

NOTES ON THE SUMMER BIRDS OF THE SOUTH MOUNTAINS

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Rising abruptly from North Carolina's rolling western piedmont are two regions of mountainous terrain, known collectively as the Outer Blue Ridge. These two ranges, the South Mountains below Morganton and the Brushy Mountains north of Statesville, lie some 15 to 30 miles SE of the Blue Ridge Escarpment and are separated from this major range by a rolling hill country whose elevation averages slightly above 1,000 feet. With numerous peaks rising above 2,500 feet, these ranges reveal a mixture of typical piedmont and mountain avifauna; and for this reason they serve as valuable areas for the study of altitudinal limitations for the breeding of a number of species.

STUDY AREA

The South Mountains begin as a series of low ridges between Hickory and Morganton, with the bulk of the higher terrain extending in a southwesterly direction for some 25 miles through portions of Burke, Rutherford, McDowell, and Cleveland Counties. The range generally tends to be higher in elevation than the Brushy Mountains, with at least 11 peaks in excess of 2,800 feet and the maximum elevation at 2,905 feet on High Peak in Burke County. The Catawaba River drains the north slopes of the range, while branches of the Broad River and First Broad River penetrate the region from the east and south.

In contrast to the Brushy Mountains, only a very small portion of the South Mountains has been cleared for agricultural use; and the bulk of the region is heavily forested with second growth communities of pine, pine-oak, oak-hickory, and cove hardwoods. Furthermore, a substantial part of the eastern half of the range is encompassed by the South Mountains Wildlife Management Area, a situation which promotes the maintenance of relatively undisturbed woodlands. Typical species that are common and form a major portion of the plant cover include the following: white pine (*Pinus strobus*), shortleaf pine (*P. echinata*), Virginia pine (*P. virginiana*), various hickories (*Carya* sp.), eastern hemlock (*Tsuga canadensis*), river birch (*Betula nigra*), American hornbeam (*Carpinus caroliniana*), beech (*Fagus grandifolia*), white oak (*Quercus alba*), chestnut oak (*Q. prinus*), red oak (*Q. rubra*), scarlet oak (*Q. coccinea*), blackjack oak (*Q. marilandica*), winged elm (*Ulmus americana*), yellow poplar (*Liriodendron tulipifera*), sassafras (*Sassafras albidum*), sweetgum (*Liquidambar styraciflua*), sycamore (*Platanus occidentalis*), black cherry (*Prunus serotina*), black locust (*Robinia pseudoacacia*), winged sumac (*Rhus copallina*), staghorn sumac (*R. typhina*), American holly (*Ilex opaca*), red maple (*Acer rubrum*), dogwood (*Cornus florida*), black tupelo (*Nyssa sylvatica*), flame azalea (*Rhododendron calendulaceum*), rosebay rhododendron (*R. maximum*), mountain laurel (*Kalmia latifolia*), Carolina silverbell (*Halesia carolina*), and white ash (*Fraxinus americana*).

STUDY TECHNIQUES

In a previous paper (Simpson, *Chat*, 32:1-4, 1968), I described the salient features of the summer bird populations of the Brushy Mountains; but there appears to be no information in the literature concerning the birds of the South Mountains. To fill this gap, I conducted field work in the region on 18 May 1968 and on 15, 16, and 17 June 1970; and the results of this survey are contained in the present paper. Most of the field work involved systematic exploration of existing roads and trails throughout the range, although limitations of time precluded any search for positive breeding evidence. Censuses were conducted on 16 and 17 June 1970 by stopping every .2 mile along the

Lower C.C.C. Road and Headquarters Road and listening for 4 minutes at each site. Total numbers of each species encountered during the surveys were used to establish four categories of relative abundance: uncommon, fairly common, common, and very common. Notations of habitat and elevation were made where appropriate.

SPECIES LIST

- Turkey Vulture (*Cathartes aura*): Uncommon. All elevations.
Red-tailed Hawk (*Buteo jamaicensis*): Uncommon. All elevations.
Broad-winged Hawk (*Buteo platypterus*): Uncommon. All elevations.
Ruffed Grouse (*Bonasa umbellus*): Although no individuals were noted during the study, the manager of the Wildlife Management Area showed me several stuffed specimens and a number of wings from the range; and he informed me that the bird is fairly common in the region.
Bobwhite (*Colinus virginianus*): Uncommon. Lower elevations.
Mourning Dove (*Zenaidura macroura*): Uncommon. All elevations.
Yellow-billed Cuckoo (*Coccyzus americanus*): Uncommon. All elevations.
Chimney Swift (*Chaetura pelagica*): Fairly common. All elevations.
Ruby-throated Hummingbird (*Archilochus colubris*): Uncommon. All elevations.
Belted Kingfisher (*Megaceryle alcyon*): Uncommon. Lower elevations.
Yellow-shafted Flicker (*Colaptes auratus*): Fairly common. All elevations.
Pileated Woodpecker (*Dryocopus pileatus*): Fairly common. All elevations.
Hairy Woodpecker (*Dendrocopos villosus*): Uncommon. All elevations.
Downy Woodpecker (*Dendrocopos pubescens*): Fairly common. All elevations.
Great Crested Flycatcher (*Myiarchus crinitus*): Fairly common. All elevations.
Eastern Phoebe (*Sayornis phoebe*): Fairly common. All elevations.
Acadian Flycatcher (*Empidonax virescens*): Common. All elevations.
Eastern Wood Pewee (*Contopus virens*): Fairly common. All elevations.
Rough-winged Swallow (*Stelgidopteryx ruficollis*): Uncommon. All elevations.
Barn Swallow (*Hirundo rustica*): Uncommon. Lower elevations.
Blue Jay (*Cyanocitta cristata*): Fairly common. All elevations.
Common Crow (*Corvus brachyrhynchos*): Common. All elevations.
Carolina Chickadee (*Parus carolinensis*): Very common. All elevations.
Tufted Titmouse (*Parus bicolor*): Fairly common. All elevations.
White-breasted Nuthatch (*Sitta carolinensis*): Uncommon. All elevations.
Carolina Wren (*Thryothorus ludovicianus*): Fairly common. All elevations.
Mockingbird (*Mimus polyglottos*): Fairly common. All elevations.
Catbird (*Dumetella carolinensis*): Fairly common. All elevations.
Brown Thrasher (*Toxostoma rufum*): Fairly common. All elevations.
Robin (*Turdus migratorius*): Common. All elevations.
Wood Thrush (*Hylocichla mustelina*): Common. All elevations.
Blue-gray Gnatcatcher (*Poliophtila caerulea*): Fairly common. All elevations.
White-eyed Vireo (*Vireo griseus*): Fairly common. Lower elevations.
Yellow-throated Vireo (*Vireo flavifrons*): Uncommon. Lower elevations.
Solitary Vireo (*Vireo solitarius*): Fairly common. Above 1,400 feet.
Red-eyed Vireo (*Vireo olivaceus*): Very common. All elevations. In a large series, the ratio of Red-eyed to Solitary Vireos is 10 to 1 through this range.
Black-and-white Warbler (*Mniotilta varia*): Fairly common. All elevations.
Swainson's Warbler (*Limnothlypis swainsonii*): The single record is of an adult male singing in the rhododendron-laurel thickets of Jacob Fork, Burke County, at 1,320 feet on 16 June 1970. A tape recording of the species' song was played; and the bird approached at close range, permitting visual confirmation of field marks.
Parula Warbler (*Parula americana*): Fairly common. All elevations.
Yellow Warbler (*Dendroica petechia*): Fairly common. Lower elevations.
Black-throated Green Warbler (*Dendroica virens*): Very common. All elevations. This

species was the most abundant warbler in the range, occurring most frequently in hemlock ravines but in other habitats as well.

Yellow-throated Warbler (*Dendroica dominica*): Uncommon. Lower elevations.
 Pine Warbler (*Dendroica pinus*): Uncommon. Lower elevations.
 Prairie Warbler (*Dendroica discolor*): Uncommon. Lower elevations in early successional stages.
 Ovenbird (*Seiurus aurocapillus*): Common. 1,400 to 2,800 feet.
 Louisiana Waterthrush (*Seiurus motacilla*): Uncommon. Lower elevations.
 Kentucky Warbler (*Oporornis formosus*): Uncommon. All elevations.
 Yellowthroat (*Geothlypis trichas*): Fairly common. Lower elevations.
 Yellow-breasted Chat (*Icteria virens*): Uncommon. Lower elevations.
 Hooded Warbler (*Wilsonia citrina*): Common. All elevations.
 American Redstart (*Setophaga ruticilla*): Fairly common. All elevations.
 Eastern Meadowlark (*Sturnella magna*): Fairly common. Lower elevations.
 Red-winged Blackbird (*Agelaius phoeniceus*): Fairly common. Lower elevations.
 Orchard Oriole (*Icterus spurius*): Uncommon. Lower elevations.
 Common Grackle (*Quiscalus quiscula*): Fairly common. Lower elevations.
 Brown-headed Cowbird (*Molothrus ater*): Uncommon. Lower elevations.
 Scarlet Tanager (*Piranga olivacea*): Fairly common. All elevations.
 Summer Tanager (*Piranga rubra*): Uncommon. Lower elevations.
 Cardinal (*Richmondia cardinalis*): Fairly common. Lower elevations.
 Rose-breasted Grosbeak (*Pheucticus ludovicianus*): The only record is of a single adult male singing at 2,800 feet on Skull Knob in Rutherford County on 16 June 1970.
 Indigo Bunting (*Passerina cyanea*): Very Common. All elevations.
 American Goldfinch (*Spinus tristis*): Fairly common. All elevations.
 Rufous-sided Towhee (*Pipilo erythrophthalmus*): Common. All elevations.
 Chipping Sparrow (*Spizella passerina*): Uncommon. Lower elevations.
 Field Sparrow (*Spizella pusilla*): Fairly common. Lower elevations.
 Song Sparrow (*Melospiza melodia*): Fairly common. All elevations.

DISCUSSION

A total of 66 species are documented as summer residents of the South Mountains, although no positive breeding evidence was noted for any of these birds. Of these 66 species, only five are generally regarded as montane because their maximum density occurs in the Appalachian region. These five species, the Solitary Vireo, Black-throated Green Warbler, Ovenbird, Scarlet Tanager, and Rose-breasted Grosbeak, were also noted as summer residents in the Brushy Mountains during a previous study (Simpson, *Chat*, 32:1-4, 1968). However, the Slate-colored Junco (*Junco hyemalis*) and Chestnut-sided Warbler (*Dendroica pensylvanica*) were noted in the Brushies but are conspicuously absent from the South Mountains. Considering the higher elevations in the South Mountains, the absence of the junco is difficult to explain; but the Chestnut-sided Warbler may not find suitable habitat in the South Mountains, due to the relatively unbroken and mature forest canopy covering most of the range.

The occurrence of the Swainson's Warbler in the range is of interest. This species has not been reported in the Brushy Mountains, but it is known to occur as a summer resident on the outer slopes of the Blue Ridge Escarpment and portions of the western slopes of the Unaka Mountains. In these two ranges, the bird is associated with thickets of rhododendron and mountain laurel, and the single record from the South Mountains is from a similar habitat. Additional field work is needed to determine the status of this species in the South Mountains.

With the extensive tracts of fairly mature, uniform woodlands, the South Mountains provide an ideal locale for future studies of the breeding bird densities in several of the major plant communities of the Carolina piedmont.

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