

true in this species, then we expect any mixed distribution to approach the normal in form. The only sample whose distribution is significantly platykurtic is that of returning birds at banding. This sample is certain to contain adults and young of both sexes. The samples called "immature" and "returning birds at return" may each be considered uniform as to its age composition but composed of both sexes. There is no feasible way at present of analyzing these samples to find a distribution for each sex. I will hazard a guess that the difference between the average wing lengths of males and females does not exceed 2 mm.

At Hillsboro, N. C., I have not handled more than three out of over 1400 juncos that could be alleged to be *J. b. carolinensis*. The samples are taxonomically uniform.

I conclude that the mean difference in wing length between immature and adult *J. b. hyemalis* is about  $3\frac{1}{2}$  mm. and the sexual difference about 2 mm., and that lack of brown and the presence of white covert tips are both marks of old adults.

#### REFERENCE

- Croxtan, F. E. 1959. Elementary Statistics with Applications in Medicine and the Biological Sciences. Dover, pp. vii & 376.  
— Charles H. Blake, Museum of Comparative Zoology, Cambridge, Mass.

**Reverse Migration by Cowbirds.**—On April 12, 1961, I caught and released an adult male Brown-headed Cowbird (*Molothrus ater*) at Brooks School, North Andover, Massachusetts, coordinates 4242-7106. The bird was banded 59-171302 on April 4, 1961, by F. Burton Whitman, Jr., at Merepoint, Maine, on Casco Bay, six miles due south of Brunswick, Maine. North Andover is approximately 95 miles southwest of Merepoint. In a letter dated October 4, 1961, Mr. Whitman told me of a female Cowbird caught at Merepoint on May 3, 1961, that had been banded by Minot Morse, Jr., on April 22, 1961, at Castine, Hancock County, Belfast Bay, Maine, about 70 miles northeast of Merepoint.

These two instances of reverse migration may corroborate radar observations. William H. Drury (*Natural History*, 70: 11-17, 1961) reports that on May 8/9, 14/15, and 22/23, 1959, radar showed a steady southward movement following the spring arrival of cold fronts. Aaron M. Bagg informed me, in a letter dated October 11, 1961, that there was a considerable amount of cool, northerly weather in both periods that I mentioned, between bandings and recoveries. He also stated that on both April 12 and May 3, 1961, a coastal type of storm was passing through New England, northeastward, or just had passed, and that the two Cowbirds may have backtracked in the counter-clockwise airflow around these lows. — Oscar M. Root, Brooks School, North Andover, Massachusetts.

**Brown Thrasher Life History Data.**—Information of more than usual value was obtained from a set of records compiled at the Massachusetts Audubon Society's Arcadia Wildlife Sanctuary in Northampton and Easthampton, Massachusetts. The coordinates of the Station are 4217-7238. The series comprise the 34 return records from a total of 126 Brown Thrashers (*Toxostoma rufum*) banded in the period 1945-1960. No recoveries from distant points were recorded.

The series of return records on one particular individual Brown Thrasher are especially interesting. This Thrasher was first banded as an adult male on May 1, 1953, with a single red celluloid band. The color band was applied alone because the Station temporarily did not have size 3 numbered aluminum bands in stock. On the basis of the red band, repeat records were made on May 2, 4, 8, 1953. When the bird repeated on July 6, 1953, regular numbered aluminum band 543-99501 was applied. It then repeated on July 7, 9, 15, 16, 17, 22, 1953.

Return records, and the information obtained on this bird, are as follows:—

R.1	May 6, 1954	Repeated May 11, 12, 18, 19.
R.2	May 2, 1955	Repeated May 4, 11, 12, 17, 19, 24, 25, 31, June 2, 3.
R.3	May 4, 1956	Repeated May 21, July 4.
R.4	May 7, 1957	Repeated May 7, 8, 10, 12, 15, 26, June 14, July 3, July 5*, July 9, 11, 12, 15, 16, 17, 18, August 5*, August 6, 7, 12, 14, 15, 19, 20, September 9*, September 20.