

of nest construction in the area. On 5 June the egg lay in the same place with nothing changed except that a small hole had been poked in the shell. On 11 June an active nest containing three eggs was found within 30 m of the spot where the egg had been dropped. When the nest was rechecked on 13 June all eggs were gone; determination of the nest chronology was not possible. Therefore, it could not be verified that this nest was active when the egg was dropped. However, assuming a nest was completed within a few days of when the female was seen carrying nesting material, this nest would have been active at that time. The clutch would have been complete by about 5 June, and hatching would have occurred about 15 June.

We believe that a normal, undisturbed nest existed in the vicinity of the dropped egg, probably the nest which was located on 11 June. When the egg was dropped, the observer was positioned directly between the female and the nest which was subsequently found. It seems likely that the female was inhibited from approaching even for the purpose of depositing an egg. To our knowledge this is the first reported incidence of a Horned Lark dropping an egg or of any species dropping an egg due to voluntary nest avoidance.

The selective advantage of abnormal egg deposition remains unclear, but given the circumstances here the strategy employed by this Horned Lark seems beneficial. In that predation accounts for such a great loss among ground nesting species (in this study 70% of eggs and nestlings produced was lost to predation) any way of avoiding nest betrayal is likely to be advantageous.—P. B. WACKENHUT, 105 Conneaut Lake Rd., Greenville, Pennsylvania 16125; KENNETH A. STRAIT, 302 Emmans St., Flanders, New Jersey 07836; AND ROBERT C. WHITMORE, Division of Forestry, West Virginia Univ., Morgantown, West Virginia 26506. Accepted 12 Jan. 1983.

Wilson Bull., 95(3), 1983, pp. 490–491

Red-bellied Woodpecker responses to accipiters.—While studying Red-bellied Woodpeckers (*Melanerpes carolinus*) at Archbold Biological Station, 13 km S of Lake Placid, Highlands Co., Florida, I saw three hawk attacks on this species. The first occurred in an open grove of citrus and other exotic trees; the others were in xeric pine-oak woodlands.

At 15:07 on 11 December 1981, I heard a Red-bellied Woodpecker giving “scream” calls. When I approached, I saw an immature Sharp-shinned Hawk (*Accipiter striatus*) flying 4–5 m above the ground, clasping the woodpecker’s legs in its talons. Three sec later the birds broke contact and the woodpecker flew to the nearest tree. Until their separation the woodpecker screamed continuously. When first heard the calls seemed to originate at ground level, suggesting that the birds were not airborne. MacRoberts and MacRoberts (Ornithol. Monogr. 21, 1976) heard an Acorn Woodpecker (*M. formicivorus*) give “scream” calls continuously when it was caught by a Cooper’s Hawk (*A. cooperii*).

A “scream” call is also given by Red-bellied, Red-headed (*M. erythrocephalus*), Pileated (*Dryocopus pileatus*), and Hairy (*Picoides villosus*) woodpeckers, Yellow-shafted Flickers (= Northern Flickers) (*Colaptes auratus*) (Norris and Stamm, Bird-Banding 36:83–88, 1965), and Acorn Woodpeckers (MacRoberts and MacRoberts 1976) when handled during banding. A typical sound spectrograph (Kay Electric Company Sonagraph, wide band-pass filter) of the vocalizations recorded (Sony Cassette-Corder TCM-121) while banding an adult female Red-bellied Woodpecker is shown in Fig. 1. While banding, I was mobbed by Scrub Jays (*Aphelocoma coerulescens*) in apparent response to the “scream” calls, but mobbing behavior was not employed by nearby conspecifics.

On 16 December 1981 at 13:32, a male and female Red-bellied Woodpecker were perched in trees about 25 m apart when I observed a third Red-bellied Woodpecker about 75 m away

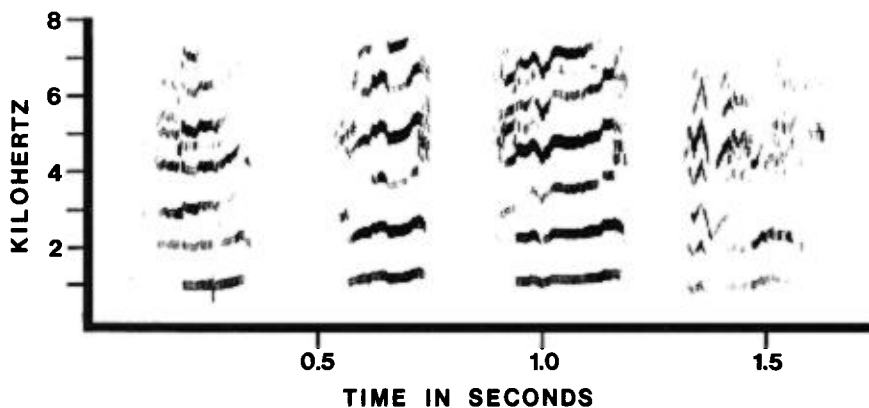


FIG. 1. Sound spectrograph of typical "scream" calls given by a Red-bellied Woodpecker while being banded.

flying in an erratic manner and giving rapid, agitated *cha* calls (Kilham, Wilson Bull. 73: 237-254, 1961) before disappearing into the understory. Seconds later, a Sharp-shinned Hawk flew from the understory near this bird. It appeared that the woodpecker had eluded capture through evasive flight before reaching the dense undergrowth. The hawk headed toward the pair. As it approached, the birds hitched to the underside of their perches where they remained motionless as the hawk flew overhead and out of sight. Both birds then returned to their former positions.

On 14 April 1982 at 07:07, I watched a male Red-bellied Woodpecker enter a nest cavity as his mate flew to it, pursued by a female Cooper's Hawk. The female woodpecker landed momentarily at the cavity entrance, scrambled to the opposite side of the trunk, then flew erratically toward the dense understory while uttering agitated *cha* calls before disappearing quietly into the vegetation. The hawk gave up the chase when the woodpecker disappeared, flew to a nearby tree, perched 10 sec, then flew from sight. The female woodpecker was next observed 18 min later giving *kwirr* calls (Kilham 1961) from a nearby tree.

Kilham (Wilson Bull. 86:35-42, 1974) reported erratic flight by red-bellies and other woodpecker species in the apparent absence of predators. He predicted aerial predator avoidance through erratic flight and suggested that his observations represented play-training for future events. My observations confirm his prediction.

Acknowledgments.—I thank L. L. Short, L. Kilham, J. N. Layne, and G. E. Woolfenden for their helpful comments. Fieldwork was supported by a New York State University Fellowship and a grant from the Chapman Memorial Fund of the American Museum of Natural History.—LILIAN J. SAUL, Dept. Biology, Queens Coll., Flushing, New York 11367. (Present address: Archbold Biological Station, Route 2, Box 180, Lake Placid, Florida 33852.) Accepted 1 Nov. 1982.