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NOTES ON THE DIET OF THE CRIMSON-COLLARED GROSBEAK (*RHODOTHRAUPIS CELAENO*) IN NORTHEASTERN MEXICO

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Little is known about the diets of grosbeaks (family Cardinalidae and subfamily Carduelinae of the Fringillidae) inhabiting México (Sutton 1942, Hill 1995, Howell & Webb 1995). Despite this, they remain important elements of tropical forest in terms of fruit/seed predation and seed distribution. We report on feeding behavior of this little-known species in the El Cielo Biosphere Reserve of México thus adding elements to our knowledge of one endemic Mexican species.

The Crimson-collared Grosbeak (*Rhodothraupis celaeno*) is a small bird (21–22 cm long) (Howell & Webb 1995) that is endemic to the Atlantic coastal region of México (Tamaulipas, Nuevo Leon, San Luis Potosí, Hidalgo,Veracruz, Puebla) and casually in southern Texas (Bjelland & Ray 1977, Howell & Webb 1995, AOU 1998). Its life history and ecological requirements are poorly documented (Sutton *et al.* 1950, Sutton 1950).

From 4 to 8 February 2000, we observed a population of Crimson-collared Grosbeaks in the village of El Malacate, ejido Lázaro Cárdenas, Municipio de Gómez Farías, Tamaulipas (23°07'N, 99°11' W). The study area is situated within the Biosphere Reserve "El Cielo" which covers 10,000 ha at altitudes from 200 to 1600 m. The reserve is located within the Sierra de Cucharas at the eastern slope of the Sierra Madre Oriental. The mean monthly temperature is 13.03°C and the mean monthly rainfall is 252.2 mm (Arriaga 1988). The vegetation has been described as comprising a mixture of tropical and temperate species (Rzedowski 1978).

The Crimson-collared Grosbeaks were studied for 5 days using 10 x 50 binoculars as they fed on oranges (*Citrus* sp.) in the canopy of orange trees and on the ground. All birds seen were in female plumage and were therefore either females or immature males (Howell & Webb 1995). Birds entered the orange trees at sunrise and remained in the trees until sundown unless disturbed when they flew into an adjacent woodlot. In spite of our observations, it could not be determined if the grosbeaks removed the rind of the orange to feed upon the interior portions or

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fed upon oranges with holes in them from Black-headed Saltators (*Saltator atriceps*) and Audubon's Orioles (*Icterus graduacauda*) which were also abundant.

The only previously published dietary note was by Sutton (1950) who states that Crimson-collared Grosbeak "tore off and munched" leaves from shrubby nightshade (*Solanum verbascifolium*). Sutton (1950) considered the species to be a folivore because stomachs of specimens collected contained leaves, gravel and insect parts. Previously, field observers have noted the species to feed upon mangos (*Mangifera indica*), loquat (*Eriobotria japonica*), chaca (*Busera simaruba*) (Will Carter & Michael Delesantro, pers. com) and chinaberry (*Melia azedarach*) fruits/drupes (Enkerlin, pers. com.). While feeding upon oranges had not been documented previously, its association with orange groves was previously noted by Bjelland & Ray (1977) who collected a roadkill specimen near Huejutla, state of Hidalgo adjacent to a citrus grove, and Sutton *et al.* (1950) who discovered a nest along the edge of a neglected orange grove.

The Black-headed Grosbeak (*Pheucticus melanocephalus*) occurs sympatrically with the Crimson-collared Grosbeak. Little is known of the diet of Black-headed Grosbeaks in Mexico. However, in the United States (California), its diet is described as being composed of 57% animal matter and 43% plant matter including numerous cultivated fruits. Fig (*Ficus carica*), mulberry (*Morus* sp), strawberry (*Fragaria vesca*), crab apple (*Malus prunifolia*), apricot (*Prunus armeniaca*), cherry (*P. cerasus*), prune (*P. domestica*), and blackberry (*Rubus* sp.) are common in its diet (Hill 1995). The Crimson-collared Grosbeak's feeding upon oranges may indicate opportunistic feeding behavior as that species's preferred diet appears to be leaves and small native fruits and insects. Clearly, however, we need a through study of the diet of *Rhodothraupis celaeno* , and we hope that this note will spur others to carry this out, thus shedding light on this endemic species's role in tropical decidious forests and adjacent man-altered habitats.

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