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Unusual Foraging Behavior by an Eastern Gray Squirrel (Sciuridae: Sciurus carolinensis) in an Urban Habitat

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NOTE

Unusual Foraging Behavior by an Eastern Gray Squirrel (Sciuridae: *Sciurus carolinensis*) in an Urban Habitat

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Abstract

A unique observation of foraging by an Eastern Gray Squirrel (*Sciurus carolinensis*) is described. The squirrel was observed consuming insects that had been impacted on automobile radiators

On the evening of 11 August 1998 (ca. 8:20 pm Central Standard Time), a gray squirrel (*Sciuris carolinensis*) was observed in the parking lot of a Minneapolis, Minnesota, Econolodge hotel consuming insects it extracted from car radiators. The diet of urban squirrels is highly diverse[1] and carnivory, including insectivory, in squirrels is well documented[2]. However, to our knowledge, this unique foraging strategy involving automobiles has not been reported for squirrels.

The squirrel was a female with swollen mammary glands, indicating she may still have been nursing young. Gray squirrel litters are typically born in summer and weaned in October.[3] Callahan[2] (and references therein) suggested that for females carnivory is due, in part, to dietary needs brought about by pregnancy or lactation or to seasonal shortages of other foods.

The slow gait and unusual course of the squirrel initially led the senior author to suspect it was ill or disoriented. After observing the animal for approximately two minutes, it was determined that the squirrel's behavior was part of an intentional foraging strategy. The squirrel walked to and from vehicles in the hotel's parking lot, stopped at the front of each vehicle and inspected the front underside near the radiator. Vehicles backed into parking spaces were not oriented in the proper direction for the squirrel's foraging and were apparently of no interest. The squirrel was only interested in the front underside radiator area of the vehicles.

Since this was an opportunistic observation, detailed data on the number of cars present, inspected, or bypassed were not collected. Specific data, however, were collected regarding the squirrel's feeding. In one instance, the squirrel was observed climbing into the front undercarriage of an automobile (late model Oldsmobile 98). It then exited the car to the ground where it was observed eating. Closer examination revealed that the squirrel was harvesting insects impacted on the radiator. In repeated forays at this vehicle, the squirrel visually scanned the radiator and climbed inside the bumper area to probe the radiator with its mouth and forelimbs. Upon finding a suitable insect, the squirrel extracted it and returned to the ground to eat it. Though not collected or identified by us, several large, winged insects were observed being consumed as this process was repeated.

The squirrel was selective in retrieving insects from the radiator. Apparently, some insects were too degraded to warrant retrieval or were too embedded to be retrieved successfully. Additionally, not all insect parts were consumed. Observed behavior indicated that feeding was concentrated on the main body segments of the insects. Presumably, these provided more nutritional value.

After scavenging from the radiator of the Oldsmobile, the squirrel inspected the front under carriage of an Isuzu Trooper, but did not extract any insects from the vehicle. The under carriage was much higher and the squirrel did not attempt to leap into the radiator area for closer inspection. At this point, the squirrel may have been disturbed by attempts to photograph it, and ceased its foraging. The total time of observation was approximately 20 minutes.

This note is meant to inform researchers of this unique urban foraging strategy that, to our knowledge, has not been reported for squirrels. Future studies of this behavior in the context of optimal foraging theory[4-9] could be particularly insightful.

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