

and dead robins, and live ones very feebly trying to find shelter. I scattered wheat and milo, but the birds made no effort to eat these foods. By the 17th hundreds were dead. Under a joist that holds our wide eaves, in a pile on the ground, were 52 dead birds. The men gathered up 101 in the barn. In a pile in the circle in front of the houses were 23, with dozens scattered around under the trees. None was found out in the fields.

The robins did not pile up, but a person could not walk without seeing dead ones every few feet. Neighbors reported the same thing. One man buried 200, and there were lots left. Everyone had robins in the house, but they would not eat. The little bluebirds were fat. I think they must have been migrating and the wet, cold weather got them. We found no other kinds of dead birds. Our usual supply of sparrows, woodpeckers, etc., came through well.

A lot of good-sized branches were broken off the trees, among them branches off the china-berry trees. The bluebirds did try to eat the china berries, but would not touch the wheat or milo.

Lancaster people, ten miles away, reported a similar quantity of dead birds.—LYDIA G. WELD, *Lancaster, California*. [Transmitted by Ralph Hoffmann, *March 17, 1932*.—Eds.]

Bird Remains from Indian Dwellings in Arizona.—Through the courtesy of Mr. Lyndon L. Hargrave of the Museum of Northern Arizona, I have recently studied a small collection of bird bones from abandoned Indian dwellings in Arizona. Mr. Hargrave states that the bones were obtained from a dwelling site in the Piñon belt thirty-five miles north of Flagstaff, Coconino County. The bones were accumulated by the Indians between 1000 and 1100 A. D., as attested by associated pottery types and tree rings, he says. The collection comprises sixty-eight dissociated bones, sixty-three of which can be identified. The remaining five bones either are lacking in distinguishing characters or are so fragmentary as to be indeterminable. (In a recent communication, dated February 2, 1932, Mr. Hargrave explains that certain of the bones here reported are from Indian dwellings at Wide Ruin, near Navajo, Apache County. These are: All of the Turkey material except 1 ulna; 1 skull, 1 lower jaw, 1 sternum, 1 sacrum, 2 coracoids, 2 humeri, 2 ulnae, 1 carpometacarpus, 2 femora, 2 tibiotarsi, and 2 tarsometatarsi of the Sparrow Hawk; and 1 indeterminable ulna. All other bones are from the Flagstaff site.)

The ornithological interest attached to these remains is largely in the suggestions as to past ecologic conditions which the assemblage presents and in the occurrence of forms which are not present or are not common in the area at the present time. Of course it is difficult to be sure that the Indians did not obtain animals at considerable distances from the dwelling site; but for the most part the remains probably represent animals secured in the immediate Coconino Plateau region or in the adjacent Colorado River Valley. The bones of raptorial and game species predominate.

Buteo borealis, Red-tailed Hawk: 1 ulna.

Falco mexicanus, Prairie Falcon: 1 humerus and 1 ulna.

Falco sparverius, Sparrow Hawk: 1 skull and lower jaw, 1 sternum, 2 sacra, 3 left coracoids, 1 right coracoid, 2 right humeri, 2 left humeri, 3 left ulnae, 2 right ulnae, 2 left carpometacarpi, 2 left femora, 1 right femur, 2 right tibiotarsi, 2 left tibiotarsi, 1 right tarsometatarsus, and 1 left tarsometatarsus. Many of these bones are exceptionally small and agree in size only with males of the small race *peninsularis*. This is especially true of the skull, ulnae and carpometacarpus. *Peninsularis* occurs normally in the Cape district of Lower California, but Grinnell (Univ. Calif. Publ. Zool., 32, 1928, p. 113) reports specimens, apparently of this race, from the Colorado River region south of the United States boundary. There is, then, a considerable representation of dwarfed Sparrow Hawks present in this collection of bones. Measurements of the lengths of carpometacarpi of Sparrow Hawks are as follows: ♂, no. 15548 Mus. Vert. Zool., *F. s. phalaena* (seemingly an averaged-sized male), 28.3 mm.; ♂, no. 55043, *F. s. peninsularis*, 24.1 mm.; specimens from Indian dwellings, 24.7 mm. and 25.8 mm.

The abundance of the Sparrow Hawk suggests that the Indians made special use of their plumage or possibly that they kept them as pets.

Lophortyx gambelii, Gambel Quail: 3 sterna and 1 tibiotarsus. To my knowledge the Gambel Quail does not occur on this part of the Coconino Plateau today, although I have noted it as far east as Phantom Ranch in the bottom of the Grand Cañon.

Meleagris gallopavo, Turkey: 1 sternum, 1 group of thoracic vertebrae, 3 sacra, 1 scapula, 1 right coracoid, 1 left coracoid, 2 left ulnae, 1 carpometacarpus, 1 right femur, 1 left femur, 2 right tibiotarsi, 1 left tibiotarsus, 1 right tarsometatarsus and 1 left tarsometatarsus. The two femora are widely different in point of size, representing the extremes of variability for the species as given by Howard (Univ. Calif. Publ., Bull. Dept. Geol. Sci., 17, 1927, p. 8). The tarsi are perfectly preserved and are entirely typical of *Meleagris*. One ulna is peculiar in that the shape of the external articular facet closely resembles that region of the ulna of *Parapavo*. Considerable individual variation is to be noted, however, in *Meleagris*, and in addition, the bone from the Indian dwelling seems to be the ulna of a young individual, the full adult characteristics of shape perhaps having not appeared at the time of the bird's death.

Turkeys could have been obtained by the Indians in the vicinity of the San Francisco Peaks.

Fulica americana, American Coot: 1 tarsometatarsus. This is a somewhat unusual find in this arid region. Possibly it was obtained along the Colorado River.

Otus asio, Screech Owl, 1 ulna. Swarth (Pacific Coast Avifauna, 10, 1914, p. 30) states that *Otus asio* is not known from this plateau region. It is probable, however, that further explorations in the district would reveal its presence there today. The ulna is that of a large-sized *O. asio* and is not to be confused with the Flammulated Screech Owl. I also have compared it with *Cryptoglaux funerea*.

Bubo virginianus, Horned Owl: 1 scapula, 1 coracoid, and 1 tibiotarsus.

Colaptes cafer, Red-shafted Flicker: 1 ulna and 1 carpometacarpus.

Pica pica, Magpie: 1 carpometacarpus. Swarth (*op. cit.*) on page 45 cites but two records for the magpie in Arizona, both from the drainage basin of the Little Colorado River.

Turdus migratorius, Robin: 1 ulna.

—ALDEN H. MILLER, *Museum of Vertebrate Zoology, Berkeley, California, November 21, 1931.*

Some 1931 Notes from Lincoln County, Montana.—Wood Duck (*Aix sponsa*). A pair of Wood Ducks was observed at a small forest lake near Fortine, April 15, 1931. The birds were evidently migrants, as later visits to the lake and others in the locality failed to reveal their presence. This is the first record of the occurrence of this species in Lincoln County that I have obtained during an observation period of twelve years.

Avocet (*Recurvirostra americana*). An Avocet was seen at Dry Lake, near Fortine, August 30, 1931. I had not previously observed this species in Lincoln County.

Great Gray Owl (*Scotiaptex nebulosa nebulosa*). On July 4, 1931, in a narrow cañon along the Stillwater River near Stryker, in extreme eastern Lincoln County, three Great Gray Owls were watched closely for about fifteen minutes. Their markings, actions, and awkwardness displayed in flying and alighting identified them as young birds of the year. I had not previously obtained first-hand evidence of the breeding of this species in this locality. An old-time trapper and woodsman who possesses an exceptionally wide knowledge of wild life informs me that he once saw two adult and four young Great Gray Owls near Fortine during the summer.

White-throated Swift (*Aëroautes saxatalis saxatalis*). On August 12, 1931, over our farm near Fortine, I saw a White-throated Swift flying with a scattered flock of resident Tree, Barn, Rough-winged, and Northern Cliff swallows. I have found this species to occur regularly but rarely in the Cabinet Mountains, near Libby, but had not before recorded it from elsewhere in the county.

Red-headed Woodpecker (*Melanerpes erythrocephalus*). One bird of this species was seen near Fortine, June 18, 1931. This constitutes the westernmost record for the Red-headed Woodpecker in Montana.—WINTON WEYDEMEYER, *Fortine, Montana, January 14, 1932.*

Swainson Hawks in the Arroyo Calero, Santa Clara County, California.—On July 28, 1928, with a class in ornithology from the State College at San Jose, California, the writer noted approximately twenty Swainson Hawks (*Buteo swainsoni*) in the Arroyo Calero (about ten miles south of San Jose). Ten were seen at one time. Most