

THE HOODED SKUNK, *MEPHITIS MACROURA*, IN LOWLAND NORTHWESTERN COSTA RICA

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Key Word Index. Carnivora. Mustelidae. *Mephitis macroura*. Costa Rica.

ABSTRACT

The hooded skunk (*Mephitis macroura*) is described for the first time from Costa Rica. There is a population of these animals in Santa Rosa National Park and its vicinity, south to Liberia. Brief notes are made on the behavior of *M. macroura* in Santa Rosa, with emphasis on the behavior of breaking chicken eggs by throwing them behind the animal.

The hooded skunk, *Mephitis macroura*, was not recorded as occurring as far south as Costa Rica by Goodwin (1946, 1957) and Hall and Kelson (1959); Nicaragua is listed as the southernmost limit of the range of species. However, we have found skunks to be common at present in Santa Rosa National Park (0–350 m elevation, extreme northwestern Guanacaste province, Costa Rica, between the Pan-American highway and the Pacific Ocean about 25 km south of La Cruz). Identification is based on a specimen deposited in the USNM (No. 552361), and on close examination of many living individuals in and around our house at Park headquarters. We have also seen many hooded skunks as roadkills on the highway between Santa Rosa and Liberia, 35 km to the south of the Park. Costa Rican cowboys in the vicinity of the park state that skunks (presumably hooded skunks) have always been common there. We have also seen the hog-nosed skunk (*Conepatus semistriatus*) in the Park, and it is also recorded from more moist parts of Costa Rica (Goodwin 1946).

At Santa Rosa, hooded skunks range from pure black to having a white lateral stripe from the foreshoulder to the hind flank with the stripe up to 4 cm wide at the posterior end (Fig. 1); up to 50 percent of the tail hairs may be white. They lack the white hood (a white dorsal patch between the shoulders) and the thin white stripe down the center of the face which are characteristic of animals to the north of Nicaragua (based on specimens in the U. S. National Museum). Based on specimens in the U. S. National Museum, the Santa Rosa *M. macroura* appear to weigh only about half as much as individuals from the south-western United States and Mexico. A female with the lateral bar described above and a nearly pure black tail (Fig. 1) had a litter of at least four: one pure black, one with a black body but

a "core" of white short hairs among the longer black tail hairs, and two with body stripes like hers; one of these two had a pure black tail and the other had a tail like its mother's.

This female and her offspring foraged in and around our house for insects, eggs, bananas, and meat garbage from November through the end of December 1979. The offspring were about half the size of the mother by the end of December and we guessed that they were born in late September or early October (last third of the rainy season). Santa Rosa National Park has a five to six month dry season (December to May) and about 2000 mm of rain during the rainy season. The forest is largely deciduous during the dry season.

As they were not molested, the mother and her offspring were very tame. They arrived at the house about dusk, coming from the forest or sometimes open pasture, and often entered and searched for food throughout. The mother and the smallest kitten usually came together; the other kittens usually arrived independently. Judging from their familiarity with the inside of the house, we suspect that they had been foraging in the house before we arrived to take up occupancy in early November. The offspring were more timid than the mother in that they gave startle responses at smaller motions or noises than did their mother, but were also less cautious about exploring new areas.

The mother walked freely among persons sitting or standing, provided they did not move rapidly, and low voices did not seem to bother her. Even in a well-lighted room she did not respond to a person's movements at a distance of more than about 2 m. If a human approached slowly on hands and knees when she was feeding in bright light, she often did not respond to the intruder even when close enough to tug the food away from her by hand. If startled, she spun around and ran very rapidly 1–2 m, and then stopped and turned. If there was no continuation of the disturbance, she returned unwarily to feed or continue with whatever she was doing. She and her offspring, however, generally fled at the sound of footsteps outside the building and approaching from 5–10 m away. She was never observed to spray when alarmed, though she did freely arch her tail over her back when alarmed. She was never observed to stand on her hands to threaten an intruder, a behavior often observed in other skunks.

The kittens, presumably two to four months of age, quarreled frequently with each other. They squealed, bit, stamped their front feet, rushed at each other, backed at each other with the tail elevated, and occasionally sprayed each other. They often tried to steal food from each other through acts of stealth; large objects were used as a screen to hide the advance.

The mother displayed one distinctive form of food harvest. When offered a raw and intact chicken egg, she held it against her chest with both front paws. Nearly simultaneously she arched her back, raised the front half of her body 10 to 20 cm above the ground, and threw the egg violently backwards between her legs. She then

turned around and snuffled after it. The egg was thrown-rolled 50 to 150 cm; if the egg was unbroken, after she located it, she repeated the process in an apparently random direction. Eventually she hit something hard with the egg and it cracked or broke, whereupon she ate the contents. The throw was never directed specifically at the large rocks in her vicinity. For about a month, she broke 1 to 3 chicken eggs nightly in this manner. The kittens did not acquire this behavior during the time we observed them. Neither the mother or a kitten could break a chicken egg with its mouth. Similar behavior in breaking hard food objects has been recorded for mongooses (Eisner and Davis 1967, Eisner 1968) and more northern skunks (Stebler 1938, King 1944, Verts 1967). In a study of predation on artificial bird nests, while using chicken eggs as prey in a habitat similar to Santa Rosa but about 100 km to the south (Janzen 1978), we sometimes encountered the eggs from a clutch scattered to distances of one to three m from the nest and only some of them broken; after watching this hooded skunk break eggs we now suspect that a skunk was the predator in these cases.

The mother skunk and at least three other individuals were observed to forage for insects at a light at the house, and other hooded skunks were seen foraging for insects at another light about 3 km away in the forest.

While we were able to frequently observe the skunks near the house and other buildings in the Park administration area, we also occasionally observed the same species crossing roads at night in other parts of the Park, 5 to 12 kilometers from areas of human habitation. The habitats in which the hooded skunks were encountered were the barren ash-covered plain of a newly burned abandoned pasture, grassland covered with 2 m tall grass, forest-grassland edges, deciduous forest, riparian evergreen forest, roadsides, and human habitations such as farmsteads and the Park administration area.

Acknowledgements

A. Gardner examined and identified the specimen of *M. macroura* in the U.S.N.M. D. Wilson encouraged the study. NSF DEB 80-11558 and Servicio de Parques Nacionales de Costa Rica supported the study. An anonymous reviewer aided with references.

Resumen

El zorrillo hediondo, *Mephitis macroura* se registra por primera vez, en Costa Rica. Existe una población de estos animales en el Parque Nacional Santa Rosa y vecindades, hasta el sur de Liberia. Notas breves sobre el comportamiento de *M. macroura* en Santa Rosa, con énfasis en el comportamiento de romper huevos de gallina, tirando los huevos hacia atrás.

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Fig. 1. a) Adult female *Mephitis macroura* selecting food from a 22 cm diameter bowl; b) same animal, lateral view. She is feeding on a chicken egg she has recently broken by throwing it between her legs. The white rim on the top of her ear is scar tissue and the grayish material on her forehead is food refuse (all fur on the head was black). November 1979, Santa Rosa National Park, Guanacaste Province, Costa Rica.