

NOTES

RECENT ALTITUDINAL RANGE EXPANSION BY THE BROWN-HEADED COWBIRD IN COLORADO

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During a 2-year study of brood parasitism by the Brown-headed Cowbird (*Molothrus ater*) in 1977 and 1978 in Colorado, I noted substantial differences in the cowbirds' range from that described in the earlier literature.

Although the Brown-headed Cowbird is among the bird species described by the first naturalists in Colorado (Bailey and Niedrach 1965, Marsh 1968), virtually all observations of cowbirds at high altitudes are recent. Bailey and Niedrach (1965) described the Brown-headed Cowbird as a resident of the foothills, ranging up to 2134 m. Davis (1969) described cowbirds as common at lower elevations in western Colorado. Only Cooke (1897) mentioned cowbirds breeding up to 2440 m, but he considered them to be confined primarily to lower elevations. Warren (1980) was cited by Sclater (1912) as having observed cowbirds in Routt and Grand counties. However, Warren's expedition was for the purpose of mammal collecting and no locations of bird sightings were published. Sclater (1912) also considered the Brown-headed Cowbird to be a bird of the plains and foothills.

I have found Brown-headed Cowbirds to be as common in the mountain parks and river valleys as in the foothills and have frequently observed cowbirds up to 2895 m. I have seen individual cowbirds at Antero Reservoir, Park Co. (2725 m); 14 at Jefferson, Park Co. (2895 m); 15 at Malta, Lake Co. (2890 m); 25 at Gould, Jackson Co. (2712 m); flocks in excess of 25 up to 2500 m in the Laramie River valley, Larimer Co.; small flocks (3-8) up to 2650 m in upper Cherokee Park, Larimer Co.; and 20-40 at various times at Lake John Annex, Park Co. (2455 m). All sightings were from late May and June when the birds would be expected to be breeding.

The highest elevation I have found cowbird eggs has been 2475 m at South Delaney Buttes Reservoir in North Park, Park Co. Brewer's Blackbirds (*Euphagus cyanocephalus*) are commonly parasitized at Lake John Annex in North Park. Of 45 nests examined, 18 (40%) contained a total of 66 cowbird eggs. Three nests contained four cowbird eggs each and one nest contained six cowbird eggs in addition to three Brewer's Blackbird eggs. Keeler-Wolf et al. (1972) reported finding a cowbird egg in a Yellow Warbler (*Dendroica petechia*) nest near Crested Butte, Gunnison Co. (2895 m), and considered the Brown-headed Cowbird to be common in the area.

Thus, the Brown-headed Cowbird is presently a common breeding bird at substantially higher elevations than generally reported by earlier naturalists. Unless it was generally overlooked, the Brown-headed Cowbird has recently expanded its numbers and range in the mountain parks and river valleys of Colorado.

The Brewer's Blackbird is clearly a major host to the Brown-headed Cowbird at high elevations. However, unlike the cowbird, the Brewer's Blackbird has been an abundant breeding bird up to 3050 m from at least the late 19th century on (Cooke 1897, Sclater 1912). Therefore, it is unlikely that the spread of the Brown-headed Cowbird is correlated with the spread of this host species.

Range expansion eastward by the Brown-headed Cowbird has been largely attributed to clearing of the forests and increased agriculture (Friedmann 1963, Mayfield 1965). The mountain parks and upper river valleys in Colorado are heavily grazed by

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cattle, and the altitudinal range expansion of the Brown-headed Cowbird in Colorado may be attributable to habitat alteration. A similar expansion of range in the Sierra Nevada of California was discussed by Rothstein et al. (1980) and Verner et al. (1983).

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