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COMMUNAL ROOSTING OF THE CRESTED CARACARA IN SOUTHERN GUATEMALA

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Abstract.—Up to 178 Crested Caracaras (*Polyborus plancus*) were observed roosting communally in a single large Ceiba (*Ceiba pentandra*) in southern Guatemala. The roost was used throughout the winter of 1993, mainly by (~70%) immature caracaras, although three other bird species were also observed. No interspecific interactions were noted. The roost may facilitate the acquisition of rare and patchily distributed food (carrion) via one or more foraging-related mechanisms.

AREA DE PERNOCTACIÓN COMUNAL EN GUATEMALA DE INDIVIDUOS DE *POLYBORUS PLANCUS*

Sinopsis.—En estudio llevado a cabo en Guatemala, se observaron hasta a 178 individuos de *Polyborus plancus* pernoctando en un árbol de ceiba (*Ceiba pentandra*). El lugar fue utilizado durante el invierno de 1993, mayormente por caracaras inmaduros (70%), aunque se observaron a otras tres especies de pájaros. No se observaron interacciones interespecíficas. La pernoctación comunal muy bien pudiera facilitar la adquisición de comida rara o localizada en parches a través de uno o más mecanismos de forrajeo.

Communal roosting has been observed in a diverse array of bird species (Allen and Young 1982, Eiserer 1984). It is common among Falconiiformes (Anderson and Patterson 1988, Steenhof 1984), especially in the family Cathartidae (vultures), and may occur in association with rare and unpredictably distributed food resources, such as carrion (Rabenold 1987, Thompson et al. 1990). Like vultures, Crested Caracaras (*Polyborus plancus*) commonly feed on carrion, although they also forage on the ground, pirate prey and actively hunt small animals (Glazener 1964, Whitacre et al. 1982). Despite their similarities with vultures, we know of only one report of communally roosting caracaras (Lasley 1982). In 1981, observers in central Texas noted approximately 85 Crested Caracaras gathering at dusk in a group of trees and on the ground or in low perches. This roost was used only temporarily however, as subsequent trips to relocate the roost proved unsuccessful (Lasley 1982). The generality of this behavior, geographically and temporally, remains unclear. This report provides the first description of communal roosting by Crested Caracaras

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during the breeding season and the first evidence that caracara roosts may be seasonally persistent.

In the winter of 1993, on each of three visits over a period of more than five weeks, we observed Crested Caracaras and Black Vultures (*Coragypus atratus*) roosting communally 30 km southeast of Escuintla, Guatemala (14°11′N, 90°28′W). This area of southern Guatemala was once dominated by lowland tropical forest, but is now almost entirely converted to fields of sugar cane or cotton, or to cattle rangeland (Leonard 1987). The open cattle pastures provided foraging habitat for caracaras and vultures (Bent 1938), and the latter nested (January–May) in nearby hedgerows and emergent trees (Johnsgard 1990, pers. obs.). Both species were locally abundant.

The birds began congregating at dusk (sunset was approximately 1800 h CST), making short flights between tree-top "assembly points" (Ward and Zahavi 1973). Arriving mostly singly but occasionally in pairs or groups up to eight, the caracaras roosted in a single large (25-m tall, 2.2-m dbh) Ceiba (*Ceiba pentandra*) located in a cattle pasture interrupted by Guanacaste (*Enterlobium cyclocarpum*), Ceiba and palms (Palmae). The nearest vegetation over 5 m in height was a hedgerow surrounding the pasture 50 m away. The earliest arrivals landed at approximately 1720, the last at 1845, and the largest influx of birds occurred between 1815 and 1835. Roughly 70% of the incoming caracaras were immature. The number of Crested Caracaras in the roost varied from 73 on 17 January, to 113 on 16 February, to 178 on 23 February. Black Vultures also roosted with the caracaras, numbering 63 on 17 January and seven on 16 February, but were absent on 23 February. Up to 150 Yellow-naped and White-fronted Amazons (*Amazona auropalliata* and *A. albifrons*, respectively) roosted communally nearby (within 500 m) and nine Yellow-naped Amazons roosted with the caracaras and vultures in the large Ceiba on 17 January. No aggressive interactions were noted between any of the species at the roosts. However, the caracaras chattered loudly upon the arrival of conspecifics, and often relocated within the roost tree, occasionally engaging in short, noisy chases encircling the roost before landing again. Very few individuals left the area after perching.

Five principal hypotheses have been advanced to explain communal roosting: decreased risk of predation (Lack 1968), facilitated thermoregulation (Brenner 1965), transfer of information (Ward and Zahavi 1973), reduced travel costs to and from daily activity centers (Horn 1968, Caccamise and Morrison 1986), and dispersion of foragers to decrease intraspecific competition (Chapman et al. 1991). These hypotheses are not mutually exclusive, and a combination of factors may better describe the benefits of a given roost than any one factor (Chapman et al. 1991, Weatherhead 1984). As Crested Caracaras commonly feed on carrion (Glazener 1964), which is often a rare and patchily distributed resource (Rabenold 1987), it is likely that the roost facilitates food acquisition. The roost may facilitate food acquisition either by serving as a center where unsuccessful foragers gain information regarding the location of feeding sites (Ward

and Zahavi 1973), or by being situated near a daily foraging area where food is temporarily reliable and/or plentiful (Caccamise and Morrison 1986). Indeed, Black Vultures roosts have been shown to function as information centers (Rabenold 1987), and this species was observed to roost near the study site next to a garbage dump, which served as a daily activity center (pers. obs.).

Roost membership in caracaras is likely limited to non-breeders (mostly immature birds) during the breeding season because an active nest requires frequent visits, so most breeders probably limit their foraging and roosting activities to within home ranges established around their nests and avoid excessive travel to and from communal roosts (*sensu* Ward and Zahavi 1973). Therefore, non-breeders are expected to comprise a disproportionate number of the individuals in breeding-season roosts. Although we cannot compare our observations to the overall age distribution of caracaras in the area, the highly skewed age ratio (and presumably breeding status) at the roosts suggests that this expectation is upheld.

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