

Hawks and owls—indeed all predators—prey heavily on forms of life that are both acceptable as food and readily obtainable. Perry and Rogers (*loc. cit.*) ascertained that in pellets gathered by them “from 50 ft. outside to 50 ft. inside” a cave in Major County, Oklahoma on 30 July, 13 August, and 15 September 1963, “bats remains predominated.” The fact that Taylor (1964, *J. Mammal.*, 45: 300) found bat remains in only one of 119 Barn Owl pellets gathered by him at caves in southwestern Oklahoma probably indicated not that bats were scarce, difficult to catch, or unpalatable, but that other forms of life were more easily obtainable.

3433 N. W. 26th STREET, OKLAHOMA CITY, OKLAHOMA 73107, 15 AUGUST 1971.

PREDATION BY HAWKS ON BATS AT VICKERY BAT CAVE

BY WARREN D. HARDEN

ON 16 AUGUST 1971 my wife Mary Ann, my mother Merle L. Harden, and I visited Vickery Bat Cave in Major County, Oklahoma, to watch the evening bat-flight. Arriving at about 19:00, we put to flight a molting adult Red-tailed Hawk (*Buteo jamaicensis*) that was perched in a tree just above the cave mouth. The hawk flew across the narrow ravine below the cave, disappearing over a ridge to the southwest.

On investigating the area, I decided that a narrow, heavily eroded ledge directly above the cave mouth would hardly serve as a perch for any large avian predator such as a Great Horned Owl (*Bubo virginianus*)—a species known to feed extensively on bats (Taylor, 1964, *J. Mammal.*, 45: 300). I saw no owls and found no owl pellets about the cave mouth. I did not go into the cave.

The bat-flight began at sundown (20:00). The bats were all dark brown except for one pure white individual that we noted soon after the flight started. I believe the bats were all of one species—the Mexican Free-tail (*Tadarida brasiliensis*)—but other species might, so far as I know, have been present.

When, at about 20:05, the vanguard of the bat-flight had reached a point well above the horizon south of us, two Swainson's Hawks (*Buteo swainsoni*) appeared over the hill to the northwest. The leading hawk was screaming, as if excited at sight of the bats. It glided into the side of the bat-flight and, without changing speed or course, snatched a bat in its talons and retraced its flight northwestward. The second hawk, using the same tactics, easily caught a bat and followed the first hawk over the hill.

At about 20:07 one of the Swainson's returned, caught a bat on its first attempt, and flew back northwestward. At about 20:10 both Swainson's returned. This time one hawk missed on its first attempt, but quickly turned and caught a bat with another try. The second hawk also caught a bat, which it transferred to its bill midair. Suddenly, changing course slightly, it caught another bat in its talons. Carrying the two bats—one in its bill, the other in its claws—it fol-

lowed the first hawk over the hill northwestward. At about 20:15 one of the Swainson's returned to make a last catch.

Meanwhile, the molting Red-tail reappeared from the southwest. Using the same technique as that of the Swainson's Hawks, it made five attempts to catch a bat. Every attempt was unsuccessful. After its last attempt it flew off eastward.

Also while we were watching, a Sparrow Hawk (*Falco sparverius*) appeared south of the ravine where the mainstream of the bat-flight was well above ground. The hawk captured a bat using the Swainson's technique and, while hovering, transferred its prey momentarily to its bill (perhaps killing it thus), and flew swiftly eastward with the bat in its talons.

When, at 21:30, it had become so dark that we could not see the bats at all clearly, we left. At that time bats were still flying from the cave.

Certain points about our observations should be stressed. Every hawk that we observed used the same capture technique. The two Swainson's Hawks and the Sparrow Hawk were successful in capturing bats; the Red-tailed Hawk was entirely unsuccessful. Not once did we see a hawk stoop *through* the bat-flight. Nowhere in the area did we see a Marsh Hawk (*Circus hudsonius*). We saw no owl either before or after dark.

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THE WESTERN LIMITS OF THE PILEATED WOODPECKER'S RANGE IN OKLAHOMA

BY LOUIS E. MCGEE AND FRANCES NEELD

IN THE SOUTHERN half of the United States the Pileated Woodpecker (*Dryocopus pileatus*) is chiefly an eastern bird; it is locally common southward to the Gulf of Mexico. In the western United States, on the other hand, it is merely "casual" as far south as "southeastern Utah (Bluff), northern Arizona (Kaibab Plateau), and southwestern New Mexico" (1957, AOU Check-list, p. 315). Its range in Oklahoma very nearly coincides with that of the "Eastern Forest" (see map of "Forest Regions of the United States," 1948, U. S. Dept. Agric., Forest Service), the westernmost records for it being from southwestern Major County (one seen 6 April 1955 among cottonwoods along the North Canadian River near Chester by J. L. Steele, Jr.) and from Comanche County, where J. H. Gaut collected a female specimen (U. S. National Museum 195,664) on Mount Scott in the Wichita Mountains in February 1902, and where Gaut saw "a few . . . along Medicine Creek" (Nice, 1931, *Birds of Oklahoma*, p. 112) between 11 March and 28 May 1904 (Nice, *op. cit.*, p. 43).

So far as we know, the Pileated Woodpecker has not been seen in Comanche County since Gaut's day, this despite continued efforts of the Lawton-Fort Sill Bird Club to find it during the past four years. There are, however, two recent