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## ADDITIONAL RECORDS OF WHITE-WINGED DOVES IN COLORADO

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White-winged Doves (*Zenaida asiatica*) occur from the southwestern United States, south into Mexico, Central America, the West Indies, to western South America (D. Goodwin, Pigeons and doves of the world. British Mus. Nat. Hist., London, 1967). In Colorado, Bailey and Niedrach (Birds of Colorado, Vol. 1, Denver Mus. Nat. Hist., 1965) reported this dove as a casual visitor and summarized the four available records. Only one specimen is known (Denver Mus. Nat. Hist. No. 9910), that being a male taken in Prowers County, 23 November 1921. More recently, Davis (Birds in western Colorado, Hist. Mus. and Inst. of Western Colorado, Grand Junction, 1969) reported a sight record by H. Holt of a White-winged Dove on 3 July 1967 in Moffat County. Lane and Holt (A birder's guide to Denver and eastern Colorado, L. & P. Press, Denver, 1973) list one observation of this species near Boulder on 11 July 1969.

Additional records have been obtained for White-winged Doves in Colorado in recent years, primarily from counties on the eastern plains. During the Mourning Dove (*Zenaida macroura*) hunting season in 1974, two White-winged Doves were shot. Between 5–10 September, an adult female was crippled

and retrieved from a group of two birds southeast of Briggsdale, Weld County. This bird was photographed and closely examined. On 10 September, an immature was shot near Manzanola, Otero County. A wing from this bird is deposited in the Fort Collins Collection, U.S. Fish and Wildlife Service.

Later records of White-winged Doves in Colorado were gotten in 1975 and 1977. On 14 September 1975 an immature female was obtained from a hunter in North Park who shot it near Rand, Jackson County. A study skin was prepared and it also is deposited with the U.S. F. W. S. in Fort Collins. On 3 May 1977 one White-winged Dove accompanied by two Mourning Doves was seen by V. H. Reid, S. H. Adams, V. E. Scott, and R. E. Pillmore on Pawnee National Grassland, Weld County.

The recent increase in records of White-winged Doves in Colorado is of interest, as the normal range of this species is at least 500 km south. All but one of the recent records are from September and probably represent fall wandering. The May record is unexpected, as suitable breeding habitat for these doves does not appear to exist in Colorado.

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## MULTIPLE NESTING ATTEMPTS BY ALASKAN REDPOLLS

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The short summers of arctic and subarctic areas are believed to prevent most birds from raising second broods. Brandt (1943) studied the avifauna of Hooper Bay, on the Yukon-Kuskokwim River Delta, Alaska, and found redpolls (*Carduelis* spp.) to be the only birds that reared two broods. Dice (1918) and Bent (*in* Clement 1968) also mentioned second broods of Alaskan redpolls. Irving (1960) predicted that all late broods of redpolls (fresh eggs in late June) around Anaktuvik Pass, Alaska, would perish due to attraction of adults to post-breeding flocks. All of these studies used the simultaneous presence

of nests with eggs and fledgling redpolls as evidence for double brooding. Evans (1966, 1969) suggested that the long breeding season of the Lesser Redpoll (*C. flammea cabaret*) may allow for replacement broods but that nothing is known about the extent of failure of early nests. Our research at the Akulik-Inglutalik River Delta, Norton Bay, Alaska from 10 May to 23 September 1977, permitted us to make continuous observations of breeding redpolls. Our findings using color-marked birds may help clarify the multiple nesting activities of redpolls.

Our study area included both Hoary (*C. hornemanni*) and Common (*C. flammea*) redpolls but most were intermediate birds. We refer to them here simply as redpolls; a detailed taxonomic study is underway. Egg-laying started in late May (25th—one nest, 26th—two nests, 28th—one nest) while considerable snow remained around the alder (*Alnus crispa*) and willow (*Salix* spp.) thickets in which the birds nested. The first of these broods fledged on 18 June. Our work on another project from 10 June until 9 July interfered with breeding attempts by other redpolls, but we collected several females with

TABLE 1. Chronology of nesting attempts of redpoll pair: female 54-51485 and male 1450-45201. At least two chicks were fledged from the last nest; one of these was seen until 14 August.

Date (1977)	Nesting activity
20 May	pair captured and color banded
26 May	nest discovered—one egg
31 May	five eggs
8-13 June	nest destroyed by winds (?) between these dates
14 June	new nest complete
15 June	one egg
19 June	five eggs
26 June	male feeding female on nest; later, no birds in attendance
27 June	nest abandoned, embryos dead
1 July	third nest found, one egg
11 July	five eggs
20 July	four chicks, fifth dead under nest

large ova or carrying nesting material. Additionally, five pairs of redpolls first captured between 9 and 12 July eventually nested. Young from these nests fledged on 7 August. These data indicate a relatively long period (1.5 months) of nest initiation, with a month between fledging of early broods and the start of incubation of late ones. Since different birds were involved in these activities, we obtained no direct evidence of a second nesting. In Sweden, Pepper and Kennedy (1970) also found a several-week spread in the fledging dates of redpolls. Since they found molting adults (presumably post-breeding) at the same time late broods were hatching, it is probable that second attempts rather than second broods were prolonging the nesting season. That some birds might successfully raise two broods is suggested by one pair who fledged a brood on 18 June and reappeared on 19 and 20 July with several juveniles, presumably a second brood, who were begging for food. It is also possible that the late nests were built by birds who had already nested in other areas. Long-distance movements between nestings have been hypothesized for Scandinavian redpolls (Hildén 1969) but this would be difficult to prove.

Of the four nests initiated during May on our study area, two were destroyed by predators or high winds and both pairs re-nested successfully. One of these pairs is of particular interest because its female had been banded as a juvenile in the same area on 9 August 1976. This bird made three nesting attempts before young were fledged (see Table 1). Nests of this bird were weakly secured to surrounding vegetation; consequently, they were either blown apart by winds or became tilted with age, making it difficult for the female to incubate. We artificially supported her third nest after one chick fell from it. The same male remained with this female during all three breeding attempts. The second and third nests were within 7.5 m of the first.

It is interesting that a year-old bird could make three nesting attempts, and that she could mobilize enough nutrients to produce new clutches so quickly after nest loss. Superficial examination of the esoph-

ageal diverticula (Fisher and Dater 1961) of redpoll specimens revealed few or no insects to serve as protein sources. At most, eight days elapsed between the desertion of nest number two and the laying of the fifth egg of the third clutch. Wynne-Edwards (1952) stated that redpolls had completed clutches within 10 days of their arrival in his study area and cited this as evidence of the reuse of old nests. Apparently 10 days is ample time to build a nest and complete a clutch.

Baldwin and Reed (1955) found that the nesting season of redpolls at Umiat, Alaska, was about eight weeks and that the birds managed such a short season by laying synchronously rather than by speeding development. In our study area the time from laying the first egg until the fledging of the last young was 11 weeks. Nests were started over a seven-week period, so we cannot say that they were synchronous.

Observations on breeding redpolls were made as part of a study of the avifauna of the Akulik-Inglutalik River Delta, supported under contract #03-5-022-56 between the University of Alaska and the National Oceanographic and Atmospheric Administration, U.S. Department of Commerce, through the Outer Continental Shelf Environmental Assessment Program to which funds were provided by the Bureau of Land Management, U.S. Department of the Interior. Leonard Peyton assisted with the banding of birds and finding nests.

#### LITERATURE CITED

- BALDWIN, P. H., AND E. B. REED. 1955. A chronology of nesting for the Hoary Redpoll (*Acanthis hornemanni*) at Umiat, Alaska, in 1953. *J. Colo.-Wyo. Acad. Sci.* 4:62-63.
- BRANDT, H. 1943. Alaska bird trails. The Bird Research Foundation, Cleveland, Ohio.
- CLEMENT, R. C. 1968. Common Redpoll, p. 407-421. In O. L. Austin, Jr. [ed.], *Life histories of North American cardinals, grosbeaks, buntings, towhees, sparrows, and allies*. U. S. Natl. Mus. Bull. 237.
- DICE, L. R. 1918. Notes on the nesting of the redpoll. *Condor* 20:129-131.
- EVANS, P. R. 1966. Autumn movements, moult and measurements of the Lesser Redpoll *Carduelis flammea cabaret*. *Ibis* 108:183-216.
- EVANS, P. R. 1969. Ecological aspects of migration and pre-migratory fat deposition in the Lesser Redpoll, *Carduelis flammea cabaret*. *Condor* 71:316-330.
- FISHER, H. I., AND E. E. DATER. 1961. Esophageal diverticulae in the redpoll, *Acanthis flammea*. *Auk* 78:528-531.
- HILDÉN, O. 1969. The occurrence and breeding of the redpoll in northern Lapland 1968. *Ornis Fenn.* 46:109-110.
- IRVING, L. 1960. Birds of Anaktuvik Pass, Kobuk, and Old Crow. U. S. Natl. Mus. Bull. 217.
- PEPPER, S. R., AND H. J. KENNEDY. 1970. Molt and measurements of redpolls *Carduelis flammea* in North Sweden, 1968. *Ornis Fenn.* 47:35-36.
- WYNNE-EDWARDS, V. C. 1952. Zoology of the Baird Expedition (1950) I. The birds observed in central and southeast Baffin Island. *Auk* 69:353-391.

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