

The nest was empty; an adult and a fledged juvenile were observed feeding about 25 yards north of the bridge. My next visit to the area was made on August 4 with Stewart; we were unable to locate any phoebes.

There were several other small bridges in the southwestern part of Caddo Parish, all within about six miles of this nest site, which were visited after the discovery of this breeding pair. No phoebes were observed at any of these bridges. A possible explanation is that the bridge which was used differed from the other bridges in that access to the underside was not partially obstructed by nearby grass or shrubbery.—HORACE H. JETER, 4534 Fairfield Avenue, Shreveport, Louisiana, December 27, 1956.

Comments on wing-flashing and its occurrence in Mimidae with uniformly colored wings.—At least two species of mockingbirds without wing patches are known to flash their wings in the manner characteristic of the Common Mockingbird (*Mimus polyglottos*). Halle (1948. *Wilson Bull.*, 60: 243) noted the behavior in the Calandria Mockingbird (*M. saturninus*) in Argentina, and Haverschmidt (1953. *Wilson Bull.*, 65: 52) in the Graceful Mockingbird (*M. gilvus*) in Surinam.

My own observation on this last species on July 24, 1956, near San Cristobal de Las Casas, Chiapas, Mexico, where the resident race is *M. gilvus gracilis*, parallels Haverschmidt's. While studying birds with Mrs. Edna W. Miner along the Rio Amarillo in the vicinity of the Sumidero, I saw one of several Graceful Mockingbirds repeatedly flash its wings with the same jerky movements used by *polyglottos* in my yard in Oklahoma. This individual, foraging over an area of heavily grazed pasture grass, stopped now and then to flash its wings. It seemed to me that movements of its blackish wings against the light gray body were only a little less arresting than the flickering of white wing patches in the Common Mockingbird.

Halle suggested that the performance by mockingbirds with uniformly colored wings would seem to deal a blow to the theory of wing-patch display. The same might be said of wing-flashing in the Brown Thrasher (*Toxostoma rufum*).

Mrs. Amelia Laskey's brief comment on an adult Brown Thrasher "opening and closing its wings while investigating something in a dark spot at the base of a yucca plant where it had been feeding" has already been reported by Sutton (1946. *Wilson Bull.*, 58: 206-209). The fuller accounts for this species given by Ruth Thomas (1952. "Crip, Come Home." pp. 55, 140-141) also bear further mention.

Mrs. Thomas watched four young Brown Thrashers, about 30 days out of the nest, attack a mouse. One of them "pecked at it, at the same time lifting and spreading his wings." Of an adult female attacking a dead snake, Mrs. Thomas wrote: "First walking up and down beside its sprawled length, she raised and spread her wings, and every few steps jumped in for a quick peck. She grew bolder and for a few seconds stabbed in fury, then resumed the wary walk and the deliberate wing-lifting . . ." When another adult female "flew down and spread her wings at the snake," it was driven off by the first thrasher.

The inference is strong that all these Brown Thrashers were performing in the same way as Common Mockingbirds, although the observers have not expressly termed it wing-flashing. Tomkins (1950. *Wilson Bull.*, 62: 41-42), however, definitely ascribes wing-flashing to this species but without fully describing the action. The foregoing items, together with others in the *Wilson Bulletin* (Gander, 43, 1931: 146; Allen, 59, 1947: 71-73; Wampole, 61, 1949: 113; Brackbill, 63, 1951: 204-206), furnish considerable discussion of function, motivation and the age-sex factors in wing-flashing. More-

over, they also show that there is some confusion as to what constitutes wing-flashing, even in *M. polyglottos*.

Until we arrive at a clear understanding of, and a more definitive name for, this special wing display of certain mockingbirds, the term *wing-flashing* becomes ambiguous when used without descriptive details. Thus one wonders whether the Mockingbird that used wing-flashing many times during its half-hour attack on a blacksnake was performing the very same motions seen in the foraging bird (Hicks, 1955. *Auk*, 72: 296-297). If certain wing movements of the Least Bittern (*Ixobrychus exilis*) while stalking its prey, and Roadrunner (*Geococcyx californianus*) while hunting grasshoppers (Sutton, *op. cit.*) are to be equated with the Common Mockingbird's formalized and precisely repeated wing action as it works its way across a lawn, then it would seem that certain of the African herons while fishing (Austin L. Rand. 1955. "Stray Feathers from a Bird Man's Desk," pp. 131-132), the Jacana (*Jacana spinosa*) in sexual display (Rand, 1954. *Wilson Bull.*, 66: 131), and many another species might be said to wing-flash.

Dilger (1956. *Auk*, 73: 325), for instance, designates as "Wing Flashing" both the single wing and the double wing displays that certain thrushes (*Catharus* and *Hylocichla*) make toward an opponent bird. Such displays, he found, were typically preludes to fleeing action by the performer. What, then, of balancing and comforting movements of the wings or the pronounced wing-flicking in such birds as Ruby-crowned Kinglets (*Regulus calendula*) and the redstarts (*Setophaga ruticilla* and *S. picta*)? Where should we draw the line?

Skutch (1950. *Condor*, 52: 225) evidently did not consider that the reactions of a Blue Mockingbird (*Melanotis hypoleucus*), again a plain-winged species, to a handkerchief, placed over its nest and young as an experiment, involved wing-flashing. After pulling on the cloth and causing it to fall to the ground, the bird "hopped all around it, at times spreading his wings, jerking it and attempting to remove it farther from the nest . . ."

I do not think for one minute that the White-winged Dove (*Zenaida asiatica*) which I flushed from her nest and young was performing wing-flashing when she landed heavily near my feet and, back to me, began walking away with rapid, continued, upright stretching and folding of her wings, angel-fashion, though the performance suggested nothing so much as "setting-up" exercises. It was plain enough that these were intention movements motivated by attack and escape drives, neither of which drives has been shown clearly to function in wing-flashing of mockingbirds.

The distinguishing feature in wing-flashing of mockingbirds, as I see it, and one that was entirely absent in the case of the White-winged Dove, and apparently also in the above-mentioned thrushes, is the way the wings are extended by degrees and are held momentarily at several positions along the arc of movement. In *Mimus polyglottos*, *M. saturninus* and *M. gilvus*, at least, the wings "open by hitches," so to speak. Roy Bedichek (1947. "Adventures with a Texas Naturalist," p. 202) says of *polyglottos*: "I have counted as many as five notches before the extension was complete."

Very likely this special action also occurs in young birds of the three mockingbird species mentioned above. Certainly it often is seen in young Common Mockingbirds recently out of the nest and in later stages of development (Michener and Michener, 1935. *Condor*, 37: 106; Sutton; Allen; Brackbill; Tomkins). Peyre Gaillard of Atlanta, Georgia, who has given particular attention to this activity in the Common Mockingbird, informs me that he has seen young birds just before venturing out of the nest move their wings in this peculiar way (letter, January 15, 1955). I myself once saw a large, well-feathered young bird stand high in the nest and twice make three slow, in-

cipient "hitches" of its wings while opening them only part way.

Possibly slow-motion pictures might reveal important differences in the wing-flashing of patterned and clear-winged Mimidae, or even in the Common Mockingbird when in feeding and in threat situations. I have not seen wing-flashing described for nestling Brown Thrashers. Any differences between their wing actions and those of nestling Common Mockingbirds might be especially significant.

An observation on *M. polyglottos* in Austin, Texas, in mid-November, 1946, seems worth including here, because of its unusual setting. A luxuriant growth of Moonflower (*Ipomoea Bona-nox*), trellised out a foot from the house and covering an entire wall and windows, was then untouched by frost. As I sat quietly near a window, my attention was caught by a Mockingbird wing-flashing inside the vines, about eight inches from the screen.

With its back squarely to me, the bird was opening and closing its wings with the usual jerky positionings, except that the vines seemed to hamper full extension at times and once almost threw the bird off balance. Apparently searching the foliage, the bird did not move about between flashings but instead turned its head from side to side with deliberation, sometimes peering up and down. Presently it jumped a few inches to a new footing in the vines and flashed the wings again.

This routine was repeated several times, though the bird did not progress over two yards. I noticed the wings were extended more fully as space permitted. Sometimes the movements were a mere "elbowing" in close quarters or extension was uneven when the wing toward the wall had freedom and the other was cramped by the vines. I saw no food taken, no other creature among the leaves. There was, I knew, a large Scaly Tree Lizard (probably *Sceloporus olivaceus*) that frequented the vines; but the bird did not center its attention on any particular spot and its general attitude suggested tranquillity. At no time did the bird seem to be aware of the observer.—LOVIE M. WHITAKER, 1204 W. Brooks Street, Norman, Oklahoma, January 26, 1957.

Brood capture involving conflict between two female Mallards.—In April, 1953, a banded female Mallard (*Anas platyrhynchos*), returned to nest on a small artificial marsh near Norwich, Chenango County, New York, where she had been released the previous July. She was one of 10 game farm-reared, six-week old Mallards, equally divided as to sex, that were liberated on the marsh. Her mate wore an unidentified band, but may also have been from the same release.

From her clutch of 12 eggs she brought off only four ducklings on or about May 18. Sometime between late May and June 9, she lost one of the four, but the remaining three survived and were able to fly by the middle of July.

Also on the marsh, an unbanded female Mallard was rearing a brood of 10, hatched about July 1. The second female and her brood regularly remained on the opposite side of the marsh, away from the brood of three.

When the young of the banded female were able to fly she was in flightless condition. Apparently she still had an unusually strong "brood instinct," for she fought the unbanded female for possession of the brood of 10. Actual conflict, initiated by the banded bird, involving extended pursuits that resulted in scattering of the young, was observed on three occasions. By July 25, one week after she was last seen with her original three, the banded female had taken over the brood of 10, and the dispossessed female apparently had been driven from the marsh. Nine of the 10 were reared by the foster-mother. They were observed to fly on September 7, when the banded female was caught. At this late date the bird was still flightless with primary feathers just breaking their sheaths.