

SMITHSONIAN MISCELLANEOUS COLLECTIONS
VOLUME 111, NUMBER 1

MIRANDOLLE'S FOREST FALCON

(WITH TWO PLATES)

BY

HERBERT FRIEDMANN

Curator, Division of Birds, U. S. National Museum



(PUBLICATION 3948)

CITY OF WASHINGTON
PUBLISHED BY THE SMITHSONIAN INSTITUTION
SEPTEMBER 22, 1948

SMITHSONIAN MISCELLANEOUS COLLECTIONS
VOLUME 111, NUMBER 1

MIRANDOLLE'S FOREST FALCON

(WITH TWO PLATES)

BY
HERBERT FRIEDMANN
Curator, Division of Birds, U. S. National Museum



(PUBLICATION 3948)

CITY OF WASHINGTON
PUBLISHED BY THE SMITHSONIAN INSTITUTION
SEPTEMBER 22, 1948

The Lord Baltimore Press
BALTIMORE, MD., U. S. A.

MIRANDOLLE'S FOREST FALCON

By HERBERT FRIEDMANN

Curator, Division of Birds

U. S. National Museum

(WITH TWO PLATES)

Mirandolle's forest falcon, *Micrastur mirandollei* (Schlegel), is one of the least known of American hawks in spite of a very extensive range, extending from Costa Rica to Bolivia, and it has long been a rare bird in museum collections. So little material was available for study that in 1932 Griscom (Bull. Mus. Comp. Zool., vol. 72, p. 317) was moved to write of Wedel's eastern Panamanian collection that "a series of five specimens of this very rare Hawk from one locality is unprecedented. . . ." Since that time additional examples have been taken, and in 1941 Griscom and Greenway (Bull. Mus. Comp. Zool., vol. 81, p. 418) separated the birds of the Caribbean coast of extreme eastern Panamá under the name *M. m. extimus*, as they observed that two adults from there differed from a single Brazilian adult and from the description of the type from Surinam in having "much narrower and paler tailbands and in having the white underparts washed with richer buff. Judging by an immature bird and an intermediate specimen also from eastern Panamá, the differences described above have nothing to do with immaturity. . . ." Their comparative material was admittedly inadequate, but, fortunately, their action proves to be correct.

Through the courtesy of the officials of the American Museum of Natural History, Carnegie Museum, Chicago Natural History Museum, Museum of Comparative Zoology, and the Academy of Natural Sciences of Philadelphia, I have been able to add to the limited material stored in Washington, and have brought together by far the largest and most representative series of this species ever assembled, 26 specimens in all. These birds, young and adult of both sexes, clearly substantiate the validity of *extimus*, as the accompanying figures (pls. 1, 2) show, but also indicate that its range is much more extensive than hitherto thought. It is because of the rarity of this hawk that I have felt it worth while to illustrate the races in this paper, as otherwise it would take an equal amount of borrowing for anyone

else to assemble an adequate corpus of data to elucidate them. The illustrations show representative samples of both races, including in each case immature as well as adult birds, and males as well as females. To show more examples in each picture would have reduced their scale too much without in any way adding to the demonstration of the distinctness of their racial characters.

The races and their ranges are as follows:

Micrastur mirandollei extimus is characterized by having the pale bands on the dorsal surface of the rectrices narrow, white or almost white with a medial dusky band. This is true of young and old birds alike. The series studied does not uphold the supposed character of a richer buffy wash on the white underparts. This race ranges from Costa Rica (Talamanca) and Panamá (scattered records from the Caribbean slope, one from the Pacific slope, Permé, Obaldía, Panama Railway Line), south to the Chocó area of western Colombia (Río Juradó, Río Baudó, Río Yarubida, where a series of 10 specimens was collected by von Sneider).

Micrastur mirandollei mirandollei has the pale bands on the dorsal surface of the rectrices somewhat broader and much duskier—grayish brown, becoming whitish on the inner webs of the lateral tail feathers, and, in young birds, the dusky margins of the feathers of the throat and breast paler, more washed out than in corresponding examples of *extimus*. This form ranges from Colombia east of the eastern Andes (Meta (Quenane) and Caquetá)¹ to Venezuela (Cerro Yapacana, Upper Orinoco; Cerro Duida), and the Amazonian basin of

¹ Unfortunately, I have not seen either of these eastern Colombian specimens, and Nicéforo María's example from Meta is figured (Caldasia, vol. 4, No. 19, p. 321, May 30, 1947) from the underside and consequently does not show the dorsal appearance of the tail bands. It is, however, a young bird, and, as far as may be judged from the photograph, has fairly pale edges to the pectoral and upper abdominal feathers, which would suggest its being of the nominate race. This is not clarified or too well borne out by the accompanying description, wherein it is said that the tail feathers are tipped with white, but have the other bars grayish brown, with white edges, which might even seem to suggest *extimus*! I understand that during the recent uprising in Bogotá, Brother Nicéforo's collections were lost in the destruction of the building that housed them. No eastern Colombian examples are known in any collection outside of Colombia. Fortunately, in response to my inquiry, Dr. Armando Dugand has supplied the necessary information to enable me to place the Caquetá bird (and hence, by inference, the Meta example) as typical *mirandollei*. He writes me that the specimen from Morelia, Caquetá, has the two central rectrices with "three bars plus one terminal; the bars are grayish brown, only very slightly paler than the dark brown of the feathers . . . the other rectrices show white bars only on the inner webs. . . ."

Brazil (Rio Juruá, Villa Braga, Santarém, Tapajóz River, Beireio, Rio Majary, Rio Acorá, Rio Jamundá, São Gabriel, Igarapa Aniba, Piquiatuba, Manacapurú, and Allianca, Pará), southeast to Espirito Santo (Rio Doce), and northeast to British Guiana (Carimang River, Ituribisi River, Courantyne, Bartica, Arawai River), Dutch Guiana, and French Guiana (Cayenne), and south to eastern Perú (Chyvetas, Yurimaguas) and to Bolivia (Santa Ana, near La Paz, on the Río Corioco).

The nominate race averages larger than the northern form as the following measurements show, but the overlap is too great for size to be used as a diagnostic character.

Micrastur mirandollei mirandollei: 11 males (including 5 from the literature), wing 220-241 (230.5); tail 179-202 (189.1); culmen from cere 20-23 (20.8); tarsus 70-76.2 (75.5); middle toe without claw 35.7-37.2 (36.7 mm.); 7 females, wing 221-248 (233.0); tail 180-208 (190.7); culmen from cere 19.9-22.4 (20.9); tarsus 73-86 (77.9); middle toe without claw 34.2-38.8 (36.2 mm.). In this connection it may be mentioned that Hellmayr (Nov. Zool., vol. 17, p. 409, 1910) gives the measurements of an old adult female from Allianca, Brazil, as wing 265, tail 200, culmen 24, and tarsus 55 mm. The wing is much longer and the tarsus much shorter than in any birds I have examined.

Micrastur mirandollei extimus: 7 males, wing 215-237 (221.3); tail 182-200 (191.5); culmen from cere 20-23.3 (21); tarsus 74.1-81 (77.6); middle toe without claw 32.5-38 (35.1 mm.); 7 females, wing 220-228 (224.3); tail 187-195 (191); culmen from cere 20.2-22.4 (21.4); tarsus 78-84 (80.1); middle toe without claw 35.1-38 (36.1 mm.).

It appears from these figures that this is one of the relatively few hawks in which there is little or no difference in size between the sexes. A detailed description of its plumages, given below, completes our present knowledge of this rare forest falcon.

Micrastur mirandollei mirandollei: ADULT (sexes alike in coloration): Forehead, crown, occiput, nape, scapulars, interscapulars, back, rump, upper tail coverts, upper wing coverts, and remiges deep neutral gray with a slate tinge, the top of head somewhat darker; the inner webs of the remiges white for their basal two-thirds or more, and crossed by four fairly broad dark mouse-gray bands and somewhat mottled with deep mouse gray on the more distal portion of the whitish area; the fifth (from the outside) primary the longest, the first (outermost) the shortest; tail chaetura black tipped with white or buffy white and crossed by three fairly broad grayish-brown bands, these bands becoming whitish on the inner webs of the lateral

feathers; lores and orbital area bare, a slight line below the eye, the cheeks, and the auriculars like the crown; the posterior auriculars shading to buffy white; chin, throat, breast, abdomen, sides, flanks, thighs, and under tail coverts whitish to pale light pinkish buff, the feathers, especially of the breast and sides, often, but not always, with very fine dusky shaft lines; under wing coverts whitish to pinkish buff, the lower ones mixed or banded with deep neutral gray; iris yellowish brown; cere and base of both mandibles yellowish, the bill otherwise horn black; tarsi and toes bright yellow; claws black.

IMMATURE: Similar to the adult, but with a brownish slate tinge on the upperparts; the pale tail bands washed with pale fulvous; the entire underparts with a buffy wash; the feathers of the breast and sides with prominent dusky shaft streaks; bill blackish except basally where it is yellow.

JUVENAL: Similar to adult, but upperparts dull fuscous with a faint slate wash; underparts whitish with a buffy wash on the throat, breast, sides, flanks, and upper abdomen, but not on chin or vent; each feather of the throat, breast, sides, flanks, and upper abdomen with a broad border of fulvous drab to hair brown, producing a conspicuously scalloped appearance; bill yellow, slightly dusky along the proximal portion of the culmen.

NATAL DOWN: Unknown.

Micrastur mirandollei extimus: ADULT: Like that of the nominate race except for the color of the tail bands, as shown in the illustrations and mentioned above. (No specimen from the range of *extimus* shows any approach to *mirandollei*, but one adult female of the latter form, from Rio Jamundá, Brazil (Amer. Mus. Nat. Hist. 283244), and one from Cerro Duida, Venezuela (Amer. Mus. Nat. Hist. 272322), show some resemblance to *extimus* in this respect. However, 2 specimens out of 11 is not a serious exception to the general picture, and of these 2, the Cerro Duida bird is less aberrant than the one from Rio Jamundá.)

IMMATURE: Similar to that of typical *mirandollei*.

JUVENAL: Similar to that of the nominate race but with the broad edges of the feathers of the throat, breast, sides, flanks, and upper abdomen averaging darker—dark hair brown.

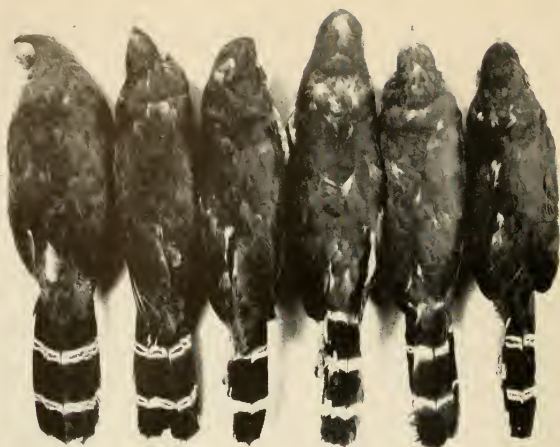
NATAL DOWN: Unknown.

Specimens examined.—*M. m. mirandollei*, 11: Venezuela 2, Brazil 6, British Guiana 1, French Guiana 1, Bolivia 1. *M. m. extimus*, 15: Costa Rica 1, Panamá 4, western Colombia 9, without locality 1.



MICRASTUR MIRANDOLLEI MIRANDOLLEI (SCHLEGEL)

Upper, dorsal view; lower, ventral view of same individuals (1 immature, 5 adult) showing lack of correlation between age and the character of the dorsal tail band. The specimens figured are from Venezuela, Brazil, British Guiana, French Guiana, and Bolivia.



MICRASTUR MIRANDOLLEI EXTIMUS GRISCOM AND GREENWAY

Upper, dorsal view; lower, ventral view of same individuals (4 juvenal, 2 adult) showing that age is not a factor in the character of the dorsal tail bands. The specimens figured are from Costa Rica, Panamá, and western Colombia.