Feral Pigs, *Sus Scrofa*, in Kansas

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Abstract. A population of feral pigs, *Sus scrofa*, was documented on Fort Riley Army Base, Kansas during summer 1993. Reproduction occurred during spring 1993 and winter 1993-94. The population probably has existed for more than five years. Thirty-nine pigs were removed from November 1993 through February 1994. A minimum of six pigs remained in April 1994.

Key Words. Army base, feral pigs, prairie, Kansas.

Introduction

More than two million wild pigs, *Sus scrofa*, were distributed in 23 states in 1993 (Miller, 1993), and about half of them in Texas (Taylor 1993). In 1992, wild pigs were found throughout Texas, except for extreme western and northwestern regions of the state (Taylor 1993). In Oklahoma, wild pigs have occurred for many years in forested eastern and southern counties, and recently they were reported in western counties near the border with Kansas (Wagner 1995). Mr. Bill Hlavachick, Supervisor of the Wildlife Management Division of the Kansas Department of Wildlife and Parks, advised the first author that he received reports in 1985 of a group of six or seven wild pigs killed south of Lake Perry in eastern Kansas. This paper is the first documented report of wild pigs in Kansas.

Study Area

This study was conducted on Fort Riley, a 44,500 ha army base in northeastern Kansas. Most of the base is typical of tallgrass prairies found in the Kansas Flint Hills. Uplands are dominated by prairie grasses including big bluestem, *Andropogon gerardii*; little bluestem, *A. scoparius*; switch grass, *Panicum virgatum*; and Indian grass, *Sorgastrum nutans*. Hardwood forests occur in the lowlands and are dominated by bur oak, *Quercus macrocarpa*; green ash, *Fraxinus pennsylvanica*; hackberry, *Celtis occidentalis*; walnut, *Juglans nigra*; and woody shrubs.

Methods

Wild pigs were collected using three methods: live traps, sport hunting, and shooting by the study team. Distribution of pigs, population structure, and use of habitats were determined from observations of pigs and from field signs observed by the study team as well as reports by hunters, farmers, and military personnel.

Ages of pigs were estimated from tooth eruption and replacement (Matschke 1967). Females were considered adults if second molar teeth were present, they were pregnant or nursing, or if the teats were enlarged indicating they had nursed in the past. Wild female pigs reach puberty at about 10 months of age (Sweeney et al. 1979), and the second molar teeth erupt at 12 - 14 months (Matschke 1967). Males were considered adults if permanent canines were present. Wild male pigs reach puberty at five to seven months, and their adult canine teeth erupt at seven to eleven months.

Pigs were considered immature if they had developed third lower deciduous premolars and had not yet developed canines (males) or showed no signs of reproduction and had not yet developed second molars (females). Wild pigs develop third lower deciduous premolars at 23 - 33 days.

Results and Discussion

Tracks of adults and small pigs were observed together on several occasions during summer and early fall 1993. Reproduction was confirmed when three pregnant females and two litters of piglets less than one month old were trapped during fall 1993 and winter 1993-94.

Thirty-nine feral pigs were removed from November 1993 through February 1994: by trapping - 31, by sport hunting - six, and by shooting by the study team - two. Age was estimated for 32 pigs from tooth eruption and replacement (Matschke 1967): 10 adults (five males, five females), nine immatures (six males, three females), and 13 piglets less than one month old. The largest pig taken was a male, probably at least five years old. This pig weighed 117 kg and had well developed, permanent, third molars. Matschke (1967) reported that third molars were not completely erupted in four-year-old pigs raised in captivity.

Locations where pigs were killed or sighted and fresh field signs were plotted on a map (Figure 1). The pigs were concentrated in a 45 km^2 area near the northeastern border of Fort Riley. Most signs were found in riparian forests along Wildcat Creek and along the northern and eastern edges of a large impact area that is off limits to human entry. Reports of pigs were received occasionally from other sections of the base. Signs of rooting and rubs on brush were discovered on private lands adjacent to Fort Riley, showing that pigs made forays off the base.

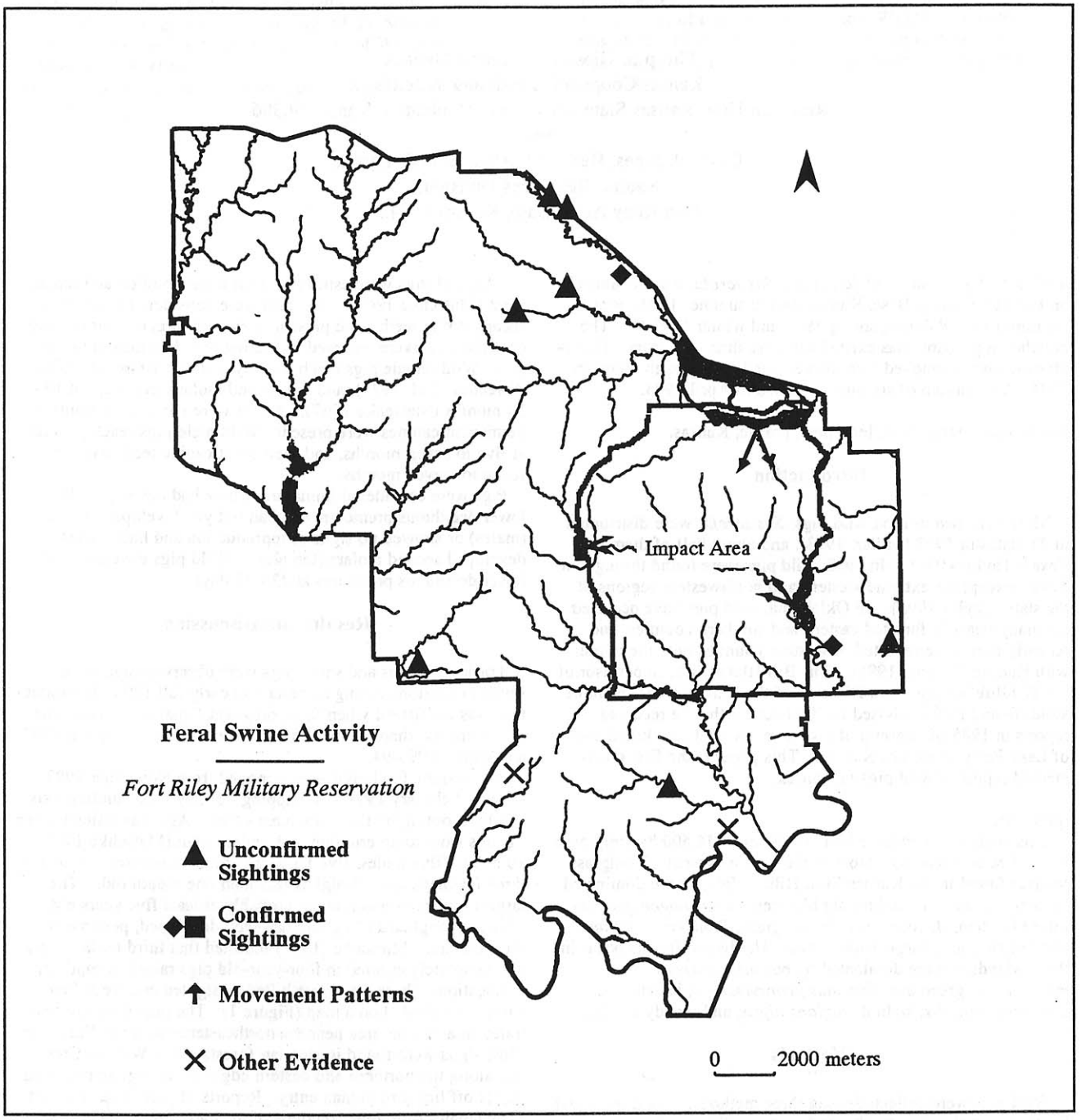

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FIG. 1. Locations of feral pigs on Fort Riley Army Base, Kansas. Confirmed sightings were made by members of the study team. Unconfirmed sightings were reports by farmers or hunters, but not direct observations by members of the study team. Other evidence included the lower jaw of a mature male pig found by a surveying team working on a road construction project and a pig struck by an automobile. Arrows indicate trails used by pigs moving into and out of the impact area.

The status of the population is unknown, but tracks observed during April 1994 indicated at least six adult pigs were present. Katahira et al. (1993) noted that a high percentage of a feral pig population would have to be killed each year for several years in order to eradicate the population. Hone and Robards (1980) calculated that, with a 70% reduction once each year, about nine years probably would be required to eradicate an established population of 1,000 wild pigs. Assuming the Fort Riley population numbered 45 to 50 animals prior to initiation of control and that six remained after control, we achieved an 86% - 88% reduction.

The Fort Riley population possibly could be eliminated in another two to three years, if 80% or more of the pigs were killed each year. However, elimination of the population is confounded by the presence of a large impact area that provides a refuge for pigs (Figure 1). There is also a possibility that substantially more than six pigs remained on Fort Riley, but we were unable to detect their presence.

A long-term strategy for managing or eradicating this pig population is needed.

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