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Comparison of Coyote and Coyote X Dog Hybrid Food Habits in Southeastern Nebraska

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The recent taxonomic study by Mahan et al. (1978) documented the occurrence of coyote (*Canis latrans*) x dog (*C. familiaris*) hybrids in Nebraska. This study, and those by Freeman (1976) in Oklahoma and Gipson et al. (1974) in Arkansas show coyote x dog hybrids, though not abundant, to be numerous in some areas. The purpose of the present study was to compare the stomach contents of coyote x dog hybrids collected by Mahan et al. (1978) from southeastern Nebraska with those of contemporary coyotes.

Stomachs of 12 coyote x dog hybrids and 16 coyotes collected November 1975 through April 1976 in southeastern Nebraska (Figure 1) were examined and contents compared. Except for freezing the stomachs rather than storing them in formalin, procedures used for food habits analysis were similar to those used by Gipson (1974).

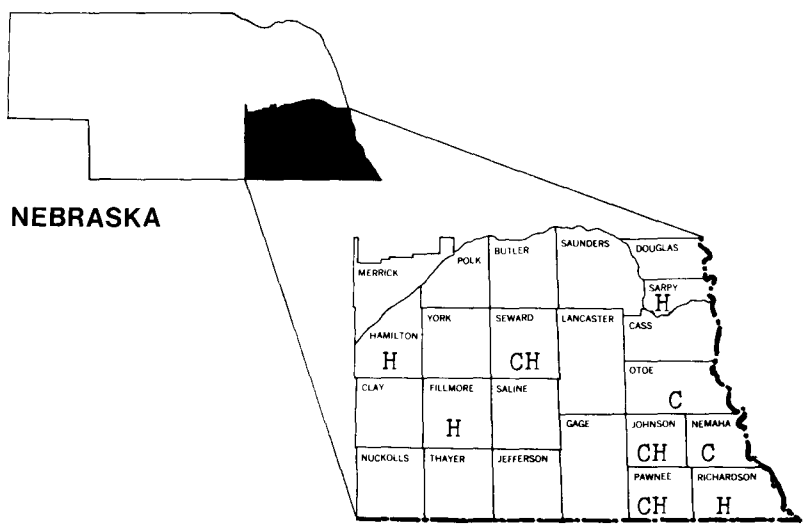

Figure 1. Counties where the 12 coyote x dog hybrids (H) and 16 coyotes (C) were collected.

Nine hybrid and 15 coyote stomachs contained food. Domestic livestock occurred in eight of the nine hybrid stomachs and comprised the bulk of material eaten (80.7% by weight). Only four of the 15 coyote stomachs contained livestock remains which made up 22.9% of the total weight. Rabbits, rodents and other wild mammals were found in 12 coyote stomachs and only three hybrid stomachs, 45.5% and 13.4% by weight, respectively. A greater diversity of wild mammals and birds occurred in the coyote stomachs. By comparison, in Arkansas, food habits of hybrids were similar to coyotes (Gipson 1974; Gipson and Sealander 1976). This may be due to the canids' utilization of an increasingly available supply of poultry carrion. In Nebraska, no such supply exists.

The observed differences in the present study may be due to certain behavioral traits; coyotes are better able to find and catch wild prey such as rabbits and rodents. This is suggested by laboratory studies of coyotes and coyote x dog hybrids (Fox 1976) in which prey catching and killing by the canids were compared. The coyotes consistently exhibited greater ability to catch and efficiently kill a rat which was placed in their pens. Hybrids, perhaps lacking adequate "mousing" ability, are more likely to feed on livestock carrion. However, coyotes are known to utilize livestock carrion (Gier 1968).

Another hypothesis for the differences between the canids' food habits is that coyote x dog hybrids are generally larger than coyotes and hence may take larger prey, especially those hybrids which, in addition, exhibit unusual aggressiveness (Fox 1975). Freeman (1976) found that genetic influence from red wolves in the southern and southeastern Oklahoma coyote populations accounted for larger canids, and their occurrences were positively related to cattle depredation in the same areas. In the present study, the average body weight of six male hybrids whose stomachs contained food items, 14.5 kg, was greater than that reported for male coyotes, 13.8 kg (Gier 1968). In spite of this, a legitimate conclusion regarding body size cannot be made because of the small sample.

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