

INTERACTIONS BETWEEN A HARRIS' HAWK AND A BADGER

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On 15 June 1976 the authors observed interactions between a Harris' Hawk (*Parabuteo unicinctus*) and a Badger (*Taxidea taxus*) that have not previously been reported. The incident occurred along State Highway 385, 51 km south of Marathon, Brewster County, Texas, at 0745 on a clear calm day. The area is open ranchland dominated by scattered Honey Mesquite (*Prosopis juliflora*) and Creosote Bush (*Larrea tridentata*). A metal watering trough and windmill are situated 25 m off the west side of the highway. Although no cows were present at the time, the ground was trampled and bare, except for the numerous dung piles within a radius of approximately 20 m of the trough.

Initially we were attracted to the scene when the Harris' Hawk flew from the road shoulder to the area of the watering trough as our car approached. We stopped and got out of the car to view the hawk through binoculars. It was then that we saw the Badger.

The Badger was methodically rooting under piles of cow dung and digging into the loose soil. By this time the hawk was standing on the ground near and watching the Badger; the latter appeared to be ignoring the hawk completely. The Badger moved from one dung pile to another, followed by the hawk, which examined the overturned dung piles as soon as the Badger moved on. At one time the hawk was no farther than 46 cm from the Badger. At another time the hawk flew to the top of a fence post directly above the busy mammal. We watched these activities for approximately 12 minutes while the Badger and hawk moved a distance of about 150 m. Not once did the Badger seem to be disturbed by the presence of either the hawk or us.

We later examined the piles of cow dung overturned by the Badger and also others that had not been disturbed. We discovered several arthropods beneath the undisturbed piles but none on the ground surface under the disturbed piles. Although we did not observe the hawk take any prey, we surmise that it searched for arthropods missed by the Badger. Pache (Wilson Bull. 86:72-74, 1976) found arthropods to be a significant part of 63 Harris' Hawk pellets examined in southeastern New Mexico.

A similar situation with a Badger and Coyote (*Canis latrans*) was described by Dobie (The Voice of the Coyote, Univ. Nebraska Press, 1961) in which a Coyote waited at a wood rat (*Neotoma* sp.) nest entrance while a Badger rummaged through the opposite side of the nest. Phillips et al. (The Birds of Arizona, Univ. Arizona Press, 1964) stated that the Ferruginous Hawk (*Buteo regalis*) and Red-tailed Hawk (*B. jamaicensis*) "have a reputation in Arizona for perching low near a working Badger in order to catch what prey slips past the digging mammal."

The relationship between the Harris' Hawk and the Badger might be that of mutualism, when both animals benefit from the association. However, unless the hawk acted as a lookout, it is doubtful if the Badger received any benefit from the hawk. Opportunism is a more likely relationship. The Harris' Hawk had learned to use the Badger's feeding habits for its own benefit.

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