

eyes. This area is not, however, so extensive as it is in an adult male Ring-neck. 6. There are distinct black ear tufts (see photo of dorsal surface).

The bird resembles a Prairie Chicken thus: 1. The upper parts, especially the feathers of the upper back, are strongly barred. 2. The flank feathers are strongly and completely barred on at least one web. 3. The tail has a dark brown terminal area on all but the middle pair of rectrices, and the color of this area is similar to that of the Prairie Chicken's tail. 4. The markings of the primary coverts (which do not show in either photograph) are very much like those of the Prairie Chicken. 5. The tarsi are feathered, in front, half way down to the toes.

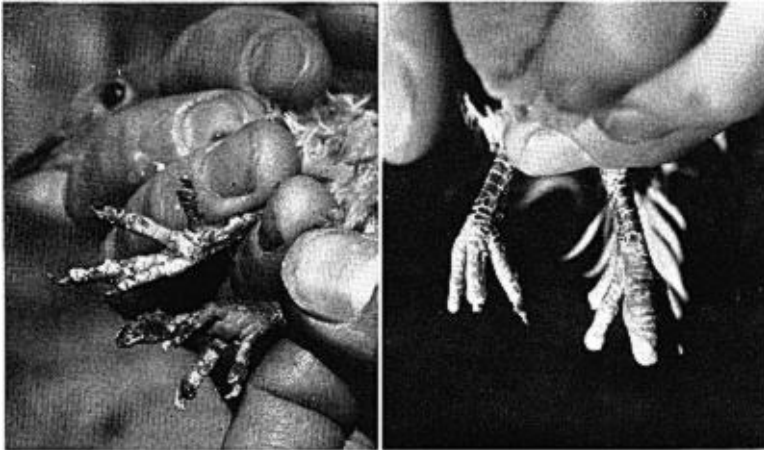
The bare space on each side of the neck is somewhat larger than in a typical male Ring-neck, but the skin does not seem to have the slightly thickened quality characteristic of the booming sac of the Prairie Chicken. The reddish brown feathers of the underparts are tipped with black more or less as in the adult male Ring-neck, but they lack the brilliant metallic lustre. The tail is moderately graduated (wedge-shaped) but not nearly so long and pointed as that of a Ring-neck. The rectrices are neither square-tipped, as they are in the Prairie Chicken, nor extremely pointed, as they are in the Ring-neck. They are intermediate. The primaries are marked with white on their inner webs as are those of a pheasant, but the markings of the outer webs suggest those of the Prairie Chicken. The dark centers of the feathers of the lower back and rump have a suggestion of metallic sheen, but all these feathers are strongly barred.

The wing, bill, and toe measurements are about those of an average adult male Ring-neck, but the tail and tarsus are much shorter. The measurements, in millimeters, are: wing, 237; tail, 167; culmen from cere, 21; tarsus, 64; unfeathered portion of tarsus, 26; middle toe without claw, 46.

Natural or 'wild' hybrids among galliform birds have been recorded many times. Among the best known are those between the Capercaillie (*Tetrao urogallus*) and the Black Grouse (*Lyrurus tetrix*) (see Handb. Brit. Birds, 5: 210). Anthony (1899. *Auk*, 16: 180) has reported a cross between the Dusky Grouse (*Dendragapus obscurus*) and Ring-necked Pheasant taken near Portland, Oregon. I have reported a cross between *Pedioecetes phasianellus* and *Tympanuchus cupido* (1918. *Wilson Bulletin*, 30: 1-2, plate). Taverner (1932. Annual Report, 1930, National Museum of Canada, p. 89 and plate) has reported a cross between the Willow Ptarmigan (*Lagopus lagopus*) and Spruce Grouse (*Canachites canadensis*). Dr. Aldrich has called to my attention a hybrid between *Dendragapus obscurus* and *Pedioecetes phasianellus* (in the Fish and Wildlife Service collection) taken at Osoyoos, British Columbia, September 15, 1906, by C. deB. Green.—FREDERICK C. LINCOLN, *Fish and Wildlife Service, Washington, D. C.*

Foot-freezing and arrestment of post-juvenal wing molt in the Mourning Dove.—Scattered flocks of Mourning Doves (*Zenaidura macroura*) winter throughout south- and west-central Wisconsin. These flocks often suffer considerable mortality. A flock of approximately fifty birds at Menomonie, for example, dwindled to five during the winter of 1949-1950, according to H. M. Mattison. Four of this flock, caught by Mattison and me while live-trapping Bob-white Quail (*Colinus virginianus*), had badly frozen feet. Two more, caught later in that vicinity, as well as a third bird caught by hand in a shed at Horicon when I happened to be present, were caged indoors at Madison and cared for by Fred Wagner and myself. After about six weeks, the feet healed. Almost without exception, however, the frozen distal phalanges dropped off. This loss of bones and claws did not affect locomotion and perching, so far as we could see; but had the doves been obliged to obtain their own food in the wild during the convalescent period, their ground-scratching ability probably would have been seriously impaired. Some of the non-captive birds probably died as a direct result of starvation, but the combination of undernourishment and foot-freezing must have been lethal to many of them.

Arrestment of the post-juvinal molt was apparent in all three of the birds held captive. Of the other four trapped birds only two were given a wing molt examination. In one of these the molt of the primaries was complete; in the other the molt had been arrested. This phenomenon apparently is identical with that observed in the Bob-white by Thompson and Kabat (1950. *Wilson Bulletin*, 62: 20-31). The arrestment of molt varied in the four doves. In one bird the five outer juvinal primaries had been retained, in another bird four had been retained, in another three, in another two. The condition was bilaterally symmetrical in each case. The birds also retained, respectively, the outer four, three, two, and one white-tipped juvinal primary coverts. White-tipping and other evidences of immaturity were ap-



Left: Frozen feet of a Mourning Dove captured at Horicon, Wisconsin, February 8, 1950, and photographed the following day by Frank M. Kozlik. Right: Feet of the same dove after about six weeks of confinement. Photo by Robert A. McCabe.

parent also on unmolted feathers of the alula of the first two birds (two outer white-tipped feathers in the first; one in the second). The juvinal primaries were short, ragged, and faded dull brown, lacking entirely the sheen of the pearly gray new feathers. Swank (1950. *Texas Game and Fish*, Feb., pp. 5 and 21) states that six months are required for completion of the Mourning Dove's post-juvinal molt of primaries. If birds of late-hatched broods do not molt the outer primaries before the arrival of cold weather the molt may be arrested or suspended.—DONALD R. THOMPSON, *Wisconsin Conservation Department, Madison*.

Great Horned Owl versus porcupine.—There are few published records of encounters between the Great Horned Owl (*Bubo virginianus*) and the porcupine (*Erethizon dorsatum*). The classic account is that of Eifrig (1909. *Auk*, 26: 58), quoted by Bent and by Forbush. The porcupine is not mentioned in the food habits study of this owl made by Errington, Hamerstrom and Hamerstrom (1940. *Iowa Agr. Exp. Sta. Research Bull.* 277).

On December 8, 1949, two Great Horned Owls were trapped near Ithaca, New York, and presented to the Laboratory of Ornithology at Cornell University. Judging by size they were a male and a female. The end of a porcupine quill was noted protruding from among the feathers of the right anterior portion of the neck of the female. This quill was extracted. It was 44 mm. long, and judging from the fragments of tissue adhering to the barbs, had penetrated to a depth of at least 6 mm. This depth of penetration, coupled with the fact that