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NOTES ON SOME NEOTROPICAL HAWKS

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Recently it became necessary to list the specimens of American Falconiformes in the Wheeler Collection of Chicago Natural History Museum. During his lifetime Mr. Leslie Wheeler built up a very fine collection of hawks, especially from the Neotropics, and this collection, which he gave to the Museum, has been increased since his death by generous gifts from his widow. In checking over these specimens a number of rare forms were found, and at least one question of taxonomic interest came to light. It is thought that several of these findings should be written up at greater length than will be feasible in the footnotes of the *Catalogue of Birds of the Americas*, Part I, No. 2, which is in press.

I am indebted to the following institutions for the loan of material: The American Museum of Natural History, the Museum of Comparative Zoology, the Museum of Zoology, University of Michigan, and the Academy of Natural Sciences of Philadelphia.

Accipiter bicolor pileatus Temminck

Falco pileatus Temminck, Pl. Col., livr. 35, pl. 205, 1823—Brazil=Ilha Cachoeirinha, Rio Belmonte, Bahia, fide Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 458, 1929.

Range.—Tableland of southern Brazil from Maranhão and Piauhay south in the west to central Matto Grosso and in the east to Rio Grande do Sul, and eastern Paraguay(?).

Accipiter bicolor guttifer Hellmayr

Accipiter bicolor guttifer Hellmayr, Verhandl. Orn. Ges. Bayern, 13, p. 200, 1917—Bolivia (new name for *Sparvius guttatus* auct. not *Sparvius guttatus* Vieillot=*Accipiter pileatus* Temminck).

Range.—Tropical Bolivia (from Santa Cruz to Tarija), western Matto Grosso (Urucum near Corumba), Paraguayan Chaco, and northern Argentina from Jujuy south to Tucuman and east to Formosa and the Chaco Austral.

In the manuscript of Part I of the *Birds of the Americas* Dr. Hellmayr has treated the above forms as specifically distinct, placing *pileatus* as a race of *A. bicolor* Vieillot and *guttifer* as a race of *A. chilensis* Philippi and Landbeck. In studying the specimens in Chicago Natural History Museum grave doubts were raised as to the specific distinctness of the two. Therefore specimens were borrowed that had been collected in the area where these forms were supposed to overlap or meet, that is, southeastern Bolivia, southwestern Brazil, Paraguay, and northern Argentina.

Discussion.—*Guttifer* differs from *pileatus* by the tawny rufous coloration of the breast and abdomen, which are generally spotted or barred with white and sometimes partially barred with dusky gray. In *pileatus* these parts are uniform light gray. To give an idea of the individual variation found in adults from southern Matto Grosso, Bolivia, the Paraguayan Chaco, and northern Argentina a brief description of the specimens examined is given below.

Matto Grosso: A male from Chapada has light gray under parts as in *pileatus* but at the base of some of the breast feathers there are hidden blotches of light rufous. A second male from Urucum, near Corumba, is typical of *guttifer*, the under parts from the chest down being rufous with scattered white spots except for the vent and under-tail coverts, which are white with rufous blotches.

Bolivia: A female from San Lorenzo, Tarija, is typical of *guttifer*, with reddish breast and abdomen indistinctly barred with white and dusky gray.

Paraguayan Chaco: Five females, from 195 to 265 km. west of Puerto Casado, are rufous below as in the Bolivian female mentioned above, but one has very little barring, while the others are well marked with white and dusky. One male from the same region is also typical of the Bolivian form. In a second male, however, the entire under parts are gray, with the breast and the abdomen crossed by *indistinct* light rufous and white bars which are more pronounced on the abdomen; in other words an individual variant of *guttifer* which is almost typical of *pileatus*.

Argentina: From Rio de Oro, Chaco Austral, there is a female with reddish breast and abdomen but with a number of dusky grayish and white bars on the under parts. Another of the same sex from Jujuy is typical of *guttifer* while a male from the same province has gray under parts heavily *washed* (not barred) with rufous and indistinctly spotted with white. The only specimen from Salta, a male, has the light gray breast of typical *pileatus*, but it is spotted

here and there with dabs of light rufous that become thicker toward the vent until it and the under-tail coverts are almost solid rufous.

From Tucuman four females have been examined, none of which are typical of either form. Two, from Concepcion and Cumbre de Raco, have gray under parts rather heavily washed with rufous, especially about the abdomen, and they also show some white spotting. The other two, both from Concepcion, have very dark gray under parts. On one this plumage is practically immaculate except for a suggestion of reddish wash about the vent. The other has small, more or less hidden white spots about the lower breast and abdomen with an indistinct rufous wash on the latter and white under-tail coverts broadly barred with dark gray and rufous. A male from Taficillo is pure *pileatus* in coloration except for a suggestion of rufous here and there on the under parts.

Thus, nineteen adult specimens of *guttifer* and *pileatus* have been examined from the above localities. Many more are needed before the ranges of the two forms can be defined. From the examples studied, however, there can be little doubt that the so-called specimens of *pileatus* recorded as occurring in the same territory as *guttifer* are merely individual variants of the latter wholly or partially lacking its reddish under parts.

Twenty immature specimens were also examined from the same regions. Birds from Bolivia and the Paraguayan Chaco average more rusty ochraceous on the under parts. In two out of three from Bolivia and six out of nine from the Paraguayan Chaco the ground color of the ventral surface is rusty ochraceous while in the others it is much whiter. There are no other differences.

The ranges of the two forms appear to be approximately as given above (p. 39).

Accipiter gundlachi Lawrence

Accipiter Gundlachi Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 252, 1860
—Hanabana, Cuba.

Discussion.—The status of this rare hawk has been in doubt but so far as coloration is concerned it most closely resembles *Accipiter bicolor guttifer* but is larger (wing of male 245 and of female 298 mm.) and has a much heavier foot and tarsus. A female examined has less reddish under parts than typical specimens of *guttifer* from Bolivia and the Paraguayan Chaco, but is very much like the two females from Concepcion and Cumbre de Raco, Tucuman, described under the preceding species. It differs from them, however, for

the thighs, the under-wing coverts, and the axillaries are spotted with white instead of being immaculate rufous, and the indistinct white spotting and barring on the breast are more numerous and extensive, while the chest is lighter gray. On the dorsal surface it is grayer and the light bars on the tail are wider.

In an adult male the white spotting of the under parts is rather indistinct and is confined to the crissum, while the thighs are pure rufous, except that each feather is tipped by a very narrow, almost obsolete line of white. The foreneck, chest, upper breast, and flanks are grayish ash indistinctly tinged with dull rufescent along the shafts of the feathers.

An immature male resembles immatures of *guttifer* but the throat is finely streaked with dusky and the brown shaft lines to the feathers of the under parts are lighter and narrower. The specimen is in transition plumage as the thighs are reddish barred with white as are some of the flank feathers.

This hawk does not appear to be extinct, since one of the examples examined was taken in 1935.

Accipiter collaris Sclater

Accipiter collaris Sclater, Ibis, 1860, p. 148, pl. 6—"Interior of New Grenada"
=Bogotá, Colombia.

Swann (1925, p. 250) states that at that time this rare hawk was known from only five specimens. These were an adult (Bogotá) skin in the British Museum and another in the Philadelphia Academy of Sciences, an immature (Bogotá) skin in the Norwich Museum, and two immatures from Merida, Venezuela (Swann, 1921, p. 357), one in the British Museum and one in the Museum of Comparative Zoology.

Discussion.—The two American specimens have been examined. The immature from Venezuela in the Museum of Comparative Zoology proves to be an example of *Accipiter superciliosus* Linnaeus, not *Accipiter collaris* Sclater, a fact known to Dr. Stresemann, as Mr. James L. Peters informs me. It is in the tawny phase of plumage common to both hawks, but lacks on the hind neck the light rufous collar that is the distinguishing character of *collaris*. However, Mr. J. D. Macdonald of the British Museum informs me that their immature from Merida has a distinct light collar on the hind neck and a wing of 173 mm. The range of *Accipiter collaris*, therefore, does extend into Venezuela.

Since 1938 Chicago Museum has received through the Wheeler Collection of birds of prey six examples of this hawk from the Cauca Valley of Colombia and from western Ecuador. There are two adults and four immatures. A study of these specimens and a comparison of them with a series of eleven *Accipiter superciliosus* has brought to light some facts that seem worth recording.

As pointed out by Gurney (1875, p. 471) *Accipiter collaris* and *Accipiter tinus* (= *superciliosus* Linnaeus) are very similar in coloration and pattern of plumage in both adult and immature stages. However, the specimens in this Museum show that *collaris* can always be identified by the light collar on the hind neck and by its larger size.

In the adult dress *collaris* when compared to *superciliosus* is darker, more brownish, less grayish above and has an ill-defined, half hidden collar on the hind neck; below, the dark barring is much broader and darker. Three females have wings from 171 to 174 and tails from 118 to 121 mm., as against a measurement in one adult female of *superciliosus* of wing 158 and tail 103 mm. I have seen no adult male of the larger species, but six of the smaller hawk have wings from 135 to 146 and tails from 91 to 99 mm.

In the immature stage this species has two types of plumage, as does *superciliosus*. Three of the four immatures are in what can be called the tawny phase, which would appear to be the commonest in both species. In this plumage the only constant distinguishing character of *collaris* is the light rufous nuchal collar that separates the dark brown crown from the more rufous brown of the mantle. However, four examples of *superciliosus* in the same phase do show a tendency to have darker rufous cheeks and three have more closely barred under parts. Specimens in transitional plumage of both species show that the succeeding stage is that of the adult.

The fourth young example of *collaris* is in what can be termed the brown-backed phase. Unfortunately, I have no specimen of *superciliosus* in this dress with which to compare it. However, it would appear to resemble very closely the plumage described by Sharpe (1874, p. 139) as the *immature* of *A. tinus*. The upper parts are brown, slightly lighter than the color of the adults, and the wing coverts, scapulars, and feathers of the back and rump are indistinctly edged with rufous. The head is slightly darker than the rest of the upper parts and is separated from them by an indistinct white nuchal collar that becomes light buff on the sides of the neck. Underneath, the rufous barring is lighter, more buffy and narrower.

It is probable that this is a color phase rather than a younger stage of plumage than the tawny one, because in the latter case it should be the more common. Instead it appears to be the rarer.

The four immature specimens of *collaris* are all sexed as males, but it is plain from their measurements that three must be females (wings 170, 171, and 175 mm.; tails 124 mm.). The fourth specimen has a wing of 148 and a tail of 109 mm. Four young examples of *superciliosus* have wings of 151, 153, 161, and 164, with tails measuring 104, 106, 112, and 116 mm. respectively. Although three are sexed as males, comparing these measurements with those of the adults given previously I judge them all to be females.

Range.—From the Merida region of Venezuela through Colombia, west of the eastern Andes to western Ecuador (Nanegal and Gualea, Pichincha).

Spizaetus devillei Dubois

Spizaetus devillei Dubois, Bull. Acad. Roy. Belgique, (2), 38, p. 129, pls. 1, 2, 1874—Baeza, Ecuador.

Discussion.—The Wheeler Collection possesses a specimen of this rare hawk, hitherto known only from the two original examples described by Dubois. It is in the white-breasted plumage which Dubois considered to be that of the adult. The bird agrees very well in coloration with both the plate (pl. 1) and the description except that the top of the head and the back of the neck are much whiter than they are shown in the figure. In its dimensions it also agrees with those given by Dubois, being a male with a wing of 470, tail of 320, and tarsus of 116 mm. While in this plumage *devillei* superficially resembles the juvenile stage of *S. ornatus* it can be separated at a glance by its much larger size, by the lack of black barrings on the flanks and thighs, by the three instead of five black tail bands, and by the white-edged upper wing coverts and tertials.

Hellmayr (Part I, No. 2, *Catalogue of Birds of the Americas*, in press) has suggested that this white-breasted plumage is that of the juvenile not the adult. This is borne out by the example in Chicago Museum. In it some of the old worn white-edged feathers of the back have been replaced by new unworn ones that are dark brown (almost black) without any white edges. These feathers agree in color with the plate (pl. 2) and description of the supposed young example in the Brussels Museum.

The specimen was collected in 1939 at Saloya (altitude 1,100 meters) on the Saloya River, on the southwest slope of the Pichincha

volcano. The species therefore would seem to be found in both eastern and western Ecuador.

Below is given a rough translation of the original description of both juvenile and adult:

Juvenile (adult of Dubois).—Head, neck and under parts white; feathers of the crown of the head, the nape, the flanks, and the thighs marked with a longitudinal streak of brown; feathers of the crest white at the base, brown at the tips, but all with a little white tip; back and greater wing coverts ashy; all the feathers more or less edged with white; lesser wing coverts brown, edged with white; primaries ashy, brown at their tips but ended with a little white tip and crossed by five or six black bands and bordered with white at their inner edge for three-fourths of their length from the base; fifth primary the longest, secondaries brown, tipped with white, banded more or less distinctly with black, and marbled on their inner edge with white; under wing coverts white, striated or blotched with brown; tail ashy gray, blotched with brown, tipped with white and crossed by three black bands. Bill and claws black; cere and feet probably yellow.

Adult (young of Dubois).—Head and neck tawny, spotted with brown; throat white, with some black feathers under the bill and surrounded with a half collar equally black; back black, wings an irregular mixture of black and brown feathers, the rear ones often bordered with white; primaries as in the juvenile; under parts reddish brown, mixed with white, but all the feathers with a deep brown center and generally edged with white; feathers of the thighs and under tail coverts pale tawny; tail as in the juvenile, but tipped with tawny, the black tip of the middle tail feather extending as far as the second band.

Measurements.—Length of wing 47 cm., tail 32, tarsus 32, middle toe 6 (without claw).

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