

UNUSUAL FORAGING STRATEGY BY THE GREATER ROADRUNNER

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The Greater Roadrunner (*Geococcyx californianus*) feeds on a remarkable diversity of animals including rodents, birds, reptiles, and arthropods (Hughes 1996). Often the species demonstrates surprising adaptability in acquiring prey: individual roadrunners have been observed capturing insects by turning over surface objects (Jaeger 1947), hiding near artificial feeders to take hummingbirds (Spofford 1975), and removing passerines from mist nets (Barclay 1977).

At approximately 0800 on 4 August 1998, while hiking near the mouth of Sabino Canyon, Tucson, Arizona, I witnessed an adult roadrunner chasing band-winged grasshoppers (*Trimerotropis* sp.) on a rarely used paved access road. Though I have witnessed roadrunners foraging on numerous occasions, I have never seen a roadrunner active for so long a time. Over a period of approximately 1 hour, the bird serially rushed upon grasshoppers resting on the pavement. Hunting bouts lasted between 5 and 10 minutes with the roadrunner standing and resting on the pavement for 1 or 2 minutes between bouts. Its hunting path followed the east–west direction of the road, and the bird moved continually away from my position in a zigzag manner. In most instances the roadrunner rushed several meters toward a resting grasshopper, attempting to capture it on the ground. If unsuccessful, it sometimes made an additional capture attempt after the grasshopper took flight. Of the 150 capture attempts that I counted, the roadrunner was successful 22 times, for a success rate of about 15%.

On most capture attempts the roadrunner lowered its head and ran directly toward each grasshopper, then snapped at the insect with its mandibles. If it missed, the roadrunner would visually follow the insect for 1 or 2 seconds and occasionally lunge a final time while the prey was airborne. Captured grasshoppers were bitten 3 to 6 times, then tossed a few centimeters in the air, caught in the mandibles, and swallowed.

The band-winged grasshoppers in this observation possessed a mottled and speckled pattern consisting of the colors tan, rufous, white, and gray that made them next to impossible to see when they were resting on the desert soils of the region. On the dark gray paved roadway, however, the grasshoppers were quite conspicuous and could be easily censused. They were unusually abundant with about one grasshopper per 2 m² of road surface. I assumed that the grasshoppers were attracted to the pavement in the relatively cool early morning hours because of its warmth.

On natural terrain the roadrunner typically captures a band-winged grasshopper after it has accidentally startled the insect (pers. obs.). The grasshopper immediately takes flight, whereupon the roadrunner lunges for the insect in midair or captures it on the ground after it has landed. The roadrunner does not appear to see a grasshopper until it moves—as suggested by roadrunners often making misdirected initial capture motions.

The presence of this, and perhaps other, paved roadways can allow roadrunners to develop a novel, more direct, foraging strategy for hunting grasshoppers. This is significant since grasshoppers are one of the roadrunner's most important food resources (Bryant 1916, Parmley 1982).

NOTES

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