LITERATURE CITED

BALTOSSER, W. H. 1987. Age, species, and sex determination of four North American hummingbirds. N. Am. Bird Band. 12:151–166.

BREWER, A. D. 1994. Blue-gray Gnatcatcher killed by entanglement on burdock. Ont. Birds 12:115–116.

LEBERMAN, R. C. 1972. Identify, sex, and age it. Key to age and sex determination of Ruby-throated Hummingbirds in autumn. Inland Bird-Banding News 44:197–202.

MCNICHOLL, M. K. 1994. Additional records of birds caught on burdock. Ont. Birds 12:117–119.

MILLER, R. S. AND R. E. MILLER. 1971. Feeding activity and color preference of Ruby-throated Hummingbirds. Condor 73:309–313.

ORTIZ-CRESPO, F. I. 1972. A new method to separate immature and adult hummingbirds. Auk 89:851–857.

ROBINSON, T. R., R. R. SARGENT, AND M. B. SARGENT. 1996. Ruby-throated Hummingbird (*Archilochus colubris*). *In* The birds of North America, no. 204 (A. Poole and F. Gill, Eds.). The Academy of Natural Sciences, Philadelphia, Pennsylvania; The American Ornithologists' Union, Washington, D.C.

STRAUSBAUGH, P. D. AND E. L. COLE. 1977. The flora of West Virginia. Second ed. Seneca Books, Inc., Grantsville, West Virginia.

WILKINSON, T. 1999. Songbird deathtraps. Audubon 101(5):23.

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Attack on Chestnut-bellied Euphonia Nestlings by Army Ants

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ABSTRACT.—I report some observations of a Chestnut-bellied Euphonia (*Euphonia pectoralis*) nest in a lowland Atlantic Forest of southeastern Brazil during the early nestling period. During 7.5 hours of observations, the nest was attended 46.3% of the time, 45.6% by the female and 0.7% by the male. Unattended periods lasted 16–38 min. Parents visited the nest most of the time together at 36–59 min intervals. There were 1.06 feeding visits per nestling per hour. The two nestlings in the nest ended up preyed upon by army ants (*Labidus praedator*, Ecitoninae). The low height of the nest (0.8 m) may have facilitated its detection by the ants. *Received 17 Feb. 2000, accepted 11 May 2000.*

The Chestnut-bellied Euphonia (*Euphonia pectoralis*) is a medium-sized (length 11 cm, weight 16 g; Isler and Isler 1987), sexually dimorphic tanager that occurs in southeast South America. It inhabits forests and their edges, being especially common in humid forest areas (Isler and Isler 1987, Ridgely and Tudor 1994). Its breeding behavior is poorly known; the available information comes from scattered observations on a few nests (Bertoni 1919, Snethlage, and Schreiner 1929, Anjos and Schuchmann 1999). Here, I report some observations made on a nest discovered early in the nestling period, and that ended up preyed upon by army ants (*Labidus praedator*, Ecitoninae).

The observations were carried out at the Saibadela Research Station (24° 14′ S, 48° 04′ W; 70 m a.s.l.) at Parque Estadual Intervales, a 49,000 ha reserve located in São Paulo state, southeastern Brazil. The region received a mean annual rainfall of 4216 mm between 1994–1996. Although rains are evenly distributed throughout the year, showers are more intense and frequent October to March, which is also the hottest period. Old-growth forest (sensu Clark 1996) predominates in the site. The understory is open and the canopy averages 25 m tall with a few emergent trees reaching 30 m (Almeida-Scabbia 1996). The Chestnut-bellied Euphonia is a common resident bird at Saibadela (Aleixo and Galetti 1997).

The dome-shaped nest was discovered 9 October 1995 and contained two newly-hatched young and one unhatched egg. The nest was at the base of an epiphytic bromeliad, on the side of a tree trunk growing in the forest interior, 80 cm above the ground. The outside of the nest was composed of mosses and

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a tangle of bromeliad rootlets on its top, and measured 12 (height) × 15 (width) cm. The nest entrance, partially camouflaged by an overhanging awning, measured 3.2 (height) × 3.5 (width) cm. The nest differed in two aspects from a nest found by Anjos and Schuchmann (1999): the entrance was closer to the top than to the bottom of the nest and no cone-shaped plant material was attached to it.

Five observation sessions (0.5–2.5 h each; 7.5 h total) were distributed throughout the day between 10–14 October from a concealed position 10 m from the nest. Overall the nest was attended for 46.3% of the time, 45.6% by the female and 0.7% by the male. Unattended periods lasted 16–38 min [mean = 21.7 ± 8.5 (SD), $n = 6$]. Supporting my impression that the young had recently hatched, the female brooded them (Sargent 1993) for bouts that lasted 17–73 min (31.0 ± 23.5 min, $n = 5$). The presence of the male in the nest was very brief (0.5 ± 0.1 min, range 0.3–0.6 min, $n = 6$), probably only long enough to deliver food to the nestlings.

Parents visited the nest most of the time together (seven of nine visits, the remaining two were by the female alone) at 36–59 min intervals (45.0 ± 9.1 min, $n = 5$). There were 1.06 feeding visits per nestling per hour, similar to that reported for other euphonias (0.75–1.33; Skutch 1989). As observed for other euphonias (e.g., White-vented Euphonia, *E. minuta*, Skutch 1972; Yellow-throated Euphonia, *E. hirundinaceae*, Sargent 1993) the male Chestnut-bellied Euphonia preceded his mate in feeding the young in six of the seven joint visits to the nest. After the male completed his feeding duty, he perched on a suspended root 1.5 m from the nest and followed the female closely half her way to the nest. When she entered the nest, the male turned in midair and returned to the perch. Such escorting flight has been observed in a variety of birds (Skutch 1981), including the Yellow-throated Euphonia (Sargent 1993). Unlike that species, the female Chestnut-bellied Euphonia was never observed escorting her mate to the nest.

On the morning of 15 October I observed both parents making a series of unsuccessful attempts to enter the nest. Upon inspecting the nest chamber I found both nestlings dead, completely covered by workers of the army ant (*Labidus praedator*). Attacks on bird nestlings by ants seem to be rare, being more common in open than in forested areas. Oniki (1979, 1985) reported only 14 of 4089 nests depredated by ants in Manaus and Belém in the Brazilian Amazon. All 14 nests were located in open terrains. Fire ants (*Solenopsis invicta*, Myrmicinae), an inhabitant of open areas, are the most frequent nest attacking ant reported (Skutch 1931, 1951, 1986; Dickinson 1995 and references included). Other instances involve ants of the genus *Monomorium* (Myrmicinae; Parker 1977). Although Skutch (1986) thought that army ants rarely harm bird eggs or nestlings, Schneirla (1956 in Hölldobler and Wilson 1990) observed nestlings killed by the army ant *Eciton burchelli* (Ecitoninae). Gotwald (1995) classifies *L. praedator* as an indiscriminate predator that forages day and night taking a variety of arthropods, carcasses of dead animals, and vegetable material. As far as I know this is the first report of *L. praedator* preying upon nestling birds. The low height of the nest (0.8 m compared to 2–4 m of other reports; Isler and Isler 1987, Anjos and Schuchmann 1999) may have facilitated its detection by foraging ants. I observed worker *E. burchelli* climbing 8 m up a tree to attack a wasp's nest. Therefore, there is opportunity for the nomadic and highly carnivorous army ants to find and attack bird nests in tropical forests. The paucity of such events in the literature might only reflect the rarity with which they are witnessed in nature.

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LITERATURE CITED

ALEIXO, A. AND M. GALETTI. 1997. The conservation of the avifauna in a lowland Atlantic forest in south-east Brazil. Bird Cons. Int. 7:235–261.

ALMEIDA-SCABBIA, R. J. 1996. Fitossociologia de um trecho de Mata Atlântica no sudeste do Brasil. M.S. thesis, Univ. Estadual Paulista, Rio Claro, Brazil.

ANJOS, L. DOS AND K.-L. SCHUCHMANN. 1999. Notes on the reproductive behaviour and the nest of the Chestnut-bellied Euphonia (*Euphonia pectoralis*). Bull. Brit. Ornithol. Club 119:133–135.

BERTONI, A. DE W. 1919. Apuntes sobre aves del Paraguay. Hornero 1:284–287.
CLARK, D. B. 1996. Abolishing virginity. J. Trop. Ecol. 12:735–739.
DICKINSON, V. M. 1995. Red imported fire ant predation on Crested Caracara nestlings in south Texas. Wilson Bull. 107:761–762.
GOTWALD, W. H., JR. 1995. Army ants: the biology of social predation. Cornell Univ. Press, Ithaca, New York.
HÖLLDOBLER, B. AND E. O. WILSON. 1990. The ants. Harvard Univ. Press, Cambridge, Massachusetts.
ISLER, M. A. AND P. R. ISLER. 1987. The tanagers: natural history, distribution and identification. Smithsonian Institution Press, Washington, D.C.
ONIKI, Y. 1979. Is nesting success of birds low in the tropics? Biotropica 11:60–69.
ONIKI, Y. 1985. Nidificação de aves em duas localidades amazônicas: viabilidade e adaptações. Ph.D. diss., Univ. Estadual de Campinas, Campinas, Brazil.
PARKER, J. W. 1977. Mortality of nestlings Mississipi Kites by ants. Willson Bull. 89:176.
RIDGELY, R. S. AND G. TUDOR. 1994. The birds of South America: the suboscine passerines. Oxford Univ. Press, Oxford, U.K.
SARGENT, S. 1993. Nesting biology of the Yellow-throated Euphonia: large clutch size in a Neotropical frugivore. Wilson Bull. 105:285–300.
SCHNEIRLA, T. C. 1956. The army ants. Reports of the Smithsonian Institution for 1955. Pp. 379–406. Not seen, cited by Hölldobler and Wilson (1990).
SKUTCH, A. F. 1931. The life history of Rieffer's Hummingbird (*Amazilia tzacatl tzacatl*) in Panama and Honduras. Auk 48:481–500.
SKUTCH, A. F. 1951. Life history of Longuemare's Hermit hummingbird. Ibis 93:180–195.
SKUTCH, A. F. 1972. Studies of tropical American birds. Publ. Nuttal Ornithol. Club 10:182–197.
SKUTCH, A. F. 1981. New studies of tropical American birds. Publ. Nuttal Ornithol. Club 19:1–288.
SKUTCH, A. F. 1986. Clutch size, nesting success, and predation on nests of Neotropical birds, reviewed. Ornithol. Monogr. 36:575–594.
SKUTCH, A. F. 1989. Life of the tanager. Cornell Univ. Press, Ithaca, New York.
SNETHLAGE, E. AND K. SCHREINER. 1929. Beiträge zur brasilianischen oologie. Verhandl. Int. Ornithol. Kongr. 6:576–640.

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Neophobia by the Lesser-Antillean Bullfinch, a Foraging Generalist, and the Bananaquit, a Nectar Specialist

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ABSTRACT.—Generalist birds are thought to be less neophobic than specialists, but the dietary difference is often confounded by differences in experience and food availability. We conducted field tests with an artificial nectar source on a foraging generalist [Lesser-Antillean Bullfinch (*Loxigilla noctis*)] and a nectarivorous specialist [Bananaquit (*Coereba flaveola*)] in Barbados. Both species are equally opportunistic and tame on this island. Bullfinches arrived first at the feeding stations and showed a shorter latency to feed in the tests than did Bananaquits, suggesting that differences in specialization lead to the differences in neophobia predicted by ecological plasticity. *Received 1 Nov. 1999, accepted 5 March 2000.*

food types and are consequently more likely than specialists to encounter novel stimuli associated with food. Greenberg (1984, 1990, 1992) has shown that generalist warblers (Bay-breasted Warbler, *Dendroica castanea*) and sparrows (Song Sparrow, *Melospiza melodia*) feed more rapidly in the presence of novel objects than do more specialized species of their genus (Chestnut-sided Warbler, *D. pensylvanica*; Swamp Sparrow, *M. georgiana*). In many cases, the generalist/specialist continuum is confounded by opportunism/