nest to determine when eggs were laid. Two young ones left the nest on May 21.

A jay captured on July 10, 1952, shortly after it left the nest, lived in my library through the winter, its cage door being open most of the time so that it became tame. When 11 months old in May, 1953, the jay developed new patterns of behavior, apparently sexual in motivation and subsequent evidence showed the bird to be a male. As I approached him in the evening he would hop from a shelf to my shoulder, facing one way, then the other as he kept up low, rapid whistlings in my ear and rubbed his bill in my hair. That these actions represented courtship was indicated by subsequent behavior when two juvenal jays were introduced into the library on May 18. On May 19, the older captive perched beside the largest of the young, fluttering his wings, making low whistles, and running his bill through the young bird's plumage. The next evening, after a similar performance, the older jay attempted coition. The young jay, however, never responded to his advances.

The situation was different for a younger jay which I had removed from the nest in the yard three days before the other young left naturally. For the first week this bird fluttered its wings and begged food from me. By May 25, the year-old captive male had taken over feeding the youngest jay. This he did with great enthusiasm, dismembering many cicadas in the process. No sexual behavior was noted until May 31, when the male hopped from one side of the young jay to the other, making low notes and poking its plumage with his bill. Then he mounted and attempted coition. On succeeding evenings the year-old male would hop over, above, and below the young jay before mounting when the young one, being half his size, was pressed fairly flat. Occasionally the former would stand high as to look down on the juvenal bird's back and sing an odd song which he had developed during captivity, presumably as a prelude to coition.—LAWRENCE KILHAM, *109 South Fourth Street, Hamilton, Montana.*

An Egg-bound Mourning Dove.—The condition known as egg-bound is not uncommon in caged wild birds and in domestic fowls. However, in wild birds in the natural state it is rarely, if ever observed.

A Mourning Dove (*Zenaidura macroura*) with an egg-bound condition was called to my attention by Mr. Merritt Paulson, a farmer, who has permitted an extensive study of this species to be made on his property near Barrington, Illinois. The dove was found prostrate on the ground under a tree. At this time an egg was protruding part way out of the cloaca. A bystander advised him to break the egg, which was done. Then, the dove struggled free, flew for a distance of about 75 yards, and again fell prostrate to the ground, where it was recovered.

The bird was in a very weakened condition, had lost the use of its legs, and could not maintain its equilibrium. The area surrounding the cloaca was swollen and covered with blood and fecal matter. This was washed with warm water to permit examining for a prolapse, which was not present. The bird expired about 3 hours after being relieved of its first egg.

Post-mortem revealed the following: weight 102.8 grs., crop empty. The gizzard contained grit and a small amount of unidentifiable dark green fibre. The inner-lining of the gizzard was colored a very dark green, similar to a condition often found in lead-poisoned waterfowl. Gonads indicated active follicles of which two were collapsed, including one which had partly receded. The second egg was in the oviduct adjacent to the opening of the cloaca and measured 29 × 20.5 mm., which is normal in size. The posterior half of the egg was encased by a normal fully calcified shell, the anterior half was very thin and rubbery.

Ward and Gallagher (1920, "Diseases of Domesticated Birds," p. 165) and Levi

(1941, "The Pigeon," p. 301) state the cause of the inability to extrude an egg (egg-binding) may be due to: inflamatory or infection of the oviduct or cloaca (*Salpingitis*), a stricture or tumor in it, or its prolapse; a malformed, over-sized or soft shelled egg; and in younger birds the egg passage may not have developed enough to accommodate a normal egg.

Karl Plath of the Chicago Zoological Society, Brookfield, Illinois, in conversation said that chilly weather is conducive to egg-binding.

Probably an egg-bound condition in Mourning Doves is uncommon, but possibly it is one of the many minor mortality factors.

I wish to thank Dr. A. L. Rand of the Chicago Natural History Museum for help in this study.—CHARLES W. KOSSACK, *715 Division Street, Barrington, Illinois.*

Starling at Vanderhoof, British Columbia.—In the autumn of 1953, relatively large numbers of Starling (*Sturnus vulgaris*) appeared in the Lakes District, a small farming community 10 miles south of Vanderhoof, British Columbia. The birds were first detected early in the morning of September 17 by Mrs Edward Dickson, who reported to me by telephone a few minutes later that a flock of "short-tailed, white-spotted blackbirds" was in a grove of aspens close to her house. When I arrived at the Dickson farm shortly afterwards, a compact flock of approximately 120 Starlings was located on an oatfield where the grain was in shock. The birds were restless, flying from one part of the field to another, and did not permit me to approach within shot-gun range. On September 18, a flock of 60 alighted in several cottonwood trees at a place about 2 miles east of the Dickson farm. From the cottonwoods, the Starlings flew to an adjacent field, which had recently been ploughed and foraged there until I walked towards them, when all flew off together and disappeared from view. At about the same time, other flocks were reported by local residents on the Dickson farm and elsewhere. Subsequently, until I left the district on September 30, Starlings were noted daily and the total population was estimated to be approximately 250. Usually they were in small flocks numbering up to 25 individuals, but on one occasion, September 28, a flock of 75 was recorded. Information was received later that flocks had been seen in November and in January and March, 1954. None was observed by me during the period May 20 to June 6, 1954.

The stomachs of seven specimens collected in September, 1953, of which five were birds of the year, contained pulp and pits of choke cherry *Prunus* sp., exclusively.

An unusual feature of this invasion is the relatively large number of individuals involved. Earlier records of the species in British Columbia were of single birds, nesting pairs, and small nimbers accompanying flocks of Red-wings or Brewer Blackbirds (Munro, Murrelet, **34**, (2): 15–17).

Another point of interest is in the locality concerned. The Lakes District is approximately eight miles south of the 54th parallel of latitude. The nearest locality of reported occurrence is Williams Lake, some 180 air-line miles to the southeast.

The place of origin of these Starlings is a matter for speculation. In this connection it may be pointed out that some elements of the central British Columbia bird population, e.g., Purple Finch, White-throated Sparrow, Clay-colored Sparrow, Swamp Sparrow, and others, enter the region from the east—not from the south where these species are but casual migrants. Most certainly there exists an east-west migration route into and from this part of British Columbia. Perhaps it may be inferred, then, that the Starling invasion reported above originated in prairie farming communities east of the Rocky Mountains. J. A. MUNRO, *Okanagan Landing, British Columbia.*