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AN ORNITHOLOGICAL RECONNAISSANCE IN EASTERN PANAMA IN 1927

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With the collections from western Panama approaching approximate adequacy for the purpose of a distributional study of its avifauna, it became desirable to study conditions in eastern Panama with a view to planning a biological investigation of that little-known territory in the near future. I was fortunate in having my friend, Mr. Maunsell S. Crosby, accept my invitation to join Mrs. Griscom and me in a preliminary reconnaissance trip. He generously furnished the Museum with one-third of the necessary funds, subordinated his own wishes and interests in a most unselfish manner, and in the field was an ideal and enthusiastic companion. Mrs. Griscom voluntarily took entire charge of the photography. In Panama we were joined by Mr. Rex R. Benson, as a volunteer assistant, who collected with his usual enthusiasm and success. Mr. Paul F. Covel rendered efficient service as taxidermist. We were in the field from Feb. 9–March 13.

After a delightful visit with Dr. Chapman on Barro Colorado Island we sailed for the Pearl Islands on the yacht 'Big Bill,' which had been chartered for us through the kind offices of Mr. George S. Schaeffer of the Chase National Bank. We visited the majority of the larger islands of the group, collecting series of all the endemic birds, in addition to the Hummingbird described below. A special study of the great seabird rookeries was made, and Mrs. Griscom took 1700 feet of motion picture film and over 200 photographs. A full account of this phase of the expedition's activities will appear in another connection.

Crossing over to the mainland and entering the Gulf of San Miguel, we ascended the Sambú River to the upper limit of the tide. There was little point in collecting here, as this section had been thoroughly explored by Barbour and Brooks in 1922. This visit afforded me, however, the easiest method of examining the primeval tropical forest of Darien, which in density and luxuriance greatly surpasses the forest on the Pacific coast of western Panama, though exceeded in its turn by the rain forest in eastern Nicaragua and Costa Rica. The most fruitful country

visited was, however, the coast just back of Cape Garachiné. The whole coastal region of the Gulf of San Miguel is arid tropical, not humid tropical, and the forest is largely scrub, relieved by the gigantic "cuipo" tree (*Cavanillesia planifolia*). Anchored in the bay we could look inland (north) over the roofs of the wretched village of Garachiné to the heights of Mt. Sapo, and see the sharp cleavage on the lower slopes where the "cuipo" forest left off, and the heavy rain-forest began. Goldman, indeed ('Mammals of Panama'), reports that this arid tropical forest invades the interior in places, occurring even on the upper reaches of the Rio Tuyra. It is apparent, therefore, that some other factor besides rainfall and altitude is effective in controlling its distribution. It also became obvious that the area shown on Goldman's map as arid tropical is by no means so extensive or so uniform as indicated. Thus it does not occur on the Sambú River above tidewater. The matter is of considerable biological importance, as the avifauna of the arid and humid tropical forests in this region is totally different.

With a view to obtaining further light on this question, we visited Chiman, some fifty miles farther up the coast towards Panama City, where several days were spent in scouring the country in every direction. Except for clearings, this country was covered with unbroken humid forest and there was not a trace of the scrub forest of Cape Garachiné or of its avifauna. Birds were surprisingly scarce, but such indicator species as were collected all belonged to the South American element, which consequently occurs much farther west than previously recorded. A clear morning permitted an excellent view of the mountains in the utterly unknown interior, between the headwaters of the Bayano and Chucunaque Rivers. Their altitude greatly surpasses that of Mt. Sapo (3700 feet), and Benson and I vowed that some day we would have birds from their upper slopes.

The following annotated list mentions all species of importance, in addition to the novelties. One or two sight records are included of birds easy to recognize, with which Benson or I had had previous experience. At the present writing I know of 942 species and subspecies for which I have a record in the Republic of Panama. Of these I have examined specimens of 922, and I have seen over 550 in life. As Goldman pointed out in his 'Mammals of Panama,' the avifauna of eastern Panama seems to be inexhaustible. During our brief visit, Mr. Crosby and I encountered over 250 species, and over 150 were collected. We kept a daily bird-list and journal. With no effort to "make a list," on several occasions more than 75 species were observed or collected in a day.

ANNOTATED LIST OF NOTABLE SPECIES

1. *Stercorarius pomarinus* (Temminck). Pomarine Jaeger.— Several seen in Colon Harbor on March 13.

2. *Stercorarius parasiticus* (Linnæus). Parasitic Jaeger.—One in Colon Harbor, Feb. 9, and eight birds, either this species or the next, on March 13.

3. *Stercorarius longicaudus* Vieillot. Long-tailed Jaeger.—One off the docks at Colon, Feb. 9. No Jaeger has been recorded to my knowledge from Panama waters. It was consequently a great surprise to find these birds abandoning their pelagic habits in their winter quarters and following steamers into Colon Harbor, where they squabbled with the Laughing Gulls for refuse, as tame and fearless as are Herring Gulls in northern waters. The two smaller species were on occasion so close that the number of primaries showing white shafts could be counted accurately. On March 13 both Benson and Lieut. Gaffney were with us, and these birds were pointed out during a motor-boat trip across the harbor. They will make every effort to secure specimens.

4. *Catoptrophorus semipalmatus inornatus* (Brewster). Western Willet.—No form of the Willet has been definitely recorded from Panama, and Hallinan (1924, Auk, p. 309) was the first to record the species, a fact of which he was unaware. His three specimens from Juan Diaz are this race. There could be no better illustration of the accidents of collecting. As a matter of fact the Willet is one of the commonest shore-birds on the great flats at the mouths of the rivers on the Pacific Coast. The tide-fall being from 7–14 feet, these rivers have exposed mud-banks ten miles or more from their mouths, and the Willet and Curlew go way up these rivers, roosting in the mangroves at high tide. Specimens shot by us at Garachiné and Chiman all belonged to the western race.

5. *Ereunetes mauri* Cabanis. Western Sandpiper.—All specimens of this genus collected were the more western species, which has only once been recorded definitely from the Republic, although undoubtedly abundant.

6. *Agamia agami* (Gmelin).—This beautiful Heron is sufficiently rare in Central America to make it worth while to record all additional observations. Two adults were seen in the great swamps at the mouth of the Sambú River on Feb. 24, and another adult at Chiman, March 6.

7. *Tigrisoma cabanisi* Heine.—This Tiger Bittern has long been known to range southward to the Canal Zone. It has recently been recorded from the Pearl Islands, and we saw an adult at Chiman on March 7.

8. *Sula dactylatra* Lesson.—The big white Booby is sometimes not uncommon off Colon Harbor just outside the breakwater. On Feb. 13, 1924, I saw no less than 30. On Feb. 9, 1927, we saw four adults.

9. *Sula piscator* (Linnæus).—The Red-footed Booby also occasionally wanders into Colon Harbor. Two adults were noted by Mr. Crosby and me on Feb. 9. It is easily distinguishable at great distances from the last species by its smaller size and proportionately longer tail.

10. *Sula leucogastra* (Boddaert).—One seen sitting on the breakwater of Colon Harbor, Feb. 9. No Booby has been recorded from the Caribbean side of Panama to date, but there is no reason why these three species should not be of regular occurrence off the coast.

11. *Buteo swainsoni* Bonaparte. Swainson's Hawk.—Bangs and Barbour (1922, Bull. Mus. Comp. Zool., XLV, p. 192) have recorded 2 great hawk flights in April, 1922, observed by the latter in eastern Panama, which were undoubtedly composed of this species. On March 6, 1927, we observed a flock of 22 Swainson's Hawks drifting westward. In the late p.m. of March 7 an enormous flock of at least 1000 came up from the east in three main detachments. These were at a great altitude, and were wheeling in a great cloud, which gradually drifted westward. On the morning of March 8 a flock of 820 passed overhead with similar evolutions. Almost all the phases of this species were represented in these gatherings. With them were a few Broad-winged Hawks. Such habits on migration as these account very naturally for the great rarity of specimens from Central America.

12. *Ara ambigua* subspecies.—About three pairs of the giant Green Macaws lived in the hills of Cape Garachiné, where we saw them daily. They inhabited the tops of the very tallest "cuipo" trees, were wise and wild, and could have been killed only with a lucky rifle shot. This species has never been recorded from eastern Panama, but the absence of specimens in this case means absolutely nothing.

13. *Momotus subrufescens reconditus* Nelson.—Collected both at Cape Garachiné and at Chiman, the latter record greatly extending the range of this subspecies to the westward. In the vicinity of Panama City the subspecies *conexus* Thayer and Bangs is not uncommon in thickets and patches of scrub forest. It apparently skips the heavier forests of eastern Panama, where it is represented by *reconditus*, to reappear in the Magdalena Valley of Colombia, where it is intermediate in color characters between the darker *reconditus* and the paler *subrufescens* of a more arid climate and habitat.

14. *Antrostomus rufus rufus* (Boddaert).—Two of these birds were flushed in an open thicket at Cape Garachiné. One lit in full view on a log at close range. In the excitement of the moment I forgot to adjust my collecting pistol, and fired a small charge of dust-shot from the .22 aux barrel instead of a heavy .32 shell in the lower barrel. The inevitable result was that I merely tickled the bird into a rapid and complete departure. In life the male looks like a ruddy Chuck-wills-widow. There are very few records for this species in Panama. These, however, indicate clearly that it is not a forest species.

15. *Panyptila cayanensis* (Gmelin).—A single Forktailed Swift was seen with small *Chæturæ* at Cape Garachiné on Feb. 25. As with the Green Macaw, the scarcity of records for Panama means nothing with a species which can be collected only by lucky accident.

16. *Saucerottia edwardi margaritarum*, new subspecies

SUBSPECIFIC CHARACTERS.—Similar to typical *Saucerottia edwardi* (Delattre and Bourcier) of the vicinity of Panama City, but lower back much less coppery more greenish bronze; tail also much less coppery more greenish bronze, the reddish violet tinge often lacking altogether, or present only on the central pair of feathers and the tips of the others; under tail-coverts light chestnut, margined with whitish, instead of dusky tinged more or less strongly with rufescent; flanks often tinged distally with light chestnut.

TYPE.—No. 257,141, Amer. Mus. Nat. Hist.; ♀ ad.; Pedro Gonzales Island, Pearl Islands, Panama Bay; Feb. 18, 1927; Griscom, Crosby, *et al.*

17. *Saucerottia edwardi crosbyi*, new subspecies

SUBSPECIFIC CHARACTERS.—Similar also to typical *Saucerottia edwardi* and the form characterized above; lower back more coppery bronze, in this respect nearer *edwardi*; tail quite different from either, solid golden bronze, in only 1 specimen a tinge of coppery on the tips of the central tail-feathers; in all but one specimen all but the central pair of tail-feathers are tipped with light chestnut-brown; flanks and under tail-coverts as in *margaritarum*.

TYPE.—No. 257,142, Amer. Mus. Nat. Hist.; ♂ ad.; Cape Garachiné, eastern Panama; March 5, 1927; Griscom, Crosby, *et al.* Named in honor of Maunsell Schieffelin Crosby, friend and choice companion, who assisted in financing my 1927 expedition to eastern Panama, and collected most of the specimens of this new Hummer at my special request.

SPECIMENS EXAMINED

Saucerottia e. edwardi.—PANAMA: Canal Zone, 6♂, 1♀; La Chorrera, 2♂.

Saucerottia e. margaritarum.—PEARL ISLANDS: Pedro Gonzales, 1♀; El Rey, 7♂, 4♀; Saboga, 1♂, 1♀.

Saucerottia e. crosbyi.—EASTERN PANAMA: Capeti River, 1?; Cape Garachiné, 4♂, 1♀.

Saucerottia edwardi, so far as known, has a very limited range. It is common in the open scrub and savannah country in the neighborhood of Panama City, and does not occur on the Caribbean side of the Canal Zone, the chief reason why relatively few specimens of it exist in collections in this country. Brown found it common on the Pearl Islands some years ago, and collected a good series, now in the Museum of Comparative Zoölogy, which Mr. Outram Bangs has kindly loaned me. At the time they were received, Mr. Bangs apparently possessed only one normally colored specimen of the typical form. When series are compared, however, the Pearl Island bird is obviously distinct, and one of the best marked of the several local races found there. The species has never been recorded in eastern Darien, and I was greatly surprised to find it common in the remarkable "cuipo" tree forest at Cape Garachiné, feeding for the most part quite out of shot gun range. A specimen collected by chance the first day seemed to me decidedly different from the species as I knew it, and Mr. Crosby finally succeeded in securing additional material. In most parts of eastern Panama, rain-forest reaches the coast, so that the Cape Garachiné and Rio Capeti stock is certainly isolated from the Panama City form. In characters the new race *crosbyi* differs just as trenchantly from *edwardi* as does the distinct species *niveoventer* (Gould) of western Panama and Costa Rica. The copper bronze tail of *edwardi* is exactly half-way between the violet tail of *niveoventer* and the golden tail of *crosbyi*. However, *margaritarum* is a distinct link between *edwardi* and *crosbyi*, and no such link is known be-

tween *edwardi* and *niveoventer*. A good series of *niveoventer*, collected by Benson and me in various parts of Veraguas, does not differ in the least from topotypical material from western Chiriqui and consequently does not in any way approach *S. edwardi*. I prefer, therefore, to maintain these two as distinct species, and divide the latter into what I regard as three very distinct forms.

Returning to *crosbyi* for a moment I note that the Rio Capeti specimen lacks chestnut tips to the tail-feathers and all the Garachiné specimens possess them.

18. *Chlorostilbon assimilis* Lawrence.—A breeding male collected at Cape Garachiné on March 3 is indistinguishable from Canal Zone specimens. Just like *Saucerottia*, the range of this species is considerably extended eastward.

19. *Monasa pallescens minor* Nelson.—Collected at Chiman, thus considerably extending its range westward.

20. *Chrysophilus punctigula striatigularis* Chapman.—One collected in a dense red mangrove swamp at Garachiné, Feb. 27, and another seen at a time when Mr. Crosby and I were struggling helplessly in a maze of huge roots over a sea of mud. Not only is this bird new to Panama, but it also adds another South American genus to the avifauna of Central America.

21. *Taraba major transandeanus* (Sclater).—So far as I know, this large Ant Shrike has never been recorded between the Canal Zone and Colombia. Two specimens were collected by Benson at Garachiné, and we have others from the Rio Tuyra. In eastern Panama it is an arid tropical species, and does not occur in heavy forest.

22. *Thamnophilus nigriceps* Sclater.—This species was only recently recorded from Panama (Chapman, 'Birds of Colombia,' 1917, p. 365). We found it abundant in the thorny thickets at Cape Garachiné.

23. *Herpsilochmus rufimarginatus exiguus* Nelson.—This little Ant Wren is known only from the two specimens collected by Goldman in eastern Panama. I collected one out of a flock of three at Cape Garachiné, and saw another later with a flock of Warblers. In both cases the birds were in the tops of tall trees, practically out of gun-shot range.

24. *Myrmeciza exsul exsul* Sclater.—Abundant at Chiman, a slight eastward extension of its range.

25. *Myrmeciza maculifer cassini* (Ridgway).—Common in the darkest, heaviest forest on the Sambú River. Field experience with this species and both races of *exsul* convinces me that Dr. Hellmayr errs in regarding them as representative forms. In haunts, notes and song, the two birds are radically different, and there is no evidence of intergradation.

26. *Xenerpestes minlosi* Berlepsch.—One specimen only of this excessively rare genus has been taken in eastern Panama (at Tacarcuna by Anthony and Ball of this Museum) (cf. Hellmayr, 'Cat. of Birds of the Americas,' part 4, p. 167). Crosby and Benson collected two specimens on the Sambú River. These two birds were with a flock of Warblers, small Tanagers and Honey Creepers in a small flowering tree on the edge of an Indian clearing, and were acting and feeding just like Warblers. It is difficult to believe that this genus is correctly allocated in the Furnariidæ.

27. *Sclerurus guatemalensis salvini* Salvadori and Festa.—Throughout Central America at least this species is found only in heavy forest. I was accordingly agreeably surprised to collect a specimen strolling on the ground in an open thicket at Cape Garachiné. This specimen proves to belong to the West Ecuador race. Birds from the heavy forest in the interior are typical *guatemalensis* (cf. Chapman, 'Birds of Ecuador,' p. 453). The division between the two races is apparently an ecological one.

28. *Microtriccus brunneicapillus* subspecies.—One collected by Benson at Chiman, March 7. Previously known in Panama only from the Canal Zone. This specimen and others from Colombia and Ecuador do not quite agree with the types from the Canal Zone, but they also do not quite agree with each other. What is needed is a fresh series from the type locality, before the variations in this rare species can be properly appreciated.

29. *Elainea gaimardii macilvainii* Lawrence.—One collected at Cape Garachiné. The reputed rarity of this bird in Panama is probably due to its being practically impossible to separate this species in the field from *Myiopagis*. Dr. Hellmayr is certainly well advised to suppress the genus *Elainopsis*.

30. *Sublegatus modestus glaber* Sclater and Salvin.—Dr. Hellmayr has left the status of Panama specimens of this genus uncertain ('Catalogue of Birds of the Americas,' part 4, p. 448, footnote). Such specimens as I have examined agree minutely with a large series of the race *glaber*. The bird ranges west through the arid scrub country of western Panama, where, however, it is quite rare. I have specimens from Santiago, Veraguas, and Agua Dulce in Coclé. The Dwight Collection contains a series of the very rare *Sublegatus arenarum* from western Costa Rica. This bird is quite distinct from *glaber*.

31. *Pipra erythrocephala actinosa* Bangs and Barbour.—This South American species was common at Chiman. Specimens were collected to establish the extension of range westward. It will be interesting to determine what factors keep this species and *mentalis* apart in Panama, and where the boundary between the two birds is.

32. *Neochelidon tibialis* (Cassin).—This dull-colored little Swallow is apparently very local, and in Central America has been recorded only from the Isthmus. Two or three pairs were found on the Sambú River nesting in holes in the river bank, directly under Indian huts. They were remarkably tame and confiding, and as they never left the radius of the clearing, collecting one was not deemed to be expedient.

33. *Riparia riparia* (Linnæus). Bank Swallow.—A flock of ten migrating westward on March 8 about a mile off-shore from Cape Garachiné. There are surprisingly few records for this species in Central America.

34. *Lanivireo flavifrons* (Vieillot). Yellow-throated Vireo.—One collected at Garachiné, March 4. There are very few records for the Yellow-throated Vireo south of western Panama.

35. *Pachysylvia minor darienensis*, new subspecies

SUBSPECIFIC CHARACTERS.—Similar to typical *Pachysylvia minor* (Berlepsch and Taczanowski) of West Ecuador, but slightly brighter, more yellowish green above; underparts with much less greenish yellow on sides of breast and flanks, the shade distinctly greener, less yellow than in the typical form.

TYPE.—No. 257,146, Amer. Mus. Nat. Hist.; ♂ ad.; Cape Garachiné, eastern Panama; March 5, 1927; Griscom, Crosby, *et al.*

SPECIMENS EXAMINED

Pachysylvia m. minor.—West ECUADOR: various localities, 10 ♂, 2 ♀, 2?

Pachysylvia m. darienensis.—Eastern PANAMA: Cape Garachiné, 2 ♀, 1?

This new form is easily recognized by the greatly reduced amount of greenish yellow below. The species is known to Panama only on the basis of one specimen taken by Barbour and Brooks on Mt. Sapo, at a time when only two specimens from Ecuador were available for comparison. Dr. Chapman has already commented on the only known specimen from western Colombia. It resembles the Panama bird exactly in the reduction of greenish yellow below, but is somewhat darker even than the typical form above.

This species was common at Cape Garachiné, living in the tops of the tallest trees, and consequently very difficult to collect. In habits and song it closely resembles *Pachysylvia decurtata*. It is a most persistent singer, or would otherwise be completely overlooked. So high does it range that it is unidentifiable in life even with high-powered binoculars. These factors undoubtedly account for the great preponderance of males in our series.

36. *Compsothlypis pitiayumi nana*, new subspecies

SUBSPECIFIC CHARACTERS.—Most closely resembling *Compsothlypis pitiayumi elegans* Todd of Colombia and Venezuela in coloration, but green patch on back greatly reduced in area (less than half that of other races); size minute, even smaller than the Central American races.

TYPE.—No. 25,714, Amer. Mus. Nat. Hist.; ♀ ad.; Cape Garachiné, eastern Panama; March 5, 1927; Griscom, Crosby, *et al.*

SPECIMENS EXAMINED

Compsothlypis pitiayumi elegans.—Large series from the entire range.

Compsothlypis pitiayumi pacifica.—Large series from West ECUADOR.

Compsothlypis pitiayumi nana.—Eastern PANAMA, the type.

Compsothlypis pitiayumi speciosa.—Large series from COSTA RICA and WEST PANAMA.

The most interesting fact in connection with the bird here under discussion is not that it represents an apparently undescribed form, but that it fills in a notable gap in the distribution of the genus, which has never been recorded between western Panama and Colombia. Its occurrence near sea-level in the Tropical Zone is of course on record for various races (cf. Chapman, 1925, *Auk*, pp. 193–208). In eastern Panama this can probably be explained on ecological grounds. So far as known all higher altitudes there are covered with the densest type of heavy forest, a type of country in which I have never found the species in other parts of Central America.

The new form here proposed seems sufficiently distinct from *elegans* to justify its recognition on the basis of one specimen only. From *pacifica* Berlepsch it differs in the same respects as from *elegans* and in addition by the much less rich coloration. From *speciosa* it differs radically in less brilliant coloration and in having two well-developed wing-bars, as in *pacifica* and *elegans*.

In addition to the specimen collected, I heard and saw two singing males, but both were out of gun-shot in the gigantic "cuipo" trees.

MEASUREMENTS

14 ♀ *Compsothlypis p. elegans*.—Wing, 50.5–55; tail, 38–43.

1 ♀ *Compsothlypis p. nana*.—Wing, 46.5; tail, 30.

37. *Ateleodacnis leucogenys panamensis*, new subspecies

SUBSPECIFIC CHARACTERS.—Similar to typical *Ateleodacnis leucogenys* (Lafresnaye) of Colombia, but adult males much darker both above and below, the general color dark Payne's gray instead of Payne's gray; adult females slightly darker above, with little or no tinge of green.

TYPE.—No. 257,147, Amer. Mus. Nat. Hist.; ♂ ad.; Cape Garachiné, eastern Panama; March 4, 1927; Griscom, Crosby, *et al.*

SPECIMENS EXAMINED

Ateleodacnis l. leucogenys.—COLOMBIA, 8 ♂, 3 ♀.

Ateleodacnis l. panamensis.—EASTERN PANAMA: Cape Garachiné, 5 ♂ ad., 1 ♂ imm., 4 ♀.

The capture of this bird was one of the great surprises of the trip, and adds a new genus to the fauna of Central America. It proved to be very common in flocks in the tops of the giant "cuipo" trees, and it could be collected only by luck with a charge of heavy shot. The series on which the new form is based is due entirely to the special efforts of Mr. Crosby and Mr. Benson, the original discoverer.

The systematic position of this bird is still in some uncertainty. Mr. Ridgway revived the genus and transferred it provisionally to the Mniotiltidae on external characters. I carefully examined the tongues of several of the specimens we collected and found that they were moderately slender, the tip only slightly bifid, and not at all fringed to the naked eye. This confirms the mniotiltine relationships of the genus.

The immature male differs from the female in having the upperparts a slightly darker blue-gray, and light chestnut under tail-coverts.

38. *Dendroica castanea* (Wilson).—Bay-breasted Warbler.—This species is almost unknown in Central America, but winters commonly in Colombia. As a matter of fact it winters commonly from the Canal Zone southward. We observed it commonly and collected specimens at every locality visited,

39. *Dendroica fusca* (Müller). Blackburnian Warbler.—One seen by me at Garachiné on March 5 with Bay-breasted Warblers. While common on migration in April, there is no definite winter record for Panama.

40. *Spiza americana* (Gmelin). Dickcissel.—A flock of six at Chiman, March 7, one collected.

41. *Piranga testacea* subspecies.—One of the great surprises of the trip was supplied by Mr. Benson, who brought in an adult male of this Tanager from the low hills of Cape Garachiné. In the first place this species, like the Pitiayumi Warbler, has never been recorded between western Panama and Colombia. In the second place it is strictly a Subtropical Zone species and has never been known to occur in the Tropical Zone at sea-level in Central America. Strangely enough, in color this specimen does not differ in the slightest particular from an excellent series of topotypes of typical *testacea* from Veraguas. It is distinctly smaller, however, particularly the bill. Twelve males of typical *testacea* measure as follows: wing, 88.5–96.5, tail, 72–80; exposed culmen, 17.5–19.2. The Garachiné specimen measures: wing, 87; tail, 70.5; exposed culmen, 16. Further specimens are needed, however, to confirm these size differences. As only one individual was seen at Garachiné, it is probable that the headquarters of this species in eastern Panama still awaits discovery.