

TABLE 1
RELATIVE FREQUENCY OF FLIGHT PURSUITS AMONG RECORDED ENCOUNTERS INITIATED
BY A CAPTIVE MALE JUNCO WITH AND WITHOUT ITS RECTRICES

| Date(s) | Condition of rectrices | Encounters initiated (n) | Flight pursuits (%) |
|----------------|----------------------------|--------------------------|---------------------|
| 1-29 December | Normal | 140 | 48 |
| 15 January | No rectrices | 117 | 0 |
| 16 January | No rectrices | 5 | 0 |
| 26-27 January | No rectrices | 50 | 0 |
| 4 February | New rectrices partly grown | 71 | 1 |
| 15-28 February | New rectrices fully grown | 127 | 6 |
| 1-14 March | New rectrices fully grown | 137 | 35 |

the captive flocks were terminated, the bird approached its initial relative frequency of chasing.

If this incident is representative, it appears that chasing in flight is not necessary for individual juncos to establish or maintain dominance in winter flocks, and that juncos will readily use another high intensity form of agonistic behavior (i.e. pecking attack) as a substitute for flight pursuits. Furthermore, a male without rectrices will participate in aerial chases as the pursued bird but will not chase other juncos.

The results reported herein raise a conceptual question as to why a junco immediately should have ceased initiating flight pursuits upon losing a morphological structure which, although used in association with the behavior, was not obviously necessary for performance of the behavior. If pursuit in flight were a relatively stereotypic response, one would expect the bird to have persisted in chasing other juncos or in attempting to do so after it lost its rectrices. Alternatively, if the behavior pattern were maintained through experience, one would expect that had the tailless bird ceased chasing other juncos, it should have done so over a period of time. Neither of these expectations was borne out. The bird did not pursue other juncos at all from the time it lost its tail feathers until new rectrices were partly grown; then, after the rectrices were fully grown, the bird gradually increased its relative frequency of chasing. It seems possible that proprioceptive feedback coupled with experience may be important in the development and maintenance of this behavior pattern in juncos.—MARTHA HATCH BALPH and DAVID F. BALPH, *Department of Wildlife Science, Utah State University, Logan, Utah 84322*. Accepted 28 Oct. 75. This paper was subsidized by the authors.

Additional records of Mountain White-crowned Sparrows parasitized by the Brown-headed Cowbird.—The White-crowned Sparrow (*Zonotrichia leucophrys*) is an uncommon victim of the Brown-headed Cowbird (*Molothrus ater*). Friedmann (1963, U.S. Nat. Mus. Bull. 233) lists only five records referable to *Z. l. leucophrys* (1), *Z. l. oriantha* (3), or an unknown race (1). Lewis (1973, Auk 90: 429) and Lavers (1974, Auk 91: 829) supply five additional records for *Z. l. pugetensis*. To these we can add seven cases of parasitism of *Z. l. oriantha* by *M. a. artemisiae* on the eastern slope of Hart Mountain, Lake Co., Oregon (42° 26' N, 119° 44' W) about 1900 m above sea level.

On 22 July 1974 a cowbird nestling weighing 15.8 g was banded in a nest also containing two unhatched eggs of the host White-crowned Sparrow. The cowbird fledged a few days later and the eggs were abandoned.

Cowbird eggs or nestlings were found in 6 of 42 White-crowned Sparrow nests in which incubation began within the span 29 May-27 June 1975. In addition to 3-4

host eggs each, four nests contained one cowbird egg and one nest contained two cowbird eggs. A sixth nest contained a single cowbird nestling when found. Three of the nests were destroyed by a snowstorm on 17–19 June, another was abandoned early in incubation, and the remaining two nests fledged one and two cowbirds, but no sparrows.

The White-crowned Sparrow was one of the more abundant breeding birds of the Aspen (*Populus tremuloides*) dominated riparian edge and adjacent sagebrush (*Artemisia* sp.) habitats in 1974 and 1975. Cowbirds were relatively uncommon, and probably near their upper altitudinal limit of distribution. In an intensive program of mist-netting on five hectares of the 100-hectare study area 8 cowbirds (4 females, 2 males, and 2 nestlings) were captured in 1974 in 27 netting days (8 June–30 July). In 42 netting days in 1975 (25 May–14 July) 17 cowbirds (9 females, 6 males, and 2 nestlings) were captured, including 3 of the 4 1974 females and 1 of the 2 1974 males.

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Golden Eagle preys on Osprey.—On 25 November 1974 in central Massachusetts we watched a Golden Eagle (*Aquila chrysaetos*) kill an Osprey (*Pandion haliaetus*). The Golden Eagle is rare in Massachusetts and limited to the winter months when, in recent years, one or two individuals have been recorded.

On the previous day, we had watched the eagle as it fed along the shore of an island. After about 15 min the bird flew approximately 100 yards to a white pine on the shore. We assumed that the bird would spend the night there. Although it was only 1500, it was already beginning to get dark as the day was quite overcast.

The following morning, we returned to the same place at 1030 and found the eagle was still perched where it had been the previous day. At 1105 an Osprey dove to the water, passing directly over the tree where the eagle was perched. Its splash diverted our attention from the eagle. As the Osprey spread its wings to take flight, the eagle seized it. There was no apparent struggle. The eagle floated briefly in about 3 feet of water, holding the Osprey under. It then swam approximately 40 feet to shore and pulled its prey onto a hummock.

We watched the eagle for several minutes as it sat with the Osprey, picking at it occasionally. We then decided to flush the bird in order to examine its prey. The Osprey appeared to be a healthy adult bird, and well fed, judging from the amount of fat on the breast.

Three days later, on 28 November at 0815, we returned to examine the Osprey's remains. As we approached the spot, we found the eagle perched on a stump nearby, and we walked to within 40 feet of it before it flew. At this distance we were able to determine that the Golden Eagle was a 4th-year bird. The remains of the Osprey were in two places about 15 feet apart. The first site contained only breast feathers. The second contained the remaining feathers, all of which had been picked clean. The pile also contained one wing bone and both legs. Because of the freshness of the flesh on the wing bone as opposed to the dried flesh on the feet, we concluded that the eagle was still feeding on the Osprey.—A. RICHARD LAFONTAINE, *33 West Street, Easthampton, Massachusetts*, and JANET H. FOWLER, *102 Amherst Road, Pelham, Massachusetts 01002*. Accepted 5 Mar. 75.