## WING-FLASHING IN THE MOCKINGBIRD

## BY GEORGE MIKSCH SUTTON

THILE attached to the U.S. Army Air Force's Tactical Center during the recent war. I was stationed at Orlando, Florida, for several periods during both winter and summer months of 1944 and 1945. One of the commonest birds of the military base was the Mockingbird (*Mimus polyglottos*), a species I had seen repeatedly in the southwestern United States and Mexico but had never very closely studied. What interested me chiefly about the birds was their roosting habits, concerning which I hope to report later; their 'duelling,' on which I have published a brief note (Sutton, 1945); and their wingflashing-a puzzling and at times somewhat amusing practice of lifting and spreading the wings archangel-fashion while pausing between runs on the ground (Plate 8). So fully were the remiges spread that the white wing-patches flashed conspicuously, giving me at first the impression that some sort of courtship display was going on or that an attempt was being made to startle insects into flight. The latter concept has been discussed by Gander (1931), who says: "While watching a pair of Mockingbirds at Pensacola, Florida, in the spring of 1928, I was shown that this display may have a very practical use. These birds had a nest of young . . . and they frequently carried on the search for insects in a nearby field. As I watched I was impressed with the frequency with which the wings were opened and closed. Also, I noted that while the dull gray Mockingbird blended well with the background of earth and grass, yet when the wings were extended he became very conspicuous. The idea occurred to me that to an insect on the ground this sudden spreading of the contrastingly colored wings must be actually startling. With this in mind I watched with greater care and on several occasions noted that grasshoppers or similar insects flew from the grass as the bird made this display and that it quickly pursued them. After considerable observation I was convinced that in this instance, at least, the Mockingbird's striking wing pattern was of real assistance to it in finding insect food."

Wing flashing as a means of finding and capturing food is certainly a common practice among certain birds. My captive Road-runners (*Geococcyx californianus*) flashed their wings, or rushed about with wings spread, and thus made certain insects (especially grasshoppers) reveal themselves by moving (Sutton, 1922:15). I have reported on a Least Bittern (*Ixobrychus exilis*) which flashed its wings as it stalked its prey along the edge of a marsh in Michigan (Sutton, 1936). But with the Mockingbirds I am not sure that the flashing is part of a foodcatching procedure. Whatever its purpose may be, I have this to say of it: 1. I have repeatedly seen a Mockingbird flash its wings between short runs on the ground, usually in a rather open place, often on a



Adult Mockingbird flashing its wings Drawing by George Miksch Sutton of a specimen taken October 29, 1946, at Louisville, Kentucky, by Burt L. Monroe;

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lawn, but I have never seen one flash its wings while moving about through leafage *above* the ground. 2. I have observed the phenomenon frequently in summer, only infrequently in winter. A possible explanation of this is that Mockingbirds were more conspicuous in summer than in winter or that, the days being longer, I saw more of the birds in the evening hours after work at that season. Mrs. Amelia Laskey tells me, however (*in litt.*), that she has observed the phenomenon "commonly ... in the Nashville [Tennessee] area in summer, very rarely in winter." 3. I have seen young birds as well as old ones flashing their wings. This last phase of the subject is the one I wish to develop in the present paper.

The wing-flashing at times appears to be a modification or exaggeration of the wing-waving or wing-quivering which is so characteristic of many passerine (and some non-passerine) young birds when being fed. However, on August 19, 1945, when I was field officer of the day, hence obliged to stay at a certain desk throughout the daylight hours, I repeatedly observed a pair of Mockingbirds feeding their two 'whining' young just outside the window, and neither young bird flashed its wings at the approach of a parent bird or while being fed. The young were well fledged, their tails being 3 to 4 inches long. Most of what they ate they received directly from their parents, but between feedings they did some exploring on their own, and many times I noticed that as they ran about the shrub- and flower-bordered path they flashed their wings at clumps of leaves or tufts of grass, standing high and looking about expectantly after returning their wings to a folded position. Harold and Josephine R. Michener (1935:106) have reported similar behavior in three young Mockingbirds which they reared "at different times." Concerning the flashing they say: "We found with all of these babies that any new or strange object put into the cage caused this action. When released we observed one of them going about the vard lifting its wings over and over as it looked at eucalyptus caps, pebbles and all sorts of objects. This certainly was not an indication of fear because when afraid they behaved very differently."

Concerning the wing-flashing of a very young Mockingbird I have this to report. Late in the afternoon, on August 4, 1945, I heard the crying of a young Mockingbird which must have left the nest somewhat prematurely. It was standing at the base of a pine tree fully 30 yards from the nearest shrubbery. Its tail was about half an inch long. It stood uncertainly on its long legs, yet as it moved awkwardly forward through the short grass it lifted high and fully spread its stubby wings at each pause in a manner characteristic of the adult. In this case I believe it was lifting its wings, not at the grass, but at the world in general or at me. Certainly there was no strangely shaped object anywhere near it in the grass. Though obviously much too young to obtain its own food, it had, on leaving the nest, assumed a measure of adulthood—a transformation as definite as that which I observed in captive young Cardinals (*Richmondena cardinalis*), which for the first time in their short lives lifted their crests high and gave the alarm-cry of the adult the instant they climbed from the bowl of the nest up onto the rim (Sutton, 1941:164).

Concerning wing-flashing in very young Mockingbirds, Mrs. Laskey has given me (*in litt.*) some interesting information. A young bird which she was rearing some years ago, and which was not yet feeding itself, hopped from its box, which was on a high kitchen stool in a bright part of the room, fluttered to the floor, landed in a dark spot near some cupboards and "immediately opened and closed its wings in characteristic fashion."

Another young bird which Mrs. Laskey had taken from the nest on August 1, 1939, when it was approximately 9 days old, flashed its wings at gravel and dried insects placed in its large cage on August 17 (age: 3 to 4 weeks). It approached these "new" objects warily, flashed its wings, retreated, approached them again, and finally, after thoroughly inspecting them, hopped onto its perch to preen. Two days later it flashed its wings at a pink paper napkin placed tentwise in the cage, retreated as before, eved the unfamiliar object with obvious curiosity or suspicion, then advanced and pecked at the paper. On August 20, while still not feeding itself, it flashed its wings at a bright green dish and a piece of bread placed in its cage. Even after learning to eat by itself it flashed its wings at unfamiliar objects which it encountered in its cage, in a room in which it was allowed to fly about, or on the porch. Its attitude toward a buzzing cicada was particularly interesting. The forward thrusting of its wings (or of one wing only) was now exaggerated. Gaining courage from the failure of the cicada to respond in any special way to the flashing, it moved forward promptly and attacked the insect. It could hardly have learned this method of capturing prey during the few days of infant life it had spent with its parents.

A female bird, which Mrs. Laskey kept for a year, reacted similarly to unfamiliar objects. After this bird had learned to feed by itself, an unset mousetrap was placed in its cage. The bird approached the trap warily, flashed its wings, and grasped the trap in its bill.

On June 5, 1939, Mrs. Laskey observed an adult Brown Thrasher (*Toxostoma rufum*) opening and closing its wings while investigating something in a dark spot at the base of a yucca plant where it had been hunting food. These wing movements differed from those of the Mock-ingbird in that they were not given in an open area during brief pauses between runs.

From what I have reported above I believe we may safely conclude that the Mockingbird's wing-flashing is not solely, nor even primarily, a means of obtaining food. It is an instinctive gesture indicating wariness, suspicion, distrust. It is occasionally, but more or less accidentally, associated with the capture of food. Why it should be given only while the bird is on the ground I cannot say. WING-FLASHING

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## LITERATURE CITED

GANDER, FRANK F.

1931 May the color pattern of the Mockingbird's wings aid in finding insect food? Wils. Bull., 43:146.

MICHENER, HAROLD, and JOSEPHINE R. MICHENER

1935 Mockingbirds, their territories and individualities. Condor, 37:97-140. SUTTON, GEORGE MIKSCH

1922 Notes on the Road-runner at Fort Worth, Texas. Wils. Bull., 34:3-20.

1936 Food capturing tactics of the Least Bittern. Auk, 53:74-75.

1941 Crousty, the story of a Redbird. Part 1. Aud. Mag., 43:161-168.

1945 Autumnal duelling among Mockingbirds. Auk, 62:301.

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