

Examination of the six eggs showed that no development has taken place in any of them. The germinal disc was still visible on the intact yolk. Decay had proceeded too far to tell whether any cell division had taken place, but presumably the eggs had been infertile.—EUGENE P. ODUM, *University of Georgia, Athens, Georgia.*

Ivory-billed Woodpecker and Wild Turkeys in Louisiana.—The writer spent approximately six months on the Singer Wildlife Refuge in Madison Parish, north-eastern Louisiana, while working on a Wild Turkey restoration project as part of the State Pitmann-Robertson program. During this time the area was visited almost daily. Careful notes were kept on the Wild Turkey and Ivory-bill populations [See McIlhenny, *Auk*, 58: 582–584, 1941—Ed.].

On August 16, 1941, at about 5:30 P.M. while returning from the Sharkey plantation area I was attracted by a most unusual noise. I immediately stopped the car and noticed two Ivory-billed Woodpeckers perched in two small ash trees about eight inches in diameter, having recently killed tops. Only one of the birds was carefully observed. A bright, white bill, flaming red crest, and large white wing patch were all clearly noted as the bird remained at the tree. The second bird in a similar ash tree was observed less carefully but a white dagger like bill was as clearly seen. As the birds flew away large white wing patches were observed. It was only then that a third bird was noted. It flew from a dying water-oak tree ten inches in diameter which had only a few curled brown leaves. A stripped spot about six by eight inches and about seventy feet from the ground was present on the trunk of this tree. This is thought to be a spot where the birds had been feeding and to represent the characteristic Ivory-bill 'sign.' In the immediate area were many ash trees with dead tops. Much of the bark was stripped in patches of varying size. This may possibly be old Ivory-bill feeding grounds. This area is of a slightly lower elevation than the rest of the forest and is referred to locally as an 'ash flat.' Typical trees are: overcup and Shumard oaks, white and cedar elms, hackberry, ash, and bitter pecan. The large-sized and dominant red gum, so common in other parts of the forest, is almost entirely absent.

During the months of July, August, and September approximately ninety-eight turkeys were seen. Seven flocks were observed and counted. The average flock-size was 10.7. Other birds were observed one or two at a time. Of all turkeys seen, only eleven were noted in the the 'deep woods,' twenty-four were in a grazed pasture bordering the woods, eight at the border between a recently cut area and the virgin woods, three along a road bordering a cut-over area, forty-four along a logging railroad upon which is an abundance of crushed stone and gravel, seven at the junction of the woods and a cornfield, and one along the Tensas River bank in a disturbed area next to a hunting and fishing club. There apparently was a good correlation between their occurrence and the presence of 'edges.'

Turkeys are undoubtedly plentiful in the Singer area. They are apparently of the genuine wild variety. The refuge has never been restocked. All birds which were clearly seen had very blue heads. They were trim and slim and seemed to conform to the ideal Wild Turkey pattern. No white-tipped tail feathers were ever noted. The large turkey population has apparently resulted solely from the presence of a large (81,000-acre) undisturbed forest which has been completely closed to all hunting since 1926. No other management steps have ever been taken.

The refuge is entirely in bottomland hardwoods consisting largely of a mature stand of valuable red gum and oak timber. In the refuge agreement the owners reserved the right to cut, sell, and develop the property as they saw fit. Large

scale timber cutting began in 1937 and is now proceeding very rapidly. It is estimated that approximately 25 per cent has now been cut and that at the present rate logging will be complete in about five years. Considerable effort is being made by the owners to sell and open the cut-over areas to settlement. This area embraces some of the most fertile agricultural land in Louisiana. As cutting and settlement proceeds and spreads to the more remote areas, the Ivory-bill will undoubtedly become completely extinct as a result of the destruction of its habitat. These factors can have only an adverse effect upon the Wild Turkeys. It will become increasingly difficult to minimize poaching as more and more of the area is sold in small tracts.

The rapid rate of logging will soon eliminate Louisiana's last great wilderness area. The expiration of the refuge agreement in 1946 will likely result in wholesale slaughter of the large turkey and deer populations and will certainly mean extinction for the panther and black wolf as well as for the Ivory-billed Woodpecker.—GEORGE H. BICK, *Louisiana Federal Aid Project 3-R, New Orleans, Louisiana.*

A distributional note on Maine Spruce Grouse.—When I described the Acadian Spruce Grouse, *Canachites canadensis torridus* Uttal (Auk, 56: 462, 1939) from Nova Scotia, the Gaspé, and New Brunswick, I had a male specimen from Calais, Washington County, Maine, and a female from an indefinite Maine locality in the type series. I felt at that time that subsequent investigation would prove *torridus* to be a more definite part of the Maine avifauna.

Under date of November 21, 1941, Mr. James Bond, of the Academy of Natural Sciences of Philadelphia, wrote me that he had a female specimen of Spruce Grouse taken near Olamon, Penobscot County, Maine, which he believed to be *torridus*. My interest was keenly aroused by this information, and I asked Mr. Bond to lend me this skin, together with some Somerset County birds to which he had also referred. This he kindly consented to do. After examining this series I agree with Mr. Bond in calling the Penobscot County female *torridus*, and two Somerset County females *C. c. canace* (Linnaeus). Included in the series was a male from Passadumkeag Stream, Penobscot County. This bird is indistinguishable from a small series of males from Somerset County. I am inclined to believe with Mr. Bond that further study will demonstrate that Penobscot County is transition territory between the ranges of *canace* and *torridus*. At any rate, this definite allocation of a Spruce Grouse from well within Maine to *torridus* makes that subspecies an addition to the Maine avifauna, and to that of the United States.

It is hoped that this paper may be instrumental in unearthing other samples of *torridus* from eastern Maine.—LEONARD J. UTTAL, *Norman, Oklahoma.*

The Newfoundland Robin in Michigan.—On May 12, 1936, at Whitefish Point, Chippewa County, Michigan, I collected a male robin which differs considerably from several hundred other robin skins in this museum by having the entire upperparts practically solid black. When the Newfoundland subspecies, *Turdus migratorius nigrideus* Aldrich and Nutt (Sci. Publ. Cleveland Mus. Nat. Hist., 4, No. 2, 31, 1939), was separated, I was interested to notice that the Whitefish Point specimen agreed with the description of that form. Recently Dr. Aldrich examined the bird and agrees in its determination as *nigrideus*. The Newfoundland Robin is previously unrecorded from Michigan, although the original paper mentions migrants from New York and Ohio.—PIERCE BRODKORB, *Museum of Zoology, Ann Arbor, Michigan.*