

bird in juvenal plumage recently from the nest. On comparison of specimens it develops that the three skins from Mt. Rogers are the recently described Southern Winter Wren, *Nannus hiemalis pullus* Burleigh (Proc. Biol. Soc. Washington, vol. 48, p. 61, May 3, 1935; Mount Mitchell, 6500 feet, North Carolina). This is an extension of the known range of this race and its first definite report for the State of Virginia. It is of interest to record that the juvenal bird is duller and darker in color above and below than skins of similar age of the northern race, *Nannus hiemalis hiemalis*, from Rothesay, New Brunswick, St. Regis Lake in the Adirondacks, and Plateau Mountain in the Catskills of New York.—ALEXANDER WETMORE, U. S. National Museum, Washington, D. C., and J. J. MURRAY, Lexington, Virginia.

**Bohemian Waxwing in Luce County, Michigan.**—In spring, 1924, I planted some mountain-ash trees at various places in the yard where I reside, for the purpose of attracting birds. Of these, three are now living, and the berries have brought some interesting observations. Of the birds that I have seen coming for the mountain-ash berries, the Bohemian Waxwing (*Bombycilla garrula pallidiceps*) is of interest. I first saw this species on December 14, 1928, when a flock of ten was feeding on mountain-ash berries in the yard. The supply that season was small, and the birds nearly cleaned up that season's crop. I next saw Bohemian Waxwings on November 18, 1930, when a flock of four was feeding on the berries. Of the '1930' crop, there were nineteen clusters of berries on these trees in the yard; and on November 21, the fourth day of feeding, these four Bohemian Waxwings had finished the fruit here, and moved to a neighbor's home, where is a mountain-ash tree with a good supply of berries. During their stay at my home on the four days, they spent some of the 'resting' time on telephone wires and nearby trees, and at other times went to the woodlands within forty rods to the northeast. The largest number of mountain-ash berries that I saw a Bohemian Waxwing take at one meal was thirty. This flock of four was reduced to two on November 23 which marked my last record for the year 1930.

On March 23, 1931, a flock of three was seen in the orchard here feeding on frozen apples. On March 24 and 25 only two were seen, but on the 26th a flock of nine came to the orchard for frozen apples. In an effort to trap and band some of these birds, I got some mountain-ash berries which I had saved, and placed a trap with some berries in it, on the snow beneath the apple trees. I got only a single bird, which I gave band no. B117255. This was on March 26, which is also my last date for the Bohemian Waxwing that season. While being handled, this bird ejected nine mountain-ash berries. It is the only one of this species that I have banded.

On November 9 and 10, 1931, eight Cedar Waxwings (*Bombycilla cedrorum*) were seen feeding on mountain-ash berries in the yard. The first Bohemian Waxwing was noted on November 12 of that season—1931-32, when three were seen. Only one was seen on the 13th; but on the 14th the flock increased to 16, then to 31 on the 15th when they again cleaned up the season's crop of mountain-ash berries from the trees in the yard. My next record came with a flock of 19 on November 22, 1931, as they passed over the orchard. I next found Bohemian Waxwings on December 14, 1931, at a point three-fourths of a mile south. On this date eight were seen feeding on berries of black alder by the east side of McCormick Lake. Fourteen were seen at this location on December 18 and again, feeding on the same kind of berries, at the southwest corner of the lake shore, a distance of about 80 rods from where they were noted on the last two days. The berries were all consumed where they were noticed on those days.

Since the year 1931, I have secured only two records of the Bohemian Waxwing.

These are: March 20, 1933, two came to the mountain-ash trees in the yard, but found only skins of berries. Some Eastern Purple Finches (*Carpodacus purpureus*) had taken most of the 1932 crop and also what I had saved for use in trapping for banding operations. The last record is November 24, 1936, two at the mountain-ash trees, but again too late, as a flock of Cedar Waxwings which remained late, and some European Starlings (*Sturnus vulgaris*) had cleaned up the 1936 crop, and they refused even to go to the traps nearby for a taste of the berries.—OSCAR MCKINLEY BRYENS, R. F. D. No. 1, McMillan, Luce County, Michigan.

**North-south versus northeast-southwest migration of the Starling.**—Kalmbach (Wilson Bull., 44: 67, 1932) has published a map of returns from Starlings (*Sturnus vulgaris*) banded at Washington, D. C., in the winters of 1927–28 and 1928–29, showing a northward migration of banded winter birds from Washington, some actually to the eastern end of Lake Erie and the St. Lawrence. Such data are at variance with the hypothesis of two more or less separate northeast-southwest migration axes, one near the Atlantic coast and a second in the Great Lakes Basin. They presumably do not invalidate that hypothesis, however, but show another factor, probably of considerable importance, in the complicated migrational and distributional movements of the bird. Though with an inherited northeast-southwest direction which has accounted for much of its distribution, the Starling presumably moves directly south into new territory under pressure of winter, some birds at least returning north to the same breeding area the following spring, whereas the extension of its range directly north into new territory is a slow matter. Even so, with Washington in the bird's primary Connecticut-New Jersey, northeast-southwest axis of distribution (Auk, 54: 210, 1937), the paucity of returns to the northeast on this map requires explanation. The high and steadily increasing concentration of wintering Starlings in New Jersey very likely absorbs migrants from the northeast along this axis, so that those found wintering in Washington were for the most part local or derived from other sources.

The appearance in the 'Bird-Lore' Christmas census in 1926 of wintering Starlings near the lower part of the Penobscot Valley in Maine, and their regular occurrence in the State in succeeding censuses, may be taken as evidence of another case where the bird was driven south into new territory by winter. In a trip through northern New England by road in the summer of 1936, I found the Starling near Houlton, Maine, and in adjacent New Brunswick, and more plentiful in Quebec north of the Vermont line, but missed it in the coastal region from the Massachusetts line to Bangor. It seems more probable that such Maine-New Brunswick birds reached these summer quarters following the Great Lakes axis north of Vermont and New Hampshire, than that they crossed the wide stretch of coastal Maine where they must still be uncommon to have been missed, in an extension of the New Jersey-Massachusetts axis. Such being the case they might reasonably be supposed to have reached coastal Maine as winter visitants from the north down the Penobscot Valley.—JOHN T. NICHOLS, New York, N. Y.

**A Pine Warbler killed by arsenical spray.**—On June 22, 1937, Earl Whitcomb picked up, under a large pine tree, at Beverly Farms, Massachusetts, a Northern Pine Warbler (*Dendroica pinus pinus*) in fine adult plumage. On careful examination the bird showed no evidence whatever of external damage.

As I have long suspected that there was a mortality among insectivorous birds owing to the practice of spraying vegetation with arsenate of lead, and as I surmised that eating insects which had been sprayed or which had fed on sprayed foliage