

OBSERVATIONS ON SOME OF THE SUMMER
BIRDS OF THE MOUNTAIN PORTIONS
OF PICKENS COUNTY, SOUTH
CAROLINA.

BY LEVERETT M. LOOMIS.

SOMEWHAT over a dozen years ago, having become interested in the birds of the neighborhood of my home, the plan was conceived of making an ornithological survey of the State — a systematic study of the avifauna of the various sections exhibiting distinctive physical characteristics. With the progress of my researches in Chester County, it became evident that the Piedmont Belt was an exceptionally inviting field — a veritable *terra incognita* of surprising richness, —and that years of continuous effort should be devoted to its investigation. In consequence all thought of work in the mountainous districts was deferred until the time when further observation appeared to warrant an enlargement of territory. In the early part of July, 1886, I made a reconnaissance of the portions of the mountain region lying in Pickens County in the vicinage of Mt. Pinnacle — the highest point in the State — and the following season I made a second visit of a week beginning June 18, and on June 4, 1888, a third visit of three days. In 1889 I again continued my investigations, but instead of proceeding, as on former occasions, by rail to the point most convenient to Mt. Pinnacle — Easley, seventeen miles distant — I travelled across the country with a team of mules and a heavy covered wagon. Accompanied by a young colored man as a helper, I set out from Chester, June 3, and accomplished the journey in four days and a half. The influence of the mountains became early apparent, as I advanced, in the diminishing abundance of *Mimus polyglottos* and in the increasing prominence of *Turdus mustelinus*, and also by the presence of *Pipilo erythrophthalmus* near Spartanburgh. I began work on the afternoon of my arrival, June 7, and continued without interruption until July 2, the time of my departure for home. The second day after reaching the scene of my labors a long drought which had been prevailing terminated, and, with but few exceptions, rain fell in some part of every day during my entire stay.

But in spite of this drawback field-work was diligently pressed, though I was compelled to put up at the house of a friend at the foot of Mt. Pinnacle instead of camping out as I had intended. The mules I had with me, however, enabled me to reach the summits and other places more remote without great loss of time.

The mountain region of South Carolina may be briefly defined as a wedge-shaped territory, about one hundred and fourteen miles in length and from eight to twenty-one miles in width, stretching along the North Carolina boundary from the vicinity of Henry's Knob and the King's Mountain chain on the east to the Georgia line on the west, traversing the counties of York, Spartanburgh, Greenville, Pickens, and Oconee. Within this region there are two distinct districts; an outer one characterized by widely isolated elevations arising from a country essentially similar in general aspect to the Piedmont section, and an inner one, truly mountainous and properly a part of the Blue Ridge system, extending in an irregular belt — nowhere, perhaps, exceeding a dozen miles in width — along the border from the State of Georgia to the northwestern corner of Spartanburgh County.

About Mt. Pinnacle the mountains assume the form of successive ranges, broken up by gaps into numerous peaks, and separated from one another by narrow valleys. Mt. Pinnacle, proper, is but a single point, with lateral spurs, in a chain lying between the Oolenoy and the South Fork Saluda. Table Rock, several miles away, is at the eastern terminus, the general trend of the range being east and west. The sides, which are very steep, are broken up into narrow ridges and hollows; the numerous brooks flowing from the latter rendering the region one exceptionally well watered. The summits culminate in mere points and sharp roof-like ridges — the apex of Mt. Pinnacle tapering to a surface of only a few square rods in extent. As would naturally be inferred from the name, Table Rock furnishes a partial exception to this statement. Just below the highest portion, and at a spot where a fine spring issues from the soil, there is a wooded area, comparatively level, of upwards of twenty-five acres. On the slopes, near the crest of the range, a few acres of fairly even ground are a rarity. Such places, forming little 'benches' and coves, are always compensated for by sudden drop-offs, crags and cliffs abounding. The most noteworthy precipice of the locality, as well as of the whole mountain region, is at Table Rock, where

there is a sheer descent, according to local measurement, of nine hundred feet. The other ranges of the immediate vicinity do not differ strikingly from the Mt. Pinnacle range, though some are less precipitous and offer more favorable opportunities for agriculture. The absence of plateaus and other extended levels adds greatly to the difficulty of studying the avian fauna of the mountain tops. A few shots generally drive the birds to the steeper declivities where prolonged pursuit is not feasible. Often birds will be plentiful a few hundred feet below the station occupied, in situations practically inaccessible, or which can be reached only by long detours entailing exhausting exertion.

The Oolenoy Valley (or Oolenoe as formerly spelled by some writers), so often referred to in the subjoined notes, is a fertile bottom following the Oolenoy Creek from its junction with the Saluda (a branch of the Broad) to the watershed separating its south fork from the headwaters of an affluent of the Savannah in Reedy Cove. The High-low Gap, also frequently mentioned, is a dividing ridge between the north prong of the Oolenoy and the south branch of the Saluda.

It will be seen that the territory actually covered by my explorations is very limited; the whole tract, bounded by Table Rock on the east, Reedy Cove on the west, the High-low Gap on the north, and the Oolenoy Valley on the south, perhaps aggregating not above twenty-five square miles.

Except where the ground is sterile or rocky, the mountains are covered with woods of hardwood growth. There are but few clearings, the settlements being almost exclusively confined to Reedy Cove and the Oolenoy and Saluda Valleys. Mt. Pinnacle is wholly uninhabited, although there is a little 'deadening' near the summit where a few acres of hillside were formerly cultivated. Though there are fine forests, as at the top of Mt. Pinnacle and on Rich Mountain at Reedy Cove, still the timber is not of great age. Men of advanced years can remember when 'Bald Knob' (the local appellation of Mt. Pinnacle) was, in fact, truly bald. The name, 'Mt. Pinnacle,' is of very recent origin, having been bestowed by the engineers of the United States Coast and Geodetic Survey. For fear of unduly extending these preliminary remarks, allusion is made only to such floral features as forcibly arrested an eye accustomed to the woodlands of the lower country. Of the deciduous trees — aside from the oaks and hickories — the chestnut is

the most conspicuous. On the higher elevations, in some places, it predominates over all other kinds of growth. Hemlocks, solitary or in small groups, occur at all altitudes in the ravines and coves, interspersed among the hardwood. Scattered through these hollows and on their sides, in smaller numbers, are white pines, while in the damper locations an occasional black spruce towers mast-like amid the other trees. On the poorer ridges the Jersey or scrub pine abounds. The rarer Table-Mountain pine is accounted among the wonders of Table Rock. Rhododendrons everywhere border the wooded streams. The last season the first blossoms were noticed June 15.

Of the mammals, I have but little of pertinence to note. I did not meet with *Sciurus hudsonius* or *Lynx borealis canadensis*, but both species are probably present, as I was told that the 'boomer' was found on the mountains west on the Big Estatoe, and that a large cat, differing distinctively from the common one, was sometimes taken about Mt. Pinnacle by the wild-cat hunters. The ground squirrel (*Tamias striatus*) is abundant and the ground hog (*Arctomys monax*) common.

Three avifaunæ meet in the South Carolina highlands—the Louisianian, Carolinian, and Alleghanian. The first-named is not prominent, the local ornithology being characterized by species representative of the Carolinian and Alleghanian, those of the former preponderating. The general influence of the mountains is of a nature so potent as to preclude the division of the two thousand feet, more or less, arising above the Oolenoy Valley into distinct faunal zones—sharp distinctions of this kind not existing. In considering the relation between distribution and altitude, woodland birds alone are of significance, for these mountain slopes do not supply the conditions essential to birds inhabiting open situations—a modifying circumstance always to be kept in mind in the perusal of the statements that follow. However, irregular lines of limitation with abrupt sinuosities may be drawn for a few species, the Alleghanian being confined above 2000 feet and the Carolinian chiefly below 2500 feet. While these boundaries appear to be well sustained locally, still a wider field would probably show, in some cases at least, a more general distribution. The universal dispersion of *Dendroica virens* in the vicinage of Mt. Pinnacle and its reported restriction to the Canadian fauna in the higher mountains of North

Carolina, give peculiar emphasis to the fact that a single locality cannot safely be accepted as a criterion in the determination of vertical distribution, local conditions — not always obvious — often exercising greater influence than does mere elevation. The rigid adherence of *Seiurus aurocapillus* to the belt above 2000 feet — a circumstance naturally not to be expected, if altitude were absolutely paramount, of a species occurring within the bounds of the Carolinian Fauna — strongly contrasts with the wide ranging of *Dendroica virens*. The uniform allotment of *Helmitherus vermivorus*, *Seiurus motacilla*, *Geothlypis formosa*, *Thryothorus ludovicianus*, *Parus bicolor*, *Parus carolinensis*, shows what little weight height actually has in these mountains in governing the upward range of some of the characteristic components of the Carolinian fauna. Of species whose range seems definitely restrained by altitude, it would naturally be expected that there would be a gradual diminution in abundance in receding from base or summit, but this is not strictly the case — the highest and lowest points often exhibiting, in a given area, numbers not unequal. The pushing up along the barren ridges of *Sitta pusilla* of the Louisianian fauna strikingly illustrates the force exerted by floral surroundings. It should be added, further, that the streams of larger size are apparently as influential in extending the altitudinal range, in certain instances, as are rivers the latitudinal. The north fork of the Oolenoy well exemplifies this, the extreme limits, so far as noted, of a number of species being attained on this water-course near the High-low Gap.

To summarize, while the predominant factor in the constitution of the bird-fauna of these mountains is altitude, still it does not strictly control vertical distribution, its immediate force being modified,

1. By the combined effect of the mountains, this collective influence pervading the lower grounds to such a degree as to check the extension of the more susceptible Carolinian forms and to increase that of some Alleghanian.

2. By the flora, conditions of this nature — often of great potency where local habitat is concerned — extending or curtailing the general range.

3. By streams (natural highways encouraging extension of range) and other surface features, upon which depends the pres-

ence or absence of certain species—local environment in some instances counterbalancing disadvantages of elevation.

4. By artificial circumstances, such as are brought about through the agency of man.

5. By influences not apparent, as manifested in the selection of one locality as a place of residence and the rejection of another, to all appearance not dissimilar.

6. By inherent power of adaptation in certain Carolinian species, notably *Parus bicolor* and *Parus carolinensis*, to the conditions incident to altitude, irrespective of other modifying considerations.

LIST OF ELEVATIONS.

Mt. Pinnacle	3436 feet.
Table Rock	3124 "
Pickens Court House	1162 "
Spartanburgh Court House	887 "
High-low Gap	2763 "
Reedy Cove	1810 "
Oolenoy at foot of Mt. Pinnacle	1123 "

I am indebted for the first four of the above measurements to the U. S. Coast and Geodetic Survey. The last three were kindly supplied by a friend who obtained them directly from the engineers engaged in making the preliminary surveys of the projected Carolina, Cumberland Gap, and Chicago Railroad.

A few words of explanation are necessary to a proper understanding of the appended notes. In general, when no year is given, 1889 is meant. Large birds, when spoken of as common, are not to be regarded so in the same sense as smaller ones.

1. *Ardea herodias*. GREAT BLUE HERON. 'CRANE.'—July 1, one was seen in the Oolenoy Valley at the foot of Mt. Pinnacle. The day following another—perhaps the same bird—was observed lower down the valley opposite Table Rock. From what I learned by inquiry, I judge that this species is not as plentiful as in the Piedmont Region. It is said to occur chiefly during wet spells.

2. *Ardea virescens*. GREEN HERON.—This Heron was met with during June, 1887, and again in June, 1889, along the Oolenoy, where its presence appears to be not infrequent.

3. *Colinus virginianus*. BOB-WHITE. 'PARTRIDGE.'—While this bird is very common, especially about the settlements, still it is apparently not as abundant as in Chester County and other portions of the upper country away from the mountains.

4. *Bonasa umbellus*. RUFFED GROUSE. 'PHEASANT.'—The Pheasant is fairly entitled to be ranked as common in this section. It is not confined to the mountain tops during the month of June but is found from base to summit, and is not more numerous at the higher elevations than the lower. At this season the mulberry trees are in fruit, and are much resorted to. Two of these trees at the foot of Mt. Pinnacle were visited daily by Pheasants during my stay. At the base of Rich Mountain, in Reedy Cove, I rode up to three that were feeding on wild strawberries in a little cove on the edge of the woods. Huckleberries also form a part of their diet at this season, and dogwood berries are said to be a favorite addition to their fare in the autumn. From what I gleaned from hunters, it seems that the wild-cat is the great enemy of the Pheasant. I was informed that both old and young were preyed upon, and that a young brood was often totally destroyed. They suffer but little from the gun, as they are not regularly pursued as objects of sport. (For previous notice, see 'The Auk,' Vol. III, Oct., 1886, p. 483.)

I did not meet with the Wild Turkey, and, from all accounts, I judge that it is not as abundant as in the lower country. Its increasing scarcity is attributed to the hunters and to the wild-cats.

5. *Zenaidura macroura*. MOURNING DOVE. 'DOVE.'—Only tolerably common, and noted principally in the cultivated valleys.

6. *Cathartes aura*. TURKEY VULTURE. 'BUZZARD.'—This species is independent of altitude, and is very common over the highest peaks as well as in the lowest valleys.

7. *Catharista atrata*. BLACK VULTURE. 'CARRION CROW.'—The Carrion Crow is well known throughout this region, but is not regarded as common. It is seen most frequently, I have been assured, about large carcasses. The mountain sides and tops serve as a stock range for the settlements in the valleys, and it not infrequently happens that cattle venture too near the cliffs and lose their footing and fall over, thus furnishing a continual source of supply to the carrion-feeding birds. I did not meet with this Vulture except on one occasion, June 22, when two individuals and a Turkey Buzzard were seen soaring over the valley of the Saluda, as I sat on the verge of the precipice at Table Rock. In their gyrations they finally drew near, and skirted along the face of the cliff on a level with the place where I was sitting.

The Swallow-tailed Kite (*Elanoides forficatus*) is a summer visitant at times in the Oolenoy and other valleys. I did not ascertain, however, whether it was known to breed. Aug. 6, two were shot, a friend writes, on Little Estatoe Creek, three miles west of Mt. Pinnacle. The tail of one of the specimens was forwarded to me at Chester for examination.

8. *Accipiter cooperi*. COOPER'S HAWK. 'CHICKEN HAWK.' 'BLUE-TAILED HAWK.'—About the settlements, apparently as plentiful as elsewhere in the State. During the latter part of my last visit one harassed the chickens daily at the house where I was stopping.

9. *Buteo borealis*. RED-TAILED HAWK.—Rather common and generally distributed.

10. *Falco peregrinus anatum*. DUCK HAWK. 'SPARROW EAGLE.'—As my guide and myself were picking our way in a dense fog along the broken trail at the foot of the precipice at Table Rock on the 15th of June, three Duck Hawks with loud cries bore down upon us from the mist-hidden crag above. They flew about in a manner that plainly indicated that our presence filled them with anxiety. Occasionally one would alight for a few moments on a dead tree. Several shots were fired, but the towering cliff led me to miscalculate the distance, and the only effect produced was to frighten them away. In about half an hour they reappeared, screaming as before. In the meantime the fog lifted and the surface of the cliff became distinctly visible. The object of their solicitude was soon apparent, for one of them, with a ground squirrel in its talons, alighted in a crevice in the massive wall of rock. Several unsuccessful attempts were made to obtain a specimen, which resulted finally in driving them from the scene. Four days later I visited the spot a second time hoping to secure one with a rifle, but they had grown extremely shy, remaining out of sight at the top of the precipice. On the 22d I rode across the range from Mt. Pinnacle to Table Rock and, when the brink of the cliff was reached, the three Falcons were again encountered, but the efforts put forth to capture one were as unavailing as were those on the former occasions. I did not find this bird elsewhere in my excursions about the mountains.

I was told that the Bald Eagle in the past bred at Table Rock. There is a great hole—affirmed to have been formerly a nesting site—in an inaccessible part of the cliff which still bears the name of 'the eagle hole.' The presence of an Eagle now, at any season, is an exceptional occurrence, and is of sufficient interest to awaken general comment. The Golden Eagle probably occurs during winter, if not at other times of the year. The Eagle, however, spoken of by my mountain friends is asserted to be a white-headed one.

11. *Falco sparverius*. AMERICAN SPARROW HAWK.—So far as my observation extended, the Sparrow Hawk was not numerous.

12. *Coccyzus americanus*. YELLOW-BILLED CUCKOO. — Tolerably common. Familiarly known throughout the region as the 'Rain Crow.'

13. *Ceryle alcyon*. BELTED KINGFISHER. 'KINGFISHER.'—One was seen July 9, 1886, along the Oolenoy at the bottom of Mt. Pinnacle.

14. *Dryobates villosus audubonii*. SOUTHERN HAIRY WOODPECKER. —Although the Hairy Woodpecker is common and generally dispersed, I did not satisfactorily ascertain whether other than the southern form was present. A female, shot June 6, 1888, at an altitude somewhat above 3000 feet measured in length, 9 in., tail, 3.4 in., dimensions that are indicative of the typical *D. villosus*, but the wing measurement (chord) of this example was only 4.6 inches.

15. *Dryobates pubescens*. DOWNY WOODPECKER.—Observed from the valleys up the mountain sides to their summits; moderately common.

16. *Ceophloeus pileatus*. PILEATED WOODPECKER. 'WOOD HEN,' etc.—For so large a bird, common. Generally distributed. Though ordi-

narily wary, sometimes they appear to lose their caution, I have been informed, and several, as if actuated by an overpowering curiosity, will follow a squirrel hunter about from place to place, keeping up such a clamor that he is compelled to resort to his gun to free himself from their annoying attentions.

17. *Melanerpes erythrocephalus*. RED-HEADED WOODPECKER. — A few were noticed in the Oolenoy Valley. They were more abundant in the lower part of the County away from the mountains.

18. *Melanerpes carolinus*. RED-BELLIED WOODPECKER. — The lower elevations seemingly preferred; tolerably common.

19. *Colaptes auratus*. FLICKER. 'YELLOW-HAMMER.' — I found the Flicker common, ranging from the lower valleys over the mountain tops.

20. *Antrostomus vociferus*. WHIP-POOR-WILL. — In the neighborhood of the house where I stayed the characteristic notes of the Whip-poor-will greeted the ear nightly. It did not appear to be a very common bird, however.

The Chuck-will's-widow was not heard, but of its occurrence I was well assured. It is known as 'Dutch Whip-poor-will,' and its notes were imitated in such a manner as to leave no doubt in my mind as to the reliability of the statements made concerning its presence. It was reported as being rare.

21. *Chordeiles virginianus*. NIGHTHAWK. 'BULL-BAT.' — Only seen in the lower part of the County. Said to visit the Oolenoy Valley at times.

22. *Chaetura pelagica*. CHIMNEY SWIFT. 'CHIMNEY SWEEP.' 'CHIMNEY SWALLOW.' — Common; its distribution uninfluenced by elevation. According to local information, it breeds in chimneys about the settlements, and in hollow trees back in the mountains. I spent a day in making a trip to Reedy Cove, expressly to see one of these trees. The tree, a 'poplar,' was a mere living trunk, and stood in the edge of a field on a little brook at the foot of a wooded mountain. It inclined fully 30° from a perpendicular, and was about forty feet high and eleven feet in circumference and hollow from the ground upward. The top was broken off, affording an entrance to the hollow within. I learned that it was chiefly a roosting tree, and that the fall was the principal time of the year when it was occupied. Then, at the close of day, I was told, "two or three hundred" would circle around and, at brief intervals, a few would detach themselves from the main body and enter the cavity. At last the whole flock would be settled there for the night. I saw but a single Swift near the place during the time of my visit, midday.

23. *Trochilus colubris*. RUBY-THROATED HUMMINGBIRD. — Equally common over the wooded mountains and in the open valleys below. I did not try the experiment, but it is averred that corn whiskey, with sugar dissolved in it, placed in flowers much affected by these little pygmies intoxicates them so effectually that their capture by the hand is rendered an easy matter.

24. *Tyrannus tyrannus*. KINGBIRD. 'BEE-BIRD.' — Not particularly

common, and restricted to the cultivated valleys. It is said to be most numerous about places where bees are kept.

25. *Myiarchus crinitus*. CRESTED FLYCATCHER.—Of universal dispersion throughout the region; common.

26. *Sayornis phœbe*. PHŒBE.—About the town of Chester, I have never met with the Phœbe during the month of June. In my wagon tour across the country it was first encountered, June 5, at Fair Forest, five miles west of Spartanburgh. On the same day its loud cries were heard at the South Fork of Tiger River, also in Spartanburgh County. June 4, 1888, a pair were found established at a small mill-pond midway between the villages of Easley and Pickens. At Mt. Pinnacle, it is common in the vicinage of water, ranging up to about 2500 feet. Back on the heights, sheltered situations in the walls of rock are frequently selected as nesting places. Young birds, just ready to leave the nest, were seen as late as June 23 in 1887.

27. *Contopus virens*. WOOD PEWEE.—Conspicuously common everywhere in the woods.

28. *Empidonax acadicus*. ACADIAN FLYCATCHER.—Most widely dispersed at the lower levels. Along the larger streams it reaches a higher elevation than elsewhere in the mountains. On the north fork of the Oolenoy, near the High-low Gap, it was common at 2500 feet, the highest point at which the species was observed.

(To be continued.)

ON THE WINTER DISTRIBUTION OF THE BOBOLINK (*DOLICHONYX ORYZIVORUS*) WITH REMARKS ON ITS ROUTES OF MIGRATION.

BY FRANK M. CHAPMAN.

AMONG our summer resident land birds the Bobolink is in its migrations remarkable for two things; first, the extent of its wanderings during the winter; second, the comparatively late date at which its spring migration is completed. These are both well-known facts, and I shall here simply endeavor to bring forward and arrange the records on which they are based, adding some new data furnished by an examination of the material in the American Museum of Natural History. It is to be regretted that a large proportion of the extra-limital records consist merely of mention of the bird's name and the locality of its