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NOTES ON SOME VIRGINIA BIRDS¹

BY C. E. ADDY

VIRGINIA is a state of varied climate, soil, and topography. The eastern coastal plain is low and humid, but the mountains of the southwestern part rise to over 5000 feet. The region lies between what is called 'the north' and 'the deep south.' It is not surprising, therefore, that in some 25 species of birds, northern and southern subspecies are known to adjoin or intergrade within the confines of the state. Placing these intergrades is not easy and plotting the distribution of the subspecies requires systematic collecting and careful identification of specimens.

As a start toward the solution of these various subspecies problems, a paper entitled 'Notes on the Distribution of the Loggerhead and Migrant Shrikes in Virginia' was published by Addy and Handley in *The Raven*, Vol. 11, No. 7, July, 1940. Although 20 specimens were collected from various parts of the state and identified, the paper is by no means complete, for considerable collecting has yet to be done, especially of nesting birds, before the status of *Lanius ludovicianus ludovicianus* and *L. l. migrans* can be definitely determined.

The present paper concerns a number of specimens in the Virginia Polytechnic Institute collection taken during 1938-1941. The author is indebted to Allen J. Duvall and Dr. Alexander Wetmore of the Smithsonian Institution, W. E. C. Todd of the Carnegie Museum, and Dr. George M. Sutton of Cornell University for assistance in checking the specimens and reviewing the manuscript.

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Southern Robin, *Turdus migratorius achrusterus* Linnaeus

Nine of eleven robins (6 male, 3 female) examined approach *achrusterus* in color and wing measurements, and according to Dr. Alexander Wetmore may be referred to this race although in all the specimens the tail is well over 90 mm. (95–99 mm.) long. Wing measurements varied from 123 to 128 mm. Winter, spring, and summer specimens are included in the series. Apparently this form is the predominant nesting bird of the state since summer birds collected at Blacksburg (elev. 2100 ft.) in the mountains and at Danville (elev. 500 ft.) in the Piedmont near the North Carolina line are of this race.

Eastern Robin, *Turdus migratorius migratorius* (Batchelder)

One nesting robin from the mountains of Highland County is larger in wing (131 mm.) and tail (104 mm.) and has a black head and back; the latter characters apparently are unusual in *achrusterus*. This would tend to indicate that *migratorius* is the nesting bird at least of the high mountains of that section. To substantiate this further, J. J. Murray reports in *The Raven*, Vol. 9, Nos. 11 and 12, 1938, that three specimens of *T. m. migratorius* were collected on Middle Mountain and vicinity in June, 1938.

One winter specimen from Blacksburg (wing, 131, tail 104 mm.) is typical of *migratorius*, indicating that both the northern and southern races winter within the boundaries of the state.

Northern Carolina Chickadee, *Parus carolinensis extimus* Todd and Sutton

According to Dr. George M. Sutton, two chickadees collected in the mountains of southwestern Virginia are shorter-winged (62–63 mm.) than the type of *extimus* (wing, 67 mm.), but in whiteness of wing-edgings and warmth of flank color are close to seasonally comparable Bethany, West Virginia, birds.

Northern Blue Jay, *Cyanocitta cristata bromia* Oberholser

One specimen of *Cyanocitta cristata bromia* collected in June in Rockbridge County was a nesting bird. An April specimen of this race from Blacksburg, though not definitely a breeding bird, establishes the possibility that the northern form of Blue Jay nests south in the mountains of Virginia at least as far as Montgomery County. The two remaining specimens, taken in the fall at Blacksburg and Mountain Lake, are of the northern race as would be expected.

Northern Downy Woodpecker, *Dryobates pubescens medianus* (Swainson)

Of the seven Downy Woodpeckers (6 male, 1 female) examined, none were breeding birds. However, fall, winter, and early spring birds from the mountains of southwestern Virginia are all good specimens of *D. p. medianus* (wing, 94; tail, 53-57; bill, 18 mm.). Three specimens from extreme southeastern Virginia may also be referred to this race although the measurements of one male (wing, 91; tail, 53; bill, 17 mm.) from Brunswick County, verge toward those of *D. p. pubescens*, the southern race. It is possible that the northern and southern forms intergrade in the southeastern part of the state, and in order to determine whether *D. p. pubescens* occurs in that locality, more specimens, especially of nesting birds, should be obtained.

Eastern Hairy Woodpecker, *Dryobates villosus villosus* (Linnaeus)

Two specimens of Hairy Woodpecker, one an immature male (wing, 118; tail, 70; bill, 28 mm.) collected in Charlotte Co. in May, and the other an adult male (wing, 122; tail, 69; bill, 30 mm.) collected in Montgomery County in December, were identified by Dr. Sutton as *Dryobates villosus villosus*. The immature male would indicate that *villosus* is possibly the nesting race of Hairy Woodpecker as far south as the Southern Piedmont in Virginia.

Southern Flicker, *Colaptes auratus auratus* (Linnaeus)

Three Flickers from Montgomery County, a breeding male (wing, 149; tail, 98 mm.) collected in April and two immature males (wing, 146; tail, 92, 95; bill, 30, 31 mm.) collected in July, suggest the possibility that the southern form is the predominant nesting Flicker of the state.

Northern Flicker, *Colaptes auratus luteus* Bangs

Four other specimens of Flickers (2 males, 2 females) taken in Montgomery County in April, September, and December and apparently transients, are definitely referable to *C. a. luteus* the northern race (wing, 152-159; tail, 103-112; bill, 32-34 mm.).

Southern Screech Owl, *Otus asio asio* (Linnaeus)

One female specimen from Isle of Wight County, taken in March, may be assigned to the southern form, *O. a. asio* (wing, 153; tail, 77 mm.) though not typical in all respects.

Eastern Screech Owl, *Otus asio naevius* (Gmelin)

Three male winter specimens of Screech Owls from Winchester, Blacksburg, and Mountain Lake are definitely large (wing, 161-165;

tail, 77–81 mm.) and are considered the northern race, *O. a. naevius*. Though Screech Owls do not, as a rule, migrate to any great extent, they do wander at times so that it is imperative that nesting birds be obtained from various parts of the state in order to determine the true status of *O. a. asio* and *O. a. naevius*.

“Appalachian Ruffed Grouse, *Bonasa umbellus monticola* Todd”

In December, 1940, a series of 35 Ruffed Grouse specimens, composed of 18 males, 2 (?) males and 15 females collected mainly in October, November, and December, was taken to the Carnegie Museum at Pittsburgh, Pennsylvania, and compared with the type series of “*monticola*.” The specimens from the mountains of Virginia compared favorably with the type and other specimens from West Virginia. Compared with the series of *B. u. umbellus* from Pennsylvania at the Carnegie Museum, the Virginia birds as a group were consistently darker on the upper parts, with heavier barring and more pronounced buffy wash on the under parts. No specimens of *B. u. togata* were available for comparison.

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CLUTCH-SIZE IN INTRODUCED BIRDS

BY R. E. MOREAU

DURING the last few years I have been collating records, both published and unpublished, of the clutch-sizes of African birds (a) within 5° of the equator and (b) south of 25° S., with the primary object of ascertaining the prevalence, or degree, of difference in clutch-size with latitude throughout an entire avifauna. Although most of the data are not stated in a form that makes a strict statistical investigation possible, the analysis, which I hope will be published elsewhere, shows that the equatorial clutch-size is the larger in less than four per cent of species, while the South African clutch-size is the larger in 38 per cent of the species. But most of the differences amount to less than one egg whereas, compared with those of closely allied British birds, the South African clutch-sizes for the most part run much more than one egg smaller.

Hypotheses readily present themselves to account for the fact that British birds have bigger clutches than closely comparable birds in South Africa. It is much more difficult to think of a reason why South African birds should have bigger clutches than birds of the same species close to the equator. It occurred to me that we might perhaps get a useful slant on this problem if we could find out whether the