

PLEISTOCENE AVES FROM LADDS, GEORGIA  
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The bird material in the collection is relatively small in amount, but of importance as the species represented are the first to be recorded from the Pleistocene between northern Virginia and northern Florida. The records from these fissure deposits thus add to information on early distribution in these forms. The grouse in particular marks the most southern record for this species. The specimens are catalogued in the Division of Vertebrate Paleontology of the U. S. National Museum.

*Anas rubripes* Brewster: Black Duck

Two bones (U.S.Nat.Mus. 24480) represent this species. A right humerus has the shaft complete, but thinner projections of bone on the head and the ends of the distal articular processes in part are missing. Another fragment of a humerus from the same side includes the distal half of the bone, in which the lower end is only partly complete. The many grooves of tooth marks indicate that the damage has come from gnawing by rodents. The nearly complete specimen has a total length of 87.9 mm., with the least transverse width of the shaft 8.1 mm. In the broken bone the shaft width is 7.7 mm. The relatively heavy shaft, coupled with rather short length, is characteristic of the black duck among the larger species of its genus.

The black duck, common in modern times in the eastern half of southern Canada and the United States, has been reported previously from the Pleistocene only in Florida where its bones have been found at Jug Spring and the Itchtucknee River, Columbia County; Lake Monroe, Seminole County; and Hornsby Spring, Alachua County.

*Canachites canadensis* (Linnaeus): Spruce Grouse

## (FIGURE 1)

The four fragments of this species (U.S.Nat.Mus. 23312) include the proximal half of a right humerus, the proximal half of a left carpometacarpus, the distal half of a right coracoid with the outer margin broken, and the distal third of a right tibiotarsus. The bones are incomplete, but careful comparison with modern skeletons of grouse has identified them as from this species, found at present in northern coniferous forests from northern Alaska and Canada south to northeastern Oregon, Idaho, northern Wisconsin, Vermont, Maine, and Nova Scotia (Aldrich and Duvall, 1955, p. 5). The only previous report from the Pleistocene is of bones found in cave deposits at Natural Chimneys near Mt. Solon, in Augusta County, northwestern Virginia (Wetmore, 1962, pp. 7-8). The new record for Bartow County, Georgia, is indication of late Pleistocene distribution through the southern Appalachian region.



FIGURE 1

The southerly portion of the modern distribution of the Spruce Grouse, *Canachites canadensis*, after Aldrich and Duvall (1955, p. 5), with the two known Pleistocene records, that for Natural Chimneys after Wetmore (1962, p. 7).

*Meleagris gallopavo* (Linnaeus) : Turkey

Three fragments from this species (U.S.Nat.Mus. 23311) include the distal end of a left femur, a section from the shaft of a left tarsometatarsus, and a part of the head of a right coracoid.

Bones of the turkey have been found widely in deposits of Pleistocene age so that there are many records for the species from New Mexico, Arkansas, Illinois, Indiana, Pennsylvania, Virginia, Tennessee, and Florida. The bird has been identified also from beds of the older Rexroad formation of western Kansas. The specimens from Bartow County add another point in the record of ice age distribution for the species.

*Ectopistes migratorius* (Linnaeus) : Passenger Pigeon

A left humerus (U.S.Nat.Mus. 23313) with the head and the distal end missing is from this species. Early settlers who came as colonists to eastern North America found the passenger pi-

geon in flocks that in migration numbered millions. The birds were present regularly during winter in Georgia and there, as elsewhere, were regarded as the best of game birds. The hundreds of thousands killed by hunters throughout the range in time cut down their numbers, so that the last great flight in Georgia was recorded in 1869. From this time forward the birds decreased steadily. After 1885 there were only casual records in the state until the bird finally was extinct.

In Pleistocene time the passenger pigeon seems to have been common, with a more extensive range west to California, where its bones have been found in the deposits at Rancho La Brea, in Los Angeles.

Other records for the late Pleistocene are from cave deposits in Tennessee, and in Florida, at Rock Spring, Orange County; Reddick, Marion County and Arrendondo, Alachua County.

Passeriformes: Unidentified passerine species.

A few fragments represent three species in this order, all of them small. A part of the head of a humerus is from a bird of kinglet size. The distal end of another humerus may be from a small bird of the sparrow family. The material (not catalogued) is too fragmentary to allow definite identification.

#### LITERATURE CITED

- Aldrich, J. W. and A. J. Duvall. 1955. Distribution of American Gallinaceous Game Birds. U. S. Dept. Interior, Fish and Wildlife Service, Circ. 34: 1-23.
- Wetmore, A. 1962. Notes on Fossil and Subfossil Birds. Smithsonian Misc. Coll., 145(2): 1-17.