

In three trips on dark nights to marshes in the Denver area, the catch totaled approximately 1,200 birds. On a fourth trip, during the new moon, 6 men with 2 nets easily captured 600 birds in 3 hours. The ratio of redwings to starlings in these catches was approximately 2:1. The nets used had a hoop 2½ to 3 feet in diameter, with a bag of ½-inch mesh 4 to 6 feet long. The handles of the nets telescoped and when extended were 10 to 20 feet long. The hoops were constructed of ½-inch aluminum tubing (.049-inch wall thickness), with the handles being made of heavier tubing, 1¼ inches in diameter. The materials for each net cost approximately \$15.

The birds will become badly entangled if the netting is too light, so it is desirable to use heavy cord material. Also, the bag must be long enough so that it can be closed by a flip of the netter's wrist, and thus prevent loss of birds.

In the operations, carrying cages capable of holding 100 birds were constructed. The doors of the cages were covered with overlapping pieces of rubber inner tube so that the operator could thrust his hand into the cage to release the bird without danger of its escaping. Birds were either banded and released, or taken to the aviary within six hours. Mortality was less than one percent.

Further experience may indicate that modifications of the technique are desirable, but the procedure is described at this time in the belief that, even in its present stage of development, it may be useful to individuals in similar ecological areas who wish to capture large numbers of blackbirds and starlings for banding or for experimental purposes.—Albert W. Spencer and John W. De Grazio, Wildlife Research Center, Bureau of Sport Fisheries and Wildlife, U. S. Department of Interior, Denver 25, Colo.

Winglength of Yellow-breasted Chat.—It is now well established that *Icteria virens* has a complete postjuvinal molt. The wing lengths measured at Hillsboro, N. C. give an interesting confirmation of this. Below are the extreme lengths with means in parentheses measured as wing chords.

7 Juveniles	66-(68.1)-70
29 Males	72-(75.9)-81
22 Females	71-(74.7)-78

The adults were measured between the beginning of May and mid July when Dennis' criterion of black mouths in males and partly pink mouths in females was used for sexing.—Charles H. Blake, Museum of Comparative Zoology, Cambridge, Mass.

Land Birds at Sea following a SE Storm.—*Location:* On board U. S. Coast and Geodetic Survey Ship "Explorer"; Lat. 40°45'N, Long. 70°52.7'W, or about 36 miles South of Gay Head, Martha's Vineyard. See C. & G.S. Charts 71 and 1108.

During the period 15-17 April, 1961, strong S.E. winds, up to 60 knots, lashed the Northeast seaboard. I was fortunate to be at the above location following this storm from 18-24 April, 1961, and observed the following land birds on board ship:

- 18 April. 1 Brown Creeper; very tired, just dropped on deck.
- 19 April. 2 Song Sparrows, 1 Slate-colored Junco.
- 20 April. 1 Song Sparrow; observed picking up hailstones. Source of water?
- 21 April. 2 Song Sparrows; 1 Starling.
- 22 April. 2 Palm Warblers, 4 White-throated Sparrows, 2 Juncos, 1 Red-shafted Flicker, 1 Song Sparrow, 1 Brown Thrasher, 1 Rufous-sided Towhee.
- 23 April. 1 Chipping Sparrow, 1 Song Sparrow, 7 White-throated Sparrows, 2 Juncos, 1 Towhee, 1 Flicker, 1 Brown Thrasher, 2 Common Grackles.

Most of these stayed aboard until we anchored one mile off Menemsha Bight, 24 April. Even then, most of the White-throated Sparrows refused to fly to shore and were still on board when I left 25 April.

During this period, strong winds, up to 40 knots, from the NW and SW, snow, hail and rain, were experienced.

My notes were sent to Mr. Aaron M. Bagg, Dover, Mass., by Mrs. Walter Garrey, of Waban, Mass. His comments are quoted:

"When I started to read them, I thought that I would find that the birds which came aboard included some items such as Indigos [Indigo Buntings], tanagers, grosbeaks, etc. And, when I saw that the list included none of these species, there was—momentarily—some disappointment. But I quickly realized that the list of species coming aboard is interesting and helpful, *precisely because of* the absence from it of buntings, tanagers, etc.

That is, a check of the weather maps for the period involved shows that the "Explorer" birds were in migratory movement under conditions involving *non-tropical* air. When Indigos, tanagers, and grosbeaks are carried up, in April, to coastal New England and the Maritimes, an essential ingredient of the weather situation is the presence of tropical air. I won't go into all the details here. But the point is that the "Explorer" birds provide a very nice insight into the weather backgrounds of *their* being carried offshore, and into the contrast between *their* doing so *vs.* the weather mechanisms of a flight to the north-eastern coastal areas of the buntings, tanagers and grosbeaks."—John S. Rankin, Jr., Director, University of Connecticut Marine Research Laboratory, Noank, Connecticut. Contribution No. 12.

Ed. note: a briefer account of this incident has appeared in Aaron Bagg's report in the August, 1961 issue of *Audubon Field Notes*. We are indebted to him for permission to quote his comments, above.

RECENT LITERATURE

MIGRATION

(See also No. 37.)

1. Birds' celestial navigation. Clarence F. Stasz. 1958 [published in 1960]. *Cassinia*, No. 43: 10-12. Here a bird student who is an industrial scientist by profession makes the difficulties of celestial navigation by birds vivid by comparing them with the problems of a man adrift on a raft—equipped with a chronometer, a plumb bob, and an improvised mast—trying to deduce his location from the shadow of the mast. This man would be in a bad fix if he lacked an astronomical almanac, if he lost track of the date, or if his time-piece ran a few minutes fast or a few minutes slow. Even without such misfortunes, according to Stasz, he would need to make superhuman discriminations. He would need, for instance, to measure the angle between the sun's position and a line passing both through the center of the earth and his own position. He would need to do so to an accuracy of half a degree (the radial distance that the minute hand of a watch moves while the second hand is moving only 5 seconds).

To object that a particular hypothesis of avian navigation calls for superhuman faculties is not to demolish that hypothesis. Let ornithologists at large hope that the eventual answer will involve such faculties. Otherwise they will be deeply embarrassed by having taken so long to solve an easy puzzle and by having produced too much spurious evidence against simplicity. Whatever the final outcome, Stasz is to be commended for having made the ultrafine demands of celestial navigation a bit more real, for having subjected that process to the test of skepticism.—R. J. Newman.

2. The most probable method of wind orientation of migrating Chaffinches (*Fringilla coelebs*). Über die wahrscheinlichste Method der Wind-Orientierung ziehender Buchfinken. D. A. Vleugel. 1959. *Ornis Fennica*, 36 (3/4) : 78-88. Vleugel, like Stasz, feels that deriving direction from the movement of the sun is too difficult for a flying bird and too inaccurate; still he does consider the sun the primary source of orientational information. In 1952 he suggested that Chaffinches identify their proper migration direction by reference to the rising sun, assess the angle between this direction and the direc-