

## APPARENT COMMENSALISM OF A RED-TAILED HAWK AND BADGER

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Hunting associations between the American Badger (*Taxidea taxus*) and Coyote (*Canis latrans*) have been well documented (Aughey 1884, Hawkins 1907, Cahalane 1950, Lehner 1981, Kiliaan et al. 1991, Minta et al. 1992). Coyotes have been observed capturing rodents flushed out of burrows by badgers (Minta et al. 1992).

Accounts of badgers being exploited in a similar fashion by birds of prey are not well documented. Phillips et al. (1964:23) wrote, without specific reference, that in Arizona it is “well known” that both Ferruginous (*Buteo regalis*) and Red-tailed (*B. jamaicensis*) hawks associate with badgers to capture flushed prey. In West Texas, Wauer and Egbert (1977) described a Harris’s Hawk (*Parabuteo unicinctus*) that followed a badger overturning cow dung piles. Though feeding was not actually observed, they believed the badger and hawk were seeking insect prey found beneath the piles. In this note I describe another possible instance of hawk–badger commensalism.

At 13:20 on 8 March 2020, while driving on Gartersnake Road, 0.4 km south of Carlsbad Caverns National Park, New Mexico, I observed a Red-tailed Hawk at approximately 200 m away flying toward me. I am accustomed to seeing this species flying overhead, often gliding in large circles, searching for prey, so the hawk’s movement on this afternoon was unusual in that it was flying slowly, not more than 5 m above the ground and in a straight line perpendicular to the road on which I was driving.

I stopped my vehicle and watched the bird approach the roadway. When it was approximately 20 m from the road, an adult badger appeared on the road shoulder about 25 m beyond my vehicle. The badger was traveling in front of the hawk and in the same direction. The badger moved to the middle of the paved roadway and stopped. It turned its head and stared at me, perhaps because it heard the running engine. (Before the badger appeared, I had stopped to view the hawk from the vehicle.) At the moment the badger halted, the hawk arrived at the road shoulder and immediately perched upon a fence post within 7 m of the badger. The badger glanced backward at the hawk, then looked back at my vehicle. After about 10 seconds, the badger trotted off the road and continued heading southwest in a zigzag pattern.

Once the badger left the road, the hawk resumed flying 5 m above the ground, staying approximately 20 m behind the badger. The hawk continued following the badger for at least another 150 m, until I could no longer see the badger with binoculars. The hawk continued flying slowly in the same direction until it disappeared below the horizon.

Annual monitoring of a research site brings me to Carlsbad Caverns National Park for three consecutive days each year. Although I have observed red-tails in the area on every visit, this was the first time I have observed a live badger. The site lies at the edge of the Chihuahuan Desert. Creosote bush (*Larrea tridentata*), ocotillo (*Fouquieria splendens*), lechuguilla (*Agave lechuguilla*), and Torrey yucca (*Yucca torreyi*) are conspicuous plants in the immediate area. In my experience, vehicles traverse Gartersnake Road only a handful of times each day. On 8 March a slight breeze persisted for most of the daylight hours. The sky was clear and the maximum temperature on that day was 18°C (<https://w2.weather.gov/climate/xmacis.php?wfo=maf.NOAA>).

On the basis of the many observed coyote–badger interactions, as well as the observation of Wauer and Egbert (1977), I hypothesize that the Red-tailed Hawk

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was following the badger on the chance the badger might flush prey, presumably while excavating a rodent burrow. This seems the most likely explanation for the hawk's behavior. At no time did the badger seem disturbed by the hawk's proximity, nor did the hawk behave in an aggressive manner toward the badger. An adult badger can weigh up to 12 kg and is known as an aggressive predator (Reid 2006). This may explain why I was unable to locate any records of Red-tailed Hawk predation on badgers.

This account may stimulate other observers to focus on the kind of unusual red-tail flight behavior I have described. An actual observation of a badger flushing prey that is then captured by a Red-tailed Hawk would be an interesting example of vertebrate commensalism. Beyond the specific instance I describe, any kind of unusual animal behavior may reflect patterns that seem novel but, in fact, may be significant to the survival of one or both species.

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