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THE NEST AND EGGS OF PREVOST'S GROUND SPARROW (*MELOZONE BIARCUATA*), GROUP *BIARCUATA*

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El nido y los huevos del Rascador patilludo (*Melozone biarcuata*), grupo *biarcuata*.

Key words: Prevost's Ground Sparrow, White-faced Ground Sparrow, *Melozone biarcuata biarcuata*, nest, egg.

INTRODUCTION

We describe the nest and eggs of the northern group of Prevost's (White-faced) Ground Sparrow (*Melozone biarcuata biarcuata*). Prevost's Ground Sparrow is one of three species in the *Melozone* genus, which extends from western Mexico through central Costa Rica (AOU 1998, Banks *et al.* 2004). Prevost's Ground Sparrow exists in two groups, with a northern group in southern Mexico, Guatemala, El Salvador and western Honduras, and a southern group in central Costa Rica (Howell & Webb 1995, Stiles & Skutch 1989). These groups are separated by a large gap, and the southern group, known as *M. b. cabanisi*, is suggested by many to be a separate species (*M. cabanisi*), based on distinct morphological and vocal differences (Howell & Webb 1995, Stiles & Skutch 1989). The biology of *M. b. biarcuata* is largely unknown due to its stealthy behavior. Prevost's Ground Sparrow occurs in secondary growth forests, including shaded coffee farms, forages near or directly on the ground, and rarely leaves dense cover (Howell & Webb 1995). The nest and eggs of the northern group have not previously been described.

RESULTS

We found five Prevost's Ground Sparrow (*biarcuata* group) nests in Chiapas, Mexico

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(Soconusco Region) in June and July 2000 and 2001. Ownership was confirmed by observing adults sitting and/or incubating eggs on the nests. Nests were located at approximately 1000 m a.s.l., in actively maintained coffee farms, only a few meters from footpaths that farmers traveled weekly or daily. Three nests were on shade-grown organic coffee farms, which are characterized by diverse shade canopies and no chemical application [Finca Irlanda (15°10'N, 92°20'W) and Finca Belen (15°15'N, 92°22'W)]. Two nests were on a farm with lower shade diversity (primarily *Inga* species), frequent trimming, and the use of chemical pesticides [Finca Hamburgo (15°10'N, 92°19'W)]. At the same study sites, Dietsch (2003) found significantly higher abundances of Prevost's Ground Sparrows on coffee plantations than adjacent forests.

Nest. The Prevost's Ground Sparrow nest is a loose cup made of woody twigs and stems, with a lining of finer grasses and stems. Mean dimensions of five nests (± SE) were: nest diameter 12.5 cm ± 0.84, nest depth 10.5 cm ± 1.61, cup diameter 6.94 cm ± 0.31, and cup depth 5.75 cm ± 0.04. Four nests were found at a mean height of 1.16 m ± 0.12 from the ground in coffee trees. The nest coffee trees were all alive and stood 2.1 m ± 0.38 tall with crown diameters of approximately 1.3 m and trunk diameters at breast height ranging from 1–9 cm. These nests were found resting against or near the trunks of the coffee trees with 3 to 12 support branches, ranging from 0.6–1.2 cm. Coffee branches, leaves, and berries concealed 50–100% of the sides and top of each nest when observed from 1 m.

Eggs. Three of the nests had two eggs each and one held three nestlings. The fifth nest was empty. Prevost's Ground Sparrow eggs are subelliptical with a dull white base and reddish-brown mottling concentrated at the wider end. Spots varied in diameter. Egg dimensions (mean ± SE, n = 6) were 21.9 mm ± 0.2 x 16.6 mm ± 0.4.

DISCUSSION

The nest description presented here is qualitatively similar to that of *M. b. cabanisi* described by F. G. Stiles in San Jose, Costa Rica, that was placed in tall grass (WFVZ specimen #146,772, Sealy 1997). Egg coloration and measurements were also very similar to three eggs (mean ± SE) of *M. b. cabanisi* in a nest in San Jose (22.7 mm ± 0.2 x 16.4 mm ± 0.1; WFVZ specimen #146,773). These few data are consistent with close taxonomic placement of *M. b. biarcuata* and *M. b. cabanisi* . The nest and eggs of *M. b. biarcuata* do not differ radically from the other two *Melozone* species. The nest of the Rusty-crowned Ground Sparrow (*M. kieneri*) is placed 1–2 m from the ground in small trees or bushes, and eggs are of a similar size (WFVZ specimens #21,350, 25,550, 25,591, 26,634, and 26,635), but with a pale blue-white base and rarely "unpatterned red dots" (Rowley 1962). The White-eared Ground Sparrow (*M. leucotis*) nest is placed low in vegetation or directly on the ground, and the eggs are slightly larger than and similarly colored to *M. b. biarcuata* (Winnett-Murray 1985).

Because our observations were made incidental to other research, we were unable to determine the fate of the nests. However, the regular observations of *M. b. biarcuata* in the coffee habitats of the region and rare observations in the remaining forest fragments suggest that coffee agroecosystems provide viable breeding habitat for the northern group of this species. In addition, we observed bi-parental feeding of nestlings and fledglings in coffee habitat. L. F. Kiff observed two adult *M. b. biarcuata* feeding

a fledgling Bronzed Cowbird (*Molothrus aeneus*) in Guatemala, but did not see the nest directly (Friedmann *et al.* 1977). *M. b. cabanisi* is thought to be the second most frequent host of Bronzed Cowbirds around San Jose (Friedmann & Kiff 1985). Futher, Stiles (1990) found that, from 1968 through 1989, *M. b. cabanisi* has decreased in abundance around the University of Costa Rica campus, likely due to land use change from shaded coffee to urban and suburban habitats, and a concomitant increase in brood parasitism by Bronzed Cowbirds. In Morelos, Mexico, Rowley (1962) found the Rusty-crowned Ground Sparrow to also be highly susceptible to brood parasitism by the Bronzed Cowbird and occasionally the Brown-headed Cowbird (*Molothrus ater*). We found no sign of cowbird parasitism in our five *M. b. biarcuata* nests and the effects on *M. b. biarcuata* of altering coffee shade management practices are not known. Future nest studies of *M. b. biarcuata* could add to the sparse information regarding parental behavior of the species, effects of brood parasitism in different habitats, including coffee agroecosystems, and comparisons for taxonomic purposes.

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