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CERCOMACRA MANU, A NEW SPECIES OF ANTBIRD FROM SOUTHWESTERN AMAZONIA

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ABSTRACT.—*Cercomacra manu* is a distinctive new species in the family Formicariidae. The species is distributed locally in southeastern Peru and adjacent Bolivia at elevations below 1,200 meters. *C. manu* is secretive and restricted largely to extensive bamboo thickets. The female is gray below; this unusual feature—along with other plumage and vocal characteristics—places *C. manu* within a species group that contains four other, allopatric South American taxa. We suggest that *manu* is closest to *C. melanaria* of eastern Bolivia and Mato Grosso, Brazil. *Received 7 March 1989, accepted 23 October 1989.*

IN 1975 we encountered an unusual antbird several times in mist nets set among dense riparian vegetation near the Manu River, well inside the Manu National Park of southeastern Peru (Terborgh et al. 1984). We tentatively identified these birds as *Cercomacra nigricans*, a species then thought to occur in the Amazon basin on the basis of one specimen taken by J. A. Feduccia and J. P. O'Neill at Balta, Department Ucayali, Peru, in 1964 (LSUMZ 34211; O'Neill 1969). Because the collection of specimens inside the Manu National Park is prohibited, our identification could not be confirmed.

Subsequently we obtained other specimens of this antbird during intensive surveys of the lower Manu River, the banks of the Alto Madre de Dios River, and adjacent Andean foothills. These specimens confirm that these birds are members of a distinctive new species of *Cercomacra*, to which the Balta specimen also belongs. The species is virtually restricted to dense bamboo thickets, as discussed more fully below.

Cercomacra manu sp. nov. Manu Antbird

Holotype.—Field Museum of Natural History no. 310653; adult female (skull 80% pneumatized), taken 12 river km downstream from Shintuya on left bank of Alto Rio Madre de Dios, Dept. Madre de Dios, Peru, 12°33'S, 71°17'W, elevation 420 m; collected 17 August 1980 by John W. Fitzpatrick, field number 80-221.

Diagnosis.-Medium-sized antbird, identifiable as Cercomacra by graduated tail with whitetipped rectrices, long bill with broad base and slightly hooked tip, and gray-bellied female plumage. Within the gray-bellied species group (see below), manu females are unique in having dull olive crown and dorsal plumage, rather than blackish or grayish upperparts. Males are extremely similar to C. nigricans, carbonaria, melanaria, and ferdinandi, but are dark sooty gray to dull black rather than deep, glossy black over most of their plumage. Flank plumes are dark gray, and suffused with olive in some specimens, rather than pure black as in the other similar species. White tips of rectrices, though variable, are narrower than in nigricans, ferdi-

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FRONTISPIECE. Male and female Manu Antbirds (*Cercomacra manu* on bamboo). In smaller scale are females of the four other closely related species (top to bottom: *nigricans, carbonaria, ferdinandi,* and *melanaria*). All five species are placed in their respective regions of northwestern South America, with the Amazon River shown for reference. Guache by John W. Fitzpatrick.

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nandi, and *carbonaria*. Rictal, loral, and supraorbital bristles are longer, stiffer, and more numerous in *manu* than in the four related species; the longest are 6-8 mm and have basal barbs. All five members of this species group are allopatric (see below).

Description of holotype.—Overall appearance is "two-toned," with olive-brown above and neutral grav below. Crown, dorsum, and outer webs of remiges dull olive-brown, between Olive (Color 30) and Olive-Green (Color 48; capitalized colors are from Smithe [1975, 1981]). Concealed interscapular patch white. Marginal coverts from shoulder to wrist white, producing a semiconcealed white "shoulder patch." Wing linings white: lesser and median secondary coverts black, broadly tipped white; greater secondary coverts, primary coverts, and alula dusky brown, tipped white and with outer margins olive like back. Tail graduated; rectrices uniformly dark gray-brown, closest to Blackish Neutral Gray (Color 82), each narrowly tipped with white crescent, broadest on outermost (shortest) pair and reduced to a few white barbs at the tips of the central pair. Evering, lores, cheeks, and entire underparts uniform neutral gray, between Medium and Dark Neutral Gray (Colors 84 and 83); chin and throat slightly paler, faintly streaked with whitish; long flank plumes gray, suffused with dull olive. Long, black rictal bristles about eyes, face and gape. Soft part colors in life: irises pale sandy brown, maxilla black, mandible silvery gray mottled darkish; tarsi and feet pale gray.

Measurements of holotype (mm).—Wing chord 64.0, central rectrices 66.5, outermost rectrices 46.0, culmen from base 19.0, culmen from anterior edge of nostril 10.0, tarsus 22.0; mass 17.0 g.

Distribution.—Cercomacra manu occurs (Fig. 1) locally in bamboo thickets and associated habitats in the lowlands and lower Andean slopes (up to 1,200 m, above Pilcopata, Dept. Cusco) of southeastern Peru, and extreme northwestern Bolivia along the Rio Tahuamanu (2 km W Porvenir, Dept. Pando, 300 m). The northernmost record is the single specimen from Balta, Dept. Ucayali. The species is regularly encountered in bamboo along the banks of the Rio Manu and the Rio Madre de Dios. Numerous sight records exist from the Tambopata Reserve near Puerto Maldonado, and from the Rio Heath at the Bolivian border (T. A. Parker III pers. comm.). The species is not recorded from Brazil, but almost certainly occurs in proper habitat in the state of Acre (Parker and Remsen 1987).

Etymology.—We are pleased to name this species in honor of the Manu National Park, one of the most important reservoirs of biological diversity on earth. Encompassing nearly 1.5 million hectares of pristine rain forest, cloud forest, and puna grassland, the park protects the richest avifauna in the world. To date more than 870 bird species are recorded from the vicinity of the park. The total species within the park is probably near 1,000. By honoring the historical and present-day importance of this region and park, we also honor the efforts of the Peruvian government and the World Wildlife Fund in protecting it for future generations. Cercomacra manu is a regular inhabitant of extensive bamboo thickets at lower elevations in the Manu region.

Specimens examined.—We examined the following specimens from Museu de Zoologia, Universidade de Sao Paulo (MZUSP), Museu Nacional, Rio de Janeiro (MNRJ), Field Museum of Natural History (FMNH), Academy of Natural Science of Philadelphia (ANSP), American Museum of Natural History (AMNH), Los Angeles County Museum of Natural History (LACM), and Louisiana State University Museum of Natural Science (LSUMZ):

C. manu (14 males, 10 females): Peru-Dept. Ucayali: Balta (LSUMZ 18); Dept. Madre de Dios: Cerro de Pantiacolla, E slope, 5 km NNE Shintuya (FMNH 18, 19); Alto Rio Madre de Dios, left bank: 17 km downstream from Shintuya (FMNH 18 [plus 1 skeleton, 1 in alcohol], 29), 12 km downstream from Shintuya (FMNH 28), 10 km downstream from Shintuya (FMNH 19? in alcohol), 7 km downstream from Shintuya (FMNH 13); Rio Palotoa, left bank, 12 km from mouth (FMNH 18?); ridge above Hacienda Amazonia (FMNH 18, 19); lower Rio Manu, left bank (AMNH 13, 19); Dept. Cuzco: Consuelo (km #165), 17 road km above Pilcopata (FMNH 19). Bolivia-Dept. Pando: 2 km W Porvenir (LSUMZ 28 [plus 1 skeleton], 19 [plus 19? in alcohol]).

C. melanaria (30 males, 8 females): Brazil— Mato Grosso: Agua Blanca de Corumba (AMNH 18); Faz. San Juan, R. Cuyaba (AMNH 28, 19); Cuiaba (MZUSP 18); Descalvados (FMNH 28; AMNH 18; ANSP 28, 19); rio São Lorenzo (AMNH 28, 19); Chapada (AMNH 19); Porta Esperanza (MZUSP 18); Miranda (MZUSP 28, 19); R. Paraguay (MZUSP 18); Xarqueada Ottilia, R.



Fig. 1. Northwestern South America and the Amazon drainage basin, showing distributions in the "Cercomacra nigricans" species group: nigricans (hatched areas), carbonaria (squares), ferdinandi (diamonds), melanaria (triangles), and manu (closed circles = specimen localities, open circles = sight records). Northernmost plotted locality for ferdinandi is uncertain (see text).

Paraguay (MNRJ 13); Rio Piquiri (MNRJ 13); Porto Esperidião (MNRJ 13); Salobra (MZUSP 13, MNRJ 13); Caceres (MZUSP 13); Santo Antonio (MZUSP 13, 12). Bolivia—Dept. Santa Cruz: Buena Vista (LSUMZ 13); Isama (LSUMZ 12); Dept. Beni: Rio Yacuma, 2 km from mouth (AMNH 13); Rio Tijamuchi, 4 km from mouth (AMNH 13); Laguna Suarez, 5 km SW of Trinidad (FMNH 13); 6 road km SE of Trinidad (LSUMZ 13 [alcohol], 12); Dept. Cochabamba: mouth of Rio Chapare (ANSP 23); Todos Santos, Rio Chapare (ANSP 13).

C. carbonaria (11 males, 3 females): Brazil— Roraima: Rio Mucajai, S of Boa Vista (LACM 6å, 2°; FMNH 2å; MZUSP 1å); Ilha São Jose, Rio Branco (FMNH 1°); Forte do Rio Branco (AMNH 1å); Caracarahy, Rio Branco (AMNH 1å).

C. ferdinandi (6 males, 6 females): Brazil— Goiaz: Ilha do Bananal (MZUSP 19); Santa Isabel do Morro, Ilha do Bananal (MNRJ 13, 19); Furo de Pedra, Ilha do Bananal (MNRJ 43, 39); Araguatins (MZUSP 13, 19). *C. nigricans*: more than 100 specimens, from Ecuador, Colombia, Venezuela, Middle America.

REMARKS

Male plumage.—As discussed below, manu belongs to a species group in which male plumages are extremely similar. Males of all five species are black all over, with white interscapular patches and white tips to all rectrices, wing coverts, and wrists. Marginal coverts, wing linings, and innermost edges of secondaries also are white, not visible on the folded wing. The body plumage in manu, palest of the species group, actually is extremely dark, neutral gray, somewhat paler about the face, flank plumes, and crissum. Males are most similar to melanaria in both plumage and size. The most definitive distinguishing characters between males of these two species are tarsus lengths, in which the ranges are nonoverlapping (Table 1), and

			Shortest	'·	Culmen	
Species	Wing chord	rectrix	rectrix	Tarsus	From base	From nares
Males						
manu (10)	70.7 ± 1.7 (67.0–72.5)	71.5 ± 3.7 (65.5–79.0)	$\begin{array}{c} 42.4 \pm 3.2 \\ (38.5 49.0) \end{array}$	$\begin{array}{r} 23.0\pm0.9\\ (21.5\text{-}23.7)\end{array}$	$\begin{array}{c} 20.7 \pm 1.2 \\ (19.5 22.5) \end{array}$	$\begin{array}{c} 10.5 \pm 1.0 \\ (9.011.5) \end{array}$
melanaria (24)	70.7 ± 1.8 (67.0-74.5)	73.0 ± 3.6 (66.0-81.0)	$\begin{array}{r} 44.5 \pm 1.9 \\ (41.0 {-} 48.0) \end{array}$	26.3 ± 0.8 (24.5-27.5)	$\begin{array}{l} 20.0 \pm 0.9 \\ (18.022.0) \end{array}$	$\begin{array}{c} 10.2 \pm 0.6 \\ (9.5\text{-}11.5) \end{array}$
carbonaria (11)	67.5 ± 1.0 (66.0-69.0)	64.0 ± 2.7 (59.5-67.0)	$\begin{array}{l} 40.8 \pm 1.8 \\ (38.0 - 43.5) \end{array}$	23.4 ± 0.6 (22.5-24.5)	$\begin{array}{r} 20.2 \pm 0.4 \\ (19.520.5) \end{array}$	$\begin{array}{c} 10.7 \pm 0.1 \\ (10.511.0) \end{array}$
ferdinandi (5)	69.2 ± 1.6 (67.0-71.0)	68.3 ± 2.4 (64.5-71.0)	42.5 $(n = 1)$	24.0 (<i>n</i> = 2)	$\begin{array}{l} 19.6 \pm 0.7 \\ (18.5 {-} 20.5) \end{array}$	$\begin{array}{c} 10.7 \pm 0.4 \\ (10.011.0) \end{array}$
nigricans (10)	$\begin{array}{r} 68.2 \pm 2.4 \\ (65.073.0) \end{array}$	$\begin{array}{r} 63.4 \pm 1.8 \\ (61.0\text{-}65.5) \end{array}$	$\begin{array}{r} 38.7 \pm 2.4 \\ (33.5 \text{-} 42.0) \end{array}$	$\begin{array}{r} 23.2 \pm 0.8 \\ (22.024.0) \end{array}$	$\begin{array}{r} 20.4 \pm 0.6 \\ (19.521.5) \end{array}$	$\begin{array}{c} 10.7 \pm 0.2 \\ (10.511.0) \end{array}$
			Females			
manu (8)	63.7 ± 1.0 (62.5–72.5)	62.9 ± 2.9 (59.5-66.5)	$\begin{array}{r} 40.7 \pm 2.7 \\ (37.5 {-} 45.5) \end{array}$	$\begin{array}{l} 21.6 \pm 0.5 \\ (21.022.5) \end{array}$	19.2 ± 0.5 (18.5–19.5)	9.2 ± 0.5 (8.0-10.0)
melanaria (5)	65.7 ± 1.0 (64.5-67.0)	68.3 ± 3.0 (65.5–72.5)	$\begin{array}{l} 40.8 \pm 1.1 \\ (39.5 42.0) \end{array}$	$\begin{array}{l} 25.4 \pm 0.6 \\ \textbf{(24.5-26.0)} \end{array}$	$\begin{array}{c} 19.2 \pm 0.9 \\ (18.5 20.0) \end{array}$	9.6 ± 0.3 (9.5-10.0)
carbonaria (3)	63.8 ± 2.4 (62.0-66.5)	$\begin{array}{r} 64.1\ \pm\ 5.0\\ (60.570.0)\end{array}$	35.0 (<i>n</i> = 1)	23.1 ± 0.1 (23.0-23.2)	$\begin{array}{r} 18.9 \pm 0.3 \\ (18.5 19.0) \end{array}$	$\begin{array}{c} 10.3 \pm 0.3 \\ (10.010.5) \end{array}$
ferdinandi (4)	64.5 ± 2.5 (61.0-67.0)	$\begin{array}{c} 62.6 \pm 4.5 \\ (56.066.0) \end{array}$	37.0 (<i>n</i> = 1)	21.5 (<i>n</i> = 1)	17.4 ± 0.9 (16.5–18.5)	9.9 ± 0.5 (9.5-10.5)
nigricans (12)	$\begin{array}{c} 62.9 \pm 1.4 \\ (60.5 \text{-} 65.5) \end{array}$	60.1 ± 3.0 (56.5-63.0)	37.3 ± 2.4 (33.0-40.5)	$\begin{array}{l} 22.6 \pm 0.7 \\ (21.5 - 24.0) \end{array}$	$\begin{array}{c} 19.1 \pm 1.1 \\ (17.5 {-} 21.0) \end{array}$	9.9 ± 0.4 (9.0-10.5)

TABLE 1. Measurements (mm) of five species of Cercomacra in "nigricans" species-group.^a

* Mean ± standard deviation, range in parentheses; sample sizes for each sex follow species names.

rictal bristle development (see Diagnosis, and below). Overall, the amount of white on the wings and tail in manu is similar to melanaria but reduced compared to C. nigricans, carbonaria, and ferdinandi. White tips on rectrices are relatively narrow, averaging ca. 2-3 mm (range 1.0-5.0 mm). White tips of wing coverts are confined to the terminal 1-1.5 mm, and do not extend up the outer margins. The alula has a white tip, but lacks white on outer margin. Scapulars are blackish and virtually lack white on margins or tips. Outermost one or two remiges on most males are narrowly edged whitish (absent in melanaria, present in carbonaria, ferdinandi, and most *nigricans*). Compared with all other taxa in the genus, facial bristles in manu are more numerous, elongated (up to 8 mm), and stiffened about the gape, lores, and especially the anterior supraorbital region. Soft part colors in life: irises dark brown; maxilla and mandible black; tarsus and feet black.

Variation.—Males of manu are ca. 10% larger than females (Table 1). Mean body weight of males (n = 12) is 19.7 g, and of females (n = 9), 16.6 g.

Within adults of both sexes, variation exists

in the width of white tips on rectrices, though in all cases these tips are broadest on the outermost (shortest) two pairs and narrowest on the central pair. In females the white tips are consistantly narrower than in males, form crescents rather than oval- or diamond-shaped patches, and sometimes are reduced to traces of white about the end of the rachis. Pale tips to wing coverts in some females are buffy-olive rather than white. Feathers on the belly of several female specimens are edged with pale gray, giving a pale wash to the underparts.

One male (FMNH no. 322003), with unpneumatized skull and tiny, translucent testes, closely resembles adult females, and is olive-brown above and neutral gray below. Its median and lesser coverts are narrowly tipped buffy-olive. The rectrices are long and pointed, with narrow white tips rather than the more extensive oval patches typical of adult males. Measurements are similar to those of adult males. This specimen presumably is in juvenal plumage.

Breeding.—We obtained no direct evidence as to nesting dates. Specimens of manu have been collected between 24 June and 26 November, and include only one juvenile, collected on 8 September 1985 (see above). This individual is adult-sized, and was uttering typical adult vocalizations when collected. Dates of specimens apparently in breeding condition, and their gonadal measurements, are as follows: males: 24 June 1986 (testis 5×3 mm), 17 August 1980 (5×2.5 mm), and 6 October 1981 (4×2.5 mm); female: 6 October 1981 (largest ovum 10 mm, yolking).

Vocalizations.-Like other members of the genus, manu has several call types, including male-female duets. We recorded three distinct vocalizations, of which the most frequent is a deliberate, harsh "hert-CHUCK-hert-CHUCKhert-CHUCK-hert-CHUCK" heavily accented on alternating syllables, and all syllables evenly spaced. This appears to be the primary advertising call, and is delivered principally or exclusively by the male in a pair. The second vocalization is a rapid, slightly descending whinny of 9-13 guttural, staccato notes: "tk-tk-tik-tiktik-tek-tek-tuk," softer and higher-pitched than the primary call. Both sexes deliver this call. Finally, a rapidly repeated "Chut-up, Chutup, Chut-up, Chut-up" is delivered by either sex, and frequently in syncopated, antiphonal duets between members of the pair. The first of these three vocalizations shows structure homologous to the two-syllable "ker-Chup" elements given by other members of the speciesgroup (see below).

Relationships.—Plumage patterns suggest two species groups within Cercomacra, with one species (cinerascens) intermediate. The groups are most easily recognized by female plumage, which is predominantly warm buffy-brown or orange-buff in C. tyrannina, serva, nigrescens, and brasiliana, ("tyrannina-group"), and predominantly gray to olive-gray in manu, melanaria, nigricans, ferdinandi, and carbonaria ("nigricansgroup"). In cinerascens, females are dull grayish brown. Both sexes of the tyrannina-group lack conspicuous white tips on the rectrices, present in both the nigricans-group and cinerascens.

Sound recordings are available for all members of the genus except *carbonaria* and *brasiliana*, and D. F. Stotz (pers. comm.) recently wrote notes on the calls of *carbonaria* near Boa Vista, Brazil. Vocal similarities strongly support the species groups indicated above. All members of the *nigricans*-group have harsh, guttural primary vocalizations dominated by a two-syllable "ker-Chup" element not present in the *tyrannina*-group. In addition, only *manu*, *melanaria*, and *ferdinandi* are known to have the staccato whinny in their repertoire (that of *ferdinandi* is joined to its "ker-Chup" element, producing a more complicated primary call). Recordings of *manu, melanaria, ferdinandi,* and *nigricans* are deposited at the Library of Natural Sounds, Cornell University.

Relationships among the five members of the *nigricans*-group are less clear, with males barely distinguishable and female plumages generally too distinctive to reveal obvious common ancestries (see Frontispiece). Female ferdinandi are rare in collections. They appear most similar to those of nigricans, and are dark gray to blackish with narrow pale streaks on throat and breast. The streaked throat is shared with female carbonaria, which are paler and washed buffy below. A streaked throat is unusual (presumably derived) among female antbirds. We infer that ferdinandi, nigricans, and carbonaria are each other's closest relatives. Females of both manu and melanaria are unstreaked grayish below, although melanaria is much paler. Both sexes show more limited white on the tips of remiges and rectrices than in ferdinandi, nigricans, and carbonaria. Moreover, manu and melanaria are nearly identical in size (except for tarsus) and are larger than the other three species. On the basis of these shared characteristics we hypothesize that manu and melanaria are sister taxa, possibly close enough to be recognized as a superspecies. Finally, cinerascens probably belongs at the base of the nigricans species-group, based upon its white-tipped rectrices, dull grayish-brown (not bright buff) female plumage, and gutteral vocalizations containing two-syllable phrases. In all of these features, cinerascens more closely resembles members of the *nigricans* group than do any of the remaining species in the genus.

Biogeography.—Four of the five species in the nigricans-group have limited distributions around the perimeter of the Amazon basin (Fig. 1). As suggested by their nearly identical female plumage, ferdinandi appears to represent a southern Amazonian relic that is related to nigricans far to the north and is now restricted to the Araguaia-Tocantins drainage. A male from "Belem," collected by J. Hidasi, was recently cataloged at the Museum of Zoology, São Paulo (D. Stotz pers. comm.). The precise locality for this specimen remains unconfirmed. Cercomacra carbonaria is known only from a cluster of localities along the Rio Branco and its major tributaries in northern Brazil. These include the



Fig. 2. Bamboo thickets of southeastern Peru. Holotype was collected from the dense thickets bordering seasonally flooded lagoons along the Alto Madre de Dios River (left; 12 river-kilometers downstream from Shintuya, Department Madre de Dios). Cercomacra manu pairs occupied overstory of bamboo thickets at elevations as high as 1,200 meters (right; Consuelo, near kilometer 165 on Cosñipata Road above Pilcopata, Department Cusco).

specimen (a badly shot male) from Caracarahy, Rio Branco, previously identified as C. *nigricans* (AMNH no. 236688). As this had been the only record of *nigricans* south of the Rio Orinoco (Peters 1951: 217), *nigricans* should be removed from the list of species known from Brazil.

Cercomacra manu and melanaria presumably stem from a common ancestor along the southwestern rim of the Amazon basin. Cercomacra melanaria now appears to be fragmented into two populations occupying moist, brushy habitats in largely open country south and east of manu. Although manu is the only member of the group to occur well within the Amazon forest, it, too, is nearly restricted to a specific habitat type (bamboo) usually associated with the forest edge.

Ecology and behavior.—Cercomacra manu is encountered almost exclusively in extensive, mature bamboo thickets. Parker and Remsen (1987) found it in second growth woodland adjacent to bamboo in Bolivia, and Parker (pers. comm.) observed it in tall riverine forest at the Tambopata Reserve in southeastern Peru. Our earliest netting records at Cocha Cashu Biological Station were from swamp forest and viny riveredge forest with only scattered bamboo nearby (Terborgh et al. 1984). In bamboo thickets, closely knit pairs forage 8-15 m above the ground. Even when uttering their distinctive calls, they are secretive and difficult to spot in the leafy and vine-tangled bamboo overstory. At the type locality in July and August 1980, at least three pairs maintained contiguous territories several hundred meters long and fifty to one hundred meters wide within very large bamboo thickets that border stagnant lagoons (Fig. 2). Parker and Remsen (1987) estimated territory size for three pairs to be between 0.5 and 1.0 ha. Pairs sometimes joined mixed-species flocks when these came through the territory, but were more frequently found as lone pairs.

Other common inhabitants of bamboo at the type locality included the following (species found locally only in bamboo are marked with asterisk): Nonnula ruficapilla, Percnostola lophotes, Cymbilaimus sanctaemariae*, Drymophila devillei*, Microrhopias quixensis, Myrmotherula ornata*, Simoxenops ucayalae*, Automolus dorsalis*, A. melanopezus, Campylorhamphus trochilirostris, Poecilotriccus albifacies*, Hemitriccus flammulatus*, Ramphotrigon megacephala*, Thryothorus genibarbis. At elevations between 600 and 1,200 m, bamboo thickets abound also in southeastern Peru. Additional bamboo inhabitants we have encountered at these elevations include Monasa flavirostris*, Thamnophilus palliatus*, Myrmotherula longicauda*, Capsiempis flaveola*, and Lophotriccus pileatus (see also Parker 1982, Pierpont and Fitzpatrick 1983).

Foraging behavior of manu is similar to that of other Cercomacra. It consists of active hopping from perch to perch, gleaning arthropods from clusters of small bamboo leaves or leafy tangles. Parker and Remsen (1987) observed some sallygleaning as well. The arching crowns of bamboo thickets include numerous vine tangles interspersed with bamboo branchlets, and these appear to be especially favored foraging sites. Rictal bristles are highly developed about the face of manu. We suspect that these provide protection for the eyes and face within the noxiously ant-ridden and spiny tangles into which these antbirds hop and thrust their beaks in pursuit of insects. Stomach contents included caterpillars, Orthoptera, and other small arthropods (stomachs on deposit at both LSUMZ and FMNH).

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