

there are broad white edgings to the coverts and white edgings to the outer webs of the inner secondaries; ventrally, the under wing-coverts are extensively white and the inner webs of most remiges are narrowly edged with white.

The foraging behavior that I witnessed was precisely like that of *Mimus polyglottos*. The scrub-robin in question was feeding on the ground; it would run for a short distance and, upon coming to a halt, would elevate the tail almost to the vertical and would flash its wings. This procedure was followed by immediate foraging for a few seconds (presumably for insect food). Then the entire procedure was repeated. Wing-flashing took place about 25 times in 10 minutes. In every case the opening of the wings was accomplished in two movements, with a slight pause about half way through the opening procedure; the plane of the expanded wing during flashing varied from about 45° to 60° with reference to the horizontal.

Although I observed three other species of the genus (*E. leucoptera*, *E. hartlaubi*, and *E. quadringata*), as well as other members of the present species, in my three months in Africa, I noted no other case of wing-flashing. However, I was not watching for such behavior prior to the observation described, nor did I see any other scrub-robins subsequent to the one herein noted. It seems highly unlikely that the well-developed wing-flashing behavior noted represented an abnormal behavior pattern in *E. zambesiana*.

Hailman (*Wilson Bull.*, 72: 354-355, 1960) summarized wing-flashing observations and discussed relationships of the various patterns involved. He reported no known occurrence of wing-flashing in a nonmimid that was identical to that exhibited by the Mimidae in mechanics, in precision of execution, and in stability of pattern. Further, no subsequent report of mimid-type wing-flashing in a nonmimid has been forthcoming, as far as I am aware.

Judging from numerous personal observations of the behavior in Mockingbirds, I think that the wing-flashing of *Erythropygia zambesiana* that I witnessed was identical to that of the Mimidae. If this is so, then the observation is the first one of mimid-type wing-flashing in a nonmimid.—BURT L. MONROE, JR., *Museum of Zoology, Louisiana State University, Baton Rouge, Louisiana*.

***Icterus bullockii* in Massachusetts.**—Since three (and possibly four) specimens of the Bullock's Oriole have now been taken in Massachusetts, and there are color photographs, as well as numerous well-attested sight records, of additional birds, it seems desirable to summarize the occurrence of the species here. The only previously published record (*Bull. Massachusetts Aud. Soc.*, 37: 231, 1953; see also A.O.U. Checklist, fifth edit., 1957, p. 534) seems to be that, discussed below, of two birds wintering in 1952-53 at Falmouth, Barnstable County. In the following account BMS stands for the Boston Museum of Science, MCZ for the Museum of Comparative Zoology at Harvard College, and PMS for the Peabody Museum at Salem.

Two general plumage types (aside from the brilliant-hued and conspicuously black-throated adult male plumage) will be referred to hereafter as A and B.

Type A is a plumage less brilliant than that of the adult male but distinguished from that of all (or nearly all?) females by the presence of a narrow black throat patch. There appears to be some uncertainty as to whether this patch always or only usually occurs in young males, as to when it is acquired by them, and, equally, as to whether or not it ever occurs in adult females. Thus J. L. Peters (*in* A. C. Bent, *U. S. Natl. Mus., Bull.* 211: 273, 1958) wrote: "the amount of black acquired in the postjuvinal molt varies considerably and . . . the black throat is occasionally found

in females." Conversely, George M. Sutton (*in litt.*) thought that no true female *bullockii* is ever black-throated, and that the subadult (although not first winter-plumaged) males of *bullockii* are usually black on chin and throat. The evident contradictions between these views cannot be resolved here.

Type B as used here applies to all birds without black throat patches, these being more or less dull colored, gray or grayish olive above with wax yellow to yellowish olive tail, yellow throat and upper breast, and the rest of the underparts buffy white to buffy. Adult females are somewhat paler and grayer; immature birds (of both sexes) are more buffy. They may most surely be separated from *Icterus galbula*, the Baltimore Oriole, by the break in color at the upper breast, where the yellow becomes off-white or buffy in *bullockii* instead of displaying an even gradient as in *galbula*. "Female *bullockii* often resemble female *galbula* but tend to be larger, grayer, less brightly colored above and lighter . . . about the face" (G. M. Sutton, *Auk*, 55: 2, 1938).

Specimen records.—(1) Type A; BMS 20800; Danvers, Essex County; 6 January 1957. Collected by G. E. Merrill, identity confirmed by George M. Sutton.

(2) Type B; PMS 8471; Beverly, Essex County; 25 November 1960. A dead bird found by H. Cushing. Sent to Sutton who wrote: "female, the wing . . . 90 mm, the tail 72. In general the bird is dull, even slightly dirty looking; the sides, flanks and belly being gray, though this gray is not of quite so cold a tone as that of the other specimen."

(3) Type A; PMS 8472; Annisquam, Essex County; 13 December 1960. Found dead by Sumner Andrews, who had seen it alive prior to the 12 December blizzard. Sutton wrote: "I feel certain this is a male bird . . . wing measures 94 mm, the tail 75. The whole chin and throat are black, bordered at either side by fairly bright yellow which tends to be greenish rather than orange in tone. The sides, flanks and belly are gray, palest in the middle of the belly; the undertail coverts are pale yellow. The wing bars are fairly broad and grayish white rather than snowy white."

(4) Type B; BMS 20802; Marblehead Neck Sanctuary, Marblehead, Essex County; 14 April 1957. A dead bird, probably female, in poor condition found by Robert Dee, identified 18 May by Ludlow Griscom. Sent to Sutton who wrote "probably *I. bullockii*."

Birds photographed in color.—(1,2) Type A; Falmouth, Barnstable County; 2 December 1952. This bird was joined on 21 December by a bird in plumage type B, at the feeder of Clayton W. Collins. These birds stayed until 24 and 29 April 1953. By April the first showed some black in the greenish head, the lores were broadly black as was the throat stripe, the yellow line over the eye had deepened to orange. These birds were photographed in color on 7 March by Blake Johnson, and on 11 April were trapped, banded, and measured by C. Russell Mason. Photographs, measurements, and outer retrices from the two birds were sent to Sutton, who considered both birds to be *I. bullockii*. This material is now at MCZ (*Bull. Massachusetts Aud. Soc.*, 37: 231, 1953).

(3) Adult male; Marblehead, Essex County; late December, 1953, to 15 April 1954; Mrs. Myra Love's feeder. This unmistakable adult male in brilliant plumage was photographed in color by me on 16 January 1954. Data and Kodachromes at PMS.

(4) Adult male; Osterville, Barnstable County; 24 April 1954. Trapped, banded, and photographed in color by Daniel Johnson. Comparison of Kodachromes of birds 3 and 4 showed that they were two different birds, 4 being duller in color.

Sight records considered valid.—I know of no sight records of Bullock's Oriole in

Massachusetts made earlier than 1948. I here list birds observed between 1948 and 1959, which were seen a number of times, by more than one observer, and where a description of the plumage was submitted with the record.

(1) Type B; Easthampton, Hampshire County; November, 1948, to 27 April 1949; feeder of Mrs. Harry Kidger. This dull and grayish bird was considered an adult female by Roger T. Peterson. On 27 March it was trapped and banded by E. A. Mason, measured, and compared with skins of *I. bullockii* and *I. galbula* by H. Parker.

(2) Type A (with more black than most); Florence, Hampshire County; 17 November 1951 to 1 January 1952; Robert M. Clark's feeder. Seen by S. Eliot, R. Smart, and others. Eliot noted: "some black in crown and eye-line, wing coverts extensively white."

(3) Type A; Easthampton, Hampshire County; 12 December 1952 to 24 January 1953. Kidger feeder. Confirmed by S. Eliot, D. Crompton, and Mrs. David Riedel.

(4) Type B; Marblehead, Essex County; 6-9 October 1953. Watched six times by Mrs. David Searle and me as it fed on wild grapes by the roadside. My notes read: "top of head beige tan, faint line through eye, throat warm yellow, paler yellow on upper breast, changing to drab gray or light drab on abdomen, sides darker gray. The back gray, undertail coverts and rump bright yellow, the rest of the tail olive green." This plumage is most like that of an adult female.

(5) Type B; South Hadley, Hampshire County; 29 November 1954 to 28 March 1955; feeder of Robert W. Gansauge. Identified by R. Stone, confirmed by S. Eliot.

(6) Type B; Ware, Hampshire County; 3 December 1956; L. G. Albertine feeder, which it visited irregularly. From late December through early January 1957 this bird was observed at the feeder of E. and G. March. Identity confirmed on 1 January by J. H. Conkey.

(7) Type B; Rockport, Essex County; 11-19 January 1958; Herbert A. Murphy feeder. Identified by me and seen by many observers. I noted of this bird: "lemon yellow throat and upper breast, dirty white abdomen, *gray* back, greenish tail."

(8) Type B; Wellesley, Middlesex County; Donald G. Olson feeder. Seen on nine days in the period of 4 February to 7 March 1959. Other observers were W. B. Drury, D. Sands, and R. Stackpole.

(9) Adult male; a half-mile from the Olson feeder at Richard Chandler's property. This bird was seen on 28 February and 2 and 3 March, by the owner and E. Holden.

Summary.—In the decade covered by this paper, there have been accumulated a total of 3 (or 4) specimens of *I. bullockii*, 4 occurrences documented by color photographs, and at least 9 seemingly acceptable sight records for Massachusetts. These represent the following plumages: 3 adult males; 5 type A, probably subadult males with black throat patches; and 9 type B, probably females (or conceivably subadult males without black throat patches). By areas there are 7 records from Essex County, 5 from Hampshire County, 3 from Barnstable County, and 2 from Middlesex County.

Extreme dates are 6 October and 29 April, with 4 birds remaining from November or December into April. Recorded in the various months were: October, 1 bird; November, 4; December, 9; January, 10; February, 7; March, 6; and April, 6 birds. These eastward-wandering birds, then, appear to represent a wintering population of extremely low density, of a species supposed (A.O.U. Check-list, fifth edit., 1957, p. 535) to winter from the extreme southwestern United States to Central America. It is interesting to conjecture how many, if any, of these birds would survive in the absence of the many feeding stations they have frequented in the rigorous Massachusetts winters.—DOROTHY E. SNYDER, *Peabody Museum, Salem, Massachusetts.*