

93. ROBIN—*Planesticus m. migratorius*.
Common.

94. BLUEBIRD—*Sialia s. sialis*.

A common breeder.

Ann Arbor, Mich.,

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NOTES FROM THE TENNESSEE CUMBERLANDS

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During the latter part of May, 1922, I found myself confronted with my usual annual vacation and the rather burning question as to how and where it should be spent. Having narrowed the question down to making another ornithological reconnaissance in my home state, I applied myself to my maps and, contemplating the lay of the land from the high Alleghanies of east Tennessee to the Mississippi swamps on the west, I finally selected a wild and rugged area, which I had not as yet covered, lying about midway between Nashville and Chattanooga. This area consisted of the high plateau of the Cumberland Mountains which extend through the state in a southwesterly direction and forms a table land, roughly 15 miles wide and 40 miles long, with a nearly constant elevation varying from 1,800 to 2,000 feet above sea level. To the east and to the west it drops off abruptly, some thousand feet and more, and the watercourses which drain the plateau have cut jagged canyons or "gulfs" back into it at a depth of hundreds of feet. Aside from the interesting topography I was attracted by the fact that here were to be found vast unbroken tracts of virgin timber and unsettled country, far from the lanes of transportation, where one might reasonably expect to find still some of the larger and rapidly disappearing birds, such as Wild Turkey, Ruffed Grouse, Great Horned Owl, Northern Raven, Duck Hawk and, perchance, the Eagle.

And so it transpired that on the 21st of May, accompanied by E. M. McNish, a fellow enthusiast, I took the train to Beersheba, in Grundy County, which point is 18 miles beyond the end of a railroad branch line. We were equipped to bury ourselves completely in this wilderness for the two weeks at our disposal and to spend nights by a camp fire when the distance to our base was too remote at close of day. The base to which I refer was

an ancient summer hotel, the popularity of which was at its height in the days when stage coaches were first being displaced by railway trains. From the broad veranda, on the very brow of the plateau, we could look down into the gorge of the Collins River a thousand feet below, and up to the abrupt wooded slopes beyond to "Tother Mountain," on which we were told not even a trail had been worn. Up the gorge as far as the naked eye could see the timber was unbroken and the plateau was marked by a sharp escarpment of cliffs, some of which had a sheer drop of 125 feet. Two miles up, the river split into its three forks, each cutting its way back into the plateau through deep "gulfs" and the waters of the streams came tumbling down over huge boulders, worn round and smooth by the wear of ages. The plateau forest, as might be expected, was thin and open, and for the most part of deciduous trees, though there were also to be found large tracts purely of pine, and other tracts in which a dense deciduous second growth had followed the forest fires. Cedar and pine fringed the plateau's edge, the former hanging over the very face of the precipice of the escarpment. At the foot of these cliffs and along all water courses there is a fringe of the picturesque hemlock. The streams are also bordered with dense growths of laurel and holly. We did not cover the cultivated portion of the valley, which began just below our headquarters and extended downstream; had we done so it is probable that we would have added to our list such birds as Bob-white, Sparrow Hawk and Green Heron.

Native hunters accompanied us on some of our more extended tramps and we asked many questions of them, and of others whom we met, regarding certain of the large birds which we felt they would know. And right here, I wish to say that eliciting correct information from a native on such matters is an art which requires experience and careful forethought. Before allowing him to commit himself it is necessary to carefully lead up to his answer, lest he "go off half cocked" with an erroneous reply.

The notes which follow cover the species which were of greatest interest to us and include our experience with the 17 species of the warbler family found to be breeding in this area.

Of the warbler family the Chat and the Prairie Warbler were abundant, the Black and White, Hooded, Pine Black-throated Green, Louisiana Water-thrush and Oven-bird were common,

the Cerulean, Kentucky and Black-throated Green were scarce, and the Blue-winged, Northern Parula, Redstart, Worm-eating, Cairn's and Maryland Yellow-throat were rare. The first two species mentioned, the Chat and the Prairie Warbler, were to be found on the plateau in every patch of second growth, which growth springs up quickly here on abandoned fields. A half-dozen nests of the Prairie contained young or eggs which indicated a range of laying dates extending from May 5th to June 2nd. The Black and Whites were, for the most part, feeding young out of the nest, as were the Pine Warblers, Oven-birds and Louisiana Water-thrushes. Two of the dainty nests of the Hooded Warbler were found, one with four fresh eggs on the 22nd of May, and the other, half incubated, on the 29th. The pine groves formed a splendid habitat for the Pine Warbler and although the bird was always to be found no nests could be discovered. Of more than ordinary interest to me was the finding of the Black-throated Green Warbler. The hemlock growth, at the base of cliffs and along the streams, offered the proper habitat, and here they were noted repeatedly feeding their young, showing, too, that it is an early breeder. The Kentucky Warbler was not met until the fourth day of our stay, when one flushed from under our feet on the mountain side, and disclosed its nest containing four incubated eggs. In this section of woods it was later found to be fairly common. The Yellow-throated Warbler was found feeding always among the pine trees on the table land, which habitat is radically different from that in which I had found it elsewhere in the state, i. e., along the sycamore-bordered banks of lowland streams. A nest of this species, with one broken egg, was found in a small pine at the top of a cliff, and nearby a family group were feeding. The Maryland Yellow-throat was conspicuous by its almost entire absence, though conditions were apparently suited to its liking. Returning one day, the 29th, from a long tramp up Savage Creek Gulf, we were attracted by the songs of some Parula Warblers, in a grove of walnut trees near the log house of an old settler. I wondered where they could be nesting, since we had seen but little of the usnea moss, but on nearing the walnut trees we perceived that some of the limbs were dead and that a fair growth of usnea was attached to them. A few minutes watching rewarded us with seeing one of the Parulas fly into a bunch of the moss and no time was lost in climbing to investigate. The nest was found to be incomplete,

the bunch of moss having been opened out in the center and the bottom apparently knit together to hold the lining.

Our most interesting warbler find occurred on the 26th, when some nine miles from camp and walking through thick second growth in a thin plateau woods, we discovered a compact little nest four feet up in a small oak sapling. A female warbler was on the nest and by stalking stealthily we approached to within six feet. She slipped off the nest but later returned and was readily identified as the Cairn's Warbler (*Dendroica caerulescens cairnsi*). The nest was collected with its four fresh eggs, during which time the male joined its mate and protested from a safe distance. The eggs are marked with much smaller specks than those I have taken of this warbler in the Great Smoky Mountains to the eastward. We saw no other birds of this species during our stay at Beersheba so regard it as rare and probably of very local distribution. This breeding record extends the known range of this species to probably what will prove to be its extreme southwestern limit.

The woodpeckers were not a numerous tribe in this area; only one Red-head was seen, while the Red-bellied, Hairy, Downy and Flicker were scarce. The pine groves were carefully scanned for the Red-cockaded but while none were seen, Prof. H. C. Fortner, of Knoxville shot one here in December of 1921. The Brown-headed Nuthatch was also sought among the pines and it was without surprise that none were found. That most picturesque of our native woodpeckers, the Pileated, was met often, and gave us the thrills that always come with close contact with this fascinating bird. I say fascinating, for there is something about him which sets him well apart from all other of my feathered acquaintances and makes him my favorite. I have observed the nesting and home life of many pairs of "Log Cocks" and I added further to my experiences when on the 27th of May a nest was found. The dead pine stub into which the nest had been chiseled, was standing in a small upland swamp and the parent birds were called up close by clapping of hands. After watching them for half an hour and listening to their resonant call, my companion approached the nest stub and hammered vigorously. To our surprise, an apparently full-grown female appeared from inside the cavity and then launched itself forth, followed by another and smaller one. These proved to be young

and their flight had been their first experience on their own wings.

The Wild Turkey and Ruffed Grouse were among the birds which we had hoped to meet but the heavily foliaged woodlands militated against us and we came away unrewarded. Inquiry however among one native after another, made it evident that there was no doubt but that these birds, though now scarce, are regularly killed each winter by hunters. The Grouse, which is known through Tennessee mountains as "Pheasant," is said to be always found near the laurel covered banks of the mountain streams and in this thick evergreen cover it finds refuge from pursuit during the winter. It is said that the fox is chiefly responsible for its continued scarcity.

I have a rather firm conviction that the gathering of negative information regarding a species is of as much value from a distributional standpoint as the recording of actual experience and this will apply to the following remarks on the Northern Raven. I had heard that this rare bird was regularly to be found in this remote and rugged country so I decided that no small part of our time should be spent in verifying these reports. After days of skirting miles and miles of cliffs, "shooting up" the most promising ones and lying prone on some promontory scanning the gorges with binoculars, we came away without sight or sound of a Raven. There is no doubt however that this bird has nested here in the past and that it wanders here now regularly in winter. Hunters readily distinguish it from the Crow, describing its guttural croak, its carrion eating habits, etc., and admitted that Raven scalps to the credit of local nimrods were few and far between, due to the great wariness of the birds. Even now breeding conditions would seem to be ideal, for the vast areas of uninhabited country and the great extent of high vertical cliffs offer a well suited habitat.

I will conclude these remarks with a few references to the birds of prey. Easily the most spectacular birds of the cliffs are the Turkey Vultures, which make such places their headquarters and soar the day long, up and down the gorge when there is breeze to assist them, and if this be lacking, partake themselves to higher strata, at times almost beyond reach of the eye. When one works his way along the ledges of the cliffs, as we frequently did while searching for nests, the Vultures would often soar down close and look at us with an expression which seemed to say, "if you slip and fall we'll know where to go for

dinner tomorrow." Oddly enough, the Black Vulture was not noted at all though in the central part of the state, about Nashville, it out-numbers its red-headed cousin.

I had entertained some slight hope that in such a rough, remote environment Eagles might still be found, but here again we had to return with negative information. Even the natives would not lay claim to its residence and recalled very few instances where it had been seen or shot during fall and winter. Further west, where many sheep are raised, Golden Eagles are killed and caught regularly in the lambing season and, rather rarely, the Bald Eagle is also taken at this time.

We were rather surprised to hear, from two different and apparently reliable sources, that a pair of Osprey bred regularly on the Collins River a few miles below our headquarters. These reports came to us too late to make personal investigation.

Of the hawks, we found the family rather sparsely represented, possibly due to the mountaineer's deadly accuracy with his "squirrel gun." The Sparrow Hawk to our surprise was not seen at all while of the Broad-winged only two were observed. In the deep narrow gorges we noted three splendid pair of Red-tails and the vigor of the flight of these mountain-bred birds contrasted sharply with those with which I had had experience in the lowlands. On May 27th a nest of one of these pairs was found which was more than ordinarily interesting. We were skirting the base of some high cliffs when suddenly we were greeted by the incessant crying of a Red-tail which beat short circles of flight directly over our heads. It was evident that we were the cause of her anxiety and, a hundred yards further on, she flew to a ledge on the face of the cliff and away again, thereby betraying the location of the nest which could now be readily seen from below. The location was quite inaccessible but, by climbing a nearby hemlock, it was found that the nest contained young nearly ready to fly.

The last species I shall mention was one which had largely been responsible for my selection of the locality for our trip, since my hopes of finding the Duck Hawk had been high and these hopes were not disappointed. On the morning of the 23rd, while sitting on a promontory scanning the cliffs across the gulf with our glasses, a falcon suddenly burst into view, about three hundred yards from us, and began a series of evolutions which for pure grace and utter abandon outdid the flight of any

raptore I had ever witnessed. Presently it was joined by its mate and together they performed nose-dives galore and all but "looped the loop." The ease with which, by means of a few graceful wing strokes, these birds could climb upward after a rocket-like dive, was a source of wonder and a sight I shall always remember. The performance lasted about fifteen minutes when suddenly the birds turned their ever beating wings up the gorge and disappeared. The sight of the pair spurred us to concentrate our efforts upon finding the nest and a great deal of our time during our stay was spent in searching the cliffs for miles around. Nearly a week later, while skirting under a high cliff which formed the dividing wedge between two "gulfs," we came upon feathers and bones of large number and variety, scattered about on the shelf which formed the base of the cliff. By climbing a hemlock, a quarter mile further on, we were enabled to find footing in a cleft of the rock and made our way to the top of the cliff. Thence we walked back to a point immediately above where the feathers had been found and from this point were able to work our way down, from ledge to ledge, to a point 60 feet below the top and as far from the bottom. The ledge, which apparently was used as the nesting site, was found to be quite inaccessible and most of its recessed surface was obscured by a jutting point of rock. The portion which was visible was littered with bones and feathers and was approximately 20 feet long by 3 feet wide. As we sat viewing the situation one of the parent Duck Hawks appeared off the side of the cliff and winged her way uneasily back and forth as though gun shy from some former experience. Lack of proper tackle and the lateness of the date caused us to abandon further attempt to reach the nest, until perhaps another year.

Duck Hawks were seen in three places, so well removed from each other, that we judged we had located as many pair. They are well known to native hunters who call them "Squirrel Hawks" as distinguished from "Chicken Hawks," by which name they know the Redtail. They attest its fondness for poultry but state that squirrels, caught among the tree tops, form its chief prey. They also claimed them to be more common than we actually found them and, if they are right, it is good news about a species that has been almost exterminated in the eastern United States.

Thus ended our stay on the Cumberland Plateau, a region

which so far as I know had never before been thoroughly gone over in an ornithological way, and one which doubtless would yield more of interest to the bird student who could spend there more than the brief time we had at our disposal.

The following list covers the 64 species of birds noted during our stay, all of which except the Waxwings, were no doubt breeding. The notations appended are as follows: A—Abundant, C—common, F. C.—fairly common, S—scarce, and R—rare.

MOURNING DOVE— <i>Zenaidura macroura carolinensis</i>	S.
TURKEY VULTURE— <i>Cathartes aura septentrionalis</i>	C.
RED-TAILED HAWK— <i>Buteo b. borealis</i>	3 pair
BROAD-WINGED HAWK— <i>Buteo p. platypterus</i>	2 noted
DUCK HAWK— <i>Falco peregrinus anatum</i>	apparently 3 pair
SCREECH OWL— <i>Otus a. asio</i>	1 taken
BLACK-BILLED CUCKOO— <i>Coccyzus erythrophthalmus</i>	nest with 2 eggs

Several "Raincrows" heard every day, perhaps both species present.

HAIRY WOODPECKER— <i>Dryobates v. villosus</i>	3 noted
DOWNY WOODPECKER— <i>Dryobates pubescens medianus</i>	S.
PILEATED WOODPECKER— <i>Phlæolomus p. pileatus</i>	F. C.
RED-HEADED WOODPECKER— <i>Melanerpes erythrocephalus</i>	only 1 noted
RED-BELLIED WOODPECKER— <i>Centurus carolinus</i>	only 2 noted
NORTHERN FLICKER— <i>Colaptes auratus luteus</i>	S.
WHIP-POOR-WILL— <i>Chordeiles v. virginianus</i>	S.
CHIMNEY SWIFT— <i>Chatura pelagica</i>	F. C.
RUBY-THROATED HUMMINGBIRD— <i>Archilochus colubris</i>	C.
KINGBIRD— <i>Tyrannus tyrannus</i>	only 1 noted
CRESTED FLYCATCHER— <i>Myiarchus crinitus</i>	F. C.
PHOEBE— <i>Sayornis phæbe</i>	A.
WOOD PEWEE— <i>Myiochanes virens</i>	S.
ACADIAN FLYCATCHER— <i>Empidonax virescens</i>	F. C.
BLUE JAY— <i>Cyanocitta c. cristata</i>	F. C.
CROW— <i>Corvus b. brachyrhynchus</i>	S.
GOLDFINCH— <i>Astragalinus t. tristis</i>	F. C.
CHIPPING SPARROW— <i>Spizella p. passerina</i>	C.
FIELD SPARROW— <i>Spizella p. pusilla</i>	F. C.
BACHMAN'S SPARROW— <i>Peucea æstivalis bachmani</i>	one noted, feeding young
TOWEE— <i>Pipilo e. erythrophthalmus</i>	1 pair

CARDINAL— <i>Cardinalis c. cardinalis</i>	S.
INDIGO BUNTING— <i>Passerina cyanea</i>	F. C.
SCARLET TANAGER— <i>Piranga erythromelas</i>	F. C.
SUMMER TANAGER— <i>Piranga r. rubra</i>	F. C.
PURPLE MARTIN— <i>Progne s. subis</i>	3 noted, together
CEDAR WAXWING— <i>Bombycilla cedrorum</i>	flock of 20, May 22nd.
RED-EYED VIREO— <i>Vireosylva olivacea</i>	C.
WARBLING VIREO— <i>Vireosylva g. gilva</i>	1 pair
YELLOW-THROATED VIREO— <i>Lanivireo flavifrons</i>	2 noted
WHITE-EYED VIREO— <i>Vireo g. griseus</i>	F. C.
BLACK AND WHITE WARBLER— <i>Mniotilta varia</i>	A
BLUE-WINGED WARBLER— <i>Vermivora pinus</i>	1 male heard
NORTHERN PARULA WARBLER— <i>Compsothylpis americana usnae</i>	several pair
CAIRN'S WARBLER— <i>Dendroica caerulescens cairnsi</i>	pair and nest
CERULEAN WARBLER— <i>Dendroica cerulea</i>	S.
YELLOW-THROATED WARBLER— <i>Dendroica d. dominica</i>	S., in pines
BLACK-THROATED GREEN WARBLER— <i>Dendroica virens</i>	F. C., in hemlocks
PINE WARBLER— <i>Dendroica v. vigorsi</i>	F. C., in pines
PRAIRIE WARBLER— <i>Dendroica discolor</i>	A.
OVEN-BIRD— <i>Seiurus aurocapillus</i>	C.
LA. WATER-THRUSH— <i>Seiurus noveboracensis motacilla</i>	F. C.
KENTUCKY WARBLER— <i>Oporonis formosus</i>	S.
YELLOW-BREASTED CHAT— <i>Icteria v. virens</i>	A.
HOODED WARBLER— <i>Wilsonia citrina</i>	F. C.
REDSTART— <i>Setophaga ruticilla</i>	1 only
CATRIRD— <i>Dumetella carolinensis</i>	F. C.
BROWN THRASHER— <i>Taxostoma rufum</i>	F. C.
CAROLINA WREN— <i>Thryothorus l. ludovicianus</i>	C.
BEWICK'S WREN— <i>Thryomanes b. bewicki</i>	3 pair
WHITE-BREASTED NUTHATCH— <i>Sitta c. carolinensis</i>	1 only
TUFTED TITMOUSE— <i>Bæolophus bicolor</i>	F. C.
CAROLINA CHICKADEE— <i>Penthestes c. carolinensis</i>	S.
BLUE-GRAY GNATCATCHER— <i>Polioptila c. carulea</i>	3 pair
WOOD THRUSH— <i>Hylocichla mustelina</i>	F. C.
SOUTHERN ROBIN— <i>Planesticus migratorius achrusterus</i>	S.
BLUEBIRD— <i>Sialia s. sialis</i>	S.

Nashville, Tenn., October 24, 1922.