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Nelson's Sharp-tailed Sparrow Nest Parasitized by Brown-headed Cowbird

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ABSTRACT.—On 22 July 2004, we found a Nelson's Sharp-tailed Sparrow (*Ammodramus nelsoni*) nest in Sheridan County, Montana, containing a single Brown-headed Cowbird (*Molothrus ater*) nestling that was about to fledge. A punctured sharp-tailed sparrow egg was found below the nest. This is the second definitive report of cowbird brood parasitism of a Nelson's Sharp-tailed Sparrow nest and the first indicating successful rearing of a cowbird by this host species. The impact of cowbird parasitism on nesting success of Nelson's Sharp-tailed Sparrow has not been studied, but our record indicates that nest failure (i.e., producing no host young) may be an outcome for some nests of this species. Received 18 January 2005, accepted 10 August 2005.

During an inventory of wetland-associated bird species in northeastern Montana, we surveyed wetlands on McCoy Creek, Sheridan County (48° 49' 57" N, 104° 35' 36" W), in June and July 2004 to observe the activities of singing grassland sparrows found there. On 19 July, TJN and MPN saw a pair of Nelson's Sharp-tailed Sparrows (*Ammodramus nelsoni*) carrying food four times and fecal sacs three times during 75 min of observation, but could not find the nest. On 22 July, TJN and MPN found the nest after watching the adults make two feeding trips to the same general area.

The nest was in dense wetland vegetation of sedges (*Carex* spp.), rushes (*Scirpus* spp.), and unidentified grasses about 100 cm tall; the nest rim was 23 cm above ground. The nest was built of coarse grass and lined with finer grasses; inside cup dimensions were 3.5 cm deep and 5.0 cm in diameter, typical for nests of this species (Greenlaw and Rising 1994). The nest contained a single Brown-headed Cowbird (*Molothrus ater*) nestling that filled

the entire nest cup. The cowbird was well feathered, with sheathing present on the proximal two-thirds of the primaries; we estimated that it was about 8 days old, or within a few days of fledging (Scott 1979). We photographed and videotaped the nest contents and surrounding area and deposited digital copies with the Montana Natural Heritage Program in Helena.

On 24 July, we revisited the nest and found it empty. We assumed the cowbird nestling had fledged, but neither saw nor heard the sparrows or the cowbird during 30 min of observation. We found a single, punctured sharp-tailed sparrow egg on the ground below the nest that had been overlooked on the day the nest was discovered. The egg measured 17.5 × 14.2 mm, was bluish-white in color, and was covered with numerous fine, light-brown maculations—typical in size, coloration, and markings for Nelson's Sharp-tailed Sparrow, although slightly shorter than average (Greenlaw and Rising 1994). The eggs and nest of Le Conte's Sparrow (*A. leconteii*) are similar (Lowther 1996) to those of Nelson's Sharp-tailed Sparrow, and, in northeastern Montana wetlands, Le Conte's Sparrow is sympatric with Nelson's Sharp-tailed Sparrow (PH pers. obs.); however, we neither saw nor heard any Le Conte's Sparrows at this site on any of our five visits. Thus, we are confident that the nest and egg belonged to the pair of Nelson's Sharp-tailed Sparrows we observed near the nest site. The nest and punctured egg were collected and deposited in the Philip L. Wright Zoological Museum at the University of Montana, Missoula (UMZM 18620).

Our observation of cowbird brood parasitism on Nelson's Sharp-tailed Sparrow is significant for several reasons. First, it is only the second definitive record of a cowbird parasitizing this host species. The first was of a single cowbird egg found in a clutch of four sharp-tailed sparrow eggs near Brandon, Man-

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itoba, on 20 June 1962 (Hill 1968). In his comprehensive summary of host species, Friedmann (1963) listed an earlier, third-party recollection of an associate who found a Nelson's Sharp-tailed Sparrow nest containing a cowbird egg, but no additional details regarding date or location were provided; thus, the record is hypothetical. Second, our report is the first to confirm that this species can successfully rear a cowbird nestling (Friedmann and Kiff 1985, Greenlaw and Rising 1994, Shaffer et al. 2003). Third, our observation indicates that nest failure (i.e., producing no host young) is a possible outcome when cowbirds parasitize Nelson's Sharp-tailed Sparrow, perhaps resulting in reproductive failure for an entire breeding season.

Nelson's Sharp-tailed Sparrow is arguably among the most poorly known of North American sparrows. In particular, very little information is available on this species' nesting ecology or its habitat requirements in the northern prairie states and provinces (Greenlaw and Rising 1994) because the nests are notoriously difficult to locate. Therefore, the impact of parasitism by Brown-headed Cowbirds on populations of Nelson's Sharp-tailed Sparrow in the northern Great Plains is unknown. Friedmann (1963) was probably overly optimistic in concluding that the nesting habitat used by Nelson's Sharp-tailed Sparrow would buffer it from significant cowbird parasitism. On a small North Dakota site occupied by both Le Conte's and Nelson's Sharp-tailed sparrows (Murray 1969), all five Le Conte's Sparrow nests found were parasitized, indicating that cowbirds were active in the habitat where sharp-tailed sparrows nested. Studies of additional Nelson's Sharp-tailed

Sparrow nests may prove that cowbird parasitism is more frequent than evidence currently indicates.

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