NOTES ON *HARPYHALIAETUS*

BY DEAN AMADON

Two little known eagles of the neotropics, the crested harpy and the solitary harpy, have been listed by Peters (Check-List Birds of World, 1: 245–246, 1931) and some other authors in separate genera as *Harpyhaliaetus coronatus* and *Urubitornis solitaria* respectively. Sharpe (Cat. Birds Brit. Mus., 1: 221, 1874) placed them both in the former genus and wrote, "At present I believe that there is only one species, but admit the possibility of two distinct kinds being differentiated, the grey bird (*H. coronatus*) having a more southern distribution than the black one (*H. solitarius*)." Gurney (Ibis: 490–493, 1876), a keen student of raptores, commented on this as follows, "I agree with Mr. Sharpe that both these birds may very properly be referred to the genus *Harpyhaliaetus;* but I cannot concur in his view that they should both be referred to the same species, as, although they agree in form and dimensions, they differ in *H. solitarius* being always (when adult) much more darkly coloured, with a shorter crest, and in their very distinct geographical distribution . . ." Although specimens are still too few to determine if their ranges overlap, in general the crested harpy occurs in southern South America north at least to southern Brazil, while the solitary harpy occurs from Perú, or possibly parts of Chile, north to Sonora, México.

In 1912, Kothe (Ornith. Monatsber., 20: 1–5) asserted that *solitarius* should be generically separated from *coronatus* because it lacks a crest, is darker in color, and has a more sharply hooked beak. Kothe figured the beaks of the two species but scarcely any difference is perceptible. Direct comparison of specimens also reveals no difference in the shape of the bill, a conclusion corroborated by others who were asked to make this comparison. Kirke-Swann (Monograph Birds Prey, 1: 447, 1930) also upheld *Urubitornis* on the basis of shorter crest and relatively shorter legs and tail. As the following measurements show, there seems to be no significant difference in the proportions of the two species. There is great variability in tail length, in part sexual and in part because the tail feathers of immatures are much longer than those of adults. This condition is not uncommon in hawks but is especially pronounced in these large species.

Of the alleged generic characters separating the two eagles, only the longer crest and lighter coloration of *coronatus*, in both adult and immature plumages, seem to be valid. The color pattern of both adult and immature plumages and all the important details of structure are the same. Although *solitarius* lacks a conspicuous crest, its occipital

feathers are pointed and slightly lengthened. The apparently complementary ranges of the two species, moreover, suggest that they may be geographical representatives of a former single species. Such closely related species are best placed in the same genus. In this case *Harpyhaliaetus* is the older of the two names.

Dr. Herbert Friedmann, who was kind enough to read these notes, suggested that the relationship of *Harpyhaliaetus* to *Buteogallus* be investigated. These two genera are undoubtedly related. *Buteogallus anthracinus* resembles *Harpyhaliaetus* in the pattern and color of both immature and adult plumages. The same is true of *Hypomorphnus urubitinga;* moreover, the coarse scutellation of the tarsi, as well as the complete absence of rufous on the wing in this species, suggests that it may be closer to *Harpyhaliaetus* than is *Buteogallus.* The type of the latter genus is *aequinoctialis,* a small, rufous species, in which the black coloration and wide white tail bar of the related species are absent or merely suggested. To me it does not seem desirable to place this rather small hawk in the same genus with the strikingly larger, more robust and different appearing *Harpyhaliaetus coronatus.*

Hypomorphnus urubitinga and the various species of *Buteogallus* usually live near water, often feeding largely upon reptiles, amphibians, or crabs. Little is known of the habits of *Harpyhaliaetus,* but, as noted below *H. solitarius* is apparently rapacious enough to attack fawns, while *H. coronatus* is said usually to smell of skunk, and evidently preys upon these mammals. Thus, while *Hypomorphnus* is in some respects intermediate between *Harpyhaliaetus* and *Buteogallus,* it seems closer to the latter in habits as well as in size and proportions. Further study of these and other related genera will show whether it is necessary to continue to separate *Hypomorphnus* from *Buteogallus.*

The genus *Harpyhaliaetus* may be diagnosed as follows: related to *Buteogallus* and *Hypomorphnus* but differing in the following respects: outer primaries much more sharply emarginated; tail to wing ratio smaller (about 0.46 as compared with about 0.60); occipital crest present or suggested; included species much larger, more robust and apparently more predacious in habits.

Van Rossem (Proc. Biol. Soc. Wash., 61: 67–68, 1948) recently described a race of the solitary harpy from Sonora, México, naming it *Urubitornis solitaria sheffleri.* Based on one pair of adults as compared with only one adult and one immature of the nominate race, the characters given are larger size and several minor differences of color. Examination of two adults of *solitarius* (Perú, Ecuador) reveals variation in most of the very points mentioned by van Rossem as distin-

guishing the northern bird, such as the basal marking of the primaries, the amount of white on the under-tail coverts, and the development of the partial white band at the base of the tail. Whether this is individual or age variation is not evident, but the color characters of *sheffleri* require confirmation. Further material (see below), also tends to reduce the supposed size difference between the two races, although *sheffleri* may prove to be sufficiently larger to warrant recognition.

Although van Rossem's specimens are the only ones thus far recorded from north of the Isthmus of Tehuantepec, the American Museum of Natural History has a male in immature plumage collected at "Los Masos" (5800 feet), Jalisco, México, on November 23, 1905, by M. Goodnight, then an assistant to J. H. Batty. Field notes on the label read, "Rather common on high mountains. A pair seen attacking two fawns but were driven away by mother and approaching hunter. Eye light yellow. Legs dirty greenish white." This specimen agrees in color with two immatures from northern South America. It is exceeded by one of them, also sexed as a male, in size.

Table 1 gives the measurements of three specimens of *coronatus* and five of *solitarius* in the American Museum of Natural History; to these have been added data for seven additional specimens of *solitarius* from Kothe and from van Rossem.

TABLE 1

Sex	*Locality*	*Wing length (chord in millimeters)*	*Tail length (central feathers in millimeters)*	*Tarsus (approximate length in millimeters)*
		Harpyhaliaetus coronatus		
		Adults		
Male	Matto Grosso, Brazil	517	245	134
?	Argentina	542	264	134
		Immature		
?	Argentina	556	305	124
		H. s. solitarius		
		Adults		
Male	Ecuador	510	230	128
Male*	Colombia	490	220	127
Female**	Colombia	525, 525	260, 250	135, 128
?	Perú	520	240	120
		Immatures		
Male	n. South America	535	295	122
Male?*	Guatemala	490	(225)	118
Female**	Colombia	520	270	135
?	Colombia	515	267	129
		H. sol. sheffleri		
		Adults		
Male*	southeastern Sonora	530	252	132
Female*	southeastern Sonora	552	260	131
		Immature		
Male	Jalisco	514	276	133

* From van Rossem (*loc. cit.*)
** From Kothe (*loc. cit.*)

SUMMARY

It is suggested that *Urubitornis* J. Verreaux be considered a synonym of *Harpyhaliaetus* Lafresnaye; the latter then will contain two species *coronatus* and *solitarius*. They appear to be closely related and to have complementary ranges, as far as known. The race *H. solitarius sheffleri* van Rossem from Sonora, México, requires confirmation. Another Mexican record for the species is given.

American Museum of Natural History, New York, N. Y., July 23, 1948.

BIOGRAPHICAL NOTES ON THE PENARD BROTHERS

BY FR. HAVERSCHMIDT

NEARLY forty years ago the first volume of a comprehensive work on the birds of the Guianas was published at Paramaribo in the Dutch language under the title 'De Vogels van Guyana' by Frederik Paul Penard and Arthur Philip Penard. Both authors have long since passed away and almost nothing is known about them in the ornithological world, so that it now seems a task of honor to devote a short note to their life and work.

The Penard family was of French origin and almost certainly descended from 'refugiés,' French Protestants who fled, owing to religious intolerance, from France to Holland, and who, in the 17th century, settled in Surinam. There they started a great many plantations, such as 'La Liberté,' 'Ma Retraite,' 'La Simplicité,' and several others still existing, although nearly all of them have now been deserted. Frederik Paul Penard, Senior, a merchant of ample means at Paramaribo, and his wife, Philippina Salomons, had four sons, three of whom were interested in natural history—the eldest, Frederik Paul, born January 26, 1876; the second, Thomas Edward, born May 7, 1878; the third, Arthur Philip, born April 6, 1880—all at Paramaribo.

The interest in natural history of Frederik and Arthur started in their early boyhood, but at the same time the first symptoms of a terrible disease were manifested, and both boys had to leave school early—Frederik at the age of nine, Arthur at eleven—and were obliged to spend the rest of their lives in seclusion.

The perseverance and moral power of both boys under these conditions are expressed in a letter from their mother dated November 5, 1909, after the death of her eldest son, Frederik: "Without any help and with untiring energy Frederik not only developed himself but also