

Bluestem (*Andropogon scoparius*), 85 per cent contained Switchgrass (*Panicum virgatum*), 69 per cent contained Bedstraw (*Galium aparine*), and 38 per cent contained Peppergrass (*Lepidium virginianum*). Various kinds of tree leaves were used as reinforcing materials in all of the nests. Paper, rootlets, and other grasses were also used occasionally. Thirty (49 per cent) of the 61 nests that contained eggs hatched at least one nestling, and 18 (30 per cent) fledged at least one young. This is considerably lower than the average nesting success of 49 per cent reported by Nice (*Auk*, 74: 305-321, 1957) for altricial birds in general. Of the 210 eggs that were laid, 80 (38 per cent) hatched, and 52 (25 per cent) produced fledglings. Nineteen (31 per cent) of the nests were parasitized by the Brown-headed Cowbird (*Molothrus ater*), but none of the cowbird eggs hatched. [Contribution No. 340 of the Oklahoma State University Zoology Department.]—THOMAS G. OVERMIRE, *Stillwater, Oklahoma*.

Catbird Pair Accepts Cowbird Egg and Apparently Raises Young Cowbird.—

The Catbird, *Dumetella carolinensis*, has been listed as a very uncommon victim and reported indefinitely to have raised a young Brown-headed Cowbird, *Molothrus ater* (Friedmann, *The Cowbirds*, 1927). Observations by Berger (*Jack Pine Warbler*, 29: 115-117, 1951) and Nickell (*Wils. Bull.*, 70: 286-287, 1958) confirm a low percentage of parasitism and a rare acceptance of the egg and fledging of the young cowbird. We have but one instance of previous parasitism of this species in our own records covering a span of 30 years. In this instance the cowbird egg disappeared in a few days, perhaps ejected by the host.

During the 1960 nesting season only one pair of Catbirds occupied territory on our property, which in some seasons has supported two pairs. This nest was discovered at 08:15 on 5 June by David McGeen. It was one meter from the ground, well concealed and in darkness in a multiflora rose hedge. At this time it contained four Catbird eggs and one cowbird egg. By 08:00 the next morning the cowbird egg had hatched, the Catbird eggs being unchanged. The following morning, 7 June, the nest was found to be empty and the lining displaced to one side. A raccoon, *Procyon lotor*, was the suspected predator.

No attempt was made to locate a subsequent nest. However, on the morning of 8 July one of the adult Catbirds was feeding a recently fledged cowbird with a short, stubby tail. The Catbird also came to our suet feeder, and repeatedly fed the young cowbird bits of suet. In the next several days three young Catbirds were also noted being fed by the adults. No other adult birds demonstrated any interest whatsoever in the juvenile cowbird. On 11 July a group of three courting cowbirds, containing at least one male, was noted on the area! At 07:30 on 13 July we observed at close range the young cowbird perched on the porch roof outside our bedroom window. The Catbird fed it five times in as many minutes. While the Catbird was away foraging, an insect flew fairly close but out of reach in a zigzag flight. The cowbird followed the insect's movement, cocking its head to follow it up and away. By this time the tail was much longer, and its appearance as well as its flight ability denoted its added age out of the nest.

On 16 July a pair of Song Sparrows was noted feeding two stubby-tailed, freshly fledged cowbirds. The three were subsequently visitors to our seed feeding area, and one was banded on 30 July, although by this time their appearance was more similar and we were not certain whether it was the one apparently raised by the Catbird or one of the two apparently raised by the Song Sparrows.

Subsequent conversation with Nickell brings out the fact that a great degree of darkness existed at the nest in which acceptance of an egg and subsequent fledging of

a young cowbird were observed. Hence these records still may not indicate a greater degree of tolerance than usual but only an inability to recognize the foreign egg in nests in extremely dark locations.—DANIEL S. and JEAN MCGEEN, 707 Community National Bank, Pontiac, Michigan.

Egg Teeth and Shell Rupture of the American Woodcock.—The method of hatching and the presence or absence of an egg tooth on the American Woodcock (*Philohela minor*) was broached by Wetherbee (*Bird-Banding*, 30: 119–121, 1959). A clutch of four partially incubated eggs was contributed to us by Dr. William G. Sheldon. These eggs hatched one week after receipt. All four chicks had egg teeth on both upper and lower jaws. The one on the upper jaw was typical, but the egg tooth of the lower jaw appeared as a rounded, smooth, calcareous deposit only barely raised from the surface of the bill, and was located at the extreme tip of the bill. The teeth were shed between the second and third day after hatching.

The hatchlings' method of breaking out of the shells was unique in our experience, and explained the longitudinal slit on one side of the egg previously described. Instead of lifting off a nicely cut operculum from the obtuse end of the egg, the neonate of this species tended to puncture, with the egg teeth, a relatively large pip hole near the obtuse end of the shell. The tip of the bill then gained purchase on the rim of the hole, and leverage was facilitated for the action of the muscles of the neck. The spinal processes of the cervical and thoracic vertebrae presented a noticeable ridge, which actually dehisced the egg shell longitudinally from a point near the puncture to an equatorial point where the head of the embryo disappeared under the right wing. This method of hatching was abetted by the relatively inflexible nature of the woodcock egg shell. Thus, when the embryo convulsed, the shell ripped along the line of contact with the spinal processes, rather than along the internal pip line. The shell seemed to rip, rather than fracture, as with other species.

Wetherbee has hatched eggs of the Willet (*Catoptrophorus semipalmatus*), in which the neonates emerged in a somewhat similar manner. The hatched Willet eggs had two or three longitudinal slits, but these were more spiraled than in the woodcock. Also, an additional opercular piece was more common in the Willet than in the woodcock. [This is a contribution of the Massachusetts Cooperative Wildlife Research Unit supported by the University of Massachusetts, the Massachusetts Division of Fisheries and Game, the United States Fish and Wildlife Service, and the Wildlife Management Institute.]—DAVID KENNETH WETHERBEE, *Department of Poultry Science*, and L. M. BARTLETT, *Department of Zoology, University of Massachusetts, Amherst, Massachusetts*.

Barn Swallows Nesting in the Mouth of a Cave.—On Monday, 3 July 1961, T. Kenneth Ellis, of Hot Springs, Virginia, and I found a dozen or more occupied nests of the Barn Swallow, *Hirundo rustica erythrogaster*, on the walls of a cave at the Sinks of Gandy in Randolph County, West Virginia, about three km (two miles) north of the Pocahontas County line. Here Gandy Creek flows into a large, domed opening in the hillside, disappearing and coming out again approximately five km (three miles) to the north. The nests are fastened to small ledges in the roof, from three to seven meters (10 to 20 feet) inside the opening. Professor Maurice Brooks tells me that swallows were nesting here when he visited the place some years ago. This seems to be one of the few remaining nesting sites of the primitive type. Abandoned houses and little-used barns are available in sight of the spot.—J. J. MURRAY, 6 Jordan Street, Lexington, Virginia.