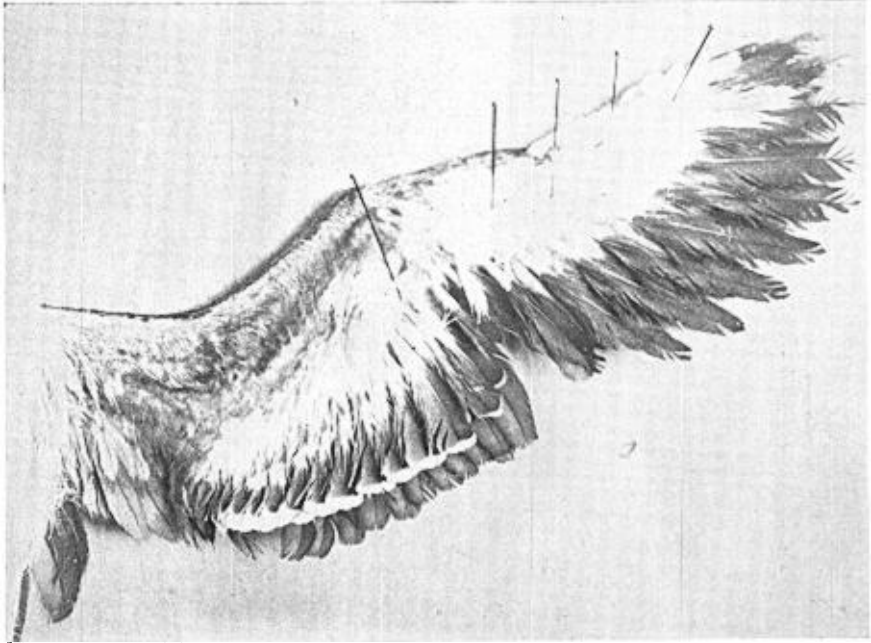


bird at the time of leaving the nest island and going to the water has no remiges. The presence of well-developed greater, median and lesser coverts has led ornithologists to suppose that these were the small juvenal primaries and secondaries. Bent (Bull. U. S. Nat. Mus., no. 107, 1919) says: "There are no white tips on the secondaries in this plumage." The birds which Verwey (*Ardea*, vols. 11 and 12) examined, had apparently all developed the primaries and secondaries before they came in to the Dutch coast, and so he did not notice their absence in the young birds. But in a young bird which he took September 3, 1921, he noted that "all remiges are growing, they are also growing with distinct hornsheaths." In another young bird of October 15, 1921, he noted: "Primary coverts don't seem to be moulted."

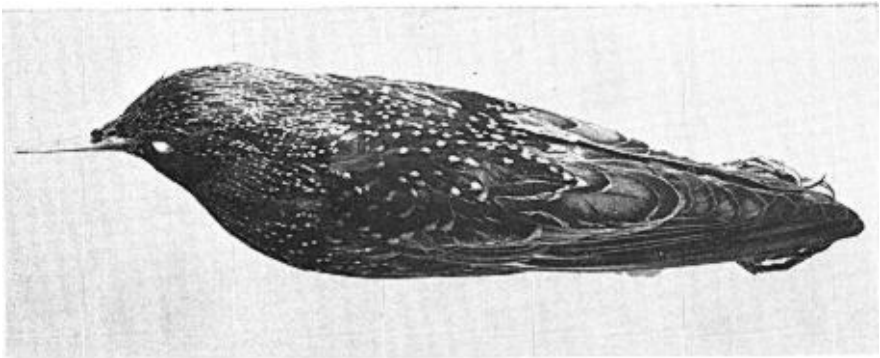
The full significance of what Verwey just missed observing in these young birds came to me through my study of captive birds. In a paper read before the A. O. U. at the Quebec meeting in 1932, I described the development of the first flight feathers (primaries and secondaries) in the young bird as follows: "When the young birds are ready to leave the nest-island or ledge the greater coverts are from one inch to one and a half inches in length. By careful examination the very small neossoptiles on the primaries may be seen. After the bird has been in the water from three to four weeks (judging from captive birds) the first appearance of primaries and secondaries may be seen. All these feathers appear and develop at the same time, and the coverts which have up to this time been the main feathers of the wing apparently serve to protect the incoming soft primaries and secondaries from becoming broken as the wing is used in the dive. These coverts are retained and the primaries and secondaries grow rather fast. In about two weeks they will have become greater in length than the coverts which have been protecting them. They are in every respect like the feathers of adult birds and, I believe, are retained through the first winter. The birds which Bent described (1919) as having no white tips in the secondaries had, of course, only coverts since at that age the remiges had not appeared. Apparently the young birds begin to develop this first set of flight feathers about one month after they leave the nest colony. In my opinion, they do not actually fly much before October."

One can readily see the many advantages such a plan for plumage development has. Since the young birds do not get into the water (on the North Shore of the Gulf of St. Lawrence) until late July or August and then as extremely undeveloped small birds, it would be a great hardship to moult a juvenal set of flight feathers and grow another set for the first winter. As it is, the small wing of the bird when it leaves the nest-island has some time to grow before these large flight feathers are produced. In the meantime well-developed coverts aid the bird in propelling itself under the water. The illustration (Plate 18, upper figure) shows the wing of a young captive Murre seven weeks of age with the white-tipped secondaries coming in under the coverts. The primaries have already developed beyond the length of their coverts.—ROBERT A. JOHNSON, 150 East St., Oneonta, New York.

'White-eyed' Murres in the British Isles.—In 'The Auk' (vol. 55, p. 59) Mr. R. A. Johnson makes the somewhat astonishing suggestion that selective collecting of individuals and eggs of the 'White-eyed' Murre may be responsible for the small proportion now occurring in the southern parts of the British Isles. On the Yorkshire Coast the colonies, which extended for several miles, have been encroached upon by Kittiwakes (*Rissa tridactyla*) and Fulmars (*Fulmarus glacialis*) of late years. Nelson, in 1907, estimated the annual take of eggs here at 130,000. This probably represents a little over two eggs from each pair, but even allowing three eggs per pair



JOHNSON: DEVELOPMENT OF REMIGES IN THE MURRE



SMITH: STARLING WITH MISSING UPPER MANDIBLE

(which is almost certainly an overestimate), this would give at least 43,000 pairs. There are also vast colonies in Pembrokeshire and still more on the west coast of Ireland, where the eggs are rarely taken, if at all.

I think it would be difficult to find four hundred skins in the British Isles, and these have been collected at various dates during the last sixty years. Hardly any identified eggs of the ringed form exist, as no one regards it as a species, and on crowded ledges identification is impracticable.

The chief cause in the diminution of the species is the mortality caused by floating oil. This is a non-selective agency. There is now no shooting on the breeding grounds and it is only here that it would be possible to pick out any appreciable number of ringed birds. In 1864, there was a good deal of indiscriminate shooting at Planborough and it was easy for a collector to look over a boatload of slaughtered birds, but the shooting was non-selective and the demand for 'white-eyed' birds soon died out.—F. C. R. JOURDAIN, *Southbourne, Bournemouth, England.*

Early date for the White-crowned Pigeon on the Florida Keys.—On March 9, 1938, we saw a White-crowned Pigeon (*Columba leucocephala*) on Key Largo, Florida, about seventeen miles northeast of Tavernier. The bird, a female with ashy crown, was perched in a small tree near the road and gave ample opportunity for observation. This seems to be the earliest dated record for the State, although Howell ('Florida Bird Life') gives some undated winter reports from Cape Sable. It is also of interest as being from one of the uppermost keys. We saw no other pigeons on the trip which took us through to Key West.—J. J. MURRAY, *Lexington, Virginia*, AND ALEXANDER SPRUNT, JR., *Charleston, South Carolina.*

The last Passenger Pigeon killed in Wisconsin.—It would be difficult to find more contradictory and indefinite statements than those regarding the last Passenger Pigeon (*Ectopistes migratorius*), supposedly, killed in Wisconsin. W. B. Mershon ('The Passenger Pigeon,' p. 154, 1907) cites a letter from Neal Brown, dated May 20, 1904, in which the latter says: "It was, I think, three or four years ago, in hunting with Mr. Emerson Hough near Babcock in this State in September, we killed an unmistakable Wild Pigeon." On page 223, however, appears the categorical statement: "In 1900 Neal Brown of Wausau, Wis., killed one near Babcock, Wis., in September." In an unsigned article in the 'Saturday Evening Post' (October 15, 1910, p. 30), Hough states that "about ten years ago while hunting with two friends at Babcock, Wisconsin, one of the party killed a Passenger Pigeon." In the 'Passenger Pigeon in Pennsylvania' (1919), by John C. French, there is a note on page 189 by Henry W. Shoemaker stating that he was told by Emerson Hough "that the last Passenger Pigeon which he saw was killed by a retired railroad conductor, in Wisconsin, the first week in September, 1897. The conductor while journeying along a railroad cut, saw a large bird perched on a tree among a band of Mourning Doves." More recently (Aldo Leopold, *Trans. Wisconsin Acad. Sci.*, 30: 72, 1937) it is said: "The record ends with a single bird killed by Emerson Hough at Babcock about 1900."

Recalling that, at the time, Hough had a weekly column, "Chicago and the West," in 'Forest and Stream,' it seemed probable that more exact information was available. In fact, the details of the incident are given in volume 53, p. 148, September 23, 1899, of this publication. The bird was shot by the guide Varney, of Babcock, from a group of Mourning Doves sitting in a tree, while the party was hunting Prairie Chickens. It was recognized as a young Passenger Pigeon by Neal Brown. Hough states further: "The bird was about two-thirds grown and the plumage was pale and devoid of