbearers were dispatched and removed.

The frequency of furbearers captured was used as an index of relative abundance (2). Catch-per-unit-effort (CPE) was determined for all species, and cumulatively, both years using number of species caught per trap-night (i.e. one trap set for 24 h equals one trap-night).

Traps were set in late December for seven consecutive days in 1994 and four consecutive days in 1995. Weather conditions were favorable during the study both years (no rain or freezing temperatures). The data recorded from each trapped furbearer included the date of capture, location, species, sex, age (adult /juvenile), color phase (opossums), and general physical condition. Species captured were assumed to represent furbearers with the highest relative abundance in the study area.

In 1994-95, 50 trap-nights resulted in the catch of 18 furbearers for an overall CPE = 0.36. Furbearers captured included two red foxes, one gray fox, five raccoons, and ten opossums (Table 1). In 1995-96, 44 trap-nights resulted in the catch of 17 furbearers with an overall CPE = 0.39. The catch in 1995 included three red foxes, one gray fox, five raccoons, and eight opossums (Table 1). Of the 18 opossums captured, over the two years, half were gray phase and half were black phase. All individuals captured both years were in good condition based on general appearance and parasite loads. Trapped red foxes were all caught by the front leg and released in accordance with current state regulations. Based on visual inspection for healed foot-injuries, no red fox caught in 1995-96 was a recapture. Except for red fox, no other nontarget species were caught during either year of the study (i.e. dogs, cats, birds, etc.).

TABLE 1. Catch-per-unit-effort (CPE) and sample sizes *n* for furbearers trapped in 1994-95 and 1995-96 compared to trapping records from the same area in 1984-85 (*n* only).

Species	94-95		95-96		84-85
	CPE	<i>n</i>	CPE	<i>n</i>	<i>n</i>
Red Fox	0.04	2	0.07	3	1
Gray Fox	0.02	1	0.02	1	3
Raccoon	0.10	5	0.11	5	17
Opossum	0.20	10	0.18	8	21
Total	0.36	18	0.39	17	42

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Proc. Okla. Acad. Sci. 1998;78:125-126

In 1984-85, the trapping effort I conducted over a 2-wk period within the study area and in similar habitat <0.5 km away resulted in the catch of one red fox, three gray foxes, 17 raccoons, and 21 opossums. These data were included to highlight the apparent difference in relative abundance of red and gray foxes 12 years ago compared to the present.

Although coyotes, bobcats, and striped skunks were not present in the samples of this study, each has been observed or captured in or near the study area during the past 20 years. However, the absence of these species in the catch of this study indicates their relative abundance is presumably low in the region.

Hatcher (3) found red foxes were more abundant in northeastern Oklahoma than in any other region of the state, despite a westward range expansion (4-8). Trapping effort in this study confirmed their presence and relative abundance in relation to other furbearer species. The red fox is a popular species for chasing with hounds and can be legally pursued without taking by houndsmen in Oklahoma (J. Hoagland, ODWC, pers. comm.). However, disagreements exist between user groups (i.e. hound-hunters and trappers) over whether red foxes could withstand a regulated harvest in Oklahoma. Furthermore, there has not been strong public interest in opening the red fox season (H. Hoagland, pers. comm.).

Data on furbearer populations are critical to their proper management (9). Additional research is needed to better assess the status of furbearer populations in northeastern Oklahoma, particularly in areas where both red and gray foxes occur.

ACKNOWLEDGMENTS

The author thanks P. Reno-Anderson and C. Winton for permission to trap furbearers in the study area since 1976, and D. Theys, J. Heltzel, and S. Brown for research assistance during this study. D. Leslie, Jr., J. Shaw, J. Hoagland, F. Leach, T. Warren, C. McDowell, and several anonymous reviewers are credited for providing technical and/or editorial assistance to earlier versions of this manuscript.

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Received: 1997 Dec 22; Accepted: 1998 Mar 20.