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Senate Committee on Natural Resources

Chair Powell, Vice-Chair Kerschen and members of the committee,

I am testifying in support of SB 269, an act concerning wildlife and specifically the removal of the Eastern Spotted Skunk from the endangered species list for Sedgwick County.

Currently, before we can initiate any stream maintenance projects in Sedgwick County, we must coordinate with the Kansas Department of Wildlife, Parks and Tourism (KDWPT) in advance to determine if there are any potential impacts to endangered species. The project scope of these activities is limited to where this is the only state agency that Sedgwick County is required to contact prior to work beginning. Unfortunately, the coordination and communication process with KDWPT typically takes about four weeks to receive a response before we can proceed. On numerous occasions, we have had costly mitigation or accommodation requirements for the Eastern Spotted Skunk. We believe these requirements are too burdensome for the area and do not necessarily accomplish the effort to protect a species that we are not certain exists in our county.

According to the International Union for Conservation of Nature Redlist for Endangered Species, the Eastern Spotted Skunk is regarded as "Least Concern," on their ranking, and they noted that "increases in the geographic range of Eastern Spotted Skunks in the Great Plains may be correlated with increases in the amount of land devoted to agriculture, because agricultural practices provide outbuildings as shelter and encourage commensal house-mice that serve as a prey base. By the 1940s, the Eastern Spotted Skunks were reported in North Dakota, Wisconsin and Minnesota, areas in which they had not previously occurred."

And, the Kansas Mammal Atlas information on the Eastern Spotted Skunk also suggests that the skunk habitat "occurred primarily to the east and south of Kansas" and eventually spread

northward and westward. "It eventually spread across Kansas and much of the northern Great Plains, and in many areas, it became as abundant as the ubiquitous striped skunk."

In addition, the NatureServe Explorer website lists the Rounded Global Status of the Eastern Spotted Skunk as "Apparently Secure," and that the range for the skunk was "evidently expanded westward in the Great Plans regions with agricultural expansion."

The KDWPT requirements make routine stream maintenance to mitigate potential flooding issues in our county more costly to our taxpayers. For example, on projects within the riparian corridor, a special seed mix comprised of native grasses and forbs are required to mitigate our impacts. Brush piles that serve as shelter for the Eastern Spotted Skunk have also been required. On stream maintenance projects, these structures may be required on private property, which is often not well received by landowners.

When an action permit is issued, the "Special Conditions" typically indicates that "all areas disturbed by construction will be replanted with native warm season grasses." Additionally, "all trees /shrubs/brush removed as a result of this project will be used to construct at least one brush pile onsite or nearby." As an alternative to onsite habitat construction, credit with offsite land banks can be purchased, but the fees associated with these land trusts can be substantial. All of these are requirements only to accommodate the Eastern Spotted Skunk.

Action permits were issued for the following county projects:

- Dry Creek Stream Maintenance -- A special seed mix was utilized and brush piles were constructed to satisfy permit conditions.
- D-11, Drainage Channel and Storm sewer Improvements -- Area was replanted with native warm season grasses and brush piles were constructed on site.
- KDOT project 54-87 K-9879-01, US-54 Frontage Road construction -- Offsite mitigation satisfying KS Wildlife and Parks and the Army Corps of Engineers required payment of $113,670 to the Sunflower Land Trust of which $24,000 is being held in a trust used at KDWPT discretion for the creation of suitable habitat for the Eastern Spotted Skunk.

I am asking you to support SB 269 and remove the Eastern Spotted Skunk from the endangered species list for Sedgwick County. We believe this change will have minimal actual impact on

this species, but will greatly improve the ability of our county to perform routine stream maintenance, and mitigate potential flooding. Removing this species would also eliminate the costly requirements for Sedgwick County to have special grass plantings and brush pile habitats, or even costly land bank trades.

Thank you allowing me to be here today in support of this bill and helping us to reduce the obstacles so we can do our important public works projects in a timely manner.

Richard Ranzau
Commissioner – 4th District

KANSAS MAMMAL ATLAS

EASTERN SPOTTED SKUNK

***Spilogale putorius* (Linnaeus, 1758)**

(spI-lO-gAle pU-tor-E-es)

Kansas State Threatened Species

An adult Eastern Spotted Skunk.

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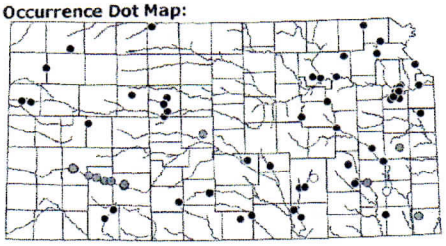
Recognition:
The eastern spotted skunk is smaller than a domestic cat with fine, dense fur and an elongated, weasel-like body. The black pelage is marked with a white triangular nose patch and 4 to 6 broken white body stripes in a seemingly infinitely variable pattern The stripes are broken into a pattern of spots. The dental formula is incisors 3/3, canine 1/1, premolars 3/3, molars 1/2.

Confusing Species:
Although both the eastern spotted skunk and the striped skunk have striking black and white warning coloration, the eastern spotted skunk can be readily distinguished by its smaller size, more slender body, shorter legs, smaller claws on the front feet, shorter and softer black body fur, the white triangular patch on its forehead, its 4 to 6 broken white stripes which extend from the neck along the back and sides, and its solid black tail (the tails of some individuals are bordered with white-tipped hairs). The western spotted skunk closely resembles the eastern spotted skunk, differing primarily in details of reproduction and number of chromosomes. The nearest to Kansas that the western spotted skunk has been found is the area around Black Mesa at the western end of the Oklahoma Panhandle.

Occurrence Dot Map:



Data from 352 occurrences (349 museum vouchers).
● - 303 museum vouchers > 30 yrs.
● - 46 museum vouchers < 30 yrs.
○ - 3 observations.
○ - 0 literature observations.
83 unique localities.

Distribution:
Historical records suggest that the eastern spotted skunk occurred primarily to the east and south of Kansas and barely reached the easternmost counties when the state was first settled. At about the beginning of the Twentieth Century, possibly because of agricultural development, the eastern spotted skunk began expanding its distribution northward and westward. It eventually spread across Kansas and much of the northern Great Plains, and in many areas it became as abundant as the ubiquitous striped skunk. However, in just a few decades the species began to decrease in both distribution and abundance. It disappeared totally from many areas, and its distribution in Kansas and several other states including Arkansas, Iowa, Missouri, Nebraska, and Oklahoma) became highly localized. In 1982, the Kansas Department of Wildlife & Parks listed the species as threatened. Since that time, critical habitat for the species has been designated in Trego, Ellis, Barton, Finney, Gray, Ford, Sedgwick, Butler, Chautauqua, Anderson, Woodson, Wilson, Montgomery, and Labette counties.

County Breakdown: County Name (# occurrences)
Anderson (1), Barton (1), Brown (1), Butler (3), Cherokee (1), Coffey (1), Cowley (2), Dickinson (1), Douglas (150), Ellis (5), Finney (4), Ford (2), Gray (6), Greenwood (33), Harper (2), Harvey (1), Jackson (1), Kiowa (1), Lane (1), Leavenworth (3), Lyon (1), Meade (6), Miami (1), Montgomery (1), Nemaha (9), Phillips (4), Pottawatomie (9), Pratt (3), Rawlins (4), Reno (1), Riley (4), Rush (1), Thomas (1), Trego (9), Wabaunsee (1), Wallace (2), Wilson (2), Woodson (1), Wyandotte (1)

Reproduction:
The eastern spotted skunk breeds in March or April. Females are spontaneous ovulators, thus increasing the likelihood of fertilization. After the eggs are fertilized, they may not implant in the uterus for 14 to 16 days. The kittens are born in May or June following a 50 to 65 day gestation period. Litters range from 2 to 9 (usually 5) kittens. Kittens are born with their eyes and ears closed and have sparse fur with black and white markings already apparent. Their claws are well-developed, and they begin to crawl around the nest by the fourth day after birth. Their eyes and ears open about 1 month after birth, and their teeth begin to erupt after 5 weeks. Shortly after this time the kittens begin to explore near the den with the female. They start to eat solid food at about 6 weeks, and by 8 weeks they are usually weaned. They disperse from their natal burrow 14 to 16 weeks after they are born, and reach adult size by mid-October of their first year. The kittens are capable of breeding the spring after their birth when they are 9 tor 10 months old.

Behavior:
Eastern spotted skunks are even more nocturnal than striped skunks. Preferred habitats include brushy, rocky, and wooded areas. They seem to avoid open areas that provide little cover, dense forest, and wetland areas. While foraging, they tend to remain near shelter, such as trees, bushes, rocks, buildings, or fence rows. In natural landscapes, they den in cavities or openings in rock ledges, hollow logs, or stumps. In agricultural landscapes, they frequently den in haystacks, woodpiles, outbuildings, and grain storage buildings. The eastern spotted skunk is much more agile than the striped skunk. It readily climbs trees or climbs to the loft of barns. They often do a handstand when threatened, and while in this position they direct their toxic spray toward the intruder. Foot stamping is another characteristic behavior when an intruder approaches. The species does not hibernate, but it becomes inactive within its dens during especially cold winter weather. Summer dens may be constructed almost anywhere that is sheltered from light, wind and rain, such as underground burrows, hollow logs, abandoned buildings or rock and brush piles. Leaves and grass are sometimes gathered for nesting material. Within its home range an eastern spotted skunk usually has more than one den site. They use of a particular den seems to be based on the local abundance of food. The same den is frequently used by more than one skunk during the year. Winter dens are usually built or modified from existing burrows so that they extend below frost line. Skunks vary their daily movements depending upon the weather and their reproductive condition. During cold weather they reduce their activity above ground and may range over an area of only 0.4 square kilometers. During the breeding season males may range over five to 10 square kilometers while searching for mates. in good habitat, populations may reach densities of five per square kilometer. The aggressive nature of adult males during rut indicates they may compete with each other for mates.

Food Habits:
Eastern spotted skunks are primarily insectivorous but are opportunistic feeders, eating a wide variety of animals and plants. In winter, they consume mostly small mammals plus some birds, carrion, and plant material.

Predators and Defense:
It has been estimated that about 90% of mortality in this species is caused by humans. Automobiles kill the most, but landowners, their dogs, and their implements kill many more. Disease also is a cause of mortality. The most important nNatural predator is the great-horned owl. Most other potential predators leave eastern spotted skunks alone unless starved or dull-witted.

Growth and Longevity:
Adults may attain the following dimensions: total length 459-539 mm; length of tail 190-228 mm; length of hind foot 44-51 mm; length of ear 25-30 mm. Males weigh about 600g, females about 425g. It has been reported that captive animals live as long as 6 years in captivity, but probably few live longer than 2 to 3 years in the wild.

Taxonomy:
The subspecific name that applies to populations of the eastern spotted skunk on the Great Plains is Spilogale putorius interrupta.

Fossil Record:
The genus Spilogale appeared in the fossil record in the late Pliocene in Kansas and Texas. The species Spilogale putorius is represented in several Pleistocene deposits.

Remarks:
Like the striped skunk, the eastern spotted skunk stores musk in a pair of anal glands for use in defense. They usually give a series of warnings before they spray: they lift their tail and fan out their fur; they stamp their front feet; and they do a handstand on their forelegs with the tail bending forward over their back, and in this position walk toward the source of the threat. They may expel their musk in this position, or they may return to all four feet, assuming a U-shaped stance with back arched, and contracting the muscles surrounding the scent glands. Eastern spotted skunk musk is reported to be stronger and more pungent than striped skunk musk.

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