



Mexican Anthrush *Formicarius moniliger*, northern Belize (Mark Kasprzyk)

The specific status of black-faced antthrushes in Middle America

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Resumen

La separación de vocalización y plumaje combinados con la aparente división altitudinal de *Formicarius* en Honduras oriental indica que los ejemplares en el norte deben ser reconocidos como una especie distinta, *F. moniliger*. Las diferencias en los patrones de plumaje, en las cabezas y pechos, combinados con diferencias de voz son las principales características para distinguir otras especies de *Formicarius*, y las diferencias de voz entre *moniliger* y otro *F. "nalis"* son comparables con las diferencias aceptadas entre otras especies de *Formicarius*, aunque el grupo *F. "nalis"* conforma una sola superespecie. Diferencias comparativamente fuertes en voz existen entre ejemplares en el sur de Centroamérica y aquellos en gran parte de Suramérica. De otro lado dos grupos de subespecies *hoffmanni* y *nalis* han sido reconocidos en esta distribución; este reconocimiento se basa en las diferencias en plumaje, que interesantemente, no correlacionan con el cambio de voz. Los ornitólogos activos en Colombia y Venezuela deben determinar donde ocurre el cambio de voz y como puede ser correlacionado con plumaje, morfología y hábitat.

Introduction

The genus *Formicarius* comprises five widely recognized species of terrestrial, crane-like antbirds of Neotropical forests^{10,13}. Peters¹⁰ and AOU¹ consider the Black-faced Antthrush *Formicarius analis* a single species whose range extends from south-eastern Mexico to South America. Sibley & Monroe¹³ recognise three subspecies groups within *F. analis*: the *moniliger* Mexican Antthrush group ranging from south-eastern Mexico to northern Honduras; the *hoffmanni* Hoffmann's Antthrush group from eastern Honduras to Colombia, northern Venezuela, and Trinidad; and the *analis* Black-faced Antthrush group from south-eastern Colombia and southern Venezuela to Amazonian Brazil. These groups are distinguished primarily by plumage differences, particularly the extent of rufous on the chest and the sides of the neck.

Observers with field experience in Middle America immediately recognise that the song of black-faced antthrushes from Mexico, Guatemala, and Belize sounds quite different from their song in southern Central

America. Davis³ treated these northern birds as a full species, Mexican Antthrush *F. moniliger*, but this split was ignored by AOU¹. Ridgely & Gwynne¹¹ point out that "more than one species may be involved" and that birds in northern Middle America "differ morphologically and vocally from birds in southern Middle America", and Howell & Webb⁵ treat the Middle American black-faced antthrushes as two allopatric species.

This note explains more fully the characters of the Mexican Antthrush *F. moniliger*, and also highlights a problem within this complex in South America that needs further study.

Voice

The song of *F. moniliger* is a single whistle followed after a relatively short pause by a rapid series of 8-12 evenly-paced whistles, and may be written as *piu*, *piupiupiupiupiupiupi...*, or "keee-cu-cu-cu-cu..."³. All notes are on a similar pitch, although the last notes of the series may be slightly lower or higher than the first ones.

The introductory note is longest, and notes in the rapid series are all about the same length, with the later notes tending to be sharply down-slurred (Fig. 1A-B). I have heard this particular song throughout the range of the Mexican Antthrush from Veracruz, Mexico, to northern Honduras.

The song of the *hoffmanni* group in Nicaragua⁶ (T. R. Howell pers. comm.), Costa Rica¹⁵ (pers. obs.), Panama¹¹ (pers. obs.) and the middle Magdalena Valley (F. G. Stiles pers. comm.), is a single whistle followed typically by 2-4 (rarely up to 13) slow-paced whistles, *pee, piu piu*, or “*per—pur-pur*”³ or “*keep two two*”¹⁵. The song is described as plaintive and deliberate by Ridgely & Gwynne¹¹ who also liken it to the song of Chestnut-backed Antbird *Myrmeciza exsul* (of Nicaragua, south through Ecuador), a comparison that would not be evoked with *moniliger*. The introductory note is slightly higher, with the subsequent notes at an even pitch or with a slight overall decrease from first to last. All notes are about the same length or sometimes decreasing slightly in length between first and last; thus the notes of the second part of the song are obviously longer than those of *moniliger* (0.16-0.22 s vs. 0.06-0.13 s), as are the spaces between the notes (compare Fig. 1A-B and 1C-D).

The song of black-faced antthrushes in most of South America, from western Venezuela (Fig. 1E), Trinidad (Fig. 1F), eastern Ecuador (Fig. 1G), and eastern Peru (Fig. 1H) through Amazonia (R. S. Ridgely pers. comm.) superficially suggests *moniliger*, and is quite unlike the *hoffmanni* group. It consists of a single, longer whistle followed after a relatively long pause by 3-15 short, fast-paced whistles in descending series, which I transcribe as *whii piipiipiipiipiipiipiipiipiipi* (Ecuador), or *whiii di-di-di* (Trinidad). In longer series, the earlier notes are short and arched, grading into the longer, more level later notes. The effect to the human ear is that the series starts abruptly with a rippling, melodic quality that descends into slurred notes at the end, quite unlike the evenly paced, flatter-sounding song of *moniliger*. Based on a limited number of tape recordings, north-

ern birds appear to give fewer notes than southern birds in the second part of the song: 3-4 notes in Trinidad, 5-11 in Venezuela, and 8-15 in Ecuador and Peru.

Thus there are three distinct song-types in the “*F. analis*” complex: a) Mexico to northern Honduras; b) Nicaragua to Panama; and c) South America. The abrupt break in northern song-type equates to the major biogeographic division centred on the Sula Valley and interior of Honduras. I have found no specific description of the song of Black-faced Antthrushes from eastern Honduras but predict, as Davis³ assumed, that it is the same as that of morphologically identical birds in adjacent Nicaragua. Also, during fieldwork in the lowland rainforests of eastern Honduras, T. R. Howell (pers. comm.) did not note *Formicarius* songs different from those he was familiar with from Nicaragua. Since birds in eastern Panama, on the Colombia border, have songs typical of the *hoffmanni* group, the southern shift in voice can be expected to occur in northern Colombia and north-western Venezuela, perhaps between the north-western and eastern slopes of the Andes.

Figure 1. Songs of the Black-faced Antthrush *Formicarius analis* complex.

Recordings were analysed on a Kay Elemetrics DSP Sonograph, Model 5500.

A: *F. moniliger*, Palenque, Chiapas, Mexico (Coffey).

B: *F. moniliger*, Calakmul, Campeche, Mexico, 9 April 1992 (Howell).

C: *hoffmanni* group, S8H Road, Panama, Panama, 25 February 1983 (Behrstock).

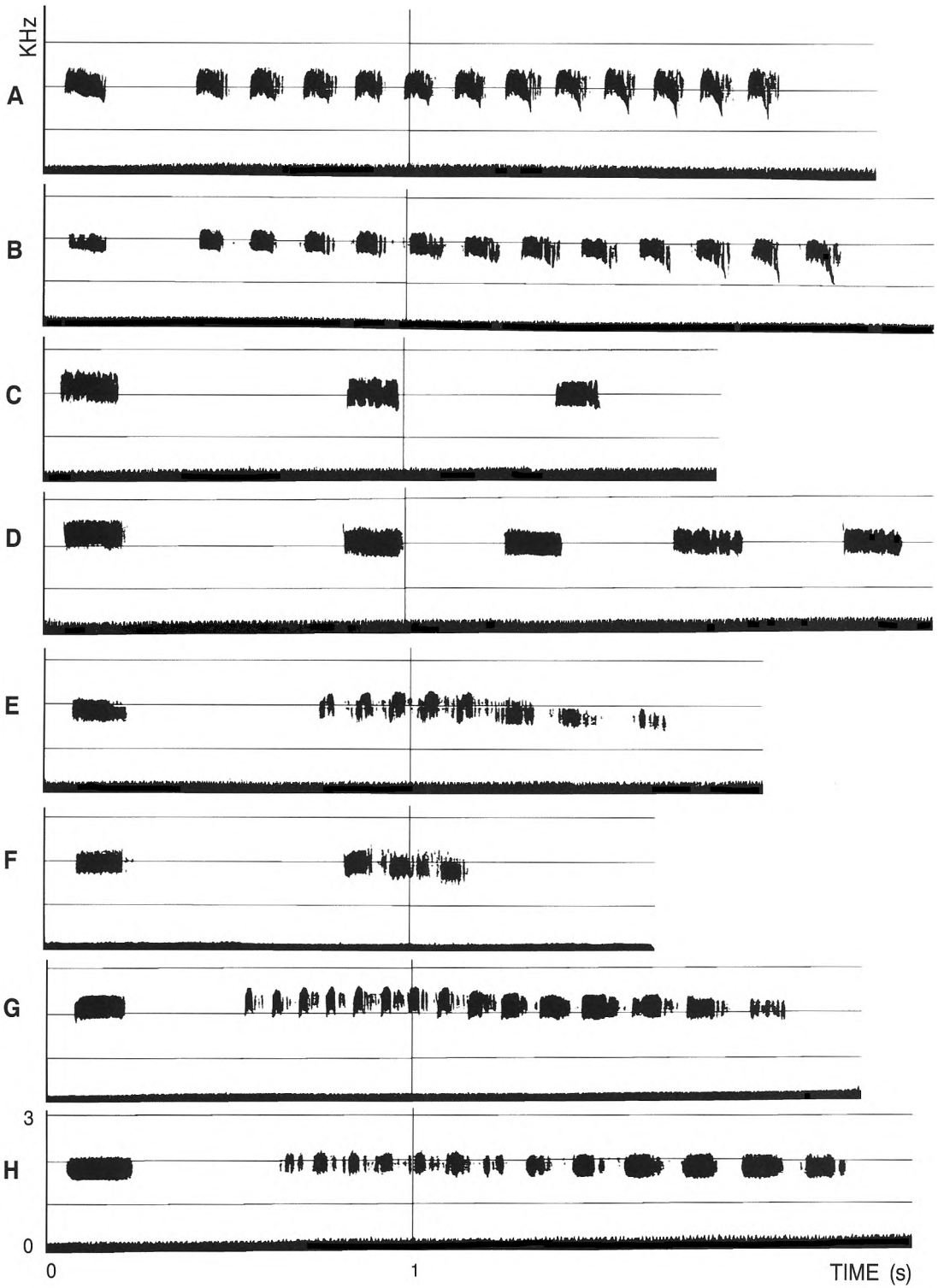
D: *hoffmanni* group, Cerro Pirre, Darien, Panama, 7 March 1983 (Behrstock).

E: “*hoffmanni*” group, Parque Nacional Yacambú, Lara, Venezuela, 25 May 1992 (Behrstock).

F: “*hoffmanni*” group, Asa Wright Nature Centre, Trinidad, 16 October 1982 (Behrstock).

G: *analis* group, La Selva, Napo, Ecuador, 6 January 1991 (Behrstock).

H: *analis* group, Explorer’s Inn, Peru (Coffey).



Plumage

All black-faced antthrushes have a black face and throat which offset a naked, pale bluish orbital ring; their upperparts are overall rich dark brown and their underparts are smoky grey. All three subspecies of *F. moniliger* (*pallidus*, *intermedius* and nominate *moniliger*) differ consistently from other black-faced antthrushes in their rufous-chestnut fore-collar below the black throat. The *hoffmanni* and *analisis* groups lack this fore-collar so that the black throat is sharply defined and abuts the grey chest. Other differences between *F. moniliger intermedius* of central Honduras and the subspecies *umbrosus* (*hoffmanni* group) of eastern Honduras are the darker underparts and more vinaceous, less chestnut neck sides of the latter.

Thus, a marked change in plumage of black-faced antthrushes parallels the break in song type in eastern Honduras. The situation in South America, however, is less clear-cut, since the break in plumage between birds with rufous neck sides (typical of the *hoffmanni* group) and those with clay-coloured neck sides (*analisis* group) occurs in southern Colombia and southern Venezuela. Thus birds in Trinidad and northern Venezuela have been aligned by plumage with the *hoffmanni* group of southern Central America¹³, while their songs align them with the Amazonian *analisis* group. Interestingly, this problem suggests that found in *Microcerculus* wrens, where song change parallels plumage change in Central America but in South America song and plumage breaks do not correlate^{12,14}.

Habitat and Distribution in Middle America

The *Formicarius* antthrushes of Middle America inhabit the floor of humid forest. The Mexican Antthrush *F. moniliger* occurs in humid evergreen to semi-deciduous forest from sea level to 1,800 m elevation from central Veracruz, Mexico, through Belize and Guatemala to northern and central Honduras^{2,9} (Figure 2). A report from 2,050 m in Guatemala⁷ may be in error. In Mexico and Guatemala, *F. moniliger* is as typical of cloud-forest as of rainforest (pers. obs.) and its centre of abundance in Honduras is the

mid-elevation humid forests from 400 to 1,200 m⁹.

The *hoffmanni* group of southern Central America occurs in humid evergreen to semi-deciduous forest, mainly below 900 m although it reaches 1,500 m locally in Costa Rica^{11,15}. In Honduras, a specimen of this form was collected along the Río Guampú (about 430 m elevation) in the Olancho rainforests. Monroe⁹ noted that this specimen "is typical in every way of the southern Central American race *F. a. umbrosus*... oddly, no other Honduran specimen, not even those from El Boquerón, about 60 km south-west [600-750 m]... show any approach to *umbrosus*."

Thus, where the ranges of the two species approach, *F. moniliger* appears to be a bird of the foothills, and is replaced in the lowlands by the *hoffmanni* group. Altitudinal replacement is the rule among *Formicarius* species in southern Central America and South America e.g., *F. analisis* (*hoffmanni* group), *F. nigricapillus* and *F. rufipectus* in Costa Rica¹⁵.

Summary: The sharp break in voice and plumage combined with apparent altitudinal replacement of *Formicarius* antthrushes in eastern Honduras, indicates that the northern birds should be recognised as a separate species *F. moniliger*, the Mexican Antthrush. Differences in head and chest pattern, combined with song, are also the main specific features of other *Formicarius* antthrushes, and the song differences between *moniliger* and other black-faced antthrushes are comparable to accepted species-level differences in the genus *Formicarius* although the Black-faced Antthrush complex constitutes a single superspecies. Comparably striking differences in song-type exist between birds in southern Central America and those in most of South America. While two subspecies groups, *hoffmanni* and *analisis*, have been recognised in this range, these are based on plumage differences which, interestingly, do not correlate with the shift in song-type. Ornithologists active in Colombia and Venezuela should determine where the shift in song-type occurs, and how it may be correlated with plumage, morphology, or habitat.

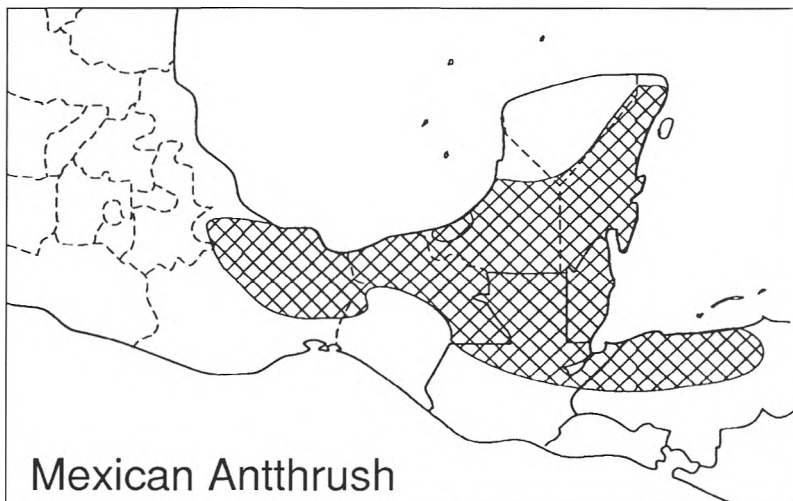


Figure 2. Distribution of the Mexican Antthrush *Formicarius moniliger* (from Howell and Webb in press).

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