

THE AVIFAUNA OF TRINIDAD AND TOBAGO

by

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This paper deals with a collection of birds from Trinidad and Tobago brought together by the junior author during a stay on these islands from the end of June 1953 till February 1954. The collection contains 835 specimens belonging to 178 species. About one hundred skins have been collected on Tobago. The collection mainly consists of the smaller species, which is due to the fact that at the time Mees was not in the possession of an adequate shooting gun for the larger species.

Though much collecting work has already been done on Trinidad the collection contains one new subspecies, *Pipra erythrocephala flavissima*, jointly described, while it was shown that *Tanagra violacea rodwayi* is a tenable race. Moreover the Trinidad list is augmented by the following forms not previously recorded: *Muscivora tyrannus monachus*, *Myiarchus swainsoni swainsoni*, *Elaenia parvirostris*, *Atticora cyanoleuca patagonica*, *Sporophila schistacea*. *Dendroica striata* and *Nuttallornis borealis* only had been touched on by the way, but now Mees actually collected specimens. *Myiarchus ferox* is only known from Tobago, the pretended occurrence on Trinidad depended on confusion with the southern migrant *Myiarchus swainsoni*. The two species resemble each other so closely that the one can easily be taken for the other. The same confusion certainly has occurred between *Sporophila schistacea* and *Sporophila intermedia*.

Though much has been written on the birds of Trinidad, nearly all publications are mainly faunal lists on the collected birds, mostly without giving the measurements of the individual specimens. Mees during his stay badly felt the need of a guide to the birds, which, however, is still lacking. Contacting the local field naturalists it appeared that they too felt uneasy about this omission. Therefore we thought it useful not only to give a discussion of the collected birds, but to add short descriptions of all birds known to occur on these islands.

The faunal position of the islands has been discussed by Chapman (1894) and Hellmayr (1906). Since then our knowledge, especially of the South American mainland, has considerably increased, which makes it worth while to discuss this matter briefly again.

At the time being 344 species are known to occur on Trinidad. From 3 species a resident as well as a migrant form occur on the island.

These are: *Sterna sandvicensis sandvicensis* (migrant) and *Sterna sandvicensis eurygnatha*, *Muscivora tyrannus tyrannus* (migrant) and *Muscivora tyrannus monachus*, *Atticora cyanoleuca patagonica* (migrant) and *Atticora cyanoleuca cyanoleuca*. This makes a total of 347 forms.

Tobago, which is still far less satisfactorily known, now has a total of 144 species. As an appendix a list is given at the end of this paper.

The following table gives a comparison between the avifauna of Trinidad and Tobago. Northern as well as southern migrants occur on both islands. The remaining group consists of breeding birds, species which have not yet been found breeding with certainty on the islands, and occasional visitors.

	Trinidad	Tobago
Northern migrants	56 = 16%	36 = 25%
Southern migrants	5 = 1.5%	1 = 0.7%
Forms peculiar to S. America	208 = 60%	60 = 41.7%
Forms peculiar to S. America and Antilles	26 = 7.5%	18 = 12.5%
Forms peculiar to N. and S. America and Antilles	31 = 9%	18 = 12.5%
Forms peculiar to N. America and Antilles	4 = 1%	7 = 4.9%
Forms peculiar to N. and S. America, not Antilles	14 = 4%	3 = 2%
Endemic	1 = 1/3%	
Uncertain	2 = 2/3%	1 = 0.7%
	347 = 100%	144 = 100%

The endemic species is *Pipile pipile*. Uncertain are *Fulica* spec. and the status of *Buteo albonotatus*. It is not certain whether the latter species must be considered a northern migrant, or that there is still a breeding population in South America.

As southern migrants are considered: *Ixobrychus involucris*, *Muscivora tyrannus tyrannus* (the only one known to reach Tobago), *Myiarchus swainsoni*, *Elania parvirostris*, *Attila cyanoleuca patagonica*. Three of these five species have been collected for the first time by Mees. It may be that subsequent observations will increase this list still further, and some species now considered as casual visitors may prove to be more regular southern migrants. Also the list of northern migrants may be extended, especially in Tobago, for it is not to be expected that northern migratory species reaching Trinidad do not occur on Tobago. This of course will affect the Tobago list considerably. Therefore in the next table the migrants and the uncertain forms have been omitted.

	Trinidad	Tobago
Forms peculiar to S. America	208 = 73.3%	60 = 56.6%
Forms peculiar to S. America and Antilles	26 = 9%	18 = 17%
Forms peculiar to N. and S. America and Antilles	31 = 11%	18 = 17%
Forms peculiar to N. America and Antilles	4 = 1.4%	7 = 6.6%
Forms peculiar to N. and S. America, not Antilles	14 = 5%	3 = 2.8%
Endemic	1 = 0.3%	
	284 = 100%	106 = 100%

From these tables results that the main part of the avifauna of both islands consists indeed of purely South American forms. This, however, appears much more in Trinidad than in Tobago. Many South American species did not reach Tobago, which has been colonized by more widespread forms and some Antillean elements (*Buteo platypterus*, *Progne subis*, *Tiaris bicolor*). The more isolated position of Tobago is also expressed in a relatively much larger percentage of endemic races. Trinidad and Tobago have 6 endemic races in common. Besides Trinidad has 18 endemic races among 284 forms (6 %) and Tobago 22 among 106 forms (20 %).

Chapman (1894) as well as Hellmayr (1906) suggested that the avifauna of Trinidad and Tobago, though mainly showing Venezuelan affinities, also possesses some Guianan elements. Our increased knowledge of the distribution of many species in northern South America now shows that these Guianan elements can be neglected. Of the purely South American forms on Trinidad there are 28 occurring in Venezuela that are not known from the Guianas. On the other hand there are only 2 species occurring in Trinidad and the Guianas that are not (yet?) found in Venezuela, viz., *Chaetura chapmani*, a species difficult to collect and rare in collections, with a still very unsufficiently known distribution, and *Pseudocolopteryx sclateri* with a distribution in northern South America that still shows many gaps. Tobago does not show any Guianan affinities. Of the 13 resident species in Tobago, not known from Trinidad, 5 occur in Venezuela, but not in the Guianas; the reverse is not found. The main part of the South American forms of course occur in Venezuela as well as in the Guianas. The species occurring in Tobago that are not found in Trinidad, most probably reached Tobago from the South American mainland by chance.

For the taxonomical part of the paper and the short descriptions Junge is mainly responsible, while Mees added his field notes, but of course many questions were discussed together.

The main literature used can be found at the end of the paper. We want particularly to express our admiration for the invaluable work done by Léotaud (1866). He not only prepared a charming book, but for that time also an outstanding work. In ornithological literature very little can be found about Léotaud and therefore we may add here some particulars. These were taken from an obituary that appeared in "Historical Account of Trinidad" and was kindly sent to us by Dr. Quesnel.

Antoine Léotaud (1814-1867) was Trinidadian by birth. At the age of twelve he went to France, where he acquired an extensive knowledge of Anatomy, Pathology and Chemistry. He also studied Zoology. In 1839 he returned to Trinidad and started his career as a physician, and distinguished

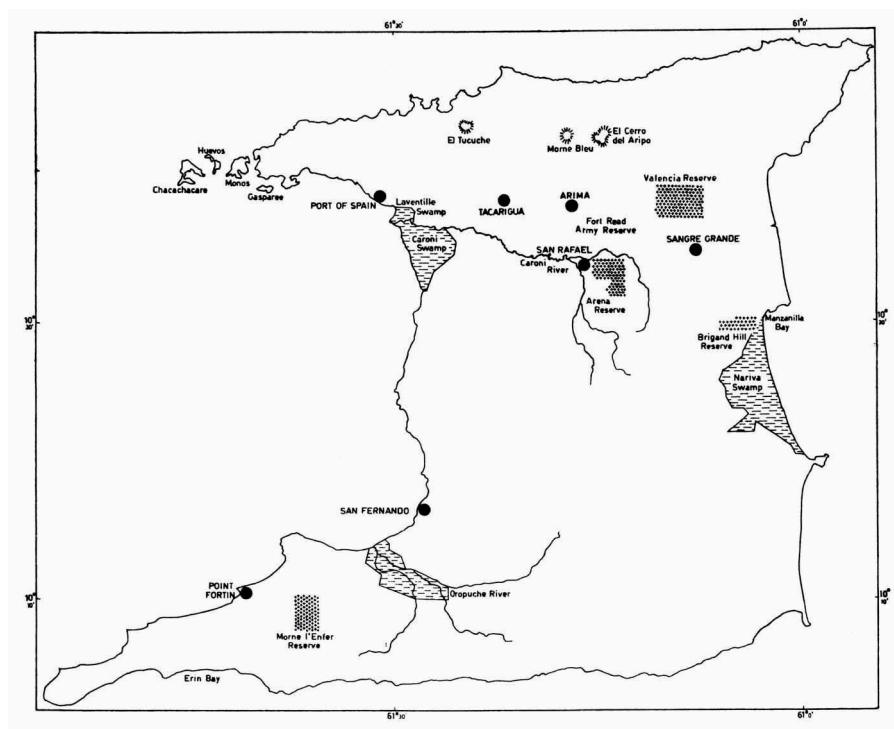
himself as such. One of his essays was awarded the gold medal by the Paris School of Practical Medicine. Another has been crowned by the Medical Association of Ghent. On the island he was highly esteemed by all. In his spare time he studied birds, purchased specimens and books required for this study, which, however, meant a heavy tax on his slender means. His book was published by a national subscription in 1866. In 1867 Léotaud passed away after a painful malady of fourteen months' duration.

Another highly valuable work, which we constantly used, is Belcher & Smooker's paper (1934-1937) in which are given particulars about the status and nidification of all the birds of the islands. We have not seen Kirk's original list of the birds of Tobago in Hay's Tobago Handbook (1883), but his observations have been fully used by Belcher & Smooker.

Acknowledgements. We respectfully acknowledge our indebtedness to His Excellency Sir Hubert Rance, Governor of Trinidad and Tobago, for granting the permit giving the authority of collecting specimens of every species of protected animals and birds. We are greatly obliged to Mr. A. F. A. Lamb, at the time Conservator of Forests and Chief Game Warden, for his liberal interpretation of the permission obtained, which enabled Mees to collect as many specimens as were desired, or as could be obtained, from any species. The direction of the K. N. S. M. (Royal Netherlands Steamship Company) in Amsterdam allowed the shipment of the collected material in the deep-freeze of their ships free of any charge; in this connection the shipping department of Messrs. Gordon, Grant & Co., agents for the K. N. S. M. in Port-of-Spain must be mentioned for disinterested help with the actual shipping, and the K. N. S. M. authorities at Amsterdam, who immediately informed the Museum of the arrival of the material. Also H. M. Customs in Trinidad, and the Dutch Customs in Holland, always showed the greatest benevolence. In Trinidad the material was first stored, by permission of Professor Hardy, acting principal, in the freezing room of the sugar department of the Imperial College of Tropical Agriculture, and, after this room went out of order, in the cold storage department of the Electric Ice Company in Port-of-Spain, where, against a very small fee, the material was excellently cared for.

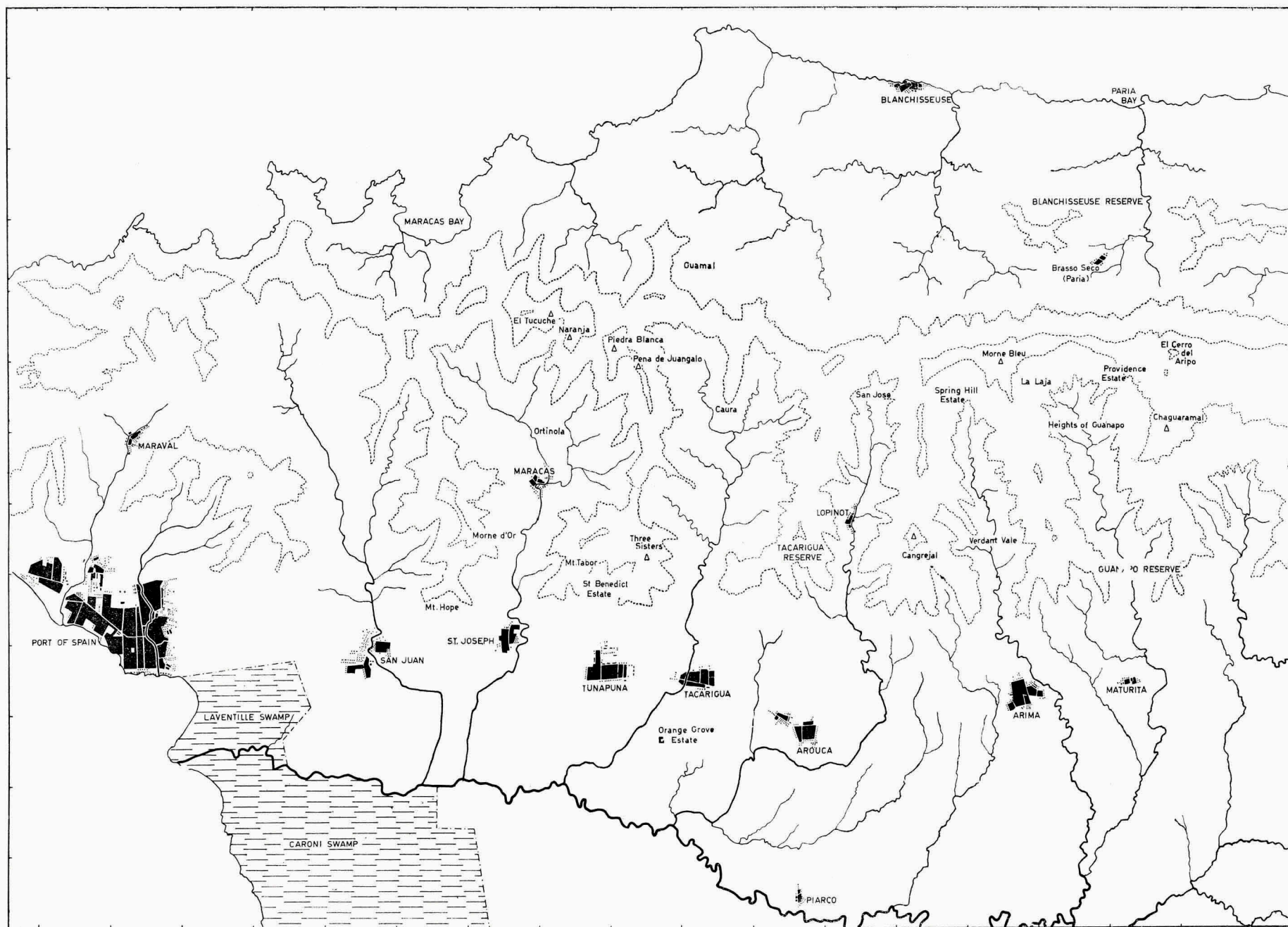
The junior author gratefully remembers the many persons who, in one way or another, contributed to the success of his stay in the West Indies. In this connection the following persons must be especially mentioned. The plan to visit Trinidad owes its origin to Mr. and Mrs. E. J. Mol (now of Golden Grove, Jamaica), brother-in-law and sister of Mees, who invited him to come and stay with them on Orange Grove Estate, Tacarigua, where, at

the time, Mr. Mol was employed as a chemist. When, during the second part of December, 1953, Mr. and Mrs. Mol left Trinidad for Jamaica, Mees went to Spring Hill Estate where he enjoyed the well-known hospitality of the late Dr. H. N. Wright and Mrs. Wright. The visit to Point Fortin was made possible by the invitation of Mr. and Mrs. M. Meyn of U. B. O. T. The suggestion to visit Tobago came from Mr. and Mrs. J. Cipriani of Port-of-Spain who hospitably received Mees during their holidays at Store Bay, To-

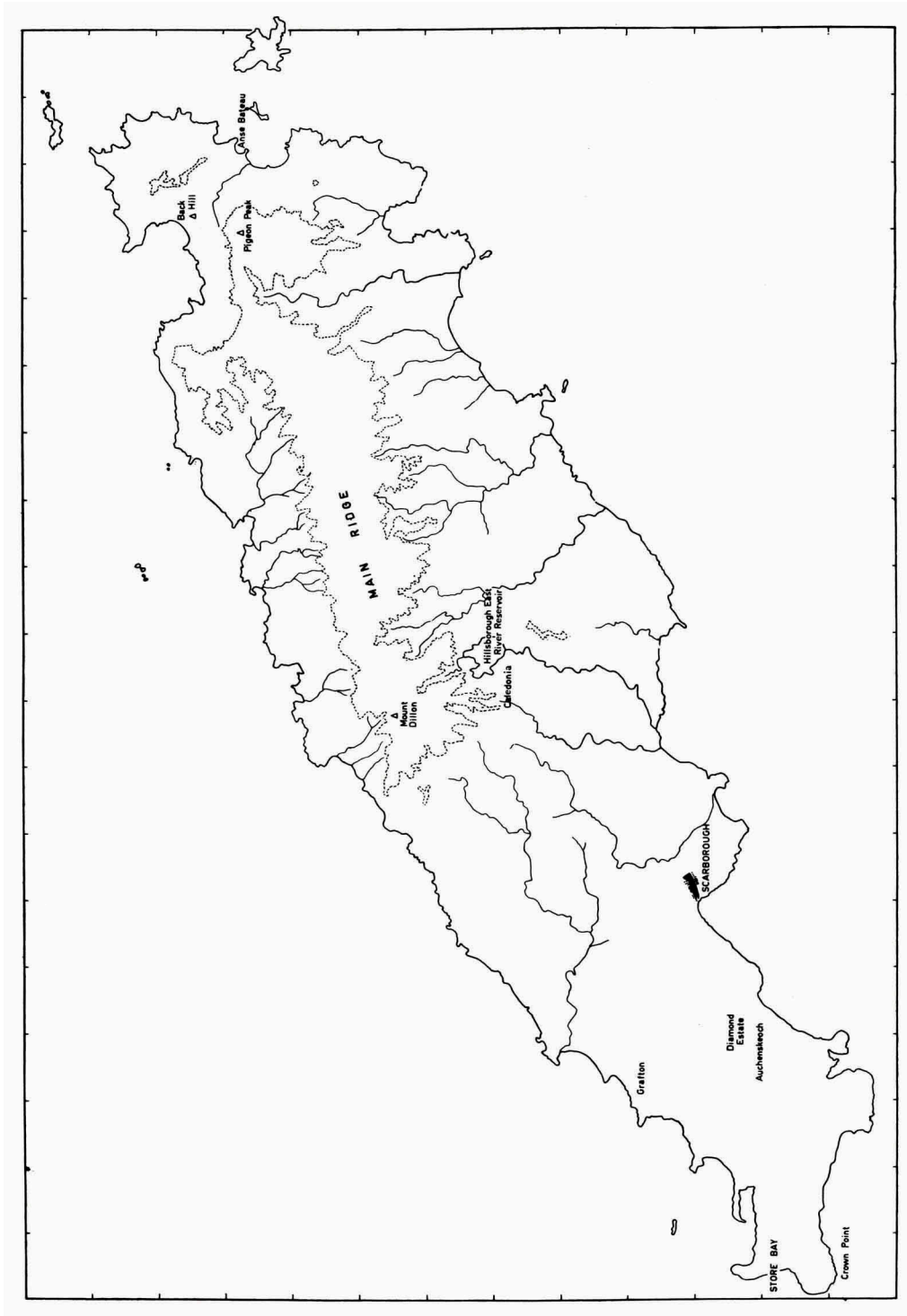


Map 1. Trinidad.

bago. Also they brought Mees into contact with Mr. and Mrs. N. A. Bishop of Diamond Estate, Auchenskeoch, which led to the second, very successful, stay in Tobago. Mr. Bishop was personally greatly interested; not only did he enable Mees to cover, as far as was possible in such a short time, all parts of the island, but also, as an excellent marksman, he shot several of the larger birds which Mees himself would not have been able to obtain. The last weeks before his return to Holland Mees spent with Dr. and Mrs. F. H. Beijerinck at Maraval (now of Zeist, Holland), he also gratefully remembers help from his friend Dr. V. C. Quesnel, of Port-of-Spain, who arranged the visits to



Map. 2. Northwest region of Trinidad.



Map 3. Tobago

Gaspree and Monos Island, where several specimens were obtained not observed elsewhere, and from Dr. G. A. C. Herklots, principal of the I. C. T. A., and Mrs. Herklots, in whose company several successful trips to remote parts of the island were made. Mr. Howard, manager of Orange Grove Estate, allowed free shooting on the extended grounds of the Estate, and several estate owners near Tacarigua and in Arima Valley assisted in granting similar facilities.

All the localities mentioned in this paper are indicated on the accompanying maps of Trinidad and Tobago.

We are much indebted to Dr. D. Amadon, and Dr. Ch. O'Brien (New York), Dr. J. Bond (Philadelphia), Dr. J. C. Greenway (Cambridge, U.S.A.), Mr. W. H. Phelps Jr. (Caracas), Mr. R. W. Sims (London), and Dr. K. H. Voous (Amsterdam), who kindly gave information or supplied skins for comparison from the material under their care.

TINAMIDAE

1. *Crypturellus soui andrei* (Brabourne & Chubb)

Crypturus soui andrei Brabourne & Chubb, Ann. Mag. Nat. Hist. (8), vol. 14, 1914, p. 321 (Caparo, Trinidad).

Tacarigua: 1 ♀ (no. 319).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
319	♀	6-10-1953	136	19	21	39	279

Irides pale brown. Feet yellowish green. Bill greyish with pale base of mandible.

Short description. Head blackish, upper parts brownish black, under parts chestnut, chin whitish washed with rufous. Resident. Not in Tobago.

Field notes. The specimen collected was picked up dying, after I had heard it fluttering through the undergrowth of the forest. It did not show any sign of external injury and the reason of its death is quite obscure to me. The species is called abundant by Belcher & Smooker and by Chapman, but must be very secretive. Apart from the specimen collected I have seen one on Mt. Tabor, and probably one near Tacarigua.

PODICIPIDAE

2. *Podiceps dominicus* (L.)

Short description. A small dark brown grebe with much white on the wings. Small black, whitish tipped bill. In winter whitish throat. Rare resident.

3. **Podilymbus podiceps** (L.)

Short description. Much larger than *dominicus*, with a blunt heavy bill. In summer greyish, in winter brownish black; with white under the tail. In breeding plumage black throat and black streak on the bill. Local resident.

PROCELLARIIDAE

4. **Puffinus lherminieri** Lesson

Short description. A small shearwater, black above, white below, cap black, cheeks white. Flight fluttery. Breeding bird off Tobago.

HYDROBATIDAE

5. **Oceanodroma leucorhoa** (Vieill.)

Short description. A small sooty brown petrel with a pale band across the wing, white rump and forked tail. Flight erratic, resembles butterfly. Occasional winter visitor.

PHAETHONTIDAE

6. **Phaethon lepturus** Daudin

Short description. A large white sea bird with black wing tips and large black patches on shoulders. Extremely long tail feathers. Bill orange or yellow. Flight dove-like. Breeds off Tobago.

PELECANIDAE

7. **Pelecanus occidentalis** L.

Short description. A large, heavily built bird with broad wings and a large flat bill. Head drawn back onto shoulders in flight. Dark brown with grey on the upper parts. Head white. In breeding dress white line along the brown neck, otherwise neck white. Young birds with brownish neck and white under parts. Common resident.

Field notes. Commonly seen, especially along the rocky parts of the coasts of both Trinidad and Tobago.

SULIDAE

8. **Sula sula** (L.)

Short description. A small booby that occurs in white and brown colour phases. White adults have black wing tips and a narrow brownish edge along hind border of the wing. Tail sometimes brown. Other specimens are brown-

ish with a white tail. Bill bluish, feet red. Young birds are dull brown, paler below. Breeding bird off Tobago.

9. ***Sula leucogaster*** (Bodd.)

Short description. A dark brown booby, larger than the preceding, with white lower breast, abdomen and under wing coverts. Young birds are brownish, paler below. Bill and feet yellowish. Breeds off Tobago.

PHALACROCORACIDAE

10. ***Phalacrocorax brasilianus*** (Gm.)

Short description. A small cormorant, glossy black. In breeding dress a white line along gular sac. Young birds are brownish, paler below. Status uncertain, sometimes breeding?

ANHINGIDAE

11. ***Anhinga anhinga*** (L.)

Short description. ♂ glossy black with silvery streaks on back and wings. Gular sac orange. ♀ buffish brown head, neck and upper breast. Neck very long. Bill straight, pointed. Tail long. Immatures brownish above, paler below. Status uncertain, sometimes breeding?

Field notes. Only observed on December 15, flying over the Caroni Swamp.

FREGATIDAE

12. ***Fregata magnificens*** Mathews

Short description. ♂ entirely glossy purplish black with orange or red gular pouch. Bill bluish. Wings extremely long and narrow. Tail deeply forked. ♀ breast and upper abdomen white. Young birds have head and breast white. Breeding bird off Tobago.

Field notes. This bird was recorded by Beebe for the Arima valley, and once I saw a specimen flying over the highest point of that valley. The species was found particularly common at the south coast of Trinidad (Palo Seco Bay) and around Tobago.

ARDEIDAE

13. ***Ardea herodias*** L.

Short description. A large blue heron with a white crown. A broad black band from before the eye to the nape. Edge of wing cinnamon, thighs vinous cinnamon. Under parts greyish, white and blackish streaked. A white phase occurs. Bill yellow, feet yellowish brown. Occasional visitor.

14. ***Ardea cocoi* L.**

Short description. A large blue heron with a black crown and crest. Sides of neck white. Under parts black and white. Thighs white. Occasional visitor. Not in Tobago.

15. ***Butorides striatus striatus* (L.)**

Ardea striata Linné, Syst. Nat., ed. 12, vol. 1, 1766 (Surinam).

Laventille Swamp: 1 ♀ (?) imm. (no. 341).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
341	♀ (?)	13-10-1953	164	56	58	48	135

Irides yellow. Maxilla blackish, mandible bluish horn. Feet greenish.

Short description. A small heron with glossy green upper parts and wings, wing coverts edged with buff. Crown black, sides of head and neck grey, chestnut feathers on chest and foreneck. Throat whitish. Under parts grey. Lores naked and blue. Toes orange red.

Field notes. The most common species of heron in both islands. It visits a wide variety of habitats, wherever there is water; it was found in mangroves, in rice fields, and was also always present in one or two individuals at the pond of Orange Grove Estate. When flushed the birds would utter a short harsh cry.

16. ***Butorides virescens maculatus* (Bodd.)**

Cancroma maculata Boddaert, Tabl. Pl. Enl., 1783, p. 54 (Martinique).

Hillsborough East River Reservoir, Tobago: 1 ♀ (no. 896).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
896	♀	11-2-1954	180	65	62	53	184

Short description. Resembles *striatus*, but has sides of head, neck and hind neck chestnut. Occurrence in Trinidad needs confirmation.

Field notes. The Hillsborough East River Reservoir, where the bird was obtained, is a large artificial lake of very recent origin. The surrounding hills are still covered with cocoa, now going wild, and with beautiful flowering *Erythrina*; whereas near the shores the Balisier (*Heliconia bihai*) covers large areas. There were many birds, especially Rallidae and small herons in the thick vegetation of the shore. Not observed in Trinidad.

17. ***Florida caerulea* (L.)**

Short description. Adult birds are slate blue, head and neck with a chestnut wash. Bill blue grey with a large black tip, feet olive green. Young birds white with the tips of the primaries slate coloured.

Field notes. Common in the mangroves of Caroni swamp and of Tobago.

18. **Egretta alba** (L.)

Short description. A large snow-white heron with yellow bill and black feet. In breeding dress with dorsal plumes. Rare resident.

19. **Leucophoyx thula** (Molina)

Short description. A middle-sized white heron with bill mainly black (basal portion of mandible yellowish). Feet blackish, but toes yellow. Naked skin between eye and bill yellow. Uncommon resident.

20. **Hydranassa tricolor rufimentum** Hellmayr

Hydranassa tricolor rufimentum Hellmayr, Novit. Zool., vol. 13, 1906, p. 50 (Caroni Swamp, Trinidad).

Laventille Swamp: 1 ♂ imm. (no. 340).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
340	♂ imm.	13-10-1953	228	78	88	80	295

Irides pale yellow. Maxilla blackish, base orange yellow, mandible yellow. Feet yellowish green.

Short description. A slender middle-sized heron. Dark slate grey with white under parts, rump and under side of wing. Neck and bill long. Not in Tobago.

Field notes. Found common in the not yet or just planted rice fields at Laventille.

21. **Agamia agami** (Gm.)

Short description. Slightly larger than the preceding species. Upper parts glossy green, under parts dark chestnut. In breeding dress grey crest, dorsal plumes and breast feathers. Very long yellow, black-tipped bill. Only mentioned by Léotaud and 2 ♂♂ have been collected by Andrée in the Caroni swamp. Not in Tobago.

22. **Nycticorax nycticorax** (L.)

Short description. Middle-sized. Front white, crown and back black. Wings greyish, under parts whitish. Resident.

23. **Nyctanassa violacea bancrofti** Huey

Nyctanassa violacea bancrofti Huey, Condor, vol. 29, 1927, p. 167 (Scammon Lagoon, Lower California).

Anse Bateau, Tobago: 1 ♀ (no. 930).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
930	♀	14-2-1954	290	106	70	98	662

Irides yellowish orange. Bill black. Feet yellow.

Short description. Size as preceding species. Bluish grey with black head and chin, white crown and streak below eye. Dark longitudinal streaks over back and wings.

According to the recent review of the species given by Wetmore (1946, pp. 16-21) this specimen falls within the variation range of *bancrofti* and of *violacea*, except that the depth of the bill (22.5 mm) points to *bancrofti*. This agrees with the fact that Wetmore brings a specimen from Tobago to *bancrofti*.

Three ad. specimens from Surinam (1 ♂, 1 ♀, 1 —) and 1 unsexed specimen from Berbice, British Guiana, range remarkably small and fall far below the measurements given by Wetmore for *cayennensis*. The measurements are: wing 249, 250, 258, 265, tail 86, 92, 93, 99, culmen 66, 67, 72, 73, tarsus 79, 81, 82, 82 mm.

Field notes. An occasional individual was seen on the coast of Tobago; the species was not observed in Trinidad.

24. **Tigrisoma lineatum** (Bodd.)

Short description. A bittern which has the upper parts brownish, greenish tinged and finely barred. Head and neck chestnut. Region around eye bare. Accidental visitor. Not in Tobago.

25. **Ixobrychus involucris** (Vieill.)

Short description. A very small bittern with black streaks on the ochraceous back. Tip and base of wing cinnamon separated by a blackish streak. Rare. Resident? Not in Tobago.

26. **Ixobrychus exilis** (Gm.)

Short description. Crown and back blackish, sides of face, neck and breast chestnut. Wing tips black. Rare resident. Not in Tobago.

Field notes. The only specimen seen was flushed from the rice fields at Laventille on November 21.

27. **Botaurus pinnatus** (Wagler)

Short description. Resembles European Bittern, but has crown and neck sandy buff with dusky bars. Black on upper parts. Bare lores yellowish. Rare resident. Not in Tobago.

COCHLEARIIDAE

28. **Cochlearius cochlearius** (L.)

Short description. Upper parts grey with a dark patch on the upper mantle. Lower breast, abdomen and under tail coverts cinnamon rufous, sides of body and flanks black. Remarkably broad and swollen bill. Rare resident. Not in Tobago.

CICONIIDAE

29. **Mycteria americana** L.

Short description. Large white bird with black tail and wings and a heavy downwards curved bill. Head and forepart of the neck bare, bluish black with a red band below. Occasional visitor.

THRESKIORNITHIDAE

30. **Eudocimus ruber** (L.)

Scolopax rubra Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 145 (Bahamas).

Laventille Swamp: 1 ♀ (?) juv. (no. 615).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
615	♀ juv.	5-12-1953	238	78	115	72	505

Irides brownish, changing into greyish on the outside. Bill pale yellowish grey, base grey. Feet bluish grey.

Short description. The Scarlet Ibis is easily recognizable by the splendid scarlet colour of the whole plumage. Young birds are brownish grey above, whitish below. Not in Tobago.

Field notes. On October 1st a visit was paid to the breeding colony of the Scarlet Ibis in the centre of the Caroni Swamp, in company of one of the game wardens. 1953 was the first year since a long time in which a good number of these birds were present and could breed unmolested in Trinidad, thanks to the protection given to them by the game wardens; a splendid result of effective protection. To quote from Hernandez (1953): "For ten years the mangrove of Caroni Swamp had remained drab-green in June, July and August, unrelieved as in former days by the wonderful brilliance of a colony of nesting flamants. But today it is different. Six or seven thousand of these gorgeously plumed birds are nesting..."

At the time of our visit the breeding season drew towards its end, no nests with eggs or small young were left and the majority of the young birds had already reached the fledgling stage. The colony of these magnificent birds, in a patch of mangrove surrounded by open water, offered an unforgettable

spectacle and it is difficult not to become lyric in describing it. When we left the colony, dusk set in and continuously we saw small flocks of ibises arrive, generally flying in line or in V-shape, to spend the night in the colony.

31. **Ajaia ajaja** (L.)

Short description. A rosy tinged spoonbill with a scarlet patch on the wing and on the upper tail. Head bare, orange tinged, occiput blackish. Regular visitor Caroni Swamp.

ANHIMIDAE

32. **Anhima cornuta** (L.)

Short description. A large heavily built bird. Size of a turkey. Blackish with white abdomen. Feathers of crown and lower neck white with black edges. Small white patches on the wings. A frontal horn and 2 spurs on the carpal edge of the wing. Exceedingly rare, probably extinct. Not in Tobago.

ANATIDAE

33. **Dendrocygna viduata** (L.)

Short description. Ducks of this genus all have long legs and a long neck. This species is characterized by the white forepart of the head, white chin patch. The upper parts are dark brown, barred with fulvous. Centre of breast and abdomen black. Flanks barred whitish and blackish. Occasionally breeding, strongly diminished in numbers by shooting. Not in Tobago.

34. **Dendrocygna bicolor** (Vieill.)

Short description. Head and under parts cinnamon brown. Black streak along hind neck. Upper parts brownish black, barred with cinnamon. Lesser wing coverts chestnut. Tail black with a white subterminal band. Under wing dark with a pale streak between wing and body. Status as the preceding species. Not in Tobago.

35. **Dendrocygna autumnalis** (L.)

Short description. Plain brown upper parts and breast. Abdomen, tail and under wing black. Sides of head grey. Central part of upper wing white. Bill orange. Status as preceding species. Not in Tobago.

36. **Sarkidiornis carunculata** (Licht.)

Short description. A large duck with upper parts and flanks blackish, wings

glossed with blue and green. Head and under parts white, head with black spots. Tail black, under tail coverts white. ♂ with a large wattle on bill. ♀ smaller, no wattle. Occasional visitor. Not in Tobago.

37. ***Cairina moschata* (L.)**

Short description. Blackish brown with green gloss on wings and large white patch on upper and under side of wing. Crest. Naked black skin around eye. Pinkish red caruncles on forehead and around naked skin. ♀ smaller, no naked skin, no caruncles. Occasional visitor. Not in Tobago.

38. ***Anas platyrhynchos* L.**

Short description. ♂ glossy green head, white neck collar, brown breast, vermiculated pale grey back. Speculum purple-violet, bordered by white on both sides. Bill greenish. ♀ mottled brown and buff; speculum as in ♂. Mentioned by Kirk for Tobago.

39. ***Anas crecca* L.**

Short description. A small duck with the head chestnut brown and a large glossy green patch around the eye in the ♂. Upper parts vermiculated grey and blackish. White vertical streak in front of wing. Breast cream coloured with blackish spots, belly white. Glossy green speculum in both sexes. ♀ mottled brown and buff. Mentioned by Kirk for Tobago.

40. ***Anas discors* L.**

Short description. A small duck, general colour pale reddish buff with black spots. ♂ a white crescent in front of eye. On flank a white patch just in front of black tail. In front of wing a pale blue patch, speculum glossy green in both sexes. Common migrant. Not in Tobago.

41. ***Anas bahamensis* L.**

Short description. A small duck. Pale reddish brown with black spots. White cheeks and throat. Base of bill red. Speculum green, broadly bordered with buff. Tail pale buff. Uncommon resident, decreasing in numbers. Not in Tobago.

42. ***Anas americana* Gm.**

Short description. Larger than preceding species. ♂ white crown and under parts. Broad dark green postocular stripe. Foreneck white with small dark

spots. Breast pinkish. Under wing and flanks white, rufous just below wing. In flight white patch on upper wing. Under tail coverts black. ♀ greyish head contrasts with brownish body. Migrant from the north.

43. ***Spatula clypeata*** (L.)

Short description. A large and spatulate bill in both sexes. ♂ dark greenish glossed head, white breast and chestnut flanks and abdomen. On fore edge of wing a pale blue patch. ♀ brownish with blue wing patch. The species probably is an occasional visitor. Not in Tobago.

44. ***Aythya affinis*** (Eyton)

Short description. ♂ head blackish glossed with purple and green. Breast, forepart of back, rump and under tail coverts blackish. Central part of body white. Wing with white hind edge of secondaries. ♀ brown with white ring around bill. Occasional visitor.

45. ***Aythya erythrophthalma*** (Wied)

Short description. ♂ very dark, blackish brown, head dark chestnut glossed with violet. White wing bar. ♀ brown with white at base of bill and encircling dark patch below eye. Only mentioned by Léotaud. Not in Tobago.

46. ***Nomonyx dominicus*** (L.)

Short description. ♂ a rufous brown duck, paler below with black streaks on back and flanks. Facial mask black. White patch on wing. Tail pointed, black, stiff. ♀ greyish brown, irregularly barred with buff, dark streaks through and below the eye. Rare resident.

CATHARTIDAE

47. ***Sarcoramphus papa*** (L.)

Short description. Head and neck bare, beautifully coloured, yellow, red, orange, blue. Fleshy caruncle at base of bill. Upper parts pinkish yellow with distal part of wings, lower back and tail black. Under parts white. Grey collar around lower neck. Mentioned by Léotaud and Taylor (1864). There is a recent record of a specimen shot April 18, 1942 from the Quare Dam Road (Chenery, 1956, p. 24). Not in Tobago.

48. ***Coragyps atratus*** (Bechst.)

Short description. A dull black vulture. Naked part of the head black. Common resident. Not in Tobago.

Field notes. Everywhere in open country and near human habitations; particularly large numbers, often one hundred specimens or more, may be seen in the neighbourhood of the abattoir of Port-of-Spain. They also like to feed on heaps of coconut-husks, as are often found alongside the roads and elsewhere. They have little fear for man, and, when feeding on the ground as they usually do, can be approached to within a few meters. They are evidently very strong and tough and, though several times I tried to collect a specimen with shot no. 9 from a short range, I never managed to seriously injure one; often they would not even take the trouble to fly off! The vultures are locally known as Corbeaux. It is somewhat difficult to understand that this and the following species, both being excellent fliers that can often be seen soaring high overhead, failed to colonize Tobago, and have not even as stragglers been noted in that island.

49. **Cathartes aura** (L.)

Short description. Larger than preceding. General colour black with greyish black under side of wing and tail. Seen from below a white bar along tips of wing feathers. Larger tail than *atratus*. Naked part of head crimson. Rare resident. Not in Tobago.

Field notes. Never assembling in large numbers as does the Black Vulture, and, as Belcher & Smooker correctly stated, found usually in rural districts and away from densely populated areas. Generally the birds are seen alone or in pairs, and the largest number I ever saw together is four (this is striking contrast to the gregarious *Coragyps atratus*). Nevertheless, the species is certainly not uncommon, and outside the inhabited districts it is this species, and not the preceding, that is usually met with.

50. **Cathartes urubitinga** Pelzeln

Short description. Much like *aura*, but bare head orange yellow. Folded wings extend beyond tail. Uncommon (resident?). Not in Tobago.

ACCIPITRIDAE

51. **Elanus leucurus** (Vieill.)

Short description. Above ashy grey with black stripe on the wing and black feathers in front of eye. Tail white with greyish central tail feathers. Under parts white. Occasional visitor. Not in Tobago.

52. **Elanoides forficatus** (L.)

Short description. Head, neck and under parts white. Back, wings and tail black. Tail deeply forked. Uncommon (resident?). Not in Tobago.

53. **Leptodon cayanensis** (Lath.)

Falco cayanensis Latham, Ind. Orn., vol. 1, 1790, p. 28 (Cayenne).

Arima Valley: 1 ♂ (no. 850).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
850	♂	5-2-1954	310	223	24	38	524

Maxilla black, mandible pale blue. Feet pale greyish blue.

Short description. Head and neck slate grey, rest of upper parts blackish, under parts white. Tail with a few greyish white bands. Under wing banded black and white. ♂ smaller than ♀. Young birds are brownish above, tail with 3 blackish bars. Head and neck white with dark crown, under parts white. Rare (resident?). Not in Tobago.

Field notes Occasionally observed soaring over the Arima Valley. The specimen collected was shot for me by a local hunter.

Professor Schuurmans Stekhoven kindly identified as *Physaloptera acuticauda* Molin a nematode taken from the nostril of the specimen. *Leptodon* was already known as a host of the species (cf. Cram, 1927, pp. 297-298).

54. **Chondrohierax uncinatus** (Temm.)

Short description. ♂ upper parts slate grey, tail with 3 blackish bands. Under parts grey with many thin whitish bands. Under side of wing barred and white. A variety with the under parts barred with cinnamon brown can also occur. A melanistic phase (♂ and ♀), entirely blackish with only one broad whitish bar across the tail, is mentioned by Léotaud. ♀ blackish upper parts with a whitish or buffish nuchal collar. Tail black with a few grey bands. Under parts whitish with broad brownish bars. Under side of wing black-and-white barred. Young specimens have a nuchal collar and are white below with thin darker bars. Rare resident. Not in Tobago.

55. **Harpagus bidentatus** (Lath.)

Short description. Adult birds have the upper parts and sides of face blackish blue. Tail blackish, banded with thin greyish bars. Throat white with dark mesial stripe. Rest of under parts deep chestnut with white under tail coverts. ♂ smaller. Young birds are brownish above, feathers rufous edged. Whitish below with dark shaft streaks on the breast. Rare (resident?). Not in Tobago.

56. **Ictinia plumbea** (Gm.)

Short description. Head and under parts slate grey. Upper parts black, slightly greenish glossed. Wing feathers rufous, margined with black. Tail

with 2 visible white bars, central tail feathers uniform black. Young specimens have whitish under parts, broadly streaked with blackish. Resident. Not in Tobago.

57. **Rostrhamus sociabilis** (Vieill.)

Short description. Brownish slate with upper and under tail coverts white. Cere, lores, base of bill and eyes red. Young birds have brownish black upper parts, feathers mostly edged with rufous. Under parts whitish or buffish with broad blackish streaks. Base of tail white. Only mentioned by Léotaud. Not in Tobago.

58. **Heterospizias meridionalis** (Lath.)

Short description. Head and shoulders rufous, mantle blackish grey, feathers margined with rufous. Rump and tail blackish with medium white bar and white tips. Under parts rufous with narrow blackish bars on breast and abdomen. Young specimens are very variable, blacker on upper and under parts. Rare resident. Not in Tobago.

59. **Buteo albicaudatus** Vieill.

Short description. Head, back and wings dark slate colour with rufous shoulder. Rump and upper tail coverts white, slightly barred. Tail greyish white with black subterminal band and fine bars. Under parts white, barred with blackish. Throat can be slate coloured. A melanistic form occurs which has the under parts blackish. Young birds blackish brown with ochraceous patches on breast and brownish and whitish bars on rest of under parts. Tail bluish barred with dusky. Not uncommon resident. Not in Tobago.

60. **Buteo albonotatus** Kaup

Short description. Adult black, tail with a broad grey median band, which is whitish below. Young birds have 4 to 6 pale bands. Rare. Status uncertain. Not in Tobago.

61. **Buteo platypterus antillarum** Clark

Buteo antillarum Clark, Proc. Biol. Soc. Wash., vol. 18, 1905, p. 62 (St. Vincent).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂ (no. 405).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
405	♂	28-10-1953	257	155	17	56	392

Irides pale yellow. Bill black. Feet yellow.

Not having seen material from the West Indies I follow Conover, who in the Catalogue of Birds of the Americas (pt. 1, no. 4, 1949, p. 119) considered Tobago birds to belong to *antillarum*.

Short description. A small *Buteo* with brownish upper parts, the neck mottled white and rufous. Upper tail coverts tipped with white. Tail blackish with 2 whitish bands. Sides of head mottled with rufous, ear coverts greyish. Throat pale with dark streaks. Breast rufous brown mixed with white. Rufous and white bars on abdomen. Under tail coverts white. Under side of wing white with a few black and rufous spots. Tobago only.

Field notes. The specimen collected was the only one seen; it was shot while perched on the leaf of a cononut-palm in Diamond Estate.

62. ***Buteo nitidus*** (Lath.)

Short description. Upper parts grey barred with silvery white. Upper tail coverts brownish black tipped with white. Tail black with median white band, tipped with white. Under parts regularly banded whitish and grey. Chin and under tail coverts white. Young birds are quite different. Upper parts dark brown margined with rufous. Head buffy white streaked with dark brown, under parts buffy white with irregular spots of dark brown. Under side of wings buffy white. Tail barred buffish and brownish. Resident. Not in Tobago.

63. ***Leucopternis albicollis*** (Lath.)

Short description. General colour white, wing black spotted with white, tail black-banded and tipped with white. Under wing white with black tips to primaries. In young birds the white parts are buffy tinged and the head is streaked with black. Resident. Not in Tobago.

64. ***Urubitinga urubitinga*** (Gm.)

Short description. Black with white rump. Tail feathers tipped with white. Under side of wing banded grey and black. Young birds are blackish brown above, feathers often edged with rufous. Under parts ochraceous buff with bold black markings. Tail ashy brown with 8 or 9 darker bars and white tipped. Resident.

65. ***Buteogallus anthracinus*** (W. Deppe)

Short description. Slaty black, tail tipped with white and with 2 narrow white bands. Hind neck mottled with buff. Under side of wing unbanded,

but inner secondaries mottled rufous and black. Smaller and with shorter feet than *Urubitinga*. Young birds resemble young specimens of *Urubitinga*, but tail white with 6 to 8 irregular blackish bars. Resident. Not in Tobago.

66. ***Spizaëtus ornatus*** (Daudin)

Short description. Above blackish brown with chestnut hind neck, sides of face and sides of breast. Long black crest. Tail banded grey and black. Chin and throat white, bordered by blackish feathers. Rest of under parts white banded with black. Under tail coverts mainly white. Under side of wing white with a few black bars. Tarsus feathered, banded black and white. Young birds are uniform white below and more brownish above. Very rare.

67. ***Spizaëtus tyrannus*** (Wied)

Short description. Resembles *ornatus*, but crown and crest not black, but white with black tips. Chin and throat often white with black shaft streaks. Hind neck blackish. Under parts blackish, speckled or barred with white. Under tail coverts barred black and white. Under side of wing barred black and grey. There is a black phase. Young birds have dark brown feathers on the breast. Very rare.

68. ***Circus brasiliensis*** (Gm.)

Short description. Head, neck and back black, forehead, superciliary streak and most of under parts white, throat and upper breast blackish. Upper tail coverts white, tail barred black and grey. Under side of wing greyish with thin black bars. Young birds are brownish above with rufous edged feathers. Local resident.

Field notes. A specimen was seen flying over the wet savannahs that form the eastern border of the Caroni Swamp on December 18. The long wings and tail and the characteristic V-shape in which the wings were kept most of the time, made identification easy. The bird was apparently moulting.

69. ***Pandion haliaetus*** (L.)

Short description. Head and hind neck white with brownish streak from eye to side of neck. Rest of upper parts brown, under parts white with pale brownish breast band. Under side of wing white with a black patch near bend of wing. Migrant from the north.

Field notes. A specimen was seen flying over the shore at the mouth of the Guapo River, Point Fortin, on 8 December, and one was observed at the Hillsborough East River Reservoir, Tobago, on 11 February.

FALCONIDAE

70. **Caracara cheriway** (Jacquin)

Short description. Upper parts brownish black, nuchal collar white, spotted with black. Feathers of upper back edged with white. Upper tail coverts largely white. Chin, throat, under tail coverts, upper breast white spotted with blackish. Lower breast and thighs blackish. Tail white, narrowly barred with blackish, terminal band black. Cere, lores and cheeks red. Bill bluish, edged with yellow. Young birds with buffy streaks on upper breast and upper back. Accidental visitor (2 observations by Smooker). Not in Tobago.

71. **Gampsonyx swainsonii** Vigors

Short description. Upper parts bluish brown. Front and sides of head buffish. Neck collar white, edged with rufous brown. Under parts white, a blackish patch on each side of the breast. Flanks, under wing coverts and thighs chestnut. A few observations only. Not in Tobago.

72. **Falco peregrinus** Tunst.

Short description. Upper parts bluish black. A broad black streak along sides of throat. Under parts buffy white, darker on the breast, chest streaked with black, abdomen heavily barred with black. Rare migrant. Not in Tobago.

73. **Falco deiroleucus** Temm.

Short description. Upper parts black, feathers greyish edged. Cheeks black, throat white. Under parts chestnut brown. Lower breast and under wing coverts black, spotted with rufous buff. Under side of wing with some thin whitish bars. Tail with 3 greyish white bars. Rare (resident?). Not in Tobago.

74. **Falco ruficularis** Daudin

Short description. Resembles *deiroleucus*, but much smaller. Throat and upper breast whitish to rufous. Breast, flanks and abdomen black barred with chestnut and rufous. Lower part of abdomen, under tail coverts and thighs rufous. Resident.

75. **Falco fusco-caerulescens** Vieill.

Short description. Upper parts slate grey barred with white. A rufous buff line over the eyes and joining in the hind neck. Lores and forehead whitish. Cheek stripe blackish. Hinder part of cheeks, throat and breast white

with blackish streaks. Flanks and upper part of abdomen black with narrow white lines. Lower part of abdomen, thighs and under tail coverts buffish brown. Under wing coverts black spotted with white, carpal band tawny. Resident. Not in Tobago.

76. *Falco columbarius columbarius* L.

Falco columbarius Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 90 (Carolina, U.S.A.).

Mt. Hope: 1 ♀ (no. 567).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
567	♀	22-11-1953	211	128	14	37.5	185

Irides dark brown. Bill pale bluish with dark tip. Cere pale green. Feet greenish yellow.

Short description. ♂ upper parts slate blue, hind neck black and white marked. Tail white tipped and barred slate colour and black. Sides of face and under parts heavily streaked. Chin whitish, superciliary streak whitish. ♀ upper parts dark brown. Rare migrant.

Field notes. The specimen collected was shot from the dead top of an old mango tree in waste country. On two previous occasions, on 2 and 8 November, I observed the species, both times it concerned presumably the same individual in female plumage, perched in a dead *Cecropia*-tree in secondary growth near Tacarigua. Certainly not a common visitor to Trinidad.

77. *Falco sparverius* L.

Short description. Crown rufous encircled by slaty blue. Forehead, lores, cheeks and ear coverts as well as the throat whitish. Black moustachial streak. Black patch behind ear coverts and another on side of neck. Back rufous with a few black bars. Lower back, rump, upper tail coverts and tail cinnamon. Tail with black subterminal band and whitish tips. Wing coverts slate blue with black spots. Under side tinged with rufous with a few black spots. ♀ slightly larger. Upper parts and upper side of tail rufous barred with black. Under parts fulvous streaked with brownish cinnamon. According to Belcher and Smooker resident, but this needs confirmation. Not in Tobago.

CRACIDAE

78. *Ortalis ruficauda* (Jardine)

Short description. A gallinaceous bird with greyish head, greenish back and a long tail. Outer tail feathers tipped with chestnut. Under tail coverts and thighs rufous. In Tobago only.

79. *Pipile pipile* (Jacquin)

Short description. Size of a fowl with a long tail. General colour black with greenish gloss. White crest and white on wing. Naked skin around eye, throat and wattle on throat bluish. Feet red. Rare, only in north and south Trinidad. Not in Tobago.

ARAMIDAE

80. *Aramus guarauna* (L.)

Short description. A middle-sized bird with a slightly curved rail-like bill. General colour dark brown, head, neck and anterior part of body streaked with white. Rare resident. Not in Tobago.

RALLIDAE

81. *Rallus longirostris* Bodd.

Short description. A large, greyish brown rail with long, slightly curved bill. Posterior under parts barred with white. Mangroves. Resident. Not in Tobago.

82. *Pardirallus maculatus* (Bodd.)

Short description. A large rail, upper parts black, heavily spotted with white. Under parts barred with white. Under tail coverts white. Wings washed with brown. Bill green, strong, slightly curved at tip and red spot at base of mandible. Feet red. Rare resident. Not in Tobago.

83. *Aramides cajanea* (P.L.S. Müller)

Short description. Large-sized rail with long, strong reddish legs and a firm straight yellowish bill. Crown of head brownish, neck all round gray. Upper parts brownish olive, breast chestnut, hinder part of body black. Under wing coverts rufous, barred with black. Now uncommon resident. Not in Tobago.

84. *Aramides axillaris* Lawrence

Short description. Crown, neck all round and breast rufous brown. Chin paler. Hind neck and upper mantle grey. Vent grey. Rump and tail dull black. Upper surface of wings and middle of mantle brownish olive. Remiges rufous brown. Under wing coverts black, barred with white. Feet reddish, bill yellowish. Rare resident. Not in Tobago.

85. *Porzana albicollis* (Vieill.)

Short description. A middle-sized crake, blackish above, feathers with olive brown edges. Under parts grey, more blackish on vent and under tail coverts. Bill short, green. Legs dark brown. Rare resident. Not in Tobago.

86. *Porzana carolina* (L.)

Short description. The Carolina Crake or Sora Rail is smaller than *albicollis* and characterized by thin white streaks on upper parts, white-barred abdomen, bronze brown crown with a central black streak, black mask around yellowish bill. Legs yellowish green. Migrant.

87. *Laterallus exilis* (Temm.)

Short description. A small crake with uniform brown upper parts and a chestnut band on hind neck. Crown grey. Breast greyish white. Abdomen and flanks blackish, barred with white. Resident. Not in Tobago.

88. *Gallinula chloropus* (L.)

Short description. Dull black moorhen with white under tail coverts. Front shield and bill red, bill with yellowish tip. Legs and long toes yellowish green. Resident.

Field notes. A very shy pair of these birds was seen swimming in a piece of flooded mangrove east of Store Bay, Tobago, on 30 October.

89. *Fulica* spec.

Short description. Slate grey coot with white under tail coverts. Tips of secondaries white. Feet greenish, toes lobed. Probably resident. Nests found by Belcher & Smooker, but not certain if birds belong to *caribaea* (frontal shield white) or to *americana* (smaller and frontal shield red).

90. *Porphyryla martinica* (L.)

Short description. Head, neck and under parts purplish blue, upper parts greenish. Under tail coverts white. Frontal shield blue. Bill red with yellow tip. Legs yellow. Resident.

HELIORNITHIDAE

91. *Heliornis fulica* (Bodd.)

Short description. Upper parts bronze-brown. Crown of head, neck and line on side of neck black. In ♂ orange patch on cheeks. Chin and throat

white. White line behind eyes and along sides of neck. Breast and abdomen whitish with a buff tinge. Bill rail-like, red. Toes lobed. Mentioned by Léotaud. Not in Tobago.

JACANIDAE

92. *Jacana spinosa* (L.)

Short description. A small bird with exceedingly long legs and toes. Head, neck and most of the under parts black, rest dark chestnut. Wing feathers yellow, bordered with blackish. Under wing coverts black. A spur at bend of wing. Bill yellow. Lappets on head red. Feet greyish green. Resident. Not in Tobago.

Field notes. According to Roberts this species is very common in the marsh and rice fields. I have observed it but a few times at the edge of Laventille Swamp. The birds were very shy and difficult to approach, a fact certainly due to their being much persecuted by hunters.

HAEMATOPODIDAE

93. *Haematopus ostralegus* L.

Short description. An oyster-catcher with black head and neck, olive coloured upper parts, white rump, under parts and secondaries. Bill strong, red, feet flesh coloured. Rare, only mentioned by Léotaud.

94. *Squatarola squatarola* (L.)

Short description. The largest plover on the island. Upper parts speckled greyish black and yellowish. Under parts whitish. In flight black axillaries are conspicuous. White rump and white line in the wing. In summer under parts black. Migrant from the north.

Field notes. A single specimen was observed on the beach of Point Fortin on 8 December.

95. *Pluvialis dominicus dominicus* (P.L.S. Müller)

Charadrius dominicus P.L.S. Müller, Syst. Nat., suppl., 1776, p. 116 (S. Domingo).

Tacarigua: 1 ♀ (no. 541).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
541	♀	19-11-1953	174	62	25	39	126

Irides dark brown. Bill black. Feet grey.

Short description. Smaller than *squatarola*. No white on the rump. Axillaries greyish brown as under side of wing. Migrant from the north.

Field notes. The first specimens, two or three, were seen on the savannah of Orange Grove Estate on 22 September, on which day I returned on the Estate after a 10 days' absence; the following day I estimated that about 10 specimens were present, and on 24 September I counted 31 specimens in a flock, whereas possibly more birds could be found on other parts of the savannah. A flock remained present the whole duration of my stay on the Estate, and evidently the Golden Plover hibernates in Trinidad. On 8 December I counted a dozen specimens on the golf course of Point Fortin.

96. **Charadrius hiaticula semipalmatus** Bp.

Charadrius semipalmatus Bonaparte, Journ. Acad. Nat. Sci. Philadelphia (5), vol. 1, 1825, p. 98 (Coast New Jersey).

Maracas Bay: 1 ♂ imm. (no. 360).

Point Fortin: 1 ♂ imm. (no. 650).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
360	♂ imm.	18-10-1953	118	51	13	22	36.5
650	♂ imm.	10-12-1953	117	50	12	24	40.5

Irides dark brown. Bill black with brownish yellow base. Feet greyish yellow.

Short description. White front bordered by a broad black band above. Black streak through the eye. Neck band white. Chest band black. Bill short, orange and black coloured; legs orange yellow. Young birds have the black portion greyish and the legs greyish yellow. Winter visitor.

Field notes. Occasionally observed on sandy beaches in Trinidad. Specimen no. 650 was shot out of a flock of 17.

97. **Charadrius collaris** Vieill.

Charadrius collaris Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., vol. 27, 1818, p. 136 (Paraguay).

Manzanilla: 1 ♂ (no. 75).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
75	♂	2-8-1953	92	46	15	25	26.5

Irides sepia brown. Bill black with yellowish brown base. Feet flesh coloured.

Short description. The smallest of the plovers known from Trinidad. Upper parts greyish brown, feathers sometimes with rusty brown edges. Front white, with black patch on crown between the eyes. Black breast band, no white neck band. Resident.

Field notes. Though Belcher & Smooker call the species numerous in Tobago and rare in Trinidad, I have seen it on the last mentioned island

only, and not rarely. As Belcher & Smooker especially state that they never observed the species on the Cocal, it is perhaps worth noting that the Manzanilla beach where the specimen collected was obtained, forms the northern part of the Cocal. A second specimen collected at the same locality on 27 September (no. 291) could, unfortunately, not be preserved, and also during other visits I regularly saw specimens. On 23 September there was a party of 4 specimens on the savannah of Orange Grove Estate, where one would not expect the species, and the following day the number had increased to 9.

98. **Charadrius vociferus** L.

Short description. Middle-sized plover with double black breast band and orange brown rump. Upper parts bronze olive, under parts white. White front bordered above by black band. Migrant from the north. Recorded from Tobago, not yet from Trinidad.

99. **Charadrius wilsonia** Ord

Short description. White front and white line over the eyes. One dark breast band. Legs pinkish. Bill heavy, black. Sometimes a considerable amount of rusty brown on the sides of the head. ♀ in summer with black above the white front. Winter visitor. Not in Tobago.

SCOLOPACIDAE

100. **Bartramia longicauda** (Bechst.)

Short description. Upper parts blackish with broad buffy brown edges along the feathers. Rump black, tail long, barred with black. Breast buffish streaked with black. Under wing barred black and white. Head small, bill slender, short. Rare winter visitor.

101. **Numenius phaeopus** (L.)

Short description. A greyish brown shore bird with a long and down curved bill. Pale coloured stripes across the crown and above the eyes, dark line through the eye. Regular but not abundant winter visitor.

102. **Numenius borealis** (J. R. Forster)

Short description. Smaller than the preceding species with a shorter and slenderer bill. Primaries unbarred.

There are only a few old records. Species now exceedingly rare.

103. **Numenius americanus** Bechstein

Short description. A large warm brown coloured curlew with an unstriped head and with cinnamon on under side of wings. Mentioned by Kirk for Tobago. Not in Trinidad.

104. **Limosa haemastica** (L.)

Short description. Upper parts greyish, rump white, tail black. Breast whitish in winter. Under side of wing dark sooty brown. Bill upturned. Accidental winter visitor. Not in Tobago.

105. **Limosa fedoa** (L.)

Short description. Much larger than the preceding. Bill long, upturned, legs long, blue-grey. Rump buffish brown as rest of upper parts. Occasional winter visitor.

106. **Tringa melanoleuca** (Gm.)

Scolopax melanoleuca Gmelin, Syst. Nat., vol. 1, pt. 2, 1789, p. 659 (Chateau Bay, Labrador).

Laventille Swamp: 4 ♂ ♂ (nos. 339, 363, 364, 658).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
287	♂	26-9-1953	205	78	58	63	166

Irides dark brown. Bill black with greenish base. Feet orange yellow.

Short description. A large wader with bright yellow legs and a long slightly upturned appearing bill. Upper parts dusky with whitish spots, rump white and tail banded. Breast with small brownish black marks. Rest under parts white. Winter visitor. Not in Tobago.

Field notes. Good numbers were present on 22 September and subsequent days on the savannah of Orange Grove Estate; another favoured habitat were the freshly flooded rice fields at Laventille. Though the species is generally considered a winter visitor, numbers seemed to diminish rapidly towards the end of October, and it is certainly more common in the autumn.

107. **Tringa flavipes** (Gm.)

Scolopax flavipes Gmelin, Syst. Nat. vol. 1, pt. 2, 1789, p. 659 (New York).

Laventille Swamp: 4 ♂ ♂ (nos. 339, 363, 364, 658).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
339	♂	13-10-1953	161	63	37	50	83
363	♂	19-10-1953	151	moulting	35	49	69
364	♂	19-10-1953	157	61	36	51	81
658	♂	14-12-1953	154	62	36	51	77

Irides dark brown. Bill black with greyish green base. Feet orange yellow.

Short description. Much like *melanoleuca*, but much smaller. Middle-sized. Bill straight. Winter visitor.

108. ***Tringa solitaria solitaria*** Wilson

Tringa solitaria Wilson, Am. Ornith., vol. 7, 1813, p. 53, pl. 58, fig. 3 (Pennsylvania, Kentucky and New York).

Tacarigua: 1 ♂ (no. 193).

Laventille Swamp: 1 ♂, 1 — (nos. 554, 563).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
193	♂	31- 8-1953	131	55	28	31	46
554	♂	21-11-1953	129	52	28	29	39
563	—	22-11-1953	129	54	30	30	48.5

Irides dark brown. Bill greyish green with large black tip. Feet dirty greenish yellow.

Short description. Upper parts blackish brown, spotted with whitish, greyer on head. Tail white with dark bars, central tail feathers dark. Flight rapid and erratic. Winter visitor.

109. ***Actitis macularia*** (L.)

Tringa macularia Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 249 (Philadelphia, U.S.A.).

Maracas Bay: 2 ♂ ♂, 1 ♀ (nos. 50, 583, 584).

Point Fortin: 1 ♀ (no. 633).

Anse Bateau, Tobago: 1 ♀ (no. 929).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
50	♂	26- 7-1953	107	47	23	25	25
583	♂	29-11-1953	100	47	—	23	34.5
584	♀	29-11-1953	107	51	23	24	41
633	♀	8-12-1953	104	47	25	23	42
929	♀	14- 2-1954	104	52	24	25	39.5

Irides dark brown. Maxilla black, mandible pinkish grey with black tip. Feet pale greenish to greyish yellow.

Short description. Olive brown above, white below, white streak over the eye. Tail as upper parts with a small black and white border. In flight a small whitish line over the wing. Winter visitor, sometimes summering.

Field notes. Common on both sandy and rocky shores throughout the duration of my stay. Behaviour and voice are identical with that of the Old World species *hypoleucos*.

110. ***Catoptrophorus semipalmatus*** (Gm.)

Short description. A heavy bird with grey upper parts, white under parts,

straight thick black bill and bluish legs. In flight the striking black and white wing pattern is characteristic. Rare winter visitor.

111. ***Arenaria interpres*** (L.)

Short description. Stockily built bird with in summer striking white and black head pattern, rusty brown upper parts and red feet. In winter blackish brown upper parts, white throat and dark breast patch. Feet orange. Bill short. Characteristic pattern of black and white when flying. Winter visitor.

112. ***Limnodromus griseus*** (Gm.)

Short description. Snipe-like appearance. Greyish upper parts and wings. White under parts and lower back, the white running far up the back. Tail white with black dots and bars. Bill long, straight. Migrant and possibly winter visitor.

113. ***Gallinago gallinago delicata*** (Ord)

Short description. Upper parts dark brown with strongly striped head and back. Breast mottled with dusky. Abdomen white. Long bill. Rapid zigzag flight. Occasional migrant.

114. ***Gallinago paraguaiae*** (Vieill.)

Short description. Much like *delicata*, but general appearance darker, less rufous markings on upper parts. Outer tail feathers half as broad as in *delicata*. Rare resident.

115. ***Calidris canutus*** (L.)

Short description. A heavily built, short-billed shore bird. In autumn and winter grey above and white below. Tail white with black bars. In summer brick-red under parts. Narrow white line over the wing. Mentioned by Léotaud as passage migrant in autumn.

116. ***Calidris melanotos*** (Vieill.)

Tringa melanotos Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., vol. 34, 1819, p. 462 (Paraguay).

Laventille Swamp: 1 — (no. 327).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
327	—	10-10-1953	134	55	30	27	49.5

Irides dark brown. Bill basal part greenish yellow, tip black. Feet dirty greenish yellow.

Short description. Middle-sized shore bird. Upper parts reddish brown with black feather centers and small white edges. Upper breast buffish with blackish spots, sharply bordered against white abdomen. No white line on the wing. Passage migrant and winter visitor.

117. ***Calidris fuscicollis*** (Vieill.)

Short description. Upper parts much as *melanotos*, but bird is smaller, bill shorter and rump white. Breast whitish, slightly speckled. Passage migrant and winter visitor according to Léotaud. Not in Tobago.

118. ***Calidris pusillus*** (L.)

Short description. Upper parts greyish brown, under parts white, breast faintly spotted. Bill and feet black. Common winter visitor.

Field notes. Frequently observed on the beach at Manzanilla (the first specimens on 27 September) and also at the pool behind the usine of Orange Grove Estate.

119. ***Calidris mauri*** (Cabanis)

Ercumtes Mauri Cabanis, Journ. f. Orn., vol. 4, 1856 (1857), p. 419 (Cuba).

Laventille Swamp: 1 ♀ (no. 338).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
338	♀	13-10-1953	97	39	23	22	29.5

Irides dark brown. Bill and feet black.

Short description. Much like *pusillus*, difficult to distinguish from it. Has slightly longer tapering bill. Slightly larger and higher on the feet. Winter visitor. Not in Tobago.

Field notes. The single specimen at hand was taken in one shot with a *Tringa flavipes* (no. 339) at the muddy edge of a drain in the mangrove. As at the time I failed to distinguish the species from *C. pusillus*, I can say nothing about its status.

120. ***Calidris minutilla*** (Vieill.)

Short description. Smallest of the sandpipers, sparrow size. Distinguished from the above mentioned by smaller size, thinner bill, more streaked breast and yellow or greenish legs. Winter visitor.

121. **Crocethia alba** (Pall.)

Trynga alba Pallas in Vroeg's Cat. Coll., Adumbrat., 1764, p. 7 (Coast of North Sea).

Point Fortin: 2 ♂ ♂, 1 — (nos. 647, 648, 649).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
647	♂	10-12-1953	124	48	26	23	49
648	—	10-12-1953	124	49	24	25	43.5
649	♂	10-12-1953	121	50	25	25	49

Irides brown. Bill and feet black.

Short description. Size as *C. melanotos*. Very pale grey above and white below in autumn and winter. In flight clear white wing stripe. Winter visitor.

Field notes. Occasionally observed in Trinidad on beaches, but my visits to the shore were too infrequent to enable me to state anything positive about the status of the species on the island. The three specimens listed were taken in one shot out of a small flock of about 8.

122. **Micropalama himantopus** (Bp.)

Short description. In autumn greyish upper parts, white eye stripe and white under parts. Bill long, feet greenish yellow. In flight dark wings and white rump. In spring under parts barred with black. Smaller than *T. flavipes*, with longer legs and longer, less pointed bill. White under parts, shorter bill and longer legs distinguish it from *Limnodromus griseus*. Mentioned by Léotaud. Not in Tobago.

123. **Tryngites subruficollis** (Vieill.)

Short description. General colour buff yellowish with broad black centers to feathers of upper parts. Bill short, thin, head round, legs yellowish. Under side of wing white. Resembles *Bartramia longicauda*, but is smaller. Mentioned by Léotaud.

RECURVIROSTRIDAE

124. **Himantopus himantopus** (L.)

Short description. Upper parts black, rump and under parts white. Bill straight. black. Legs very long, red. In flight wings black. Not in Tobago.

125. **Recurvirostra americana** Gm.

Short description. Black and white birds, larger than *Himantopus*, with a long upturned bill. In winter head, neck and breast greyish (cinnamon in summer). In flight wings black and white. Probably casual visitor.

LARIDAE

126. **Larus atricilla** L.

Short description. Mantle dark lead grey, wing tips black. Head in summer black, in winter white mottled with grey. Bill and feet dark red. In flight white hind edge of the wings is conspicuous. Young specimens dark with white upper tail coverts. Common.

Field notes. Curiously enough I have but one observation, 18 January, when a flock was present in the harbour of Port-of-Spain.

127. **Phaetusa simplex** (Gm.)

Short description. A tern with an extremely heavy yellow bill. Upper parts greyish. Primaries black. Pileum in breeding dress black, otherwise white with a black streak behind the eye. Feet greenish. Resident. Not in Tobago.

128. **Gelochelidon nilotica** (Gm.)

Short description. Upper parts pale grey, head with black cap in breeding dress, white in winter. Bill short, thick, black and feet black. Tail forked and grey. Rather common winter visitor. Not in Tobago.

129. **Sterna hirundo** L.

Short description. White tern with pale grey mantle, blackish primaries, deeply forked whitish tail. Black cap in breeding dress, in winter front and forepart of crown white. Bill and feet in summer red, bill blackish in winter, feet paler red. Common winter visitor. Not in Tobago.

130. **Sterna dougallii** Montagu

Short description. Resembles *Sterna hirundo*. In summer and winter bill black. Feet red. When perching forked tail projects beyond wing tips. Rather common winter visitor.

131. **Sterna fuscata** L.

Short description. Upper parts black, front and under parts white. Bill and feet black. Tail forked. Young specimens are blackish brown with whitish bands on wing and mantle. Resident.

132. **Sterna albifrons** Pall.

Short description. Small tern with white front, black cap, yellow black-tipped bill and yellow feet in summer. In winter bill more blackish, black on head restricted to nape. Perhaps resident. Not in Tobago.

Field notes. When on June 29th our ship passed through the Boca de Monos, Least Terns were plentiful, being present in flocks all along the coast. When in October I revisited the area, confident to see them again, they all had disappeared.

133. ***Sterna maxima*** Bodd.

Short description. Large tern. Forehead often whitish, crest black. Tail forked. Bill strong, orange red, legs black. In autumn and winter crown whitish with black streaks. Not uncommon visitor. Not known from Tobago.

134. ***Sterna sandvicensis acuflavidus*** (Cabot)

Short description. Middle-sized tern. Forked tail. Bill black with yellow tip. Feet black. In breeding dress black cap, otherwise whitish front. Only a few times recorded, passage migrant.

134a. ***Sterna sandvicensis eurygnatha*** (Saunders)

Short description. As *sandvicensis*, but bill yellow. Only a few records from Trinidad. From Tobago there is a specimen (♂) in the collections of the Am. Mus. of Nat. Hist., New York, dated 23 April 1903.

135. ***Anous stolidus*** (L.)

Short description. Brown coloured tern with whitish grey front and rounded tail. Bill and feet blackish brown. Resident.

RYNCHOPIDAE

136. ***Rynchops nigra*** L.

Short description. Upper parts black with white front. Under parts white. Wings long. Mandible exceeds maxilla by one third. Bill red, black-tipped. Young birds are brown and have smaller bills. Fairly common. Not in Tobago.

Field notes. Once only observed, on 1 October on one of the open lakes in Caroni Swamp, where two of these birds were present. Because of their fierce aggressive behaviour, meeting and flying overhead of any boat that enters their territory, they may well give an impression of being more common than they really are.

COLUMBIDAE

137. ***Columba speciosa*** Gm.

Short description. Easily recognizable by the scaly appearance of breast and neck feathers. The feathers have white or chestnut centres margined with

dark greenish reflecting edges. Upper parts maroon, duller in the ♀. Resident. Not in Tobago.

138. ***Columba cayennensis*** Bonnaterre

Short description. Breast plain purple vinous, upper parts chestnut purple. Occiput and nape metallic bronze green. Rump and lower back greyish. Resident.

139. ***Columba fasciata albilinea*** Bp.

Short description. Upper parts bronze brown with metallic reflections. Sides of head, throat, rump and tail greyish. The latter with a blackish subterminal band. A white nuchal band. Under parts dull vinous. Rare. Not in Tobago.

140. ***Zenaidura auriculata stenura*** (Bp.)

Zenaida stenura Bonaparte, Compt. Rend. Acad. Sci. Paris, vol. 40, no. 3, 1855, p. 98 (Colombia).

Crown Point, Tobago: 1 ♂, 1 ♀ (nos. 419, 422).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
419	♂	30-10-1953	133	88	16	23	103
422	♀	30-10-1953	132	88	15	22	95

Irides dark brown. Bill black. Feet carmine.

Short description. Crown grey, rest of upper parts brownish and characterized by black spots beneath the ear coverts and on the innermost wing feathers. Vinous under parts in ♂, dull brownish in the ♀. Naked skin around the eye yellowish red.

Field notes. Common in the open and largely cultivated country in the western part of Tobago (Crown Point), but not observed elsewhere on the island. In Trinidad, where the species was first noted by Roberts in 1931, and was subsequently found breeding by Belcher in 1932, it is apparently still uncommon or very local in its distribution, for I did not meet with the species there.

141. ***Columbigallina passerina albivitta*** (Bp.)

Chamaepelia albivitta Bonaparte, Compt. Rend. Ac. Sci. Paris, vol. 40, no. 1, 1855, p. 21 (Cartagena, Colombia).

Tacarigua: 1 ♂, 1 ♀ (nos. 184, 345).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
184	♂	28-8-1953	81	57	14	16	35
345	♀	14-10-1953	79	52	12	17	30.5

Irides carmine. Bill basal part carmine, tip blackish. Feet pale reddish. Short description. Upper parts greyish brown. Dark centred breast feath-

ers, which produces a scale-like appearance. ♀♀ duller and paler coloured. Not in Tobago.

Field notes. Round Tacarigua fairly common, though perhaps slightly less so than *minuta* and found in the same type of country. Not met with elsewhere. The ♀ was taken when, together with several others of the species, it was feeding on a bare, freshly burnt field, surrounded by low but dense secondary growth, in the hills northeast of the village.

142. ***Columbigallina talpacoti rufipennis*** (Bp.)

Chamaepelia rufipennis "Gray" Bonaparte, Compt. Rend. Acad. Sci. Paris, vol. 40, 1855, p. 22 (Cartagena, Colombia).

Tacarigua: 3 ♂♂ (nos. 20, 376, 499).

Laventille Swamp: 1 ♂ (no. 611).

Caroni Swamp: 1 ♀ (no. 668).

Diamond Estate, Auchenskeoch, Tobago: 1 ♀ (no. 856).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
20	♂	15-7-1953	88	67	12	16	—
376	♂	21-10-1953	85	58	13	16	41.5
499	♂	11-11-1953	92	67	13	17	47
611	♂	5-12-1953	90	65	12	16	44.5
688	♀	15-12-1953	86	63	13	17	46
856	♀	9-2-1954	88	68	12	17	46

Irides carmine or carmine with a small whitish inner ring. Bill greenish grey with blackish tip. Feet pale flesh colour.

Compared with a series of 9 ♂♂, 3 ♀♀ of the nominal race from Surinam (Paramaribo, Groningen) it appears that the ♂♂ from Trinidad and Tobago are decidedly slightly paler on the upper parts and under parts, the chin a trifle whiter and the head slightly paler grey. The majority of the specimens from Surinam have the primaries black, a few, however, have rufous on the inner webs along the shaft, one ♂ even has the shaft partly rufous. Some have the under wing coverts black, others have them black with rufous along the outer edge of the wing. Variants like these were described by Bangs and Penard (1918, p. 45) as *Chaemopelia arthuri*. This name was afterwards correctly synonymized with the nominal race by Hellmayr and Conover (1942, p. 539, footnote).

The ♀♀ collected at Trinidad and Tobago are rather pale below, a fact already mentioned by Léotaud. But the colour of the under parts is rather variable in ♀♀, a ♀ from Caracas, Venezuela is indistinguishable from the islands birds.

There is a small average difference in measurements between the Trinidad-Tobago birds and material from Surinam as is shown below.

Surinam	♂ ♂	(13)	wing	89-95,	tail	64-71 mm.
	♀ ♀	(4)	wing	88-95,	tail	65-67 mm.
Trinidad, Tobago	♂ ♂	(4)	wing	85-92,	tail	58-67 mm.
	♀ ♀	(2)	wing	86-88,	tail	63-68 mm.

Short description. This is the largest of the 3 *Columbigallina* species. The ♂ is brown vinous red coloured with crown grey. Black bluish streaks on the wings. ♀♀ paler and duller.

Field notes. Plentiful and generally distributed in more or less open (cultivated) country and in secondary growths. Also found in mangroves, but never far away from dikes or other open and dry places, where they go for feeding on the ground. Usually seen in pairs or family parties.

We had a number of these birds in our garden in Orange Grove Estate, where they continued breeding throughout the period of my stay. Nests were found as follows:

1. Garden, Orange Grove Estate. On 25-VIII in the morning a bird was seen building on a nest in the hedge; 30-VIII, nest completed, empty; 31-VIII, one egg, measuring 21.8×18.0 mm, dove was sitting on the nest at my arrival, about 17.00 hrs.; 1-IX, 17.00 hrs., still one egg only, dove again flushed from the nest; 2-IX, 18.00 hrs., two eggs, the second egg measured 23.0×17.4 mm, dove incubating; 6-IX, dove incubating, did not fly away while I was watching it from about a meter distance; 17-IX, 12.45 hrs., dove very tight on nest which contained two young, head to head; their skins were blackish with some down sticking against their bodies, egg-tooth still present; 22-IX, young fairly large, sitting head to tail, old dove on the nest; 25-IX, young large, but still in the nest; 28-IX, nest empty.

2. Garden, Orange Grove Estate, 25-IX, found in a *Citrus*-tree a nest, containing two small young, about 1.70 m from the ground.

3. 15-X, 18.00 hrs., found a dove incubating in the same nest as nr. 1, on two eggs; 19-X, 18.00 hrs., sitting tight, measurements of the two eggs 22.8×17.2 and 23.2×17.1 mm; 22-X, incubating tightly; 25-X, 13.00 hrs., incubating tightly its eggs; 26-X, 14.30 hrs., one egg, one very small young, old dove on nest; 2-XI, old dove on two young; 6-XI, old dove on nest with young; 7-XI, 17.00 hrs., old dove on nest with two young; 9-XI, 18.00 hrs., two young on the fence about one meter from their nest, with an old dove.

4. 7-XII, one egg in the same nest (I went away for a few days); 11-XII, dove incubating two eggs, unfortunately I broke one; 20-XII, dove incubating the single egg left, it measured 22.4×17.0 mm; 22-XII, sitting tight on small young.

5. Caroni Swamp, 18-XII, in the mangrove, on a horizontal bough, about

2.5 m above the water-level, the nest contained one young of at most a few days old; adult dove flushed from it on my approach.

The nests I found were between 1.5 and 2.5 m above the ground, but probably this was due to the fact that hedges etc., are rarely higher, and not to a preference of the doves for breeding localities not high above the ground.

Haverschmidt (1953) found slightly shorter periods of incubation and fledging, and his observations are doubtless more complete than mine. On the other hand the daily controls may have induced the young birds to leave their nests slightly earlier than would have been the case if they had been left undisturbed.

On September 29th, I observed an interesting case of injury-feigning. When I approached nest no. 2, at that time containing fairly well-developed young, an adult dove fluttered from it and to the ground, and stumbled, with continued fluttering, straight out of the garden into the savannah, until it was at least 20, more probably 30 meters away. Only then did it fly back to the garden.

143. **Columbigallina minuta minuta** (L.)

Columba minuta Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 285 (Cayenne).

Tacarigua: 4 ♂♂ (nos. 30, 52, 333, 577).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
30	♂	19-7-1953	73	50	—	14	28.5
52	♂	26-7-1953	77	54	10	15	31.5
333	♂	12-10-1953	77	51	10	16	30.5
577	♂	26-11-1953	74	52	11	16	29.5

Irides pale carmine. Bill greenish grey. Feet pale flesh colour.

Short description. Smaller and paler than *talpacoti*. Upper parts greyish brown with blue patches on the wing. Sides of head greyish. Under parts vinaceous grey. Not in Tobago.

Field notes. Only met with near Tacarigua. Here it was fairly common in waste sugar fields and in the rough secondary growth north of the village. Apparently slightly more restricted in its habitat than *talpacoti*, because it was never observed in gardens or other highly cultivated places. Male no. 577 was cooing; a single note, repeated at regular intervals, not loud and fairly high pitched: "whöök — whöök — whöök — ...".

144. **Claravis pretiosa** (Ferrari-Perez)

Peristera pretiosa Ferrari-Perez, Proc. U.S. Nat. Mus., vol. 9, 1886, p. 175. New name for *Columba cinerea* Temminck, 1811 (Brazil).

Tacarigua: 1 ♂ (no. 24).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
24	♂	16-7-1953	119	78	16	20	70

Irides pinkish. Bill pale bluish grey culmen, other parts pale horn. Feet pale pinkish yellow.

Short description. ♂ of a beautiful blue colour with black spots on the wings. Primaries and outer tail feathers black. ♀ brownish with dark spots on the wings, breast pale brown, abdomen greyish. Rare resident. Not in Tobago.

Field notes. On several consecutive days in July I flushed a small and very wary dove, evidently a female of this species, from a small open place (a nest of parasol ants) in the forest near Tacarigua. On the 16th I approached the spot more carefully than before and to my surprise saw not only the female but in her company a male, which I collected as listed above. I have never again met with the species, and agree with former authors that it must be rare.

145. *Leptotila verreauxi verreauxi* (Bp.)

Leptoptila verreauxi Bonaparte, Compt. Rend. Acad. Sci. Paris, vol. 40, no. 3, 1855, p. 99 (Colombia).

Tacarigua: 3 ♂ ♂, 2 ♀ ♀ (nos. 18, 33, 162, 220, 462).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
18	♂	14-7-1953	136	110	18	28	136
220	♂	10-9-1953	136	100	15	29	132
462	♂	4-11-1953	140	106	16	30	138
33	♀ imm.	20-7-1953	123	—	16	25	99
162	♀	24-8-1953	135	105	17	29	129

Irides cinnamon, ochre yellow or brown yellow. Bill blackish or dark grey. Feet carmine.

Short description. Upper parts greyish brown, crown vinous with bronze reflections, sides of head pale vinous. Under parts pale vinous with abdomen white. Skin around the eye bluish grey.

Field notes. According to Belcher & Smooker: "...in Trinidad, though seen in some numbers in the monsoonal bush verging on the northern "Bocas" (entrances to the Gulf of Paria), it must be classed elsewhere as uncommon. On the chain of islets from Gasparee westwards it is met with in increasing numbers, until, on Patos, it may be said to abound".

In the wider environments of Tacarigua, and in many other parts of Trinidad, this species in my experience is the most common dove after *Columbigallina rufipennis*. It occurs by preference in rather high secondary growths, and is especially plentiful in Bamboo-groves (Dinsley Bamboo); sometimes also in true forest, though probably not too far from the edge. In forests

it is replaced by its congener, *L. rufaxilla*. The same difference of habitat was found for the neighbourhood of Paramaribo, Surinam, by Haverschmidt (1955a, p. 140), who wrote about *L. verreauxi*: "This dove is in my experience much more common than *L. rufaxilla* at least in the cultivated coastal area. *L. rufaxilla* is more a bird of the forest while *verreauxi* is more a waste land bird which is also found in plantations where I seldom met *L. rufaxilla*". This is perhaps the explanation for the fact that I never observed the species in the well-wooded Arima Valley, whence it is not recorded by Beebe (1952) either.

On November 22nd, I flushed a specimen from a nest on Mt. Hope. The nest, situated about 1.75 m from the ground in a not very dense shrub, contained two fresh eggs, glossy white, which measured 32.3×21.2 , 30.0×21.1 mm.

In Dinsley Bamboo I saw several nests, fairly high up in the bamboo, but I did not try to inspect them.

145a. ***Leptotila verreauxi tobagensis*** Hellmayr & Seilern

Leptotila verreauxi tobagensis Hellmayr & Seilern, Verh. Orn. Ges. Bayern, vol. 12, 1915, p. 204 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 1 ♀ (no. 862).

Back Hill, Tobago: 1 ♀ (no. 925).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
862	♀	9-2-1954	131	97	18	28	109
925	♀	14-2-1954	140	100	17	26	122

Irides pale cinnamon. Bill black. Feet carmine. Skin round the eye bluish grey.

The specimens differ from Trinidad birds as described in the original description, except that the bill of *tobagensis* is not smaller. Perhaps the tail is smaller on an average.

Field notes. Because of the short duration of my stay in Tobago, it is difficult to say how the status of this race is. Several specimens were feeding in a Pigeon Peas (*Cajanus cajan*) cultivation near Auchenskeoch.

146. ***Leptotila rufaxilla hellmayri*** Chapman

Leptotila rufaxilla hellmayri Chapman, Bull. Am. Mus. Nat. Hist., vol. 34, 1915, p. 368 (Princetown, Trinidad).

Arena Reserve: 1 ♂ (no. 542).

Brigand Hill Reserve: 1 ♂ (no. 173).

Mt. Chaquaramal: 1 ♀ (no. 518).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
173	♂	26- 8-1953	145	106	15	29	164
542	♂	20-11-1953	141	98	16	31	158
518	♀	14-11-1953	146	101	16	30	132

Irides yellowish. Bill black. Feet carmine.

Short description. Upper parts greenish brown with forehead and crown bluish grey. Sides of head rufous brown. Naked skin around the eye reddish. Under parts vinous with white abdomen. Not in Tobago.

Field notes. Like the preceding species a common bird in Trinidad, but, as stated above, confined to forest, and therefore met with less often in the densely populated parts of the island. Never met with near Tacarigua, not even in the Tacarigua Reserve.

The male no. 173 was shot from the nest, about 3 m overhead, over a path; it did not move when I passed under it, and it came rather as a surprise to me that its nest was empty. The nest is a loose structure of small branches similar to that of *L. verreauxi* and of the ordinary dove type.

A nest, probably of this species — but I could not for certain identify the adult bird that flushed from it, not more than two meters in front of me — was found on February 2nd on the Heights of Guanapo. The nest was situated in a very thin young tree. It was in a 4 or 5 cm thick tree, about 2.25 m from the ground; an ordinary flat floor of small branches. It contained one young, with the eyes still closed (preserved in spirits), and one, apparently unincubated, and therefore probably infertile egg. The egg measured 31.6 × 21.9 mm.

147. *Geotrygon montana* (L.)

Columba montana Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 163 (Jamaica).

Arima Valley: 1 ♀ (no. 720).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
720	♀	8-1-1954	133	73	9	26	99

Irides cinnamon. Bill dark wine red. Feet carmine, pale whitish behind.

Short description. Upper parts cinnamon rufous tinged, reddish band below the cheeks, breast vinous, abdomen buffish. ♀ upper parts dark olive, sides of head and breast brownish.

Field notes. Perhaps more common than my few observations indicate. I have seen it on Mt. Tabor and a few times in the Arima Valley and on the southern slope of the Morne Bleu. Generally they are not seen before they flush from the forest floor.

148. *Geotrygon linearis trinitatis* Hellmayr & Seilern

Geotrygon linearis trinitatis Hellmayr & Seilern, Bull. B. O. C., vol. 31, 1912, p. 13 (Aripo Mts., Trinidad).

Morne Bleu: 1 ♂, 1 ♀ (nos. 718, 724).

Arima Valley. 2 ♀ ♀ (nos. 717, 725).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
724	♂	10-1-1954	152	102	16	39	284
717	♀	7-1-1954	146	98	15	38	230
718	♀	7-1-1954	143	92	15	—	233
725	♀	10-1-1954	144	93	15	38	233

Irides dirty yellow. Bill black. Feet dirty carmine.

Short description. Darker than the preceding species and with a purple bluish region on the upper back. Forehead rufous. A black band below the cheeks, throat and upper breast greyish. Tail uniform coloured.

Field notes. Common on the south slope of the Morne Bleu and on the Heights of Guanapo, but not readily observed. It lives in the same places as the preceding species and behaves exactly similar. It can be distinguished by its larger size.

PSITTACIDAE

149. *Ara ararauna* (L.)

Short description. Large. Blue above with yellow orange under parts. Under sides of wings yellowish. Tail long. Rare. Not in Tobago.

150. *Ara macao* (L.)

Short description. Large, scarlet red with blue wing tips, rump, upper tail coverts and lateral tail feathers. Median and greater wing coverts yellow. Tail long. Rare. Not in Tobago.

151. *Ara manilata* (Bodd.)

Short description. Middle-sized. Green with greenish blue crown. Chin, throat and upper breast grey. A brown red patch on abdomen. Under wing coverts orange yellow. Tail long. Rare. Not in Tobago.

152. *Ara nobilis* (L.)

Short description. Smaller than preceding, green with red under wing coverts. Tail long, pointed. Mentioned by Belcher and Smooker as probably occurring in Trinidad.

153. *Forpus passerinus viridissimus* (Lafr.)

Psittacula viridissima Lafresnaye, Rev. Zool., 1848, p. 172 (Caracas, Venezuela).

Point Fortin: 1 ♀ (no. 652).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
652	♀	10-12-1953	79	37	12	12	24

Irides pale brownish grey. Bill and feet pale flesh colour.

Short description. Very small. Yellowish green with lower back and upper tail coverts blue in the ♂, wing also partly blue. ♀ without blue. Not in Tobago.

Field notes. Though Belcher & Smooker call this species numerous in mangrove areas, I only observed it near Point Fortin where it was common in the mangroves and in solitary trees and bushes near the village.

154. **Touit batavica** (Bodd.)

Short description. Small. Head greenish yellow, under parts glaucous. Upper parts black with a broad yellowish green band on the wing. Under side of wing verditer blue. Tail lilac with a subterminal dark band on the outer tail feathers. Resident. Not in Tobago.

155. **Touit huetii** (Temm.)

Short description. Small. Upper parts green, under parts yellowish green. Wing edge with red and blue, under wing coverts red. Central tail feathers green, lateral tail feathers purple red with black end bar in ♂♂, in ♀♀ all green. Rare resident. Not in Tobago.

156. **Pionus menstruus** (L.)

Short description. Middle-sized. Green, bronze green on wings. Head and breast blue. Under tail coverts red. Lateral tail feathers blue. Under wing coverts green. Tail short. Resident. Not in Tobago.

157. **Amazona ochrocephala** (Gm.)

Short description. Middle-sized. Green with the head yellow. Band of wing and speculum red. Wing tips bluish black. Tail short, rounded. Resident. Not in Tobago.

158. **Amazona amazonica** (L.)

Short description. Middle-sized. Green with yellow crown and cheeks, bluish forehead. Wings green with black tips and orange speculum. Under wing coverts green. Tail short, rounded. Resident.

Field notes. In Trinidad common in the crowns of tall trees in the lowland forests, and in much smaller numbers in the hills. In Tobago observed in the forest of the Main Ridge. The species readily draws attention by its noisy behaviour.

CUCULIDAE

159. **Coccyzus erythrophthalmus** (Wilson)

Short description. Upper parts brown, under parts white. No black in the tail. Bill black. Eye ring red. Migrant, only mentioned by Léotaud. Not in Tobago.

160. **Coccyzus americanus** (L.)

Short description. Upper parts brown with rufous in the wings. Under parts white. Maxilla horn colour, mandible yellow. Migrant.

161. **Coccyzus minor** subsp. spec.

Monos Island: 1 ♀ (no. 389).

Caroni Swamp: 1 ♀ (no. 680).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
389	♀	24-10-1953	130	moulting	25	27	62.5
680	♀	18-12-1953	135	157	27	28	69

Irides dark sepia. Bill, maxilla black, mandible orange with black base and tip. Feet bluish grey, soles greenish yellow.

Compared with 2 skins from Surinam (Leonsberg, Nickerie) it appears that the upper parts of the Trinidad birds are greyer, less brownish. The colour of the under parts is perhaps a trifle paler in the Surinam birds. Mr. James Bond, who kindly compared both Trinidad birds with *grenadensis* from Grenada and the Grenadines states that the Trinidad birds differ from this race by "grayer, less brownish gray dorsal surface and more ochraceous posterior under parts". More material is needed in order to place the Trinidad birds correctly. One sight record from Tobago.

Short description. Upper parts greyish. A black patch behind the eye. Under parts buffish.

Field notes. Apparently uncommon, for the two specimens collected, one high up in trees on Monos Island, one low among the roots of mangrove trees, were the only ones encountered. On 11 November I observed a brownish grey *Coccyzus* with yellow mandible in the light secondary forest north of Tacarigua. The bird took fright at the noise of the cocking of my gun and could not be traced again. This bird may have been *C. minor*, but in this season migrants of *C. americanus* may be expected, and particularly as *C. minor* is apparently largely confined to mangroves and coastal areas, the identification remains doubtful.

162. **Coccyzus melanocoryphus** Vieill.

Short description. Resembles *erythrophthalmus*, but has a greyish head, buf-

fish under parts and black lateral tail feathers. Eye lids and a spot behind the eyes black. Bill heavier. Resident. Not in Tobago.

163. ***Piaya cayana insulana*** Hellm.

Piaya cayana insulana Hellmayr, Novit. Zool., vol. 13, 1906, p. 43 (Chaguaranas, Trinidad).

Tacarigua: 1 ♂, 1 ♀ (no. 17, 460).

Mt. Tabor: 1 ♀ (no. 367).

Hills west of Caura: 1 ♂ (no. 369).

Morne l'Enfer Reserve: 1 — (no. 644).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
369	♂	20-10-1953	143	232	28	35	95.5
460	♂	4-11-1953	142	235	27	35	90
17	♀	14- 7-1953	145	235	27	33	100
367	♀	20-10-1953	141	—	27	32	94
644	—	9-12-1953	136	246	27	32	98

Irides red. Skin around eye greenish yellow. Bill green yellow. Feet grey.

Short description. Upper parts dark rufous with white tipped tail feathers. Throat pinkish, rest of under side grey. Resident. Not in Tobago.

Field notes. Fairly common and widely distributed in light forest; usually seen hopping from branch to branch in trees and flying but short distances. The loud and short call: "kēēt...kēēt..." reminded me of the call of *Dendrocopos major*.

164. ***Piaya minuta minuta*** (Vieill.)

Coccyzus minutus Vieillot, Nouv. Dict. Hist. Nat., vol. 8, 1817, p. 275 (Cayenne).

Laventille Swamp: 1 ♀ (no. 557).

Caroni Swamp: 1 ♀ (no. 666).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
557	♀	21-11-1953	107	152	19	26	40.5
666	♀	15-12-1953	109	moulting	17.5	25	37

Irides vermilion. Eye lid raspberry red. Bill dark yellow. Feet greenish grey.

Both specimens from Trinidad and one from Surinam differ from a series of 7 other specimens from Trinidad and 7 from Surinam by the less rich brown upper parts and breast. Abdomen blackish grey with very little brownish suffusion. Under side of tail feathers in the two birds are more blackish than in the other specimens. In these characters they agree better with the description of *panamensis*, but I do not believe that these birds are migrants or stragglers.

Short description. Upper parts rufous, throat and upper breast chestnut, rest of under side blackish grey. Bill yellowish. Much smaller than *cayana*. Resident. Not in Tobago.

Field notes. Uncommon and, as far as my experience goes, restricted to mangrove forests. Altogether I have but three observations.

165. ***Crotophaga major*** Gm.

Crotophaga major Gmelin, Syst. Nat., vol. 1, pt. 1, 1788, p. 105 (Cayenne).

Tacarigua: 2 ♂ ♂ (nos. 452, 453).

Laventille Swamp: 1 ♀ (no. 329).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
542	♂	3-11-1953	195	moulting	44	40	149
453	♂	3-11-1953	200	258	49	42	174
329	♀	10-10-1953	204	263	46	40	156

Irides pale yellowish green or greenish blue. Bill and feet black.

Short description. Blue-black with a green or steel-blue gloss. Bill with a high narrow ridge along base of culmen, which gives the bill a massive appearance. Resident. Not in Tobago.

Field notes. Fairly common in mangroves, and once a flock of seven (two of which were collected as listed above) was observed in bamboo bordering the Tacarigua River where it meanders through the sugar cane fields of Orange Grove Estate, Tacarigua. Apart from the morphological differences and from the somewhat different habitat, this species may be distinguished from *C. ani* by its entirely different voice, which is not a whistle, but a loud harsh cry: "kchèèu", and: "kchààùw".

166. ***Crotophaga ani*** L.

Crotophaga ani Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 105 (Jamaica).

Tacarigua: 1 ♀ (no. 215).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂ (no. 880).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
880	♂	10-2-1954	156	moulting	33	38	110
215	♀	8-9-1953	147	180	30	36	98

Irides dark brown. Bill and feet black.

Short description. Like the preceding species, but much smaller and duller. Ridge along entire culmen. Resident.

Field notes. Plentiful in open cultivated country, particularly where grazing cattle is present.

Crothophaga sulcirostris Swainson

Short description. The smallest species with longitudinal grooves along the culmen ridge. Mentioned only by Beebe (1952, p. 176) without comment.

167. **Tapera naevia naevia** (L.)

Cuculus naevius Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 170 (Cayenne).

Laventille Swamp: 1 — imm. (no. 661).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
661	imm.	14-12-1953	100	133	14	20	39

Irides inner circle pale brown gradually changing into pale grey of outer circle. Bill brownish with darker base. Feet pale bluish grey.

Short description. Head chestnut, upper parts pale brown, both with broad black longitudinal streaks. Eye brow buff. Throat and under tail coverts, rest of under parts white. Resident. Not in Tobago.

Field notes. Generally considered common, but the single specimen collected, which was found in open wet country, covered with reeds and low bushes, near the edge of the mangroves, was the only representative of the species ever encountered.

TYTONIDAE

168. **Tyto alba** (Scop.)

Short description. Resembles the European Barnowl. Upper parts ochraceous buff with mottling of greyish white. Pale under parts with very fine spotting. Long legged. Resident.

STRIGIDAE

169. **Otus choliba** (Vieill.)

Short description. Upper parts pale greyish brown with distinct mesial streaks of blackish. Whitish spots on scapulars. Facial circle brownish black. Under parts whitish with a "herring bone" pattern of dusky brown. Tail as upper parts with bands of dusky. Ear tufts. A rufous face is known. Resident. In Tobago?

Field notes. A specimen was observed in the dry but dense forest near the summit of the Morne d'Or on November 24th.

170. **Pulsatrix perspicillata** (Lath.)

Short description. A large owl with dark sooty brown upper parts and a broad breast band of the same colour. Eye brow dull whitish. Feathers around bill and above breast band buffy. Orbital and auricular region sooty brown. Under side of wing buffy, tips dark and barred. Resident. Not in Tobago.

171. **Glaucidium brasilianum phalaenoides** (Daudin)

Strix phalaenoides Daudin, Traité d'Orn., vol. 2, 1800, p. 206 (Trinidad).

La Laja: 1 ♀ (no. 755).

Brasso Seco: 1 ♀ (no. 229).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
229	♀	13-9-1953	100	57	12	20	67
755	♀	22-1-1954	100	60	13	21	73

Irides sulphur yellow. Bill greenish yellow, cere around nostril orange. Feet dirty yellow.

Short description. A small owl, which occurs in a rufous (chestnut) and a dark (sepia brown) phase. Upper parts nearly uniform with small spots of fulvous white on the head. Tail blackish brown with 6 rows of whitish spots. Under parts white with broad streaks of chocolate brown. Resident. Not in Tobago.

172. **Ciccaba virgata** (Cassin)

Short description. Slightly smaller than *Tyto alba*. Upper parts dark greyish brown mottled with dusky. On scapulars whitish or buffish spots. Under parts cinnamon buff or whitish variegated with dusky. Tail brownish black with a few small mottled whitish or greyish bands broadly tipped with whitish. A darker phase is also known. Resident. Not in Tobago.

173. **Rhinoptynx clamator** (Vieill.)

Short description. Resembles *Asio otus*, the European Long-eared Owl, but is more robustly built. Upper parts rufescent buff vermiculated with blackish. Under parts buffish streaked with blackish. Forehead, chin, lores and hinder cheeks white. A black line around the eyes and encircling the throat. In Tobago, not in Trinidad.

STEATORNITHIDAE

174. **Steatornis caripennis** Humboldt

Short description. The Oil Bird or Guacharo has the upper parts chestnut with white spots on the wing. Under parts paler chestnut with small white spots. Bill large, hooked. Resident. Not in Tobago.

Field notes. On 16 September I descended to the Guacharo-cave in the southern part of Spring Hill Estate, the cave visited by Roberts (1934) and Williams (1922). On the place of the cave, two rivulets join, and enter a fairly narrow crevice, open above, in the mountain side. At the entrance this crevice is several meters wide, but further down it narrows until it is only

slightly over one meter wide. Several bats, frightened, flew away when I entered, and suddenly there sounded a horrible screeching: the Guacharos. Here, perhaps 20 m or less from the entrance, the crevice was closed above, and in the side there was a small cavity in which the birds seemed to be resting. A few meters beyond the rivulet plunged in a fairly spacious pool that was entirely open above.

On the lower ledge of the cavity there was a thick growth of young palm trees, up to 30 cm high. As the place was not entirely dark, they contained some chlorophyll, but the etiolation was sufficiently complete to make their general appearance remain pale yellow.

On my approach the Guacharos started fluttering about, now and then alighting for a moment on a ledge. More than about 10 birds were not present and it was for this reason, and also as, because of earlier disturbances the colony was said to have been deserted altogether for several previous years, the birds only recently having re-established themselves, that I did not collect any and left the cave alone during the rest of my stay at Spring Hill Estate. Certainly the small colony owed its continued existence in this fairly accessible place to the good protection it was given by Dr. Wright, and it is to be hoped that effective protection will be continued.

NYCTIBIIDAE

175. *Nyctibius griseus* (Gm.)

Short description. Rather large and with a long tail. General colour greyish or brownish, heavily marked with longitudinal streaks. Sometimes with much white. Under parts paler, also with longitudinal streaks. Blackish spots on the breast. Resident. Tobago?

CAPRIMULGIDAE

176. *Lurocalis semitorquatus* (Gm.)

Short description. Upper parts and upper breast very dark, nearly blackish. White chin spot. Lower breast, abdomen, under tail coverts rufous brown barred with black. Rather short tail. Resident. Not in Tobago.

177. *Chordeiles acutipennis* (Hermann)

Short description. The smallest species. Upper parts blackish grey. White chin patch with a rufous patch below it. Breast mottled with blackish. Wing bar white. In the ♂ the tail has a subterminal white bar, that is lacking in the ♀. Resident.

178. **Chordeiles minor** (J. R. Foster)

Short description. Much like *acutipennis*, but larger. White wing patch extending over 5 outer primaries (in *acutipennis* over 4 outer primaries). Size about as *Nyctidromus albicollis*, but *minor* is practically without rufous and buff colours. Migrant. Mentioned for Tobago by Kirk. Not in Trinidad.

179. **Podager nacunda** (Vieill.)

Short description. Upper parts and upper breast pale brown vermiculated with black. A large, white chin spot. Lower breast, abdomen and under tail coverts white. Lateral tail feathers broadly tipped with white. A large white patch on the wing. Under wing coverts barred buff and blackish. Tail rather short. Resident.

180. **Nyctidromus albicollis albicollis** (Gm.)

Caprimulgus albicollis Gmelin, Syst. Nat., vol. 1, pt. 2, 1789, p. 1030 (Cayenne).

Tacarigua: 1 ♂, 1 ♀ (no. 72, 212).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
212	♂	4-9-1953	153	150	10	21	—
72	♀	31-7-1953	154	140+	9	23	50.5

Irides brown. Bill yellowish brown with black tip. Feet bluish grey.

Both specimens are in the grey phase and darker than 7 other specimens from Trinidad, which could be compared. 8 ♂♂ and 3 ♀♀ from Surinam and British Guiana are all browner and measure: wing 147-156 mm.

Short description. Upper parts greyish with bright buff spots and streaks on the wings. In the ♂ a clear white wing bar, which is buffish in the ♀. Ear coverts buff. Lower parts buff with blackish bars. White patches or band across the throat. A rather long tail with white on some of the outermost primaries. There is also a brown phase. Resident. Not in Tobago.

Field notes. Apparently fairly common in light forest, including isolated patches of trees and bamboos, but I was not always sure of the specific identity of nightjars flushed. Nightjars were regularly seen on the asphalt roads at night, a habit already mentioned for *Nyctidromus* by Roberts (1934), and, of course, known to occur in many species of the family in all parts of the world.

181. **Caprimulgus rufus** Bodd.

Short description. Middle-sized. Warm rufous coloured, mottled with black. Resembles *Lurocalis semitorquatus* in general appearance, but chin spot buff, not white. In the ♂ outer tail feathers with large white spots, which

are buffish on the under side of the tail feathers. ♀ lacks these spots. Under parts less barred, more mottled than in *Lurocalis*. Mentioned for Trinidad by Belcher & Smooker. Not in Tobago.

182. **Caprimulgus cayennensis leopetes** Jard. & Selby

Caprimulgus leopetes Jardine & Selby, Illustrations of Ornith., vol. 2, 1830, pl. 87 and text (Tobago).

Back Hill, Tobago: 1 ♂ (no. 928).

Caledonia, Tobago: 1 ♂ (no. 867).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
867	♂	9-2-1954	145	124	12	14	34
928	♂	14-2-1954	139	120	12	14	31

Irides dark brown.

Compared with 3 ♂♂ of the nominal race from Zanderij, Surinam. These birds measure: wing 136, 143, 148, tail 114, 118, 119 mm. Ridgway in his description of the race *tobagensis* (1908, p. 195), which has to bear the older name *leopetes*, mentions that Tobago birds have shorter wing and tail. In the above measurements this holds for the tail only. That the birds from Tobago should have a much greater amount of white on the lateral rectrices is not confirmed in the skins before me. I cannot see much difference. The upper parts of the Tobago birds are more uniform and show less variation than the birds from Surinam, and therefore are darker in appearance. The brown neck collar is more pronounced and broader in Tobago birds. Therefore though the differences are small, the race *leopetes* can be upheld.

Short description. A small, sexual dimorph species. The ♂ is characterized by the white under parts, rufous neck band, white outer tail feathers, white wing bar and white spots on the wing. The ♀ has the rufous neck band less pronounced, the under parts buff with blackish bars, buff spots and streaks on the wing, no white on the tail. No white wing bar. Resident.

Field notes. The fact that the species was observed several times during my short stay in Tobago, makes it likely that it is common there. I have not met with it in Trinidad. Apparently it favours light forest and secondary growths.

APODIDAE

183. **Streptoprocne zonaris** (Shaw)

Short description. A very large black swift with a white collar around the neck. Vagrant? Not in Tobago.

Field notes. A single specimen was seen on 15 September, in company with a number of *Chaetura* hawking over a clearing at the forest edge in the upper part of Spring Hill Estate.

184. **Chaetura chapmani** Hellmayr

Short description. Upper parts glossed steel-blue, under parts smoky brown. Spined tail feathers. Probably rare resident. Not in Tobago.

185. **Chaetura cinereiventris** Sclater

Short description. Upper parts black with ash grey rump patch. Under parts greyish, throat whitish grey, under tail coverts blackish. Tail spined. Resident.

186. **Chaetura spinicauda** (Temm.)

Short description. Blackish swift with whitish band across the rump. Under parts greyish brown, whitish on throat. Tail spined. Probably resident. Not in Tobago.

Field notes. *Chaetura spinicauda* vel *cinereiventris*. Common in several parts of the Northern Range, where often flying over roads; also daily and in numbers present on Spring Hill Estate. Their extremely swift and irregular flight prevented collecting, though they would often almost hit one's face.

187. **Chaetura rutila** (Vieill.)

Short description. A middle-sized swift. Black with throat, foreneck, sides of face and neck collar rufous. Probably rare resident. Not in Tobago.

188. **Chaetura brachyura** (Jardine)

Short description. A blackish swift with ash grey rump and tail. Tail short and spined. Larger than *cinereiventris*. Common resident.

Field notes. The commonest swift, particularly in the lowlands above cultivated country. From some distance the birds often look brownish rather than blackish, with pale buff rumps and extremely short tails.

189. **Nephoecetes niger** (Gm.)

Short description. A large sooty black swift with a rather long tail. Straggler. Not in Tobago.

190. **Panyptila cayennensis** (Gm.)

Short description. About the size of *Ch. brachyura*. Upper parts black. Throat, upper breast, a ring around the neck and a patch on the lower flank white. Tail deeply forked. Resident.

Field notes. On 19 December several were seen flying above the summit of El Tucuche.

191. **Reinarda squamata** (Cassin)

Short description. About the size of *Ch. spinicauda*. Upper parts blackish with a blue gloss. Under parts white. Tail long and deeply forked. Local resident. Not in Tobago.

TROCHILIDAE

192. **Glaucis hirsuta insularum** Hellmayr & Seilern

Glaucis hirsuta insularum Hellmayr & Seilern, Verh. Ornith. Ges. Bayern, vol. 11, 1913, p. 316 (Caparo, Trinidad).

Tacarigua: 1 ♂, 1 ♀ (nos. 58, 91).

Manzanilla: 1 ♂ (no. 169).

Morne Bleu — Aripo: 1 — (no. 791).

St. Benedict Estate, N of Tunapuna: 1 ♂ (no. 493).

Main Ridge, Tobago: 2 — (nos. 904, 905).

No.	Sex	Date	Wing	Tail	Culmen	Weight
58	♂	27-7-1953	65	42	30	7
169	♂	26-8-1953	64	39	29	6.5
493	♂	10-11-1953	65	42	31	7
91	♀	5-8-1953	61	36	33	5.5
791	(♂)	29-1-1954	66	42	32	6.5
904	—	12-2-1954	62	35	32	6.5
905	—	12-2-1954	68	45	33	6.5

Irides dark brown. Maxilla black. Mandible yellow with black tip. Feet pale yellow to dark brownish pink.

Eight specimens from Surinam present in the Museum of Comp. Zoölogy, Cambridge, U.S.A. measure: wing 54-62 (one of 67) mm. Trinidad and Tobago birds average larger than birds of the nominal race.

Short description. Shining green above, under parts rufous brown. Tail rounded, white-tipped. Lateral tail feathers with chestnut base. Bill long, curved.

Field notes. A very common species in forest, also occurring in high second growth and in bamboo forest and venturing out in the open at the forest edge. At the edges of forests I often saw specimens visit the flowers of *Centropogon surinamensis*, their foreheads being yellowish from the pollen; inside the forest *Heliconia bihai* is much favoured. Contrary to Belcher & Smooker's experience, I did not get the impression that the species is less common in Tobago than it is in Trinidad.

Williams (1922) records that all nests he examined were found above water, and in the two nests found by me this was also the case. The particulars concerning these nests are the following.

Tacarigua, nest found on 30 July, contents examined on 4 August. In forest. It was attached to the under surface of a leaf of *Heliconia bihai*, about

2.5 m high above a small rivulet; the two white eggs measured 15.7×9.0 and 15.8×9.0 mm. Afterwards this nest was deserted.

Verdant Vale, 4 February. Nest hanging from a fern-leaf low above a narrow rivulet. It was in a cacao plantation, but along the rivulet was some rough growth, high plants, etc. This nest I found because of the incubating bird's constantly uttered chirp. I collected the two eggs which were hardly incubated, they measure 15.7×9.4 , 15.6×9.3 mm.

Hitherto the breeding season was reported to include the months February, March, and April (Belcher & Smooker, Beebe); the nest from early August mentioned above shows that the breeding period is considerably more extended, if, indeed, breeding is not continued throughout the year.

193. **Phaethornis guy guy** (Less.)

Trochilus Guy Lesson, Les Trochilidées, 1833, p. 119, index, p. XIV, (Brazil — Venezuela).

Tacarigua: 1 ♂ (no. 346).

La Laja: 2 — (nos. 836, 837).

Morne Bleu — La Laja: 1 — (no. 736).

East of Morne Bleu: 1 — (no. 153).

No.	Sex	Date	Wing	Tail	Culmen	Weight
346	♂	14-10-1953	60	58	41	5.5
736	(♂)	20-1-1954	65	60	42	5.5
836	(♂)	5-2-1954	67	66	42	5.5
837	(♂)	5-2-1954	64	66	42	5.5
153	(♀)	21-8-1953	60	—	41	5.6

Irides dark brown. Bill, maxilla black, mandible red with black tip. Feet dark greyish brown.

Short description. Upper parts green. Dark streak through the eye. Under parts greyish with green tinged sides of neck and flanks. Central tail feathers elongated and white-tipped. Base of tail green, rest black. ♀ with brown streak above and below eye and a brown gular streak. Resident. Not in Tobago.

Field notes. Common in forest and contrary to *Glaucis hirsuta*, which is rather similar in habits and appearance, does rarely venture out in the open but keeps to the dark forest.

Like other humming-birds this species is very inquisitive and on more than one occasion a specimen came flying up to me and, hovering in the air at one or two meters' distance, inspected me at leisure. To their habit of inspecting the humming-birds, of course, owe the name of doctor birds under which they are known throughout the British West Indies.

On 20 January I found a nest almost on the summit of the Morne Bleu, at an altitude of about 2780 ft. It was attached, about 4 m high, to the leaf

of a very prickly palm tree, probably *Bactris major*, of which some five were growing on one stool. The nest, very similar to that of *Glaucis hirsuta*, contained two slightly incubated white eggs.

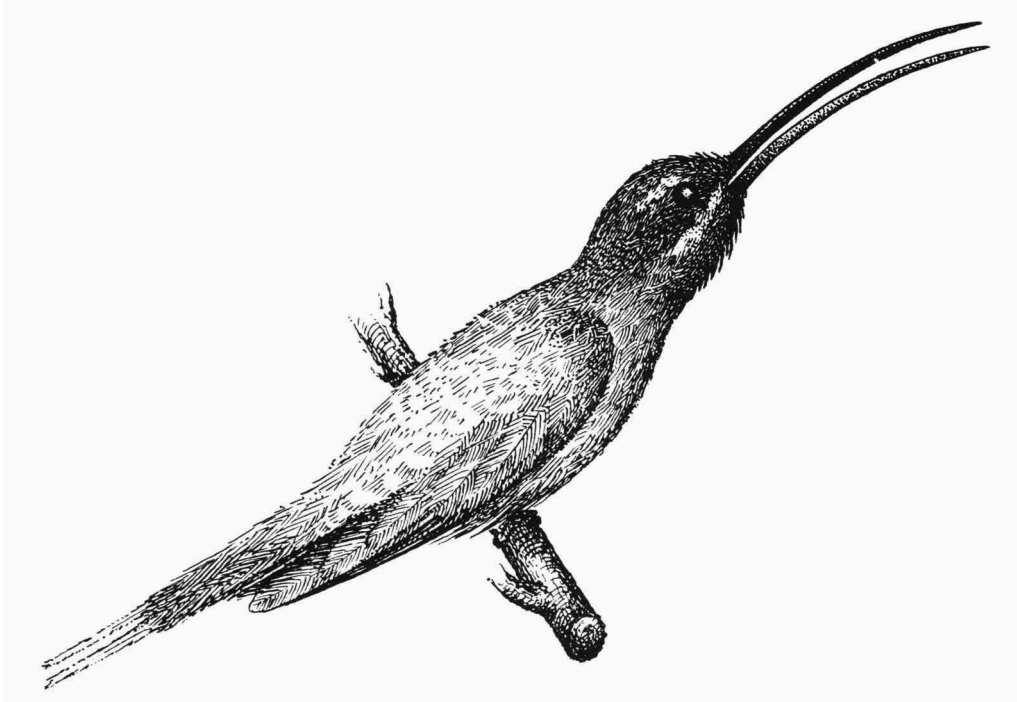


Fig. 1. *Phacethornis guy guy* (Less.), singing.

Though Chapman (1895) has already described the singing-habits of the species, I take pleasure in recording my own observations, made in January on the southern slope of Morne Bleu. As Chapman already observed, specimens of this species and of *Phaethornis longuemareus* seem to assemble for singing, so that always small groups are seen and heard together. On one place I found the birds very common and constantly singing. When singing (fig. 1) they were perched on thin twigs, generally about one meter from the forest floor and only rarely much higher, and in a typically stretched attitude, the bill pointed upwards, uttered a monotonous chirp, rather hoarse and difficult to describe: "hewēēt — hewēēt — hewēēt —" etc. The tails were constantly moved up and down, much more than necessary for keeping balance. During chirping the throats distinctly swelled; the bill was opened but a little distance. Even more remarkable was a slow flying and hovering (of course with fast wing-beats) round the perches, during which curious

loud and short notes were produced at irregular intervals. This seemed to be the expression of a strong agitation. Once in a while a perched singing bird would be visited by a second specimen that would hover about until both flew off, chasing each other, at great speed. I even noted up to four specimens chasing in line.

194. ***Phaethornis longuemareus longuemareus*** (Less.)

Trochilus longuemareus Lesson, Les Trochilidées, 1832, p. 15; 1833, p. 160, pl. 2, 62 (Cayenne).

Tacarigua: 2 — (nos. 32, 495).

Guanapo: 1 — (no. 772).

Arima Valley: 1 — (no. 781).

Morne Bleu — Aripo: 1 — (no. 791).

Morne Bleu: 1 — (no. 734).

No.	Sex	Date	Wing	Tail	Culmen	Weight
32	[♂]	20-7-1953	45	39	25	1.5
495	[♂]	11-11-1953	44	38	24	1.5
734	[♂]	20-1-1954	44	35	24	—
772	—	27-1-1954	43	40	24	2.5
781	[♂]	28-1-1954	43	35	24	2.5
791	[♂]	29-1-1954	42	43	24	2.5

Irides dark brown. Maxilla and tip of mandible black, proximal part of mandible yellow. Feet pinkish brown.

Two ♂♂ and an unsexed adult specimen from Paramaribo, Surinam in the Leiden Museum measure wing 38-41, tail 32-38, culmen 23-25 mm. That this is not a real difference is shown by 4 ♂♂, 1 unsexed specimen from Surinam in the Mus. Comp. Zoöl., Cambridge, U.S.A., which have a wing measurement of 42-46 mm.

Short description. Very small. Bronze green above. Postocular and malar streaks, under parts rufous brown. Elongated central tail feathers white-tipped. Resident. Not in Tobago.

Field notes. A common inhabitant of tall grass vegetations in somewhat shaded places (secondary growths), and also in the bamboo growths on the mountain tops.

In these undergrowths they can also be heard singing, usually several birds within a short distance from each other. The song consists of two sharp notes, followed by a more feeble concluding part: "srēē-srēē-sree.tze.see". Song was heard regularly in July, once in August, not in September and October, and regularly from November onwards. Of course I may have accidentally missed the song in the period from August to October, but this seems hardly likely in such a common species. Further, my experiences with the species are similar to those of Chapman (1894), who ably described them.

195. **Campylopterus ensipennis** (Swainson)

Trochilus ensipennis Swainson, Zool. Illustrations, vol. 2, 1822, pl. 107 and index (Locality unknown, but most probably Tobago).

Pigeon Peak, Tobago: 2 ♂ ♂ (nos. 920, 921).

No.	Sex	Date	Wing	Tail	Culmen	Weight
920	♂	14-2-1954	78	50	24	10.5
921	♂	14-2-1954	78	53	24	9.5

Irides dark brown. Bill and feet black.

Short description. Shining green with deep blue throat. Central tail feathers as the back, but darker, next pair steel-blue, rest white with dark base. In the ♀ the under parts are mixed with grey. Contrary to Peters (1945, p. 20) not in Trinidad.

Field notes. On 14 February this species was found in some numbers in the virgin forest near the summit of Pigeon Peak, Tobago. The males were in full song, a single chirp, repeated at regular short intervals.

A nest was found on the same day and locality, and as I am not aware that the nest of this species has ever been described in literature (Belcher only found a nest that was still under construction), some descriptive notes are given here. The nest was attached near to the end of a somewhat pendular, flexible twig, about 1.75 m above the forest floor; it is cup-shaped and, compared with nests of other humming-birds, very large (diameter 5.5 cm, height 7 cm). It contained two practically unincubated white eggs, one of which measures 16.2 × 10.4 mm. A female bird was seen visiting the nest and incubating.

196. **Florisuga mellivora mellivora** (L.)

Trochilus mellivorus Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 121 (India = Surinam).

Providence Estate, El Cerro del Aripo: 1 ♂ (no. 776).

La Laja: 1 ♂ (no. 742).

No.	Sex	Date	Wing	Tail	Culmen	Weight
742	♂	20-1-1954	72	40	19	6.5
776	♂	27-1-1954	75	45	18	6.5

Irides dark brown. Bill black. Feet blackish brown.

Short description. Head and neck shining blue, white neck patch, rest of upper parts grass green. Wings blackish. Under parts white. Central tail feathers green, lateral tail feathers white, edged with blackish purple. Tail forked. ♀ upper and under parts green, abdomen white.

Field notes. Though this species was not observed until the second half of January, I afterwards found that in Spring Hill Estate and the Heights

of Guanapo it was a regular visitor of the flowering *Erythrina*-trees, and I am inclined to agree with Léotaud's statement that : "Ce colibri sans être rare, n'est cependant pas très-commun". In flight this species can easily be distinguished from all other humming-birds occurring in Trinidad by its conspicuous white under parts. They usually perch high, which certainly contributes to their being not so easily observed. Like many other species of humming-birds, the Jacobin is rather querulous and, though generally it is solitary, I once saw three specimens chase each other on Spring Hill Estate.

196a. **Florisuga mellivora flabellifera** (Gould)

Trochilus flabelliferus Gould, Proc. zool. Soc. London, pt. 14, 1846, p. 45 (Mexico?-Tobago).

Caledonia, Tobago: 1 ♂ (no. 900).

No.	Sex	Date	Wing	Tail	Culmen	Weight
900	♂	12-2-1954	78	45	23	7.5

Originally described by Gould and afterwards by Ridgway (s.n. *tobagensis*) as being larger than Trinidad birds. Ridgway (1910, p. 55), however, gives as wing measurement 70.5 mm, which seems remarkable small for a ♂ from Tobago. Perhaps a ♀?

Field notes. The specimen collected, shot from an *Erythrina*-tree at the edge of a cacao plantation in the hills, was the only one encountered, so that I can say nothing about this bird's status.

197. **Colibri delphinae** (Less.)

Ornismya Delphinae Lesson, Rev. Zool., vol. 2, 1839, p. 44 (Santa Fé de Bogota, Berlepsch & Hartert restricted).

San José: 1 ♂, 1 — (nos. 802, 804).

El Cerro del Aripo: 1 — (no. 771).

La Laja: 1 ♂ (no. 705).

Spring Hill Estate, Arima Valley: 1 — (no. 700).

Pena de Juangalo: 2 ♂ ♂ (nos. 678, 684).

No.	Sex	Date	Wing	Tail	Culmen	Weight
678	♂	16-12-1953	74	43	16	8
684	♂	19-12-1953	74	40	16	7
705	♂	28-12-1953	77	44	18	6.5
804	♂	1- 2-1954	75	42	18	5.5
700	—	27-12-1953	77	43	16	6.5
771	—	27- 1-1954	76	42	18	6
802	—	1- 2-1954	73	41	17	5.5

Irides dark brown. Bill and feet black.

Compared with the older skins collected on Trinidad by André and Cher-

rie it appears that the skins recently collected are clearly greyer, less brownish. These skins discolour in collections.

Short description. Upper parts brownish, under parts greyish. A blue streak below eyes and ear coverts. Glittering green patch on throat. Upper and under tail coverts brown. Not in Tobago.

Field notes. Contrary to Belcher & Smocker's experience, who considered this species very rare, I found it locally very common once I knew its habitat. The species appears widely distributed throughout the visited parts of the Northern Range where — during the months December to February when I observed it — it attracts attention by its monotonous chirping song which I rendered as follows: "chwee — chwee — chwee — chwee — chwee ...", endlessly repeated. The species inhabits rich forests in the higher parts of the Northern Range, and is particularly plentiful in shady cacao estates where it is attracted by the flowering *Erythrina*-trees. Evidently this humming-bird is much more common than indicated in the majority of previous publications; apart from Belcher & Smocker quoted above, Léotaud (1866) already wrote: "ce colibri est assez rare ici", whereas the really rare *Helimaster longirostris* receives the remark: "ce colibri n'est pas très commun".

On 31 December I observed two specimens, presumably two males, for a considerable time. Every time they perched close to each other, flew off again, would hover for a moment with the bills pointing to each other and perhaps even touching, and subsequently would fly away, chasing each other with considerable speed. Afterwards they would return to their perches and start chirping.

198. *Anthracothorax viridigula* (Bodd.)

Trochilus viridigula Boddaert, Tabl. Pl. Enlum., 1783, p. 41 (Cayenne).

Laventille Swamp: 1 ♂, 1 ♂ imm. (nos. 207, 208).

No.	Sex	Date	Wing	Tail	Culmen	Weight
208	♂	3-9-1953	71	36	28	8.5
207	♂ imm.	3-9-1953	73	37	29	8.5

Irides dark brown. Bill and feet black.

The measurements of some Surinam birds are:

♂♂	(6)	wing	69-73,	tail	34-40,	culmen	27-29 mm.
♀♀	(3)	wing	70 ,	tail	35-37,	culmen	28-29 mm.

Short description. ♂ differs from *nigricollis* by the glittering green throat. Tail straight. ♀ difficult to distinguish from ♀ *nigricollis*. White streaks of the under side often mixed with brown. Not in Tobago.

Field notes. Repeatedly observed in the Laventille and Caroni Swamps, where evidently common in the mangroves. Never observed elsewhere.

Street's observations (1946, p. 372) concerning this species "apparently common in the mountains" are so much at variance with my own experience, with that of Belcher and Smooker, and also with Haverschmidt's (1955b, p. 73), findings in Surinam, that I consider his identification very doubtful. Beebe's (1952) record of this species' occurrence in the Arima Valley is also in need of corroborating evidence.

199. ***Anthracothorax nigricollis*** (Vieill.)

Trochilus nigricollis Vieillot, Nouv. Dict. (nouv. éd.), vol. 7, 1817, p. 349 (Belem, Para, Brazil).

Tacarigua: 1 ♂, 1 ♂ imm., 2 ♀♀ (nos. 11, 70, 500, 622).

Arima Valley: 1 ♂ (no. 744).

La Laja: 1 ♂ (no. 769).

Spring Hill Estate, Arima Valley: 1 ♂ (no. 733).

No.	Sex	Date	Wing	Longest tail feathers	Culmen	Weight
622	♂	7-12-1953	68	37	22	7.5
733	♂	20-1-1954	69	37	22	5.5
744	♂	20-1-1954	69	39	24	7
769	♂	27-1-1954	69	41	24	6
500	♂ imm.	11-11-1953	69	35	24	7
11	♀	13-7-1953	66	33	24	6
70	♀	30-7-1953	65	35	24	—

Irides dark brown. Bill and feet black.

9 ♂♂, 2 ♀♀ from Surinam measure:

♂♂ (9) wing 66-70, tail 34-38, culmen 22-25 mm.

♀♀ (2) wing 65-67, tail 33-35, culmen 23 mm.

Short description. Upper parts bronze green. Tail forked, lateral tail feathers chestnut with purple gloss. Under parts velvety black, edged greenish blue along throat and breast. ♀ with a median black streak below bordered on both sides by white.

Field notes. Very common in more or less open country, and with *Saucerottia tobaci* and *Chrysolampis mosquitos* the only species that regularly visits gardens. On 24 December I observed a female collecting, by hovering in front of the plumes, plush from tall grasses. Though she returned several times, and every time flew away in the same direction, I did not manage to find the nest she was evidently engaged in building.

200. **Chrysolampis mosquitus** (L.)

Trochilus Misquitus Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 120 (Indiis = Surinam).

Tacarigua: 1 ♂, 1 ♂ imm., 1 (♀) (nos. 16, 47, 671).

Verdant Vale: 1 ♂ (no. 830).

Mt. Cangrejal: 1 ♀ (no. 713).

Diamond Estate, Auchenskeoch, Tobago: 1 (♀) (no. 912).

Back Hill, Tobago: 1 (♀) (no. 913).

No.	Sex	Date	Wing	Tail	Culmen	Weight
671	♂	15-12-1953	58	35	11	—
830	♂	4-2-1954	58	35	12	—
16	♂ imm.	14-7-1953	59	32	12	3
47	(♀)	24-7-1953	53	28	—	2.5
713	♀	2-1-1954	58	31	13	3
912	(♀)	13-2-1954	56	32	14	4
913	(♀)	13-2-1954	59	32	13	4

Irides dark brown. Bill and feet black.

Short description. Upper parts dark greenish brown. Head and neck glittering ruby red, throat and breast topaz orange. Abdomen dusky. Tail feathers and under tail coverts chestnut, the former tipped with black. ♀ upper parts dark green, under parts dusky grey. Tail chestnut with greenish central tail feathers.

Field notes. A common bird in more or less open country, including gardens, in Trinidad and Tobago.

On 2 January a nest was found and the incubating ♀ collected (no. 713) on a slope of Mt. Cangrejal, Trinidad, in a neglected field covered with *Cajanus cajan*, *Manihot utilissima*, and a thick layer of weeds among which *Bidens pilosa* was conspicuous. Many of the manihot plants were almost entirely stripped of their leaves, probably by caterpillars, and in such a bare shrub, about 1.25 m high and on a place where the stem of the shrub divided in three, the nest was situated. It contained two fresh eggs, measuring 12.1 × 8.4 and 11.8 × 8.6 mm, slightly smaller than the set of eggs recorded by Belcher & Smooker.

On 12 February a nest was found at Caledonia, Tobago, but as it was situated at least 6 m up in a tree, inspection of the nest, on which a female bird was sitting, was impossible.

201. **Lophornis ornata** (Bodd.)

Trochilus ornatus Boddaert, Tabl. Pl. Enlum., 1783, p. 39 (Cayenne).

Tacarigua: 3 ♂ ♂, 1 ♂ imm., 1 ♀ (nos. 387, 434, 478, 537, 653).

Providence Estate, El Cerro del Aripo: 1 ♀ (no. 775).

No.	Sex	Date	Wing	Tail	Culmen	Weight
387	♂	23-10-1953	40	23	10	1.5
478	♂	7-11-1953	40	24	10	—
537	♂	18-11-1953	40	24	10	2
653	♂ imm.	12-12-1953	39	20	11	2.5
434	♀	2-11-1953	39	20	11	—
775	♀	27-1-1954	39	20	11	1.5

Irides dark brown. Bill brownish red with black tip (in ♀♀ the black tip is larger). Feet black.

No. 387 moults the head feathers. In no. 653 the ornamental plumes on the head are developing.

4 ♂♂, 1 ♀, 2 unsexed specimens from Surinam measure: wing 36-40 mm. Probably on an average they are a trifle smaller.

Short description. Small species. Upper parts shining green with buffy white streak across the rump. Dark chestnut brown crest. Forehead and throat glittering green. Elongated cinnamon feathers on the sides of the neck. Feathers ending in a glittering green tip. Under parts greyish, feathers tipped with green. Tail feathers cinnamon edged with green. ♀ has the throat cinnamon and lacks the crest and the elongated cervical feathers. Not in Tobago.

Field notes. A fairly common and, at least in the northern part of the island, widely distributed species inhabiting the edges of forest, and rich secondary growths, wherever there are flowers.

The species seems particularly fond of Pigeon Peas (*Cajanus cajan*) and in the hills near Tacarigua it was hardly possible to miss the birds as they flew, like giant wasps, from flower to flower. Dr. Quesnel even observed specimens in Pigeon Peas near the outskirts of Port-of-Spain. In flight, apart from the small size, the whitish rump bar is the most conspicuous diagnostic character.

Sometimes a specimen, in flight, would utter a weak call: "cheek..... cheek..."; I have not heard song.

202. *Chlorestes notatus notatus* (Reichenbach)

Trochilus notatus C. Reichenbach, Mag. des Tierreichs, vol. 1, 1795 (Cayenne).

Tacarigua: 2 ♂♂, 1 ♂ imm., 1 ♀ (nos. 37, 181, 191, 571).

Spring Hill Estate, Arima Valley: 1 ♀ (no. 150).

Between Morne Bleu and Aripo (600 m): 1 ♂ imm.? (no. 751).

Mt. Chaguaramal: 2 ♂♂, 1 ♂ imm.? (nos. 514, 515, 517).

Near Guamal: 1 ♂ (no. 694).

Hills SW of Caura: 1 ♂ (no. 531).

Ortínola: 2 ♂♂ (nos. 696, 697).

San José: 1 ♂ (no. 801).

Point Fortin: 1 ♀ (no. 630).

No.	Sex	Date	Wing	Tail	Culmen	Weight
191	♂	31-8-1953	49	28	19	3.5
514	♂	14-11-1953	54	30	18	3.5
515	♂	14-11-1953	51	28	17	3.5
531	♂	17-11-1953	49	31	18	3.5
571	♂	25-11-1953	50	29	17	3.5
694	♂	21-12-1953	53	30	17	3.5
696	♂	21-12-1953	51	29	18	4
697	♂	21-12-1953	51	29	17	4
801	♂	1-2-1954	52	29	18	—
37	♂ imm.?	21-7-1953	51	28	20	3
517	♂ imm.?	14-11-1953	51	27	18	3.5
751	♂ imm.?	22-1-1954	52	28	19	3.5
150	♀	21-8-1953	48	31	18	3
181	♀	27-8-1953	44 (moult)	27 (moult)	19	3.5
630	♀	8-12-1953	49	26	19	3.5

Irides dark brown. Feet black. Maxilla and tip of mandible black, basal part of mandible dirty pink.

There are no differences from Surinam and British Guiana birds. These birds measure :

♂♂ (5) wing 49-51, tail 28-30, culmen 16-18 mm.

♀♀ (4) wing 46-49, tail 26-27, culmen 17-19 mm.

Short description. Upper parts glittering green, under parts golden green with a small blue chin patch. Tail steel-blue. In the ♀ the under parts are greyish white with green glittering spots on the throat. This and the blue tail distinguish it from *A. chionopectus*. Not in Tobago.

Field notes. A common and widely distributed forest bird found at all levels in Trinidad. It regularly visits flowering trees outside the actual forest, including *Erythrina* in cacao plantations, and in these places it may associate with *Sauccroittia tobaci*, though normally the two species are ecologically different. Peters perpetuates the erroneous inclusion of Tobago in the range of the species; there is no proof that it has ever been found there.

203. **Chlorostilbon mellisugus caribaeus** Lawrence

Short description. Small species. Upper and under parts are in the ♂ shining golden green. Tail blue. Differs from *Chlorcstes notatus* by smaller size and wholly black bill. ♀ dull green upper parts, dusky white under parts. A dusky white postocular spot. Lateral tail feathers white-tipped. Not in Tobago.

204. **Polytmus guainumbi** (Pall.)

Short description. A rather large species. ♂ has the upper parts shining green, head brownish. Under parts shining yellowish green. Central tail feath-

ers bluish green, others green with white outer webs. ♀ under parts edged with white. Only known from Caroni Swamp.

205. ***Amazilia chionopectus chionopectus*** (Gould)

Thaumatias chionopectus Gould, Monogr. Trochilidae, pt. 18, 1859, pl. 8 and text (Trinidad).

Tacarigua: 4 — (nos. 21, 27, 343, 570).

Ortinola: 1 — (no. 692).

Mt. Chaguaramal: 1 — (no. 520).

Naranja: 1 — (no. 686).

Paria Bay: 1 — (no. 760).

La Laja: 1 — (no. 848).

Tunapuna: 1 — (no. 494).

Morne de l'Enfer Reserve: 1 — (no. 640).

Guanapo Reserve: 1 — (no. 812).

No.	Sex	Date	Wing	Tail	Culmen	Weight
21	—	15-7-1953	52	27	17	3
27	—	17-7-1953	52	28	21	3.5
343	—	14-10-1953	55	30	20	4.5
494	—	10-11-1953	50	28	20	4
520	—	14-11-1953	53	30	21	4.5
570	—	25-11-1953	51	29	21	4
640	—	9-12-1953	52	31	19	3.5
686	—	19-12-1953	54	31	19	5
692	—	19-12-1953	56	29	18	4.5
760	—	23-1-1954	51	28	22	4
812	—	2-2-1954	51	32	19	4
848	—	5-2-1954	52	28	21	4

Irides dark brown. Bill and feet black.

Short description. Middle-sized. Upper parts bronze green, most pronounced on upper tail coverts and tail. Under parts white. Under tail coverts greyish edged with white. Not in Tobago.

Field notes. Another common humming-bird, that apparently reaches its greatest abundance in cacao plantations and in similar fairly open country, though it but rarely ventures out in gardens and other entirely open places. The pretensionless and feeble song, as heard towards the end of December from a specimen perched in the top of a cacao-tree, I noted as: "techlüche-tete".

206. ***Saucerottia tobaci tobaci*** Gm.

Trochilus Tobaci Gmelin, Syst. Nat., vol. 1, pt. 1, 1788, p. 499 (Tobago).

Store Bay, Tobago: 2 — (nos. 397, 407).

Diamond Estate, Auchenskeoch, Tobago: 2 — (nos. 863, 887).

Caledonia, Tobago: 1 — (no. 866).

Mt. Dillon, Tobago: 1 — (no. 907).

Pigeon Peak, Tobago: 1 — (no. 922).

No.	Sex	Date	Wing	Tail	Culmen	Weight
397	—	27-10-1953	55	31	16	3.5
407	—	28-10-1953	58	31	18	4
863	—	9-2-1954	54	32	18	4
866	—	9-2-1954	58	34	18	4.5
887	—	11-2-1954	57	31	18	3.5
907	—	12-2-1954	55	32	18	4
922	—	14-2-1954	56	31	18	4

Irides dark brown. Maxilla and tip of mandible black, rest of mandible pinkish. Feet black.

Short description. Upper parts bronze coppery green. Under parts glittering green. Under tail coverts reddish brown. Tail blue. Strong coppery glance on rump and the absence of a blue chin spot distinguish the species from *Chlorestes notatus*.

Field notes. The commonest humming-bird from Tobago, not only found plentiful in open country, but also occurring in forest to a greater degree than its Trinidad relative. In the field this form looks decidedly greener than *erythronota*, and probably this is the source of the supposition that *Chlorestes notatus* also occurs in Tobago.

In this form bathing was observed. From its perch, about 2 m above a rivulet, the bird again and again flew fairly steeply down, hovered for a moment very close above the water surface, and plunged into the water, its head, however, remaining above the surface. Subsequently it would fly back to its perch and commence preening.

A curious kind of behaviour was observed on 14 February in a cacao plantation at Back Hill. A *Saucerottia* was seen flying continually, like a pendulum with an amplitude of about four meters, to and fro, uttering a: "tyēerr — tyēerr — tyēerr —", evidently its alarm cry. Just like a pendulum it reached the lowest point in the middle of its flight, and soon I discovered that this strange behaviour meant an attack on a specimen of *Myiodynastes maculatus*, which was every time very closely approached by the humming-bird and, if I correctly interpreted the ticks that were audible, was hit also now and then. The flycatcher did not seem to be much distressed by the humming-birds' behaviour.

206a. *Saucerottia tobaci erythronota* (Less.)

Ornismya erythronotus Lesson, Hist. Nat. Ois. Mouches, 1829, p. XXXII and p. 181, pl. 61 (Brazil = Trinidad).

Tacarigua: 9 — (nos. 15, 39, 116, 130, 170, 336, 342, 382, 575).

Laventille Swamp: 1 — (no. 620).

Lalaja: 2 — (nos. 703, 704).

Maracas Bay: 1 — (no. 587).

Fort Read: 1 — (no. 526).

Mt. Chaguaramal: 1 — (no. 521).

Tunapuna: 1 — (no. 451).

No.	Sex	Date	Wing	Tail	Culmen	Weight
15	—	14-7-1953	51	29	18	—
39	—	22-7-1953	53	29	17	—
116	—	13-8-1953	52	29	17	—
130	—	17-8-1953	52	30	18	3.5
170	—	26-8-1953	47	30	18	3.5
336	—	12-10-1953	52	28	19	4.5
342	—	13-10-1953	52	28	18	4.5
382	—	22-10-1953	51	27	19	4
451	—	3-11-1953	50	28	19	4
521	—	14-11-1953	52	29	—	3.5
526	—	15-11-1953	50	27	18	3.5
575	—	25-11-1953	53	29	18	4.5
587	—	29-11-1953	46	26	21	3.5
620	—	5-12-1953	50	27	20	4.5
703	—	28-12-1953	49	28	18	3.5
704	—	28-12-1953	53	30	18	4

Irides dark brown. Bill black with basal part of mandible pinkish. Feet black.

The series shows some variation in the colour of the upper parts, some specimens are more brown tinged than others. In most specimens the under tail coverts are edged with rusty brown, but in a few specimens this is not very pronounced.

Compared with the Tobago birds, the Trinidad birds are smaller (wing 47-53 against 54-58 mm). The latter are slightly more bronze tinged on the upper parts and have more brown tinged under tail coverts. The Tobago birds before me show hardly any rusty brown on the under tail coverts.

Field notes. The most common humming-bird in open country and near human habitations; also found in cacao estates and in light forest, but not occurring in dark and heavy forest where this species is conspicuously replaced by the very similar-looking *Chlorestes notatus*.

The species has a fairly pretty but feeble song: "sēē — tsī-tsi ... sēē — tsī-tsi...", but I have not heard it often.

Bathing of this species, as observed on 12 November in a cacao cultivation near the edge of the Tacarigua Reserve, offers a very attractive spectacle. From a twig about three meters above a rivulet a specimen flew fairly steeply down to the water surface, plunged into the water, keeping, however, its head dry, and subsequently flew back to its branch, where it started preening laboriously.

The piercing of corolla tubes of flowers for attaining nectar is a habit well known in birds, including several species of humming-birds. It was

repeatedly observed in our garden at Orange Grove Estate where we had several rows of *Beloperone guttata*. The flowers of these plants were regularly visited by a specimen of *Saucerottia* that had taken residency in the garden, and always in the same way: the bird, hovering in front of, or above a flower, would pierce its corolla tube close to the base. Not only open flowers were visited in this way, but also large buds, and I never saw this species visit the flowers in the normal way. That the birds made a thorough job of it was shown by the fact that it proved to be almost impossible to find flowers that had not been pierced. *Beloperone guttata* is not an endemic flower in Trinidad, but it has grown wild in recent years, and is now found in extensive patches near Arima. The related red flower *Pachystachys coccinea*, that is locally common in the cacao plantations in the hills, is visited in the same way.

Two other species of humming-birds, *Chrysolampis mosquitus* and *Anthracothonax nigricollis*, both also often present in our garden, always visited the flowers of *Beloperone* in the regular way, without doing damage. They have longer bills than *Saucerottia*, so that for them there is evidently no need to seek a short cut to the nectar. The way *Coereba flaveola* visits the flowers of *Beloperone* is described in the notes on that species.

207. ***Helimaster longirostris longirostris*** (Audeb. & Vieill.)

Trochilus longirostris Audebert & Vieillot, Oiseaux Dorés, vol. 1, 1801, p. 107, pl. 59 (West Indies, i.e. Trinidad).

La Laja: 1 ♂ (no. 841).

Hills SW of Caura: 1 ♂ (no. 672).

No.	Sex	Date	Wing	Tail	Culmen	Weight
672	♂	16-12-1953	58	31	32	--
841	♂	5-2-1954	60	33	31	5.5

Irides dark sepia. Bill black. Feet brownish black to black.

Short description. Upper parts grass green, crown glittering blue. Throat and breast glittering brownish red. Under parts greyish with middle of abdomen white and a white patch on the flanks. Bill long, rather straight. ♀ has the crown green, the throat black, feathers edged with white. Not in Tobago.

Field notes. Decidedly rare; the two specimens collected were the only members of the species encountered. The first specimen was taken in a low tree at the edge of a Pigeon Pea field near secondary forest; the second was shot while resting in the top of a fairly small tree protruding above badly kept *Citrus* and cacao groves.

208. **Chaetocercus jourdainii** (Bourcier)

Short description. Small species. Upper parts bronze green. Throat glittering violet-red. Breast white. Abdomen green. ♀ under parts cinnamon. Lateral tail feathers cinnamon with a subterminal black band. Distinguished from ♀ *Lophornis ornatus* by lacking the buffy crossband on the rump and by the absence of greenish shining feathers on the abdomen. Bill longer. Not in Tobago.

TROGONIDAE

209. **Trogon strigilatus strigilatus** L.

Trogon strigilatus Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 167, no. 1 (Cayenne).

Arima Valley: 1 ♂ (no. 722).

Point Fortin: 1 ♂ (no. 624).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
624	♂	7-12-1953	144	138	21	16	89
722	♂	9-1-1954	144	138	21	17	92

Irides dark brown, eye lid blue. Bill pale bluish grey. Feet bluish grey.

Short description. ♂ head and breast glossy purplish blue, rest of under parts orange yellow. Rest of upper parts and central tail feathers glossy green. Lateral tail feathers white with black bases. ♀ upper parts and breast greyish. Tail black, lateral tail feathers toothed with white on outer side. Not in Tobago.

Field notes. Common and conspicuous in the high woods, where it is widely distributed; in the more densely populated parts of Trinidad, however, rarely seen. The note of this species is: "tok-toktok--tok-tok tok toktok".

210. **Trogon collaris exoptatus** Cab. & Heine

Trogon exoptatus Cabanis & Heine, Mus. Heineanum, vol. 4, 1863, p. 179 (Puerto Cabello, Venezuela).

Hills SW of Caura: 1 ♀ (no. 480).

Arima Valley: 1 ♀ (no. 748).

Morne Bleu, Aripo: 1 ♀ (no. 754).

San José: 1 ♀ (no. 806).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
480	♀	9-11-1953	124	141	15	13	62
748	♀	22-1-1954	117	134	15	12	51
754	♀	22-1-1954	117	—	15	14	53
806	♀	1-2-1954	118	125	15	14	55

Irides dark brown. Bill greenish yellow with black culmen. Feet bluish grey to brownish.

Short description. ♂ bronze green above with red breast and belly. ♀ has the upper parts brown.

Field notes. Fairly common, though somewhat local, in the same habitat as the other trogons. This species has, besides the ordinary monotonous series of notes which it has in common with other trogons, several other calls. The female no. 754 was repeatedly uttering a fairly feeble, rather toneless: "kyirrrrēh"; whereas from two males near Guamal, on 21 December, a melodious loud call, or more probably a song, was heard, which I wrote as: "tyüketyüü". I have not observed the species in Tobago.

211. *Trogon violaceus violaceus* (Gm.)

Trogon violaceus Gmelin, Syst. Nat., vol. 1, pt. 1, 1788, p. 404 (Surinam).

Lopinot: 1 ♂ (no. 49).

Tacarigua: 1 ♂ (no. 110).

Point Fortin: 1 ♂ imm., 1 ♀ (nos. 623, 629).

Manzanilla: 1 ♀ (no. 172).

San José: 1 ♀ (no. 808).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
49	♂	25-7-1953	120	117	19	15	49.5
110	♂	10-8-1953	121	119	20	14	49.5
629	♂ imm.	8-12-1953	125	126	19	13	51
172	♀	26-8-1953	117	117	18	12	51
623	♀	7-12-1953	118	116	18	13	48.5
808	♀	1-2-1954	115	112	17	13	53

Irides brown. Bill bluish grey, culmen blackish. Feet bluish grey.

Short description. Resembles *strigilatus*, but smaller. Lateral tail feathers banded black and white. ♀ upper parts and breast greyish. Not in Tobago.

Field notes. Has the same habitat as *T. strigilatus* and is even more common, also occurring in the inhabited regions. The voice reminded me of the East Indian *Harpactes oreskios*, though it is not quite as toneless as in that species: "kaw.kü.kü.kü.kü.kü.kü.kü.kü.kü.kü". It is uttered by both sexes and the tail which, as in other species of trogons, hangs down vertically when the bird is perched, shakes with the uttering of the notes. It is interesting to note, as said above, that oriental and american trogons apparently all closely agree in voice.

ALCEDINIDAE

212. *Ceryle torquata* (L.)

Short description. A large species. ♂ slaty blue above, chin and neck band white, under parts deep chestnut. ♀ with a broad slaty band across the breast. Not in Tobago.

213. *Ceryle alcyon* (L.)

Short description. Smaller than the preceding. Slaty blue above with a dark crest. Under parts white with a grey breast band. ♀♀ have a second, sometimes incomplete, ferruginous band below the first and ferruginous flanks. Migrant.

Field notes. A specimen was seen at Store Bay, Tobago, on 27 October, perched on branches protruding from the low cliffs over the sea.

214. *Chloroceryle amazona* (Lath.)

Short description. Bronzy green above with a white neck collar and white under parts. ♂♂ have a chestnut breast band, in ♀♀ replaced by an interrupted bronzy green band. Not in Tobago.

215. *Chloroceryle americana croteta* Wetmore

Chloroceryle americana croteta Wetmore, Journ. Wash. Ac. Sc., vol. 12, Aug. 1922, p. 325 (Tobago).

Hillsborough Reservoir, Tobago: 1 ♂ (no. 897).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
897	♂	11-2-1954	77	53	40	9	28.5

Short description. About the size of a European Kingfisher. Bronzy green above with white neck collar and white spots on the wings. In the ♂ the breast is chestnut, abdomen white intermingled with bronzy green. The ♀ has a bronzy green breast band.

Field notes. The only specimen ever observed in Trinidad was one seen flying over a pool behind the usine of Orange Grove Estate. It may well have been resident there, but I did not revisit the place. In Tobago the species appeared common on the Hillsborough East River Reservoir.

216. *Chloroceryle aenea aenea* (Pall.)

Alcedo aenea Pallas in Vroeg's Cat. Ois. Adumbr., 1764, p. 1, no. 54 (Surinam).

Laventille Swamp: 2 ♂♂ (nos. 211, 562).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
211	♂	3-9-1953	58	36	29	8	13.5
562	♂	22-11-1953	58	37	28	8	14.5

Irides dark sepia. Bill black, basal under side mandible yellowish white. Feet greyish.

Perhaps Trinidad birds average slightly larger than birds from Surinam and Cayenne. A series of 10 ♂♂ from the latter region measure: wing 53-58 (average 55.7), tail 32-37 (average 33.9), culmen 22-28 (average 26) mm.

Short description. Small with shining green upper parts, under parts deep

chestnut with a large white spot on the abdomen. ♀ with a broad green breast band: Not in Tobago.

Field notes. Though Belcher & Smooker call this species exceedingly rare, it is the only kingfisher regularly observed by me in Trinidad, where I would call it an uncommon resident. Apart from the Laventille Swamp, where I heard and saw specimens on several occasions, I twice observed a Pygmy Kingfisher near the mouth of a rivulet at Maracas Bay, and on 29 November an apparently juvenile specimen (with pale under parts) was seen and collected while perched on a bamboo twig above a narrow ditch filled with brownish and quite untransparent water in Dinsley Bamboo, Orange Grove Estate. Unfortunately the skin (no. 298) could not be preserved. An East Indian has shown me a hole in a small dike bordering a ricefield at the edge of Laventille Swamp, of which he told me that it was a nest of the Pigmy Kingfisher, but at the time it seemed no longer inhabited.

MOMOTIDAE

217. *Momotus momota bahamensis* (Swainson)

Prionites bahamensis Swainson, Anim. in Menag., 1837, p. 332 (Bahama Islands = Trinidad).

Verdant Vale Estate, Arima Valley: 1 ♀ (no. 721).

Point Fortin: 1 — (no. 632).

Caledonia, Tobago: 1 ♀ (no. 427).

No.	Sex	Date	Wing	Median tail feathers	Tail	Culmen	Tarsus	Weight
632	—	8-12-1953	138	225	156	36	28	102
721	♀	9-1-1954	137	206	149	35	27	108
417	♀	29-10-1953	142	225	154	36	29	114

Irides dark brown (417) to dead red. Bill black. Feet brownish.

Short description. Green above, chestnut below. Central tail feathers with an elongated racket. Crown black, forehead cobalt blue, ultramarine band behind the crown, black around the eyes. A few black feathers in centre of breast.

Field notes. In Trinidad only locally, in the remote parts of the island, fairly common; in Tobago very common in suitable localities, particularly in the cacao estates in the central part of the island.

It is a beautiful and curious bird and it is not kind of Léotaud to write that: "...son port est lourd, sa forme peu gracieuse, et c'est en vain que sa parure emprunte l'éclat de quelques belles couleurs...". Belcher & Smooker already noted that this species, when perched, has the unusual habit of moving its tail from side to side. I observed the following performance in the Blan-

chisseuse Reserve on 23 January: a Motmot, perched on a branch in a dark place, was producing fairly loud noises: "took-took terrrook took took-took" etc., and in the meantime moved its tail, that was cocked and pointing diagonally upwards, from side to side.

GALBULIDAE

218. *Galbula ruficauda ruficauda* Cuvier

Galbula ruficauda Cuvier, Règne Anim., vol. I, 1817, p. 420 (Guiana).

Tacarigua: 1 (♂) (no. 34).

Arena Reserve: 1 (♀) (no. 545).

Hillsborough Reservoir, Tobago: 1 ♀ (no. 895).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
34	(♂)	20-7-1953	86	116	55	14	19
545	(♀)	20-11-1953	86	124	53	13	24
895	♀	11-2-1954	84	107	46	13	24.5

Irides dark brown. Bill black. Feet dirty or greyish yellow.

Short description. Above golden green. Belly, under wing coverts and lateral tail feathers chestnut. Central tail feathers like the back. Breast band golden green. In ♂ throat white, in ♀ white washed with rufous.

Field notes. Commonly found in open woodland in both islands, generally several individuals together. The call is a whistle, usually of slowly repeated single notes, but often accelerated to a series.

RHAMPHASTIDAE

219. *Ramphastos vitinellus vitinellus* Licht.

Ramphastos vitinellus Lichtenstein, Verz. Doubl. Zool. Mus. Berlin, 1823, p. 7 (Cayenne).

Hills SW of Caura: 1 ♀ (no. 598).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
598	♀	2-12-1953	186	137	116	55	315

Irides dark brown. Bill black, base bluish. Feet blue.

Short description. Upper parts black, with scarlet upper tail coverts. Throat white, breast tinged with orange yellow, lower breast scarlet. Belly black, under tail coverts scarlet again. Not in Tobago.

Field notes. Locally common in tall forest trees where the birds readily draw attention by their noisy behaviour. Though toucans are legally protected, they are much hunted for food by native gun-bearers.

PICIDAE

220. **Piculus rubiginosus trinitatis** (Ridgway)

Chloronerpes rubiginosus trinitatis Ridgway, Proc. Biol. Soc. Wash., vol. 24, 1911, p. 32 (Princetown, Trinidad).

Tacarigua: 1 ♂ (no. 217).

Tacarigua Reserve: 1 ♀ (no. 385).

Arima Valley: 2 ♀ (nos. 147, 785).

Arima Reserve: 1 ♀ (no. 81).

Mt. Tabor: 1 ♀ (no. 491).

Verdant Vale: 1 ♂ (no. 829).

Hills near St. Benedict Estate: 1 ♂ (no. 446).

Between Morne Bleu and Aripo: 1 ♂ (no. 839).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
217	♂	9-9-1953	102	57	20	18	54
446	♂	3-11-1953	106	62	21	18	53
829	♂	4-2-1954	103	56	21	19	54.5
839	♂	5-2-1954	106	63	21	19	54.5
81	♀	3-8-1953	101	58	20	18	58
147	♀	20-8-1953	107	59	20	17	53
385	♀	23-10-1953	106	65	20	19	53
491	♀	10-11-1953	104	59	21	19	54
785	♀	28-1-1954	101	62	21	17	51

Irides chestnut brown or reddish brown. Bill bluish grey. Feet blackish.

Short description. Upper parts golden olive, crown dark grey, occiput and nape crimson. A broad buffy white streak through the eyes. A crimson malar stripe only in the ♂.

Field notes. The commonest woodpecker of Trinidad, being fairly common and widely distributed in forested country at all levels (but not observed in mangrove). Usually seen solitary or in pairs.

The species was occasionally seen drumming; also it has a loud cry: "ke-lēē...klēē", occasionally alternated with a rattling: "t.r.r.r.r.r.r.te.te.te".

Female no. 147 was shot while hacking out a nesting hole close to the top of an about 3 m high and 25 cm thick tree stump.

220a. **Piculus rubiginosus tobagensis** (Ridgway)

Chloronerpes rubiginosus tobagensis Ridgway, Proc. Biol. Soc. Wash., vol. 24, 1911, p. 33 (Tobago).

Caledonia, Tobago: 1 ♂ (no. 898).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
898	♂	12-2-1954	109	64	25	19	59

The ♂ of *tobagensis* differs from ♂♂ of *trinitatis* by slightly larger size, the bill is heavier.

Field notes. The specimen collected was the only one seen during my stay in Tobago; it was drumming against a tree stump.

221. ***Celeus elegans léotaudi*** Hellmayr

Celeus elegans léotaudi Hellmayr, Novit. Zool., vol. 13, 1906, p. 39 (Valencia, Trinidad).

Three Sisters: 1 ♂ (no. 216).

Arima Valley: 1 ♂ (no. 727).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
216	♂	9-11-1953	144	88	27	21	107
727	♂	19-1-1953	154	102	30	23	124.5

Irides dark dull red and grey. Bill pale yellow. Feet greenish grey.

Short description. Rufous brown with a yellow crest and upper tail coverts. Bill yellow. The ♂ shows a crimson malar stripe. Not in Tobago.

Field notes. Locally common in forests. Often two or three specimens are seen together; they are noisy birds, their call reminding me of parrots, whereas drumming also occurs in the species.

222. ***Dryocopus lineatus*** (L.)

Short description. Upper parts black with a white patch above the wing. Crest crimson. Chin and throat white with black streaks in both sexes. Sides of head black with a narrow white band from the base of the bill to the neck. Lower throat and upper breast black, rest under parts whitish with black streaks. The ♂ has a crimson malar streak, the ♀ a black forehead. Not in Tobago.

Field notes. Though according to Roberts the species is not uncommon, I have never seen it.

223. ***Melanerpes rubricapillus terricolor*** (Berlepsch)

Centurus terricolor Berlepsch, Ibis, 1880, p. 113 (Orinoco district, Venezuela).

Store Bay, Crown Point, Tobago: 1 ♂ (no. 398).

Caledonia, Tobago: 1 ♂ (no. 411).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
398	♂	27-10-1953	109	56	23	18	45.5
411	♂	29-10-1953	109	54	24	19	50

Irides pale brown. Bill black. Feet dark greenish grey.

Short description. Upper parts barred black and white. Head and under parts pale drab. Crown in ♂ crimson, in ♀ buffy brown. Red nuchal feathers in both sexes. Patos and Tobago; not in Trinidad proper.

Field notes. Common in the western and central parts of Tobago, in half open country, cacao plantations and bamboo groves; not seen in primary forest. Specimen no. 398 was collected while, behaving not at all woodpecker-like, among the foliage of a small tree it was looking for berries of about $\frac{1}{2}$ cm diameter, which were swallowed entirely. The call sounds about as one would expect from a little woodpecker: "tr.r.r.r.r.r.ř.ř.ř.ř".

224. **Veniliornis kirkii kirkii** (Malherbe)

Picus (Chloropicus) kirkii Malherbe, Rev. Zool., vol. 8, 1845, p. 400 (Tobago).

Laventille Swamp: 1 ♂ (no. 614).

Between Morne Bleu and Aripo: 1 ♂ (no. 794).

SW of Caura: 1 ♀ (no. 693).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
614	♂	5-12-1953	92	53	23	15	35
794	♂	29-1-1954	91	58	21	16	36.5
693	♀	21-12-1953	92	56	21	16	38

Irides ♂ brown, ♀ brown with grey outer ring. Bill pale greyish with black tip. Feet bluish grey.

Short description. Upper parts golden olive with vermilion red rump and upper tail coverts. In the ♂ crown and occiput vermilion, the nape varied with yellow, in the ♀ crown and occiput brownish black. Under parts barred blackish and whitish.

Field notes. Uncommon, though apparently widely distributed in the wooded parts of Trinidad. The specimen from the Laventille Swamp was shot, out of a group of two or three individuals, in the mangroves. This was the first occasion, more than five months after my arrival in Trinidad, that I came across the species. Subsequently I found that it was not uncommon on the slopes of the Morne Bleu. In Tobago I have not met it, but in view of the short duration of my stay there, this does not mean anything apart from the fact that on that island it can not be plentiful either.

225. **Phloeceastes melanoleucos melancleucos** (Gm.)

Picus melanoleucos Gmelin, Syst. Nat., vol. 1, 1788, p. 426 (Surinam).

Morne l'Enfer Reserve: 1 ♀ (no. 641).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
641	♀	9-12-1953	200	123	48	32	279

Irides orange yellow.

Five ♀♀ from Surinam measure: wing 190-207, tail 120-126, culmen 44-48, tarsus 33-34 mm.

Short description. Upper parts, chin and throat black, under parts barred

black and buffy white. A white stripe on each side of the upper part of the back and along the neck. ♂ head crimson with a black and white patch on ear coverts. In the ♀ crimson crest, black in the centre, white neck stripe running to base of bill. Not in Tobago.

Field notes. The specimen obtained was collected out of a pair in a piece of old and damp forest with many decaying trees. The birds drew my attention by their loud drumming. This was the only time I came across the species.

DENDROCOLAPTIDAE

226. *Dendrocincla fuliginosa meruloides* (Lafr.)

Dendrocops meruloides Lafresnaye, Rev. & Mag. Zool. (2), vol. 3, 1851, p. 467 ("Côte ferme" = Cumané, Sucre, Venezuela).

Tacarigua: 1 ♂ (no. 85).

Tacarigua Reserve: 2 ♀ ♀ (nos. 477, 502).

Arena Reserve: 1 ♀ (no. 83).

Spring Hill Estate: 1 ♂ (no. 710).

Guanapo Reserve: 1 (♂) (no. 813).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
85	♂	4-8-1953	105	80	23	25	41
710	♂	1-1-1954	99	73	22	25	—
813	(♂)	2-2-1954	106	84	22	25	35.5
83	♀	3-8-1953	95	71	—	23	34
477	♀	7-11-1953	93	73	22	24	30
502	♀	12-11-1953	94	70	20	23	33

Irides pale greyish to yellowish brown. Bill, maxilla and base of mandible greyish brown, mandible pale bluish grey. Feet bluish grey.

Short description. Uniform rufous brown with wings and tail dark chestnut. Bill hooked.

Field notes. Common in forests. Contrary to Belcher & Smooker's statement, the occurrence of the species in Tobago is an established fact, though I did not happen to observe it on that island.

227. *Sittasomus griseicapillus* (Vieill.)

Short description. Greenish olive with chestnut wings, rump and tail. Small species with a normal passerine bill. Not in Trinidad; in Tobago rare.

228. *Xiphorhynchus picus altirostris* (Léotaud)

Dendrocolaptes altirostris Léotaud, Ois. Ile de la Trinidad, 1866, p. 166 (Trinidad).

Laventille Swamp: 1 ♀ (no. 552).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
552	♀	21-11-1953	108	72	29	23	51

Irides brown. Bill whitish, base grey. Feet pale bluish grey.

Short description. Resembles *Xiphorhynchus guttatus*, but is slightly smaller and characterized by a shorter, straight whitish bill. Rare. Not in Tobago.

Field notes. Though Smooker states to have observed the species, the present specimen seems to be the first of the subspecies collected since the days of Léotaud. In Léotaud's time it was apparently common, but now it must be very rare though it is interesting to note that the specimen was collected very close to Laventille and at only a few hundred meters from the main road in a rather accessible piece of mangrove, where it was creeping against the fairly thin and low trunks of the mangrove trees. It was not shy. Only this specimen was ever encountered.

229. ***Xiphorhynchus guttatus susurrans*** (Jardine)

Dendrocolaptes susurrans Jardine, Ann. & Mag. Nat. Hist., vol. 19, 1847, p. 81 (Tobago).

Tacarigua: 1 ♂, 2 ♀♀ (nos. 104, 109, 137).

La Laja: 1 ♂ (no. 238).

Arena Reserve: 1 ♂ (no. 549).

San José: 1 ♂ (no. 807).

Hills of Guanapo: 1 ♂ (no. 814).

Store Bay, Tobago: 1 ♀ (no. 394).

Caledonia, Tobago: 1 ♂ (no. 415).

Diamond Estate, Auchenskeoch, Tobago: 2 ♂♂, 1 ♀ (nos. 882, 883, 885).

Mt. Dillon, Tobago: 1 ♀ (no. 908).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
104	♂	9-8-1953	110	89	29	23	51
238	♂	13-9-1953	105	92	34	24	52
594	♂	20-11-1953	105	89	33	22	47.5
814	♂	2-2-1954	110	87	36	24	53
807	♂	1-2-1954	115	95	38	25	57.5
109	♀	10-8-1953	105	—	35	25	46
137	♀	17-8-1953	104	83	36	24	48
Tobago:							
415	♂	29-10-1953	102	87	37	24	48
882	♂	11-2-1954	111	88	40	23	48.5
883	♂	11-2-1954	113	87	37	23	43
394	♀	27-10-1953	97	83	36	23	44.5
885	♀	11-2-1954	90	76	36	22	41.5
908	♀	12-2-1954	98	83	38	24	45

Irides dark brown. Bill black, sometimes middle part of mandible brownish grey. Feet dark bluish grey to grey or yellowish grey; toes blackish, sometimes greenish grey.

In this material the ♀♀ from Trinidad range slightly larger than those from Tobago, but Hellmayr (1925, p. 301 footnote) remarks that the divergence between the two populations is too inconstant to warrant the recognition of a separate race.

Short description. Largest species. Upper parts brown, head blackish brown with many pale fulvous spots extending to the neck. Wings, lower back and tail ferruginous. Throat and breast with many whitish to fulvous spots. Bill black, compressed, long and hooked, slightly curved.

Field notes. In Trinidad common in forests and cacao cultivations; in Tobago common in the same habitat, but I found it particularly plentiful in a piece of mangrove belonging to Diamond Estate (which, unfortunately, was being drained in the course of a program for malaria control). In Trinidad I never observed this species in mangroves.

The insane laughing of the species is one of the loudest and most fascinating heard in the forest.

230. **Lepidocolaptes souleyetii littoralis** (Hart. & Goodson)

Short description. Rufous brown with pale fulvous shaft streaks on head, neck and under parts. Throat pale fulvous. Bill rather slender, curved and pale horn coloured. Smaller than *Xiphorhynchus guttatus* and *X. picus*. Local and rare. Not in Tobago.

FURNARIIDAE

231. **Synallaxis albescens trinitatis** Zimmer

Synallaxis albescens trinitatis Zimmer, Am. Mus. Novit., no. 819, 1935, p. 2 (Princetown, Trinidad).

Tacarigua: 2 ♂♂, 1 ♂ imm., 1 ♀ (nos. 61, 194, 351, 433).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
194	♂	1-9-1953	55	76	11	19	13
351	♂	15-10-1953	55	77	12	18	12.5
61	♂ imm.	28-7-1953	55	76	11	19	12.5
433	♀	2-11-1953	53	69	13	19	12.5

Irides ♂ orange brown, ♀ greyish brown. Bill, maxilla black, mandible bluish grey with black tip. Feet greyish green.

Two males from Surinam (*josephinae*) differ by the darker rufous occiput and nape and by the darker (more rufous) upper parts. An immature bird from Surinam is also darker on the upper parts, especially on the head and wings than the immature specimen from Trinidad.

Short description. Earth brown above with a chestnut brown patch on crown and upper wing coverts. Pale cinereous below, throat whitish. Tail brown, long and spiny. Not in Tobago.

Field notes. Not uncommon in thick secondary growths, where it usually reveals its presence by a double call-note that is not unlike the note of *S. cinnamomea*.

232. *Synallaxis cinnamomea carri* Chapman

Synallaxis carri Chapman, Bull. Am. Mus. Nat. Hist., vol. 7, 1895, p. 323 (Caparo, Trinidad).

Tacarigua: 1 (♂) (no. 318).

Tacarigua Reserve: 2 ♂♂, 1 ♀ (nos. 475, 476, 505).

Arima Valley: 2 ♂♂, 1 — juv. (nos. 157, 783, 784).

Hills SW of Caura: 1 (♂), 1 ♀ (nos. 675, 677).

Between Morne Bleu and Aripo: 1 (♀) (no. 840).

Pena de Juangalo: 1 ♂ juv. (no. 679).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
157	♂	22-8-1953	56	—	13	22	16.5
318	(♂)	6-10-1953	57	61	13	24	15.5
476	♂	7-11-1953	58	64	14	21	17
505	♂	12-11-1953	58	68	13	22	15.5
675	(♂)	16-12-1953	58	62	14	21	16.5
783	♂	28-1-1954	59	64	—	20.5	18
475	♀	7-11-1953	55	57	15	21	17
677	♀	16-12-1953	56	63	14	22	17.5
840	(♀)	5-2-1954	52	61	13	20	17.5

Irides pale brown, in juvenile grey. Bill, maxilla black, mandible pale bluish grey with black tip. Feet bluish grey.

In plumage the juvenile birds quite resemble adult specimens. Wing and tail feathers are not yet fully grown out, the bills are weaker.

Short description. Above dark ferruginous brown, wings chestnut. Feathers on throat with black bases, white tipped. Under side paler than upper parts.

Field notes. A common inhabitant of the undergrowth of rich forest in the Northern Range and probably elsewhere. It ranges up to the tops of the hills, and is common just under the summit of El Tucuche, at over 900 m. As regards its abundance my observations sharply contrast with those of Belcher & Smooker who consider the species very rare in Trinidad.

The juvenile birds were taken on 16 December and 28 January, so that these months must be at least part of the breeding period.

The birds are usually seen in pairs or in small parties of three or four individuals together, and they draw attention by the very distinct double note — which must probably be considered the song — which I rendered as follows: “chēēp — hooeuw”, the first syllable short and loud, the second somewhat less loud, rather unmusical, and drawn-out.

232a. *Synallaxis cinnamomea terrestris* Jardine

Synallaxis terrestris Jardine, Ann. & Mag. Nat. Hist., vol. 19, 1847, p. 80 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂, 3 ♀♀ (nos. 859, 860, 861, 876).

Pigeon Peak: 1 ♂ (no. 919).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
859	♂	9-2-1954	61	62	14	20	16.5
919	♂	14-2-1954	61	65	13	20	20
860	♀	9-2-1954	60	62	13	20	19.5
861	♀	9-2-1954	55	56+	13	20	16.5
876	♀	10-2-1954	58	62	—	20	16.5

Irides orange brown. Bill, maxilla black, mandible bluish grey. Feet bluish to greenish grey.

Short description. Like *S. c. carri*, but decidedly paler.

Field notes. I knew the Trinidad race of the species as an inhabitant of rich forest-undergrowth to which, as far as my observations go, it is confined in that island, being replaced by *S. albescens* in low secondary growths and drier country. Hence, it was a surprise for me to find the form *terrestris* common in the dry and rather open shrub country at Diamond Estate, far from true forest. On the other hand it occurs also in rich forest as is shown by the specimen collected on Pigeon Peak. Apparently, therefore, *terrestris* has a greater ecological range than *carri*.

Its song is identical with that of the Trinidad race.

233. ***Certhiaxis cinnamomea cinnamomea*** (Gm.)

Certhia cinnamomea Gmelin, Syst. Nat., vol. 1, pt. 1, 1788, p. 480 (Cayenne).

Caroni Swamp: 2 ♂♂ (nos. 663, 664).

Laventille Swamp: 1 ♀ (no. 610).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
663	♂	15-12-1953	60	65	15	21	13
664	♂	15-12-1953	58	63	14	20	15.5
610	♀	5-12-1953	57	—	14	19	13.5

Irides pale rusty brown. Maxilla and base of mandible bluish grey. Feet pale bluish grey.

These specimens together with a recently collected specimen from Leonsberg, Surinam, are slightly different in colour from 6 other specimens from Trinidad and 11 from Surinam. The latter are more warm brown on the upper parts. It may be that older material foxes in collections.

The measurements are :

		Wing	Tail	Culmen	Tarsus
Trinidad	♂♂ (5)	58-61	59-65	14-15	20-21
	♀♀ (4)	55-59	58-64	13-14	19-20
Surinam	♂♂ (7)	57-62	55-62	13-15	19-20
	♀♀ (3)	53-62	53-60	12-14	19-20

Short description. Upper parts rusty brown, more chestnut on the wings. Lores black. Under parts whitish, buffy tinged, chin patch yellowish. Not in Tobago.

Field notes. A common inhabitant of the wet savannah bordering Caroni Swamp, where their voice assists in drawing attention to the birds. The alarm-note is a strong and short: "kēēt...kēēt...", whereas the song, which hardly deserves that name, was described in my notes as: "tk.tk.tr.r.r.r.roe".

234. ***Xenops rutilus heterurus*** Cab. & Heine

Xenops heterurus Cabanis & Heine, Mus. Heineanum, vol. 2, 1859, p. 33 (Bogota, Colombia).

Tacarigua: 3 ♂♂ (nos. 384, 498, 606).

La Laja: 1 ♂ (no. 779).

No.	Sex	Date	Wing	Tail	Culmen	Greatest depth of bill	Tarsus	Weight
384	♂	23-10-1953	65	47	11	4.5	11	14
498	♂	11-11-1953	64	45	11	4.1	12	14
606	♂	4-12-1953	64	45	12	4.4	11	15
779	♂	27-1-1954	64	47	12.5	4.2	10.5	16

Irides dark brown. Bill dark blackish brown, basal part mandible whitish. Feet dark grey.

Short description. Upper parts ferruginous brown. Head blackish, paler striated. Superciliary streak and streak below eye fulvous white. Pure white streak below the cheeks. Tail bright rufous brown, some lateral tail feathers with black inner webs. Throat white, rest of the under parts greyish olive, streaked with white. Bill upturned. Not in Tobago.

Field notes. A locally not uncommon but generally scarce inhabitant of forests. Its behaviour, climbing up branches of trees, is typically woodpecker-like. The song consists of a series of short and fairly loud shocks: "kyēē.hēē.hēē.hēē.hēē.hēē.hēē".

235. ***Sclerurus albigularis albigularis*** Sclater & Salvin

Sclerurus albigularis Sclater & Salvin, Proc. Zool. Soc., London, 1868, pp. 627, 630 (Cumbre de Valencia, Venezuela).

Tacarigua: 1 ♂, 3 ♀♀ (nos. 179, 180, 197, 199).

Verdant Vale Estate, Arima Valley: 1 ♀ (no. 827).

Hills SW of Caura: 1 ♀ (no. 599).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
197	♂	1-9-1953	86	moult	21	20	32.5
179	♀	27-8-1953	87	55	20	21	33
180	♀	27-8-1953	82	51	21	22	33
199	♀	1-9-1953	83	moult	20	21	33.5
599	♀	2-12-1953	85	58	21	21	33.5
827	♀	4-2-1954	84	57	19	19	36.5

Irides dark sepia brown. Bill, maxilla black, mandible whitish with a black tip. Feet brownish grey to black.

Short description. Larger than the preceding species. Above brown, rump chestnut, tail black. Throat whitish, breast rufous brown, abdomen greyish brown.

Field notes. A common species of the forest floor, particularly in heavy forest, where it appears to have a special liking for the feet of heavy lianas. Pairs usually drew attention by their short and rather loud call: "sēēt... sēēt...". Not until December did I become aware of the fact that the specimens I regularly flushed from the sides of road cuttings were having nests there, but afterwards it proved very easy to find nests. All the nests I examined were situated at the end of a horizontal tunnel of from 40 to 100 cm in length; they are composed of a small heap of leaf-stems which are loosely assembled and apparently not interwoven in any way. Nests were found and inspected as follows:

1. Pena de Juangalo, 16-XII, a nest at the end of a tunnel of about 75 cm length, containing two eggs, hard set. One of the eggs measured 24.1×20.4 mm.
2. Hills SW of Caura, 19-XII, nest at the end of a tunnel of not much over 20 cm length, containing one egg, unincubated. Measurements 24.5×18.7 mm.
3. Hills W of Caura, 19-XII, a tunnel of about 30 cm length, apparently incompleated, and not yet containing nest-material or eggs.
4. Naranja, 19-XII, nest at the end of a tunnel of about 50 cm length, containing two small young.
5. Hills SW of Caura, 21-XII, a tunnel of about 50 cm length, not yet completed, and without nest or eggs.
6. N slope of the Pena de Juangalo at 1650 feet, 21-XII, tunnel of about 70 cm length, containing nest with two eggs, measuring 24.5×19.8 , 23.7×19.8 mm.
7. Mountain ridge between Morne Bleu and Aripo, 22-I, short tunnel still in the process of being dug out.
8. La Laja, 27-I, nest at the end of a tunnel of about 40 cm length, containing two eggs. Measurements 24.0×20.0 , 24.0×20.0 mm.
9. La Laja, 27-I, nest containing one egg and one very small young with closed eyes.
10. San José, 1-II, nest at the end of a tunnel of about 50 cm length, containing two slightly incubated eggs. Measurements 24.3×19.4 , 25.5×19.7 mm.

Many more nests were seen, but not inspected. The birds evidently dig out their holes themselves, and I consider it likely that this is done by the female

alone. The fact that the birds I shot after they had left their nest tunnels were all females, point in this direction.

FORMICARIIDAE

236. *Taraba major semifasciatus* (Cabanis)

Diallactes semifasciatus Cabanis, Journ. f. Ornith., vol. 20, 1872, p. 234 (Para Peninsula, Venezuela).

Tacarigua: 2 ♂ ♂, 1 ♀ (nos. 31, 106, 380).

Morne Bleu: 1 ♂ (no. 795).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
31	♂	20-7-1953	95	73	25	33	50
106	♂	10-8-1953	93	72	26	35	56
795	♂	29-1-1954	91	74	25	33	56.5
380	♀	22-10-1953	97	75	28	34	67.5

Irides red. Bill black. Feet pale bluish grey.

Short description. Robustly built bird with a strong, black bill. ♂ upper parts blackish, under parts white. ♀ cinnamon brown above, under parts white. Not in Tobago.

Field notes. A fairly common and widely distributed inhabitant of forests, observed at altitudes varying from sea level (Point Fortin, Tacarigua) to over 800 m (Morne Bleu).

The song is described by Belcher & Smooker as: "a series of notes uttered too quickly to be counted and ending with a strange snarl..."; I noted it as a series of toneless notes, concluded with a hoarse cry: "tòk-tòk-tò-hoo-hoo-hoo. hoo. hoo...-chèèèè", the series of notes being accelerated towards the end. As Belcher & Smooker state, the series of notes is uttered in too fast a sequence to be counted in the ordinary way, but I managed to fairly accurately count them by putting points with a pencil in the rhythm of the notes. Thus I found in one bird the numbers of 35, 30, 33, 35 and 34 notes in 5 series, and in another bird, where I used a stopwatch, the results were:

- 33 notes in 8.0 seconds (final cry not included)
- 35 notes in 8.7 seconds (final cry not included)
- 37 notes in 8.9 seconds (final cry not included)
- 35 notes in 9.6 seconds (final cry included in the timing)

The results show a remarkable degree of similarity between the two different birds as regards the number of notes uttered.

237. *Sakesphorus canadensis trinitatis* (Ridgway)

Sakesphorus canadensis trinitatis Ridgway, Proc. U.S. Nat. Mus., vol. 14, 1891 (1892), p. 481 (Trinidad).

Laventille Swamp: 2 ♂♂, 1 ♀ (nos. 209, 210, 553).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
210	♂	3-9-1953	73	59	19	24	26
553	♂	21-11-1953	73	59	19	25	23.5
209	♀	3-9-1953	70	48	17	23	25.5

Irides ♂ dark brown, ♀ brown. Bill, ♂ black, ♀ maxilla black, mandible bluish grey with black tip. Feet bluish grey.

Compared with 2 ♂♂ of the nominal race from Paramaribo, Surinam, it appears that in these birds the backs are much less rufescent brown and more streaked with black. Three ♀♀ from Surinam have the heads paler brown coloured than the Trinidad specimens.

Short description. Smaller than the preceding species. ♂ with the head and upper breast black. Wings and tail black, whitish edged. Back rufous brown. Sides of breast and abdomen greyish white. ♀ bright rufous on head. Beneath pale fulvous brown, throat and breast striated with black. Not in Tobago.

Field notes. Common in mangroves, but also in the dry coastal bushes of Gasparee Island (and presumably of the other islands in the bocas); in the South of Trinidad occurring in the damp forest of the Morne l'Enfer Reserve at some distance from the coast.

The song consists of a single note repeated a number of times in a rather fast sequence: "kyëw-kyük-kyük...", sometimes as few as six consecutive notes, but generally more, up to 19 in an individual in which this was counted. It is interesting to note that, though each has its own perfectly distinct song, many species of antbird share the property of having a song consisting of a number of more or less similar, or even identical notes. On several occasions I could predict that an unfamiliar song I heard was produced by an antbird.

238. *Thamnophilus doliatus fraterculus* Berl. & Hart.

Thamnophilus doliatus fraterculus Berlepsch & Hartert, Novit. Zool., vol. 9, 1902, p. 70 (Altigracia, Venezuela).

Tacarigua: 1 ♂, 2 ♂♂ imm., 1 ♀ (nos. 46, 71, 84, 95).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
84	♂	4-8-1953	77	59	16	27	28
95	♂ imm.	5-8-1953	70	55	17	26	25.5
71	♂ imm.	31-7-1953	70	59	16	28	27.5
46	♀	24-7-1953	69	53	17	26	25

Irides pale yellowish green or in imm. greyish to yellowish white. Bill, maxilla black, mandible bluish grey. Feet bluish grey.

Short description. ♂ black with white cross bands which are broader on

under parts. Crownpatch white. ♀ above ferruginous, darker on crown. Nape and sides of neck striated black and whitish. Under parts fulvous.

Field notes. A very common bird, most plentiful in thick secondary growths, in gardens, but not in forest. It does occur, however, in mangroves, though it is greatly outnumbered there by the rather similar-looking *Sakesphorus*.

The song is a series of rather toneless notes: "ka-ka-ke.ke.kekekekekaw", uttered in an accelerating sequence, but the concluding note somewhat louder and more distinct again. Like other antbirds, the birds are usually seen in pairs.

238a. *Thamnophilus doliatus tobagensis* Hart. & Goodson

Thamnophilus doliatus tobagensis Hartert & Goodson, Novit. Zool., vol. 24, 1917, p. 497 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 2 ♂ ♂, 1 ♀ (nos. 404, 857, 891).

Caledonia, Tobago: 1 ♀ (no. 412).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
404	♂	28-10-1953	75	59	16	28	22
891	♂	11-2-1954	77	60	16	28	24.5
412	♀	29-10-1953	74	59	16	27	24.5
857	♀	9-2-1954	73	56	17	28	25.5

Irides pale grey. Bill, maxilla black, mandible bluish grey. Feet bluish grey.

The males differ from the ♂ ♂ from Trinidad by the more whitish under parts as stated in the original description. The ♀♀, however, have the under parts decidedly darker, more rufous buff than the single ♀ from Trinidad.

Field notes. Common in Tobago, and identical with its Trinidad relative as regards habitat preference and voice.

239. *Dysithamnus mentalis andrei* Hellmayr

Dysithamnus mentalis andrei Hellmayr, Novit. Zool., vol. 13, 1906, p. 31 (Caparo, Trinidad).

Tacarigua Reserve: 1 ♂, 3 ♀ ♀ (nos. 347, 348, 463, 465).

Morne Bleu — Aripo: 1 ♂, 1 ♀ (nos. 752, 792).

Morne Bleu (2770'): 1 ♂ (no. 735).

Arima Valley: 1 ♂ (no. 160).

Arena Reserve: 1 ♂ (no. 544).

El Tucuche: 1 ♂ (no. 688).

Chaguaramal: 1 ♂ (no. 330).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
160	♂	22-8-1953	61	41	14	19	13.5
330	♂	11-10-1953	62	37	14	19	13.5
347	♂	14-11-1953	65	42	13	18	13
544	♂	20-11-1953	58	45	15	20	12.5
688	♂	19-12-1953	64	42	13	19	12.5

735	♂	20-1-1954	66	43	13	19	13.5
752	♂	22-1-1954	61	41	13	20	12.5
348	♀	14-10-1953	61	36	14	19	12.5
463	♀	5-11-1953	60	39	12	18	12.5
465	♀	5-11-1953	61	39	14	18	12
792	♀	29-1-1954	63	44	14	19	11.5

Irides sepia. Bill, maxilla black, mandible bluish grey with black tip. Feet bluish grey.

In 3 specimens (nos. 330, 544, 688) the abdomen is strongly washed with yellowish olive, strongest in no. 330. This specimen has also the edges of primaries and secondaries brownish olive, which according to Hellmayr (1920, p. 89) is a character of first year birds. In the November bird this character is much less pronounced, while in the December bird there is practically no difference from adult birds. All 3 specimens also show an olive tinge on the rump, weakest in the December bird.

Short description. ♂ above slate grey, wing coverts with white edges. Under parts whitish slate. ♀ crown rufous brown, upper parts washed with olive. Under parts dirty white with a buffish wash, flanks buff. Young ♂♂ have a yellowish wash on the abdomen and are olive tinged on upper tail coverts.

Field notes. A common and widely distributed inhabitant of forests at all altitudes. Usually seen in young trees and not a skulker of undergrowth. Though Belcher & Smooker regard the species as rare, I consider it to belong to the most common forest birds. Generally seen in pairs.

The song consists of a rather toneless, fairly feeble, series of notes: "kye-kyee-kyeekyeekya-kye-kawkaw", the last three syllables shorter, weaker.

239a. *Dysithamnus mentalis oberi* Ridgway

Dysithamnus mentalis oberi Ridgway, Proc. Biol. Soc. Wash., vol. 21, 1908, p. 193 (Tobago).

Caledonia, Tobago: 1 ♂ (no. 414).

Pigeon Peak, Tobago: 1 ♂ (no. 918).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
414	♂	29-10-1953	63	43	13	20	12.5
918	♂	14-2-1954	63	40	14	19	11

These birds differ from the young birds from Trinidad by the clearer yellow abdomen and by the fact that the yellow reaches higher up the breast.

Field notes. The two specimens collected were the only ones encountered in Tobago; they were taken in rich forest, a habitat corresponding with that of *andrei* in Trinidad. The song of this form is identical with that of the Trinidad race.

240. **Myrmotherula axillaris axillaris** (Vieill.)

Myrmothera axillaris Vieillot, Nouv. Dict. Hist. Nat., vol. 12, 1817, p. 113 (Cayenne).

Tacarigua: 2 ♂♂, 3 ♀♀ (nos. 112, 114, 164, 322, 474).

Tacarigua Reserve: 1 ♂ (no. 131).

Arima Valley: 1 ♂, 1 ♀ (nos. 158, 835).

Arena Reserve: 1 ♂ (no. 546).

Morne Bleu — Aripo: 1 ♂ (no. 753).

Mt. Tabor: 1 ♀ (no. 366).

Point Fortin: 1 ♀ (no. 626).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
112	♂	12-8-1953	53	34	11	—	5
131	♂	17-8-1953	53	38	12	16	6.5
322	♂	7-10-1953	55	39	11	17	6.5
546	♂	20-11-1953	52	39	12	18	7.5
753	♂	22-1-1954	54	39	12	16	8.5
835	♂	5-2-1954	55	40	13	15	7
114	♀	12-8-1953	55	40	12	16	9
158	♀	22-8-1953	52	—	13	16	6.5
164	♀	24-8-1953	53	40	12	15	8
366	♀	20-10-1953	moult	36	13	15	7.5
474	♀	7-11-1953	53	40	12	16	—
626	♀	7-12-1953	52	40	12	15	8.5

Irides dark sepia. Bill, maxilla black, mandible bluish grey (♀), with bluish grey base only (♂).

Short description. Small-sized bird. ♂ has the upper parts slate grey with blackish wings and clear white tips of wing coverts and tail feathers. Under parts blackish with whitish flanks and inner margin of wing feathers. ♀ olive brown, throat whitish, rest under parts fulvous. Not in Tobago.

Field notes. Belcher & Smooker's remark that this species is "not uncommon in forest" is in my experience a gross understatement, for I consider it the most common, though not the most conspicuous, forest bird found in Trinidad. In forests it is usually seen in the lower trees, and it also occurs in dense secondary growths. Whereas Belcher & Smooker noted small travelling parties, I got the impression that the species is territorial, the birds normally living in pairs.

241. **Formicivora grisea tobagensis** Dalmas

Formicivora tobagensis Dalmas, Mém. Soc. Zool. France, vol. 13, 1900, p. 141 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂, 2 ♀♀ (nos. 402, 873, 874).

Store Bay, Crown Point, Tobago: 1 ♂ (no. 396).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
396	♂	27-10-1953	55	51	14	24	10.5
873	♂	10-2-1954	60	54	15	24	14
402	♀	28-10-1953	57	—	13	25	10.5
874	♀	10-2-1954	57	52	12	24	10.5

Irides dark sepia. Bill and feet black.

Short description. ♂ very similar to *M. axillaris*, but larger and slightly more brownish on upper parts. Superciliaries white and broad white tips on lateral tail feathers. ♀ brownish above with blackish wings and tail, the latter tipped with white. Under parts ochraceous. Not in Trinidad proper. Chacachacare (*intermedia*) and Tobago.

Field notes. Very common in hedges, faggots, and other low and dense vegetations in the drier and more open parts of Tobago; rarely seen more than two meters from the ground. Nearly always in pairs.

242. ***Sclateria naevia naevia*** (Gm.)

Sitta naevia Gmelin, Syst. Nat., vol. I, pt. I, 1788, p. 442 (Surinam).

Laventille Swamp: 1 ♀ (no. 659).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
659	♀	14-12-1953	72	51	20	24	22

Bill, maxilla black, mandible bluish. Feet pale pinkish.

This specimen together with 4 ♀♀ from Trinidad received from the Am. Mus. Nat. Hist., New York compared with 5 specimens (♀♀) from Surinam (3 specimens from the Mus. of Comp. Zoöl., Cambridge, U.S.A.) show that the Trinidad birds are decidedly much paler (more brownish) on the upper parts. The difference in colour of the under parts is much less pronounced, though the Trinidad specimens have the dark streaks on breast and abdomen also a trifle paler. Hellmayr (1924, p. 252 footnote), however, having examined a larger material and from different places, states that this is not a constant difference.

The birds from Trinidad measure ♀♀ (5) wing 67-72, tail 47-51, culmen 19-20, tarsus 24-25 mm, from Surinam ♀♀ (5) wing 66-70, tail 45-51, culmen 19-20, tarsus 24-26 mm.

Short description. ♂ upper parts slate grey, white spots on the wing coverts, under parts with white shaft streaks. ♀ upper parts brownish, under parts whitish with brown streaks. Not in Tobago.

Field notes. The specimen collected betrayed its presence, in roots and dead branches of rhizophorae, by its shrill note: "pyeeweeeweeewee". It was the only specimen ever seen, and certainly the species must be considered rare. Nevertheless it is gratifying to note that the species is still found in fairly young mangrove so close to Laventille.

243. **Myrmeciza longipes longipes** (Swainson)

Drymophila longipes Swainson, Zool. Journ., vol. 2, no. 6, 1825, p. 152 (Trinidad Hellmayr restricted).

Tacarigua: 1 ♂ (no. 117)

Malony: 1 ♂ (no. 203).

Valencia Reserve: 1 ♂ (no. 851).

Arima Valley: 1 ♀ (no. 782).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
117	♂	13-8-1953	67	52	17	30	25.5
203	♂	2-9-1953	66	51	16	29	24.5
851	♂	6-2-1954	67	54	16	29	27
782	♀	28-1-1954	62	50	16.5	28	22.5

Irides reddish brown to pale brown. Bill ♂ black, in the ♀ mandible pinkish grey with black tip. Feet pale pinkish.

Short description. ♂ upper parts chestnut brown. Grey stripe above eye. Throat and breast black. Abdomen white, flanks and under tail coverts fulvous. ♀ upper parts like ♂, but throat and breast whitish, tinged with yellowish brown. Abdomen pale fulvous. Not in Tobago.

Field notes. Fairly common and widely distributed in the undergrowth of forest, and perhaps more common in the secondary forests with heavy undergrowth in the lowlands than in the primary forests of the Northern Range.

The song is a well-sounding series of whistled notes, produced fast, but slightly slowing down towards the end, as described by Belcher & Smooker: "a ringing burst of loud notes". I have also heard the entirely different call-notes described by Belcher & Smooker; both kinds of notes were uttered by males.

244. **Formicarius analis saturatus** Ridgway

Formicarius analis saturatus Ridgway, Proc. U.S. Nat. Mus., vol. 16, 1893, p. 670 (in key), p. 676 (Princetown, Trinidad).

Tacarigua Reserve: 1 ♂ (no. 198).

Morne Bleu: 2 ♂♂ (nos. 151, 723).

La Laja: 1 ♂ (no. 770).

St. Benedict Estate: 1 ♀ (no. 492).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
151	♂	21-8-1953	93	55	21	32	58.5
198	♂	1-9-1953	91	52	20	32	60
723	♂	10-1-1954	93	52	21	32	58
770	♂	27-1-1954	95	53	21	31	58
492	♀	10-11-1953	92	—	19	32	64

Irides brown, naked skin around eye pale pinkish blue. Bill black. Feet brownish grey.

Short description. Upper parts brownish, upper tail coverts tinged with cinnamon. Lores, chin and throat black, sides of neck rufous brown. Under parts greyish, under tail coverts cinnamon. Tail black. Not in Tobago.

Field notes. A common and widely distributed inhabitant of the floor of heavy forest, generally attracting attention by its loud, deep and melodious whistle. As Belcher & Smooker state, the call is easily imitated, and the birds can be attracted by doing so. In behaviour the species is very rail-like, and it even keeps its short tail cocked.

Beebe (1952) lists *Grallaria guatimalensis* for the Arima Valley and adds that: "Trinidad possesses 11 species of antbirds. Eight inhabit Arima Valley, and the notes of three, *Taraba*, *Thamnophilus* and *Grallaria*, are characteristic of the woods". As all previous investigators agree that *Grallaria* is an exceedingly rare, or at least local bird, this statement is surprising. Moreover it is remarkable that Beebe does not mention the call of *Formicarius*, which certainly is characteristic of the woods, and is the most conspicuous of the family. Hence, I am of the opinion that Beebe confused the two species, and that his note about *Grallaria* really pertains to *Formicarius*.

A nest, almost certainly of this species, but only a glimpse of the bird, when fleeing from it, was seen, was found on 8 October near the summit of Mt. Tabor. It was in a hollow tree of about 20 cm diameter. The two eggs are white, roundish, and measure 31.5×23.8 , $\pm 32 \times 24.6$ mm. They were heavily incubated, but could be preserved, they are rather dirty. The situation of the nest and the measurements of the eggs agree with those given by Belcher & Smooker for a doubtful nest and clutch of this species, and confirm their identification.

245. ***Grallaria guatimalensis*** Prévost & Des Murs

Short description. A robust bird with long legs and short tail. Upper parts brown with black margins along the feathers. Head grey. Under parts and tail tawny ochraceous. Rare in the northern range of Trinidad. Not in Tobago.

COTINGIDAE

246. ***Attila spadiceus*** (Gm.)

Short description. Upper parts chestnut brown, paler on rump and upper tail coverts. Wing coverts fringed with rufous. Under parts paler brown. Abdomen cream coloured. Bill rather long, hooked. Very rare. Not in Tobago.

247. ***Pachyramphus polychropterus tristis*** (Kaup)

Psaris marginatus tristis Kaup, Proc. Zool. Soc. London, vol. 19, "1851", p. 48, Oct. 1852 (Cayenne, restricted by Bangs and Penard).

Tacarigua: 1 ♂ juv., 2 (♀ ♀), (nos. 126, 202, 334).

Caroni Swamp: 1 ♀ (no. 665).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
126	♂ juv.	15-8-1953	72	55	12	17	17
202	(♀)	2-9-1953	72	55	11.5	19	19.5
334	(♀)	12-10-1953	70	51	12	19	19.5
665	♀	15-12-1953	73	55	13	18	23

Irides dark brown. Bill, maxilla black, mandible pale bluish. Feet dark grey.

The juv. ♂ has the upper parts already blackish tinged, the feathers barred with greenish grey. Sides of head and flanks greyish, feathers again barred with greenish yellow.

Four ♀♀ from Surinam are not different, wing measurements 69-73 mm.

Short description. ♂ black upper parts with white edges to the wing feathers and white tipped lateral tail feathers. Under parts slate grey. Under wing coverts speckled black and white. ♀ yellowish green above. Wing feathers broadly edged with buff. Lateral tail feathers blackish broadly tipped with buff. Under parts yellowish. Eye ring whitish.

Field notes. Evidently rather rare as the four specimens collected were the only members of the species observed. The three from Tacarigua were taken in light secondary forest, where they were fluttering from branch to branch and moving in the foliage in a quiet way; the fourth specimen was taken in mangroves. Superficially the species is very flycatcher-like, both in appearance and in behaviour.

Also recorded from Tobago, where I have not seen it.

248. *Tityra cayana cayana* (L.)

Lanius cayanus Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 137 (Cayenne).

Spring Hill Estate, Arima Valley: 1 ♂, 1 ♀ (nos. 168, 826).

Arima Valley: 1 ♀ (no. 780).

Point Fortin: 1 ♂ (no. 625).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
168	♂	24-8-1953	120	79	25	26	76
625	♂	7-12-1953	129	78	25	25	78
780	♀	27-1-1954	120	72	27	24	77.5
826	♀	4-2-1954	123	72	25	23	78.5

Irides brown. Bill, base bluish red, tip maxilla black, mandible bluish grey.

Short description. ♂ whitish grey with black head, rump and tail. ♀ darker grey above, white under parts with blackish shaft streaks on the breast. Not in Tobago.

Field notes. Not uncommon in forests and in the high trees shadowing cacao- and coffee-cultivations, both in the lowlands and in the hills. Apart from their conspicuous appearance the birds, which usually are seen in pairs, draw attention by their peculiar call, a fairly weak note like a toneless rolling "r"; the clearly audible wing-clapping at taking off is also diagnostic. Generally the birds remain high up in the trees.

249. **Procnias averano carnobarba** (Cuvier)

Ampelis carnobarba Cuvier, Règne Animal, vol. 4, 1817, p. 172, pl. 4, fig. 4 (Trinidad).

Heights of Guanapo: 1 ♂ (no. 816).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
816	♂	2-2-1954	166	86	21	33	178

Bill and feet black. Skin of throat dull black.

Short description. A large bird. ♂ greyish white with coffee brown head, bare black throat with small caruncles. Wing black. ♀ above greyish, yellowish below, throat greyish with fine striations. Bill broad, black. Not in Tobago.

Field notes. Locally common, though perhaps birds of the species may give an impression of being more plentiful than they really are, because of their loud calls, drawing attention to them from a great distance. I had no special difficulty in observing these birds, and contrary to Roberts (1934) did not note any special way of perching. They were usually rather shy and moreover their large size caused that I failed to secure more specimens.

PIPRIDAE

250. **Pipra erythrocephala flavissima** nov. subspec.

Tacarigua: 1 ♂, 2 ♂ ♂ juv., 2 ♀ ♀, 1 (♀) (nos. 12, 102, 103, 111, 430, 607).

Arima Valley: 1 ♂ juv. (no. 765).

Arena Reserve: 1 ♂ juv. 1 ♀ (nos. 82, 551).

St. Benedict Estate: 1 ♂ juv. (no. 449).

Tunapuna: 1 ♂ (no. 443).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
12	♂	13-7-1953	58	19	8	14	—
443	♂	3-11-1953	58	21	8	13	13.5
102	♂ juv.	9-8-1953	61	—	8	13	11.5
103	♂ juv.	9-8-1953	60	24	8	13	11
449	♂ juv.	3-11-1953	60	25	8	14	12.5
551	♂ juv.	20-11-1953	61	23	8	15	13.5
765	♂ juv.	24-1-1954	60	25	8	13	13
82	♀	3-8-1953	60	22	8	12	14.5
111	♀	10-8-1953	60	24	9	13	11.5
430	♀	2-11-1953	61	26	8	14	12
607	♀	4-12-1953	60	23	9	11	14.5

Irides ♂ white, ♂ juv. and ♀ grey. Bill yellowish with brown or greyish along culmen. Feet pale pinkish, juv. brownish yellow or pale greyish pink.

The authors compared this series with 14 ♂♂, 5 ♀♀ from Surinam and British Guiana (*e. erythrocephala*) and it appeared that Trinidad birds are decidedly larger, and that the ♀♀ and young ♂♂ are strikingly more yellow on the under parts and more yellowish green on the upper parts. *P. e. actinosa*

(5 ♂♂, 3 ♀♀ compared) from Panama is only slightly paler than ♀♀ of the nominal race. In size *actinosa* corresponds with *flavissima*.

The wing measurements are :

<i>e. erythrocephala</i>	♂♂	53-56
	♀♀	57-58
<i>e. actinosa</i>	♂♂	58-60
	♀♀	57-60
<i>e. flavissima</i>	♂♂	58-61
	♀♀	60-61

The bills of *flavissima* look slightly heavier and broader than those of the other mentioned races.

Type: ♀, Tacarigua, 4-12-1953, no. 607. Reg. no. 21664.

Short description: ♂ black with crown and side of face yellow orange. ♀ olive green, yellowish below. Not in Tobago.

Field notes. Slightly less plentiful than *Manacus* in the same kind of habitat, but still a quite common species. True dancing apparently does not occur, but specimens like to congregate in trees (contrary to *Manacus* not particularly close to the bottom), and to fly short stretches to and fro with rustling wings and making much noise.

251. *Chiroxiphia pareola atlantica* Dalmas

Chiroxiphia pareola atlantica Dalmas, Mém. Soc. Zool. France, vol. 13, 1900, p. 139 (Tobago).

Caledonia, Tobago: 3 ♂♂, 1 ♂ juv. (nos. 418, 869, 901, 902).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
418	♂	29-10-1953	80	39	—	21	24.5
901	♂	12-2-1954	79	39	10	21	20
902	♂	12-2-1954	80	39	9	21	22.5
869	♂ juv.	9-2-1954	76	38	9	21	23

Irides dark sepia. Bill black. Feet pale orange.

Short description. ♂ black with red crown, mantle and back blue. ♀ green, paler below, abdomen and under tail coverts yellowish. Not in Trinidad.

Field notes. An apparently common inhabitant of the forest on the Main Ridge of Tobago.

The dancing of this species, as observed on 12 February, is the most remarkable performance I ever saw from birds. Walking on the trace from Caledonia over the Main Ridge in the direction of Castara, my attention was attracted by a very curious noise: "àrrrrr — àrrrrr — àrrrrr — àrrrrr —...". I entered the forest to investigate and, approaching the noise, became more or less convinced that it was produced by frogs. Instead of frogs, however, I finally detected two dancing manakins.

They were perched on a low horizontal bough, less than a meter above the forest-floor, and jumped again and again — not over 20 cm high — over each other's backs, in the course of these actions remaining in about the same position on the branch because of the not-jumping bird every time shuffling to the right (fig. 2). During the jump, hence alternatively by each of the two birds, the noise was produced, how exactly I failed to detect. Fairly soon, presumably because of my approach, the birds stopped performing and flew higher up in the trees, where they regularly uttered a dull and fairly loud call, and also a loud whistle: "chwēēt...chwēēt".

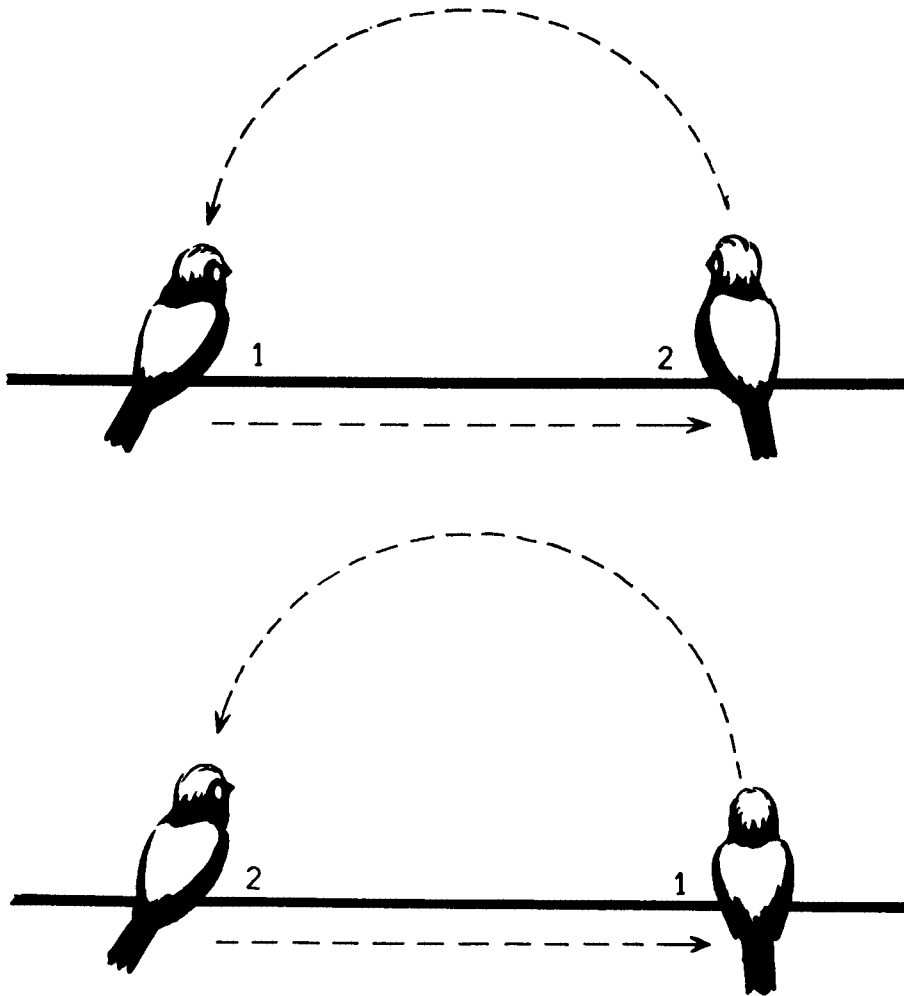


Fig. 2. *Chiroxiphia pareola atlantica* Dalmas, jumping movements.

In a very recent paper Slud (1957) described an apparently identical way of dancing (the alternate dance, p. 337) of the closely related Central American *Chiroxiphia linearis*.

252. ***Manacus manacus trinitatis*** (Hart.)

Chiromachaeris manacus trinitatis Hartert, Bull. B.O.C., vol. 29, 1912, p. 63 (Chaguanas, Trinidad).

Tacarigua: 2 ♂♂, 1 ♂ juv., 3 ♀♀ (nos. 4, 5, 77, 128, 165, 497).

Arima Valley: 1 ♀ (no. 155).

Lopinot: 1 ♀ (no. 54).

San José: 1 ♀ (no. 803).

Morne Bleu: 1 ♀ (no. 838).

Morne l'Enfer Reserve: 1 ♂ juv. (no. 637).

Guanapo Reserve: 1 ♂ (no. 811).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
4	♂	2-7-1953	55	31	10	21	16
497	♂	11-11-1953	55	33	10	20	14.5
811	♂	2-2-1954	55	32	10	21	17.5
5	♂ juv.	2-7-1953	55	33	11	19	12.5
637	♂ juv.	9-12-1953	56	33	11	22	18.5
803	♀	1-12-1953	56	32	10	19	16.5
54	♀	25-7-1953	56	32	10	19	—
77	♀	3-8-1953	57	34	10	19	16.5
128	♀	15-8-1953	54	33	11	19	16
155	♀	22-8-1953	56	34	11	18	16.5
165	♀	24-8-1953	59	35	10	19	16.5
838	♀	5-2-1954	56	34	10	21	17.5

Irides brown. Bill, maxilla black, mandible greyish. Feet orange.

No. 497 shows moulting head feathers.

Two ♂♂, 4 ♀♀ from Surinam measure: wing ♂♂ 53, ♀♀ 52-55; tail ♂♂ 30-32, ♀♀ 31-32; culmen 10; tarsus 18-22 mm.

In our material the ♀♀ from Surinam are different by the darker (greener, less yellowish) under parts.

Short description. ♂ white with black crown, lower back, wings and tail. Upper and under tail coverts greyish. ♀ upper parts grassgreen, under parts yellowish green. Not in Tobago.

Field notes. Belcher & Smooker correctly call this species plentiful in forest at all levels in Trinidad.

I have on many occasions watched the remarkable performances which have given the Manakins their name. On one of these occasions I made the following description of their behaviour. The place was in a piece of fairly dark forest, it was overshadowed by a few large and heavy trees, and grown with a somewhat larger number of thin and very thin, though already fairly

tall young trees. Ground covered with dead leafs. At least some ten, but probably more male Manakins were present, all of whom were dancing more or less intensively. The most intensive form apparently was excercised very close above the ground; these birds had their throats blown up and moreover their throat-feathers puffed up to such a degree that they even protruded beyond the bill, they continually jumped over distances of a half to one meter, often to and fro, from the basal part of the trunk of one thin tree to that of another. During this performance hard and short notes were uttered: "krr...k-krr...". I did not observe the birds really on the ground, they always perched on some place just above it.

Another noise, "rrrrt", was heard mainly from the males perched somewhat higher up, it was produced by the primaries; mostly it was made in flight but I also saw a perched male produce it by quavering its slightly lifted but not widely spread wings.

Apart from the short loud note, there was a weaker note evidently expressing a much slighter degree of agitation, which I described as "kyerr...tyēērr...". Now and then two males would chase each other. Two females at least were present, who proceeded to the intensively dancing males just above the ground. Several times I noted how a male started courting a female with, of course, its throat-feathers puffed to the extreme, and quivering its half-spread and partly lifted wings. Unfortunately no copulations were observed.

On other places I sometimes saw dancing birds perch actually on the ground, but even then usually on a root or a protruding piece of earth, not on a flat bare place. I have never seen that a bird actually cleared away dead leaves from its dancing place.

TYRANNIDAE

253. *Fluvicola pica pica* (Bodd.)

Muscicapa pica Boddaert, Tabl. Pl. Enlum., 1783, p. 42 (Cayenne).

Valencia Reserve: 1 — imm. (no. 524).

Laventille Swamp: 1 ♂ (no. 656).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
656	♂	14-12-1953	64	51	13	20	12.5
524	— imm.	14-11-1953	57	41	13	20	10.5

Irides sepia brown. Bill and feet black.

The measurements of 3 additional ♂♂ and 3 ♀♀ from Trinidad (André coll.) are: wing ♂♂ 59-66, ♀♀ 60-62 mm. A series of 8 ♂♂, 2 ♀♀ from Surinam measure: wing ♂♂ 67-71, ♀♀ 61-63 mm. Birds from Trinidad average perhaps slightly smaller than Surinam birds. More material, however, must show, if these differences are constant.

Short description. Upper parts black, under parts white. Forehead, sides of face, rump and scapulars white. Tail black, edged with white. Not in Tobago.

Field notes. My observations as regards the status of this species generally agree with those of previous investigations, but I did see neither this nor the following species quite as often as indicated in former published notes about their abundance; a difference probably caused by the fact that I did not frequent suitable habitats.

254. **Arundinicola leucocephala** (L.)

Pipra leucocephala Linné, Mus. Ad. Frid., vol. 2, Prodr., 1764, p. 33 (Surinam).

Fort Read: 1 ♀ (no. 53).

Caroni Swamp: 1 ♀ (no. 682).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
53	♀	25-7-1953	55	39	13	15	12.5
682	♀	18-12-1953	56	40	13	16	12

Irides dark sepia. Bill, maxilla black, mandible pale orange with black tip. Feet black.

These birds are small, 3 additional ♀♀ from the André collection (Trinidad) measure, however, wing 60-62 mm, 3 ♂♂ 59-66 mm. From Surinam: ♂ 64, ♀ 59 mm.

Short description. ♂ black with the head, neck and a patch on the flanks white. ♀ head whitish, upper parts greyish, under parts white. Tail black. Not in Tobago.

Field notes. Ecologically similar to the preceding species and about equally common.

255. **Muscivora tyrannus monachus** (Hartlaub)

Tyrannus (Mivvulus) monachus Hartlaub, Rev. Zool., vol. 2, 1844, p. 214 (Guatemala).

Tacarigua: 1 ♂, 1 ♀ (nos. 23, 461).

Point Fortin: 1 ♀ (no. 634).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
23	(♀)	15-7-1953	102	moult	16	18	—
461	♂	4-11-1953	106	290	17	18	30
634	♀	8-12-1953	99	196	16	18	29.5

Irides dark brown. Bill and feet black.

No. 23 has primaries and tail feathers moulting. This specimen (immature?) has a large whitish patch on the crown. The mantle is slightly darker than in the other specimens. The latter are in rather fresh plumage and must have finished their moult not long before. These birds together with 2 ♂♂ from British Guiana (Berbice, May 1887; N. Amsterdam, Oct. 1889, from

the Young collection) in the Leiden Museum agree perfectly in size, in colour of the upper parts (pale, nearly whitish grey with a slight wash of green only), and the ♂♂ in the form of the tips of the outermost primaries with 5 ♂♂ from Venezuela (Ayacucho, San Antonio, Maripa and Suapure). The latter are included by Zimmer (1937, p. 11) into *monachus*. The wing measurements of the British Guiana birds are: 99, 102 mm, of the Venezuela birds these are 99, 101, 102, 104, 106, culmen 15-17, tarsus 17-18 mm. *M. t. monarchus* was not yet known from Trinidad and British Guiana. All earlier records of this species in Trinidad and British Guiana concern the southern migrant *tyrannus tyrannus*. Beebe (1925, p. 156) records a breeding case of *tyrannus tyrannus* at Kartabo, British Guiana, a statement already doubted by Zimmer (l.c.). Now it seems likely that this observation concerns *monachus*.

Short description. Head black with concealed yellow patch on crown. Upper parts pale grey, wing brownish black. Tail black, lateral tail feathers remarkably elongated. Under parts white. The migrant *tyrannus tyrannus*, which occurs in Trinidad as well as in Tobago, is much darker grey on the upper parts.

Field notes. At my arrival Scissors-tails were common on Orange Grove Estate, and a flock of about 50 individuals was regularly observed in the low secondary growths North of Tacarigua. Early October I noted that their numbers had greatly dwindled at Tacarigua, but throughout the following months this diminished number remained about constant. On 12 December looking out from one place I counted 16 specimens on the savannah, so that the total number present may have been double this figure, and in January they were still present. It is likely, as confirmed by collected specimens, that these birds belonged to *monachus*.

Williams (1922) has already described the roosting of large numbers in the mangroves of the Caroni Swamp. On 1 October, during our visit to the swamp, I observed large numbers, arriving towards the evening. Presumably these were still migrants of the nominate race, though according to Belcher & Smooker all migrants have normally left about mid-September. An interesting performance is the drinking, a habit regularly observed on hot and dry days at the pond on the savannah of Orange Grove Estate. A bird would fly down from its perch to close above the water-surface in the middle of the pond, continue for some distance in an undulating flight close above the surface, its tail-streamers lending a fascinating appearance to the whole, and subsequently dip at the water-surface or plunge into the water with the whole anterior part of its body, after which it would fly back to some perch.

256. ***Tyrannus melancholicus chloronotus*** Berlepsch

Tyrannus chloronotus Berlepsch, Ornith., vol. 14, 1907, p. 474 (Temax, Yucatan).

Tacarigua: 1 ♀ (no. 7).

SW from Caura: 1 (♀) (no. 484).

Diamond Estate, Auchenskeoch, Tobago: 2 ♀ ♀ (nos. 878, 884).

Caledonia, Tobago: 2 ♂ ♂ (nos. 416, 866).

Back Hill, Tobago: 1 ♀ (no. 914).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
416	♂	29-10-1953	116	87	20	17	37
866	♂	9-2-1954	112	92	20	17	39
7	♀	11-7-1953	115	moult	21	18	36.5
878	♀	10-2-1954	114	moult	19	17	31.5
884	♀	11-2-1954	107	moult	19	17	31.5
914	♀	12-2-1954	110	92	20	17	37.5
484	(♀)	9-11-1953	107	moult	19	17	39

Irides brown. Bill and feet black.

Nearly all specimens show wing and tail moult. They differ from Surinam birds (*despotes*) by clearer white throat, clearer grey head and more greenish grey mantle and rump. Wing and tail feathers are blacker, less brownish. Measurements of Surinam specimens are: wing ♂ ♂ (2) 110-111, ♀ ♀ (3) 102-110, tail ♂ ♂ 88-89, ♀ ♀ 81-85, culmen 19-22, tarsus 17-19 mm.

Short description. Head grey with concealed orange patch on crown. Rest of upper parts olive green. Wings and tail blackish brown, wing coverts edged with green. Cheeks and throat whitish grey. Breast greenish yellow. Abdomen clear yellow. Under tail coverts pale yellow.

Field notes. Very common in more or less open country, including gardens and other places near human habitations.

On Orange Grove Estate we had a pair in our garden; as regards the nesting activities of this pair the following may be recorded. A nest, with incubating bird, was discovered on 13 July in a spreadingly branched *Cassia*-tree at about 2.75 m height; on 14 July copulations were observed, both on the nest and on a branch about 10 cm away from it; on 16 July I inspected the nest and measured the two eggs it contained, and which represented the full clutch: 23.5×18.3 and 23.8×18.2 mm; on 25 July I saw one of the old birds fly with food towards the nest and an examination on the following day revealed the presence of two young with closed eyes; on the rainy afternoon of 28 July I stayed at home, watching the nest. Every time a shower came down, an adult bird was present to shelter the young; twice I observed a feeding, both times a smallish brown moth was fed; after the feeding the old bird would stay for a short time, about 30 seconds, on the rim of the nest, and once I saw it, after feeding, swallow an excrement of the young. A large locust, also caught in the course of the afternoon, was not brought to the

young, but swallowed by the adult bird. On 1 August the young were still in good health, but in the afternoon of that day heavy rains fell, and though the old bird remained on the nest all the time, the two young were found dead under the tree on the following day.

The firm foundation of a new nest was discovered on 6 August, and the following days building proceeded; on 10 August I examined the nest, it was apparently completed, but did not yet contain eggs; on 12 August in the afternoon the nest contained one egg, and on 13 August about the same time two eggs; incubation started towards the evening of that day; the two eggs measured 23.5×18.2 and 24.4×17.8 mm; the first young hatched on 20 August; on 30 August there still was one young and one egg; on 31 August the egg had disappeared; the young bird continued to grow well until 6 September, when it disappeared. The incubation period deducible from these notes is 16 days.

Like several other large flycatchers this is a very bold and aggressive species; an Ani who once perched in the small tree in which the nest was situated, was very fiercely attacked by both Kingbirds who, continually uttering alarm cries, chased it away, several times actually hitting and pecking the Ani in flight.

Drinking in flight from the pond on the savannah of Orange Grove Estate, as described for *Muscivora tyrannus*, was also observed in the present species.

257. *Tyrannus dominicensis dominicensis* (Gm.)

(*Lanius tyrannus*) *β. dominicensis* Gmelin, Syst. Nat., vol. 1, pt. 1, 1788, p. 302 (Hispaniola).

Store Bay, Crown Point, Tobago: 2 ♀ ♀ (nos. 399, 408).

Diamond Estate, Auchenskeoch, Tobago: 1 ♀ (no. 888).

No.	Sex	Date	Wing	Tail	Culmen	Bill	Width	Tarsus	Weight
						from forehead	of bill at gape		
399	♀	27-10-1953	110+	82+	27	30	16.4	18	40.5
408	♀	28-10-1953	112+	84+	27	30	16.5	19	42.5
888	♀	11-2-1954	110+	85+	27	29	16.4	18	46

Irides brown. Bill and feet black.

All specimens show wing and tail moult, therefore have not yet reached their maximum length.

Dr. James Bond kindly examined these specimens and found them referable to the nominate race, adding: "They are grayer, less brownish above than most of our examples of *dominicensis*, but can be matched perfectly in this respect with a male from Mona Island, near Porto Rico, collected August 25th".

Short description. Upper parts dark grey, a blackish streak through the eye. Under parts whitish, breast ashy grey.

Field notes. Fairly common in Tobago, mainly found in trees in open or semi-open country. From their perches the birds fly out to catch large insects on the wing. Specimen no. 408 was shot a moment after it had swallowed a large dragonfly.

According to Voous (1957, p. 195), *Tyrannus melancholicus* and *T. dominicensis* occur in the same biotope in Curaçao. In Tobago the last-mentioned species inhabits more open country than its congener, though the two species on many places associate together. Specimen no. 888 was taken at the edge of a piece of mangrove; it was the only representative of its species there, but it was in company of tens of specimens of *T. melancholicus*, a remarkable concentration for a species that usually lives in pairs.

258. ***Empidonomus varius*** (Vieill.)

Short description. Upper parts dusky brown, many feathers edged with white. Crown with a concealed patch of yellowish orange. White line over forehead and above the eyes. Broad dusky streak through the eyes. Cheeks and throat grey, breast and sides of neck dusky brown. Abdomen and under wing coverts yellow. Tail dusky brown with rufous on base. Recorded only by Roberts. Not in Tobago. Probably a recent immigrant.

259. ***Legatus leucophaeus*** (Vieill.)

Short description. Upper parts dusky brown. A white line over the eye, which joins in the neck. A patch in front of eye and ear coverts blackish. A yellowish or whitish coronal patch. A dark moustachial streak. Throat and abdomen whitish, breast streaked brownish. Wing coverts edged with white. Upper tail coverts edged with rufous. Not in Tobago.

Field notes. Among recent authors, both Roberts and Belcher & Smooker consider this species fairly common, hence it belongs to the most curious omissions from this collection, particularly as I paid special attention to the Tyrannidae and kept a continual watch for unfamiliar species.

260. ***Myiodynastes maculatus tobagensis*** Zimmer

Myiodynastes maculatus tobagensis Zimmer, Am. Mus. Novit., no. 963, 1937, pp. 7-8 (Mariah, Tobago).

Tacarigua: 1 ♂, 2 ♀♀ (nos. 59, 224, 426).

Arima Valley: 1 (♂) (no. 145).

Spring Hill Estate, Arima Valley: 1 ♂ (no. 768).

Mt. Chaquaramal: 1 ♂ (no. 513).

Back Hill, Tobago: 1 ♂ (no. 926).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
59	♂	27-7-1953	110	86	23	20	48
145	(♂)	19-8-1953	112	85	24	21	47
513	♂	14-11-1953	111	84	22	21	49
768	♂	26-1-1954	110	86	23	23	48.5
926	♂	14-2-1954	115	90	24	21	46.5
224	♀	10-9-1953	106	82	25	20	46
426	♀	1-11-1953	108	82	24	20	48

Irides dark brown. Bill, maxilla and tip of mandible black, base of mandible pinkish brown, one ♀ has base of maxilla greyish brown and base of mandible brownish white. Feet lead grey.

Compared with 6 specimens from Surinam (*m. maculatus*) it appears that there is a remarkable difference in size between the two populations. The measurements of birds from Surinam are:

	Wing	Tail	Culmen	Tarsus	Weight
♂♂ (2)	105	80	20-21	18-19	37-45
♀♀ (3)	96-104	71-79			

Colour differences are very slight in the skins before me. The colour of the upper parts in the Surinam birds is perhaps a trifle more yellowish green and the shaft stripes of the tail feathers a trifle smaller.

Short description. Upper parts brownish with black shaft streaks. Head with a concealed yellowish patch. Black streak through the eye. Under parts whitish, more yellowish on the breast, with dark streaks. Wings blackish, feathers bordered with rufous or pale yellow. Tail rufous brown with black central streaks.

Field notes. In Trinidad fairly common in forests near the edges, and in cacao plantations; in Tobago only the specimen collected was encountered, it was shot in a cacao-tree in circumstances described under *Saucerottia tobaci*. It is a rather inactive species, generally seen solitary or in pairs; the only note I ever heard is a hoarse and loud alarm-cry: "küüt...küüt...", reminiscent of the note of *Dendrocopos major*, but still louder.

261. *Megarynychus pitangua pitangua* (L.)

Lanius pitangua Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 136 (E. Brazil).

Tacarigua: 2 ♀♀ (nos. 94, 99).

Arima Valley: 1 ♀ (no. 824).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
94	♀	5-8-1953	108	80	30	21	53
99	♀	8-8-1953	106	80	28	20	56
824	♀	2-2-1954	112	82	30	20	58

Irides brown. Bill and feet brown.

3 ♂♂, 3 ♀♀ from Surinam measure: wing ♂♂ 113-120, culmen 27-28; ♀♀ 113-115, culmen 27-31 mm. More material from Trinidad (present in the Am. Museum Nat. Hist. and Ac. Nat. Sciences, Philadelphia), however, show that the variation range of Trinidad birds is larger than exhibited in the specimens mentioned above: wing ♂♂ (7) 109-116, ♀♀ (8) 106-118, culmen 26-32 mm.

Short description. Head black with concealed yellow crown patch. White superciliaries, which join in the hind neck. Rest of upper parts brownish olive, paler on rump. Tail and rump feathers fringed with rufous brown, innermost secondaries with white. Chin and throat white. Breast and abdomen bright yellow. Bill very broad and heavy. Not in Tobago.

Field notes. Whereas *Pitangus sulphuratus* seems to thrive best in urban surroundings, the present species is largely confined to high second growths and open forests, where it is tolerably common and widely distributed. In the field it is often difficult to distinguish this species from the Common Kiskadee, unless a close view of the bill can be obtained, but its call is much heavier and entirely distinct from that of the common species, and as both species are very noisy, one will rarely be long in doubt about the specific identity of a specimen observed. The very loud call described in my notes as: "klēē-lēlēlē..." "klēē-lēlēlē..."

262. *Tyrannopsis sulphurea* (Spix)

Short description. Heads and sides of face grey with an orange or yellow crown patch. Rest of upper parts olive green. Chin greyish white, throat white, rest under parts yellow. Wing and tail brownish. Bill short and solid. Not in Tobago, rare in Trinidad.

263. *Pitangus sulphuratus trinitatis* Hellmayr

Pitangus sulphuratus trinitatis Hellmayr, Novit. zool., vol. 13, 1906, p. 24 (Caparo, Trinidad).

Tacarigua: 1 ♂ (no. 121).

Laventille Swamp: 1 ♀ (no. 361).

Valencia Reserve: 1 ♂ (no. 853).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
121	♂	14-8-1953	108	81	26	25	53
853	♂	6-2-1954	113	82	25	25	59
361	♀	19-10-1953	102	moult	26	24	53.5

Irides brown. Bill and feet black.

Short description. Resembles *Megarynchus pitangua*, but bill normal and slenderer. Upper parts brown without olive tinge. Primaries more broadly edged with rufous. Under parts paler yellow. Not in Tobago.

Field notes. The "bird that speaks french" is plentiful in Trinidad, particularly about human habitations, but also elsewhere in more or less open, park-like country. It readily draws attention by its loud and peculiar call: "qu'est-ce-qu'il dit?...qu'est-ce-qu'il dit?...". Recently Quesnel (1956) counted the population of a favourable area in Port-of-Spain and found a number of twenty pairs on 44 acres.

264. ***Myiarchus tyrannulus tyrannulus*** (P.L.S. Müller)

Muscicapa tyrannulus P.L.S. Müller, Syst. Nat., suppl., 1776, p. 169 (Cayenne).

Laventille Swamp: 1 ♂, 2 ♀♀ (nos. 555, 556, 657).

Caroni Swamp: 1 ♀ (no. 667).

Monos Island: 1 ♂ (no. 391).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
391	♂	24-10-1953	99	89	19	23	28
555	♂	21-11-1953	95	87	20	22	28
556	♀	21-11-1953	88	83	19	22	25.5
657	♀	14-12-1953	92	87	19	21	28
667	♀	15-12-1953	89	80	20	22	29

Irides brown. Bill brownish black, base of mandible pale brownish. Feet black.

Compared with a small series (3 ♂♂, 3 ♀♀) from Surinam there is not much difference in colour, perhaps the Surinam birds are slightly paler and smaller on an average. The measurements of the latter are: wing ♂♂ 88-94, ♀♀ 85-89; tail ♀♀ 76-79, ♀♀ 73-78; culmen 17-18; tarsus 21-22 mm, weight 27-33 grs.

Short description. Upper parts greyish olive brown, upper tail coverts slightly rufous tinged. Throat and breast ash grey. Rest of under parts pale yellow. Wings dark brown, pale fringes along inner secondaries. Tail feathers blackish brown with broad rufous edges along innerwebs of lateral tail feathers.

Field notes. Largely confined to mangroves and coastal areas, where it is fairly common. Belcher & Smooker record this bird as an inhabitant of the drier parts; they found it in the monsoon-forests of the north-western peninsula of Trinidad and not uncommon on Chacachacare. I found it fairly common in similar vegetation on the islands of Monos and Gasperee. Here we have again the remarkable fact already mentioned in connection with *Sakesphorus canadensis*, that a typical mangrove-species also seems to find its habitat requirements fulfilled in entirely different, dryish, country, if it is only close to the sea. It would be most interesting to investigate what exactly are the ecological requirements of birds belonging to this group, and why they are so rarely found far from the shore.

On 23 September, after having observed it on several previous days, I collected a specimen in secondary growth near Tacarigua, but the occurrence of the species so far inland must be exceptional. Unfortunately the specimen could not be preserved.

The male specimen no. 491 was uttering, with regular intervals a short note; the female no. 657 gave a fairly loud, short call note: "kwēēk...kwēēk...".

264a. **Myiarchus tyrannulus tobagensis** Hellmayr & Seilern

Myiarchus tyrannulus tobagensis Hellmayr & Seilern, Verh. Orn. Ges. Bayern, vol. 12, 1914, p. 89 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂, 2 ♀ ♀ (nos. 401, 855, 889).

Store Bay, Crown Point, Tobago: 2 ♀ ♀ (nos. 395, 421).

Back Hill, Tobago: 1 ♀ (no. 915).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
401	♂	28-10-1953	96	88	20	23	30.5
395	♀	27-10-1953	95	85	20	24	29
421	♀	30-10-1953	93	87	17	22	27.5
855	♀	9-2-1954	93	85	19	24	27.5
889	♀	11-2-1954	95	87	19	24	29.5
915	♀	12-2-1954	93	89	18	22	30.5

Irides brown. Bill black, base of mandible brownish. Feet black.

Compared with Trinidad birds the birds from Tobago are slightly but decidedly darker on the upper parts. In the colour of the under parts I cannot see differences between both series. Tobago birds are also somewhat larger. The mandibles are blacker.

Field notes. Like its relative in Trinidad, the Tobago subspecies appeared to be confined to mangroves and to rather open secondary vegetation within a few hundred meters from the shore. At least in the southwestern part of the island, where such country predominates, it is common.

265. **Myiarchus swainsoni swainsoni** Cab. & Heine

M[yiarchus] Swainsoni Cabanis & Heine, Mus. Heineanum, vol. 2, 1859, p. 72 (Brazil).

Tacarigua: 5 ♂ ♂, 2 ♀ ♀ (nos. 19, 55, 65, 67, 123, 166, 174).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
19	♂	15-7-1953	86	78	17	20	18
65	♂	30-7-1953	89	80	15	19.5	22.5
67	♂	30-7-1953	92	80	16	19	24.5
123	♂	14-8-1953	88	81	17	20	23
174	♂	27-8-1953	95	86	17	20	26
55	♀	26-7-1953	85	75	16	19	21
166	♀	24-8-1953	84	75	16	20	24.5

Irides sepia brown. Bill black with base of mandible reddish brown. Feet black.

All specimens show wing and tail moult.

According to Mees's observations these birds are migrants. The relative short tail, the smaller measurements of bill and tarsus as compared with a series of *M. ferox ferox* from Surinam, the rather pale yellow under parts and the more brownish, not blackish mandibles show that these birds belong to *swainsoni*. The measurements of a series of *M. f. ferox* from Surinam are: ♂♂ (6) wing 85-90, tail 80-87, culmen 17-19, tarsus 21-23 mm; ♀♀ (6) wing 85-88, tail 80-88, culmen 17-19, tarsus 21-23 mm.

For this series the tail/wing index is 92%-100%. In the specimens from Trinidad (*swainsoni*) the tail/wing index is 87%-92%, the culmen measures 16-17, the tarsus 19-20 mm.

Compared with 3 specimens of *swainsoni phaeonotus* from Venezuela and one from Brazil, it is shown that the Trinidad birds lack the dusky or blackish hue on the upper parts and especially on the head that is found in *phaeonotus*. Head and upper parts are uniform in the Trinidad birds as is found in the nominal race, but compared with 3 specimens of *swainsoni swainsoni* from British Guiana and Venezuela the Trinidad birds show more greyish olive (less brownish) upper parts. In my opinion the Trinidad birds must be placed into this race. The difference is caused by the fact that the Trinidad birds have just finished their moult and are recently collected. That specimens fox in collections is shown by the specimen kindly sent to me by Dr. J. Bond for examination. It is the specimen mentioned by Roberts (1934, p. 12) s.n. *Myiarchus ferox* subsp? It is a ♂ from the Oropuche River collected on 19-8-1931. This specimen falls entirely into the series Mees brought home and is *swainsoni*. The measurements are: wing 90, tail 78, culmen 17, tarsus 20 mm. Tail/wing index 87%. The mandible is brownish as in the other specimens, and not black as in *ferox*. The upper parts, however, are browner than in the more recently collected material.

Zimmer (1938, p. 4) already indicated that *swainsoni* is a migrant from its southern range during the southern winter. It had not yet been recorded from Trinidad. *M. ferox* is not certainly known from the island.

Short description. Much like *tyrannulus*, but crown darker, and the species lacks the rufous edges on the inner webs of the tail feathers. Upper parts greener. Not in Tobago.

Field notes. Found during the first months of my stay in Trinidad in some numbers in the forest directly north of Tacarigua, and in Dinsley Bamboo, a rectangular piece of pure bamboo-forest belonging to Orange Grove Estate. The last specimen was seen and collected (but is could not be preserv-

ed) on 23 September, and as previous to that date the species was decidedly common in the localities mentioned, the conclusion that these birds were migrants is inevitable.

They were indolent and could easily be collected, and I never heard a note from them.

This is probably the species mentioned as *Myiarchus ferox* subsp. by Belcher & Smooker, and in the light of my findings I strongly doubt the correctness of the identification of some clutches of eggs ascribed by Smooker to this species.

266. *Myiarchus ferox* (Gm.)

Short description. Very near *swainsoni*, but with clearer yellow under parts, slightly heavier bill and longer tarsus. For particulars see under *swainsoni*. A separate race from Tobago, *M. f. insulicola* has been described by Hellmayr and Seilern (1915, p. 202). The published measurements (wing 94, tail 94 mm) show that the form is correctly placed as *ferox*.

267. *Myiarchus tuberculifer tuberculifer* (Lafr. & d'Orb.)

Tyrannus tuberculifer Lafresnaye & d'Orbigny, Syn. Avium 1 in Mag. Zool., vol. 7, 2, p. 43 (Guarayos, Bolivia).

Arima Valley: 3 ♂♂ (nos. 159, 701, 849).

Spring Hill Estate, Arima Valley: 1 ♂ (no. 732).

Hills SW of Caura: 2 ♂♂ (nos. 673, 676).

La Laja: 1 ♂ (no. 740).

Mt. Tabor: 1 ♂ (no. 325).

Mt. Chaquaramal: 1 ♂ (no. 519).

El Tucuche: 1 (♀) (no. 689).

St. Benedict Estate: 1 ♀ (no. 444).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
159	♂	22-8-1953	82	73	17	19	18.5
325	♂	8-10-1953	84	76	16	18	21
519	♂	14-11-1953	80	76	17	19	20.5
673	♂	16-12-1953	83	74	16	18	18.5
676	♂	16-12-1953	81	74	16	19	19.5
701	♂	28-12-1953	83	—	16	20	17.5
740	♂	20-1-1954	81	71	16	20	18.5
732	♂	20-1-1954	80	74	16	19	17.5
849	♂	5-2-1954	83	72	15	20	20.5
444	♀	3-11-1953	75	69	15	18	15
689	(♀)	19-12-1953	79	70	15	18	16.5

Irides pale brown. Bill black with base of mandible brownish. Feet black.

Short description. Like *swainsoni*, but decidedly smaller and with dark, blackish crown. Not in Tobago.

Field notes. A fairly common and widely distributed resident in rich forest, particularly near open places. My experience differs from that of Belcher & Smooker, who considered the species rare, but unless one knows its song it is perhaps easily overlooked because of its quite habits. It occurs at all levels, but perhaps especially in the higher parts of the Northern Range; the specimen from Mt. Tabor was taken at the very summit of that mountain, at an altitude of 2144 ft.; the specimen from El Tucuche was collected at an altitude of at least 900 m.

Food is caught by fluttering from a perch, in the ordinary flycatcher fashion.

The song is a continually repeated very melancholic, but also melodious, whistle, described in my notes as: "pfēēēē — pfēēēē —".

268. **Nuttallornis borealis** (Swainson)

Tyrannus borealis Swainson in Richardson, Fauna Bor. Am., vol. 2, 1832, p. 141, pl. 35 (Banks, Saskatchewan, 54° N).

Arima Valley: 1 ♂ (no. 745).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
745	♂	20-1-1954	108	74	17	15	31.5

Irides brown. Bill black. Greyish brown along cutting edges, under side mandible yellowish. Feet greyish black.

Short description. Upper parts ashy brown with white edgings to the inner secondaries. Throat whitish, breast and flanks ashy. The latter with a white patch of fluffy feathers under the wings. Wings and tail blackish. Migrant, only once recorded before. Not in Tobago.

Field notes. This specimen was shot from the dead top of a *Cecropia*-tree protruding above cacao plantations very close to the main road. On two or three previous occasions I had observed, in high tree-tops in the higher parts of Arima Valley, flycatchers which at the time I failed to identify and probably belonged to this species, but found themselves well out of range of my gun. If this is correct, the species may perhaps be considered an uncommon but regular visitor to Arima Valley. The only previous record for Trinidad is by Beebe (1952), also from Arima Valley. Though in the light of the new facts presented above there is no need to query this record, it must be regretted that Beebe does not supply any supporting evidence. Particularly in the case of birds new to Trinidad it should be clearly stated if material has been collected, or if the addition is based on field observations only.

269. *Contopus cinereus bogotensis* (Bp.)

Tyrannula bogotensis Bonaparte, Consp. Gen. Avium, vol. 1, 1850, p. 190 (Colombia = Bogota).

Tacarigua: 3 ♂♂, 2 ♀♀ juv., 3 ♀♀, 1 ♀ juv., 2 — (nos. 13, 136, 183, 317, 388, 424, 425, 428, 466, 468, 496).

La Laja: 1 ♂, 2 ♀♀ (nos. 143, 706, 842).

Arima Valley: 1 ♂, 1 ♀ (nos. 146, 726).

Hills SW of Caura: 1 ♀ (no. 479).

Mt. Hope: 1 ♂ (no. 566).

Morne Bleu — Aripo: 1 ♂ (no. 793).

Caura: 1 ♂ (no. 371).

Paria Bay: 1 ♀ (no. 761).

Spring Hill Estate, Arima Valley: 1 ♀ (no. 711).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
468	♂	5-11-1953	82	68	12	13	13
466	♂	5-11-1953	78	65	12	14	13
496	♂	11-11-1953	75	67	12	14	11.5
566	♂	22-11-1953	75	63	12	13	12.5
726	♂	13-1-1954	77	68	12	12	10.5
793	♂	29-1-1954	77	66	11	13	12.5
842	♂	5-2-1954	77	66	12	13	12
317	♂ juv.	6-10-1953	73	64	11	13	11
371	♂ juv.	20-10-1953	73	65	13	13	12.5
424	♂ juv.	1-11-1953	76	67	12	13	12.5
13	♀	13-7-1953	70	63	13	13	8.5
143	♀	19-8-1953	72	62	12	13	11.5
146	♀	19-8-1953	74	63	12	14	11
183	♀	27-8-1953	72	61	11	13	13.5
428	♀	1-11-1953	72	62	11	12	11
479	♀	9-11-1953	75	64	12	13	11.5
706	♀	28-12-1953	73	60	12	13	11
711	♀	1-1-1954	74	63	11	13	11.5
761	♀	23-1-1954	71	62	12	13	10.5
425	♀ juv.	1-11-1953	72	64	12	13	11.5
136	—	17-8-1953	70	61	12	13	10.5
388	—	23-10-1953	74	62	11	13	10.5

Irides brown. Bill, maxilla black, mandible orange. Feet black.

The young specimens show brown barring on the upper parts and have the secondaries broadly edged with cinnamon buff. The tail feathers are tipped with this colour. Moulting specimens occur in August and November.

Short description. Upper parts dark earthbrown, crown of head blackish. Wings blackish with pale edges along secondaries and wing coverts. Chin and throat grey, breast brown, abdomen yellowish. More blackish than *Empidonax* or *Cnemotriccus*, and adult lacks the rufous wing bars. Mandible orange. Not in Tobago.

Field notes. The commonest of the small flycatchers, occurring at the edges of forests (not in the interior of heavy forest), in cacao and coffee plan-

tations, and less commonly in secondary growths. Usually seen perched on low and somewhat exposed places as already noted by Chapman (1894), though, curiously enough, Belcher & Smooker had the experience that it favours very high branches.

Once I observed a pair of *Contopus*, and particularly one of the birds, engaged in catching insects. It was perched on a protruding part of a dead branch laying on the ground, and from its perch made short flutter-flights — not more than a few meters away — in a typical flycatcher fashion, during which I was several times able to observe that a flying insect was actually caught and swallowed in flight. After perching again the tail was every time moved with quivering up-and-down motion for a moment in a very characteristic way, just like *Phoenicurus phoenicurus* does in Europe.

270. *Empidonax euleri lawrencei* Allen

Empidonax lawrencei Allen, Bull. Am. Mus. Nat. Hist., vol. 2, 1889, p. 150 (Princeton, Trinidad).

Tacarigua: 2 ♂ ♂, 1 ♀ (nos. 201, 353, 536).

Arima Valley: 1 ♂, 1 ♀ (nos. 702, 823).

Spring Hill Estate, Arima Valley: 2 ♀ ♀ (nos. 708, 825).

Arena Reserve: 1 ♂ (no. 547).

Hills SW of Caura: 1 ♂, 1 ♀ (nos. 527, 601).

Mt. Chaguaramal: 1 ♂ (no. 522).

Mt. Tabor: 1 ♀ (no. 490)

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
201	♂	1-9-1953	65	56	13	15	12.5
353	♂	17-10-1953	67	55	12.5	15	—
522	♂	14-11-1953	64	51	11	14	9.5
547	♂	20-11-1953	68	61	12	14	12.5
601	♂	2-12-1953	68	61	12	13	12.5
702	♂	28-12-1953	65	58	11	14	10.5
490	♀	10-11-1953	63	57	12	13	10
527	♀	17-11-1953	62	55	11	14	12
536	♀	18-11-1953	61	54	11.5	14	12
708	♀	31-12-1953	63	57	12	13	11.5
823	♀	2-2-1954	59	52	11	13	10.5
825	♀	4-2-1954	61	54	11	15	11

Irides brown. Bill, maxilla black, mandible dirty white. Feet black to dark grey.

The series is rather uniform in the colour of the upper parts, only no. 702 is slightly paler (more brownish) on the upper parts.

Short description. Upper parts brownish with a strong olive wash. Wing black with pale rufous edges along secondaries and wing coverts. Throat yellowish grey, breast olive brown tinged with yellow, abdomen yellow. Greener upper parts and clearer yellow under parts than *Contopus* and *Cnemotricus*. Mandible dirty white. Not in Tobago.

Field notes. A fairly common and widely distributed inhabitant of forests and cacao cultivations. It generally perches on the lower branches and does not try to conceal itself.

The male no. 353 was singing: "pchèy-qcmèy-pchèy-pyeeypyee", this song repeated over and over again without any variation. Curiously enough female no. 825 was also singing previous to its being collected; as the sexing has been carried out in the Leiden Museum it is most unlikely that a mistake has been made, where as the measurements of the specimen in question also point to its being a female.

271. **Cnemotriccus fuscatus cabanisi** (Léotaud)

Empidonax cabanisi Léotaud, Ois. Trinidad, 1866, p. 232 (Trinidad).

Tacarigua: 2 — (♀ ♀) (nos. 115, 196).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
115	(♀)	13-8-1953	63	57	12	18	9.5
196	(♀)	1-9-1953	64	59	11	17	13.5

Irides dark brown. Bill black. Feet dark grey.

Short description. Upper parts dull brownish. Wing with two ochraceous bars. Outer edgings of secondaries ochraceous. Breast ashy brown, rest under parts pale yellow. Whitish streak from base of bill over the eye. More brownish upper parts and paler under parts than *Contopus* or *Empidonax*. Mandible black.

Field notes. Rare, the two specimens collected were the only ones encountered. Both were shot from trees in high and dense secondary vegetation.

272. **Myiophobus fasciatus fasciatus** (P. L. S. Müller)

Muscicapa fasciata P.L.S. Müller, Syst. Nat., suppl., 1776, p. 172 (Cayenne).

Tacarigua: 1 juv. (no. 48).

Fort Read: 1 ♂ (no. 525).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
525	♂	15-11-1953	61	55	11	17	10.5
48	juv.	25-7-1953	—	—	—	—	9.5

Irides brown. Bill, maxilla black, mandible pale greyish brown. Feet black.

Short description. Upper parts rusty brown. Crown patch orange or yellow. Wings blackish with 2 rufous or fulvous bars. Secondaries with the outer edges in the same colour. Under parts yellowish, breast tinged with fawn colour and streaked. Mandible greyish brown. Not in Tobago.

Field notes. Common, but rather inconspicuous, in small bushes and isolated clumps of bamboo near Tacarigua; also observed on Gasparee Island.

At the breeding-site the species utters a rather weak and toneless alarm-note: "kyerrrrr", which greatly facilitates finding its nest.

The nests were always found in bamboo; they are neat cup-like structures, largely built of dead grasses, interwoven with and pendular from the end of a long, flexible, twig; generally from 1.5 to 2 m up. Nests were found as follows:

Tacarigua, 30-VII, in a small bamboo-growth, nest containing one egg which measured 17.7×13.0 mm. The following day the nest still contained one egg only, unfortunately I broke it after taking its measurements.

Dinsley Bamboo, Tacarigua, 31-VII, nest containing two eggs, which measured 18.2×13.2 and 17.0×12.3 mm.

Tacarigua, 7-VIII, nest, in a small bush of bamboo and only 1.5 m up, containing one egg and a young bird with closed eyes, though probably already one to several days old; on 11 August the young bird was found to have grown considerably. I collected the remaining egg on that date and found its contents to be putrified; it measured 18.1×13.4 mm. On 16 August the nest was empty, probably the young bird had fledged; on 25 August I happened to re-inspect the nest, on my approach an adult flushed from it, and the nest was found to contain one egg; on 28 August this nest still contained one egg; on 31 August this nest still contained one egg only, on my approach a bird uttered its familiar alarm note, showing that the nest had not been deserted.

Tacarigua, 16-VIII, a nest in a situation similar to that of the preceding ones, empty; on 25 August this nest contained two eggs on which the bird was incubating. I collected the clutch, the eggs measured 18.2×14.0 and 18.65×14.4 mm.

Tacarigua, 28-VIII, a nest about 1.75 m up; it contained two fairly large young; on 31 August this nest still contained one young, the other probably had fledged already.

Fort Read Army Reserve, 15-XI, a nest about 1.5 m high, containing two unincubated eggs. The bird nr. 525 was collected close to the nest (but before I found the latter), when uttering its ordinary alarm-cry. The eggs measured 17.0×13.1 , 17.0×13.2 mm.

The preceding notes make it evident that two is the normal clutch-size, but that one egg may occasionally represent a full clutch, and that the same nest may be used more than once.

273. *Platyrinchus mystaceus insularis* Allen

Platyrhynchus insularis Allen, Bull. Am. Mus. Nat. Hist., vol. 2, 1889, p. 143 (Tobago).

Tacarigua: 1 (♀) (no. 441).

Mt. Tabor (2000'): 1 (♀) (no. 368).

Arima Valley: 1 ♀ (no. 156).

Valencia Reserve: 1 ♂ (no. 852).

El Tucuche: 1 ♂ (no. 687).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
687	♂	19-12-1953	58	30	11	17	9.5
852	♂	6-2-1954	55	27	10	17	9
156	♀	22-8-1953	51	26	10	16	9
368	(♀)	20-10-1953	53	—	10	17	7.5
441	(♀)	2-11-1953	50	23	10	16	7.5

Irides sepia brown. Bill black, base of mandible pale brownish, pinkish yellow or dirty white. Feet pale greyish pink to pinkish yellow.

Short description. Upper parts dark olive, crown patch, lores and ring around the eye bright yellow. Ear coverts brownish yellow, malar stripe dark. Throat whitish, rest of under parts fulvous. Bill broad, flattened.

Field notes. Though the species occurs in both islands, I observed it in Trinidad only, where it is a rather uncommon, but certainly not rare inhabitant of more or less open undergrowth of heavy forest. The birds were nearly always seen solitary, they behaved quietly, without skulking and, as a consequence, could be collected fairly easily. The "short, harsh chirp" mentioned by Belcher & Smooker, I rendered as "chēē...chēē...", repeated with short intervals. Besides the localities mentioned above, it was observed in the Arena Reserve.

274. *Tolmomyias sulphurescens berlepschi* (Hart. & Goodson)

Rhynchocyclus sulphurescens berlepschi Hartert and Goodson, Novit. Zool., vol. 24, 1917, p. 415 (Caparo, Trinidad).

Tacarigua: 1 ♂, 2 ♀ ♀ (nos. 313, 321, 378).

Tacarigua Reserve: 1 — (no. 386).

Arima Valley: 1 ♂, 1 — (nos. 714, 764).

Verdant Vale: 1 ♂ (no. 834).

Brasso Seco: 1 ♀ (no. 796).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
321	♂	7-10-1953	68	57	12	18	15
714	♂	3-1-1954	70	57	13	18	15.5
834	♂	4-2-1954	70	57	12	19	16.5
313	♀	5-10-1953	65	54	12	18	16
378	♀	22-10-1953	68	56	13	19	17.5
796	♀	29-1-1954	68	58	12	18	18.5
386	—	22-10-1953	64	—	11	17	15
764	—	24-1-1954	68	54	12	17	14

Irides grey. Bill black, mandible dirty white. Feet bluish grey.

Two October specimens show wing and tail moult.

Short description. Upper parts dark green. Wings and tail black, fringed with green. Upper wing coverts and innermost secondaries edged with greenish yellow. Throat greyish, breast darker and tinged with green. Abdomen yellow. Under wing coverts yellowish. Bill depressed. Not in Tobago.

Field notes. Only locally fairly common. Like other small flycatchers this species is usually seen moving among the foliage of forest trees. In the hand the grey irides assist in distinguishing this species from all other small flycatchers.

275. ***Tolmomyias flaviventris collingwoodi*** (Chubb)

Rhynchocyclus flaviventris collingwoodi Chubb, Bull. B.O.C., vol. 40, 1920, p. 109 (Macqueripe Valley, Trinidad).

Tacarigua: 3 ♂ ♂, 1 ♀, 2 — (nos. 26, 40, 100, 423, 470, 573).

Laventille Swamp: 2 ♂ ♂, 1 ♀ (nos. 561, 612, 619).

Mt. Hope: 1 ♂ (no. 564).

La Laja: 1 ♂ (no. 737).

Morne l'Enfer Reserve: 1 ♀ (no. 642).

Grafton, Tobago: 1 ♂ (no. 911).

Back Hill; Tobago: 1 — (no. 927).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
26	♂	17-7-1953	59	47	10	15	—
470	♂	6-11-1953	60	47	10	17	10
561	♂	22-11-1953	57	47	10	17	12
564	♂	22-11-1953	59	47.5	10	17	11.5
573	♂	25-11-1953	60	50	9.5	17	12
613	♂	5-12-1953	60	49	—	17	11.5
737	♂	20-1-1954	60	48	9	17	11.5
911	♂	12-2-1954	62	50	9	17	10.5
40	♀	23-7-1953	57	—	9	17	12
619	♀	5-12-1953	60	48	10	16	12
642	♀	9-12-1953	60	48	10.5	17	14.5
100	—	9-8-1953	59	48	9.5	17	11.5
423	—	1-11-1953	58	48	10	16	11.5
927	—	14-2-1954	62	48	9.5	16	9.5

Irides pale greyish brown. Bill, maxilla black, mandible dirty white. Feet pinkish grey.

It is remarkable that the two specimens from Tobago are slightly larger.

Short description. Yellowish olive green. Wings and tail black, margined with yellowish green. Under parts dull sulphur yellow, brighter on abdomen. Bill depressed. The species is smaller than *sulphurescens*, more green tinged on the head and decidedly more golden yellow on throat, sides of head and breast.

Field notes. A common species in forest, particularly near edges of forests and in the rich vegetation along streams, in light secondary forests, cacao cultivations, and also in mangroves. Belcher & Smooker evidently confuse the two species of *Tolmomyias*, for it is this species which is the commoner of the two, occurs in Tobago, and has a "high whistle". On the other hand the measurements of the eggs as presented by these authors are larger for their *T. sulphurescens* (= *T. flaviventris*) than for their *T. flaviventris*

(= *T. sulphurescens*), which is unlikely to be correct, as *T. sulphurescens* is a larger bird than *T. flaviventris*, and can hardly be expected to lay eggs smaller than those of the last-mentioned species.

276. **Myiornis ecaudatus** (Lafr. & dOrb.)

Short description. Upper parts yellowish green. Wings and tail blackish, feathers edged with green. Head greyish with white around the eye. Under parts whitish, greyish on sides of breast and yellowish tinged on flanks. A small species with a short tail. Rare. Not in Tobago.

277. **Pseudocolopteryx sclateri** (Oustalet)

Short description. A small tyrant with yellow under parts. Crown of head crested, blackish brown with paler longitudinal streak. Lores and streak above the eye brownish yellow. Nape and sides of neck tinged rusty brown. Back dark green with darker streaks, rump brownish yellow. Wings and tail brown. Wings with 2 brownish white bars. Not in Tobago.

278. **Elaenia flavogaster flavogaster** (Thunberg)

Pipra flavogaster Thunberg, Mém. Ac. Sci. St. Petersburg, vol. 8, 1822, p. 286 (Brazil = Rio de Janeiro).

Tacarigua: 5 ♂♂, 1 ♀ (nos. 93, 314, 326, 377, 581, 596).

Diamond Estate, Auchenskeoch, Tobago: 2 ♂♂ (nos. 872, 882).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
93	♂	5-8-1953	72	69	10	20	24.5
314	♂	5-10-1953	75	65	10	19	22
326	♂	8-10-1953	74	58	10	20	21
377	♂	22-10-1953	78	moult	9	19	23.5
596	♂	1-12-1953	81	73	10	19	25.5
872	♂	10-2-1954	83	75	10	20	21.5
882	♂	11-2-1954	84	75	10	20	23
581	♀	27-11-1953	76	64	10	20	24.5

Irides dark sepia. Bill dark grey to black, base of mandible dirty white. Feet black.

5 ♂♂, 3 ♀♀ from Surinam measure: wing ♂♂ 76-84, ♀♀ 70-79 mm (material from the Leiden Museum and the Mus. of Comp. Zoölogy, Cambridge, U.S.A.).

1 ♂, 3 ♀♀ from Trinidad (André coll.) measure: wing ♂ 79, ♀♀ 78-81 mm; 2 ♂♂, 2 ♀♀ from Tobago (André and Rendall coll.) wing ♂♂ 80, ♀♀ 82-85 mm. Tobago birds range somewhat larger than Trinidad birds, but there is no reason to suppose that they fall far beyond the variation range of the nominal race.

The fresh skins from Trinidad and Tobago are greener (less brownish) above than the older skins.

Short description. Upper parts olive brown. Head slightly darker and crested. Sides of face and throat olive grey. Breast and flanks yellowish olive brown. Abdomen yellow. Wing coverts and innermost secondaries whitish edged. Wings and tail brownish.

Field notes. Very common and widely distributed wherever there are trees and shrubs in cultivated country, near houses, etc. They are noisy and conspicuous birds, generally seen in pairs or in small bands.

279. ***Elaenia parvirostris*** Pelzeln

Elaenia parvirostris Pelzeln, Orn. Bras., vol. 2, 1868, pp. 107, 178 (Curytiba, Parana, Brazil).

Tacarigua: 1 ♂, 1 — (nos. 68, 76).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
68	—	30-7-1953	72	61	9.5	17	12.5
76	♂	3-8-1953	75	64	9.5	18	16

Irides brown. Bill black white yellowish orange base of mandible. Feet black.

The species has not yet been recorded earlier for Trinidad. Apparently it is a migrant from the South (cf. Zimmer, 1941a, p. 11). Both specimens look rather fresh and have nearly finished their wing moult, the outermost primaries are growing out.

Short description. Upper parts brownish olive green with a hidden white coronal patch. Differs from *flavogaster* and *Sublegatus arenarum* by the small bill and clear greyish under parts with only a slight yellowish wash on lower abdomen and under tail coverts.

Field notes. Rare. Specimen no. 68 was taken in a small clump of bamboo in open country on Orange Grove Estate; specimen no. 76 in light secondary forest north of Tacarigua, where the species was occasionally observed. Never seen elsewhere.

280. ***Elaenia chiriquensis*** Lawrence

Short description. Upper parts greyish olive or olivaceous brown, crown with concealed white patch. Chin and throat greyish white, rest under parts brown yellowish grey. Wing with 2 brownish grey bands. Differs from *E. flavogaster*, *parvirostris*, *M. gaimardii* and *Sublegatus arenarum* by the more brownish tinge all over. Local. Not in Tobago.

281. ***Myiopagis gaimardii trinitatis*** (Hart. & Goodson)

Elaenia gaimardii trinitatis Hartert and Goodson, Novit. Zool., vol. 24, 1917, p. 411 (Caparo, Trinidad).

Tacarigua: 2 ♀ ♀ (nos. 354, 472).

Hills SW of Caura: 1 ♀ (no. 674).

Morne l'Enfer Reserve: 1 ♂ (no. 636).

Ortinola: 1 ♀ (no. 691).

Verdant Vale: 1 — (no. 831).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
636	♂	9-12-1953	59	51	10	19	13.5
354	♀	17-10-1953	58	48	10	18	11.5
472	♀	6-11-1953	61	53	10	18	12.5
674	♀	16-12-1953	62	50	10	17	12.5
691	♀	19-12-1953	57	50	10	17.5	9.5
831	—	2-4-1954	58	51	9	17.5	9.5

Irides brown. Bill black, sometimes base of mandible orange tinged. Feet black.

Short description. Upper parts olive green. Crown of head blackish with a small crest and large white, slightly yellow tinged coronal patch. Two pale bands across the wings. Differs from *flavogaster* by smaller size and coronal patch. Not in Tobago.

Field notes. Not uncommon, though certainly not plentiful, and widely distributed in forests, along the edges of forests and sometimes also in secondary growths. The species has a pretty song, which I rendered: "tee-tyeeew-tyü-tyü-tyü-tyee-tyü--chwee", presumably it is identical with the call described by Chapman (1894).

282. *Sublegatus arenarum glaber* Sclater & Salvin

Sublegatus glaber Sclater and Salvin, Proc. Zool. Soc., 1868, pp. 168, 172, pl. 13, fig. 2 (Caracas, Venezuela).

Laventille Swamp: 2 ♀ ♀, 1 — (nos. 205, 616, 662).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
616	♀	5-12-1953	68	61	10	18	11.5
662	♀	14-12-1953	70	64	10	19	13
205	—	3-9-1953	70	—	10	19	13

Irides dark brown. Bill blackish brown with pale base of mandible. Feet black.

The September specimen shows wing and tail moult.

As a matter of fact I cannot see any differences between the Trinidad skins and 5 (2 ♂ ♂, 2 ♀ ♀, 1 unsexed (♂?)) from Surinam (Nickerie 4, Leonsberg, Surinam River 1). The measurements too agree well, for the Surinam examples measure: wing ♂ ♂ 69-72, ♀ ♀ 68-69; tail ♂ ♂ 61-63, ♀ ♀ 59-61, culmen 9, tarsus 18-19 mm: weight 13-14.1 grs.

Zimmer in the revision of the species (1941b, p. 7) does not mention Suri-

nam skins, but recognizes *obscurior* from Cayenne. In my opinion skins from Middle and West Surinam are *glaber*.

Short description. Resembles *E. flavogaster*, but is distinguished by the more greyish (not olive tinged) sides of the head and the clear grey throat and breast. Not in Tobago.

Field notes. Found only in the mangroves of Laventille Swamp, where the specimens collected were the only ones encountered. Belcher & Smooker record it also from Chacachacare, in very different country, dense scrub interspersed with tall cactus. It is a species of quiet habits.

283. ***Phaeomyias murina incomta*** (Cab. & Heine)

Elainea incomta Cabanis & Heine, Mus. Heineanum, vol. 2, 1859, p. 59 (Carthagen, Colombia).

Tacarigua: 1 — (no. 593).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
593	—	1-12-1953	57	49	9	18	9.5

Irides dark brown. Bill black, base of mandible orange. Feet black.

The species was not yet certainly known from Trinidad proper. This specimen, which shows wing and tail moult, agrees well with a series of 5 ♂♂, 5 ♀♀ from Venezuela (various localities in provinces Aragua, Anzoatagui, Bolivar, Merida, Barinas, Lara, Tachira). The measurements of these specimens are: wing ♂♂ 57-62, ♀♀ 55-58; tail ♂♂ 47-53, ♀♀ 46-52; culmen 8-9, tarsus 16-18 mm.

Compared with a series of 14 skins from Surinam, it appears that the upper parts of the latter are darker more olivaceous (less brownish), the under parts are slightly more vivid yellow, the breast too is more yellowish. The bills in the Surinam examples are weaker, the mandible mainly blackish. In the birds from Venezuela the mandible is mainly pale (orange coloured?) with a black tip. The measurements of the Surinam birds are: wing ♂♂ (9) 56-60, ♀♀ (5) 54-57; tail ♂♂ 49-52, ♀♀ 44-47; culmen 7.5-9, tarsus 17-19 mm; weight 9.5-11.6 grs.

Zimmer (1941b, pp. 9-10) includes Surinam birds into the race *wagae*, originally described from Peru. I have seen too little material from different parts of South America to give a definite opinion, but will point to the fact that Hellmayr (1927, p. 452) gives measurements for *wagae* that are larger than found in the Surinam birds. Wing ♂♂ 60-63, ♀♀ 54-57; tail ♂♂ 57-60, ♀♀ 50-53 mm. Moreover Hellmayr states that in *wagae* the bill is larger than in *incomta*, while I find that Surinam birds have weaker bills than Venezuelan birds (*incomta*).

Short description. A small species. Upper parts dusky olive brown. A greyish streak above the eyes. Throat grey. Rest of under parts grey mixed with yellow. Buffish streaks on the wings. Not in Tobago.

Field notes. My experience as regards this species is confined to this specimen, which was shot in about 2 m high dense secondary growth in waste country in the hills. On the islands in the Bocas it is apparently less rare.

284. *Camptostoma obsoletum venezuelae* Zimmer

Camptostoma obsoletum venezuelae Zimmer, Am. Mus. Novit., no. 1109, 1941, p. 12 (La Cascabel, Rio San Feliz, Venezuela).

Tacarigua: 2 ♂♂, 2 ♀♀ (nos. 38, 315, 654, 655).

La Laja: 1 ♂, 1 ♀ (nos. 844, 845).

Mt. Chaguaramal: 1 ♂ (no. 523).

Verdant Vale: 1 ♀ (no. 828).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
38	♂	21-7-1953	55	40	7	15	6.5
315	♂	6-10-1953	54	41	7	14	7.5
523	♂	14-11-1953	53	43	8	14	8
844	♂	5-2-1954	52	36	7	14	7.5
654	♀	12-12-1953	48	33	8	14	7.5
655	♀	12-12-1953	50	34	8	14	7.5
828	♀	4-2-1954	48	32	8	—	6
845	♀	5-2-1954	47	31	7	14	7

Irides brown. Bill, maxilla black, mandible pinkish grey with black tip. Feet black.

Four examples (1 ♂, 3 ♀♀) from Surinam (*napaeum*) are greener on the upper parts and clearer yellow below. The measurements correspond with Trinidad birds: wing ♂ 53, ♀♀ 46-50; tail ♂ 40, ♀♀ 30-32; culmen 8; tarsus 13-14 mm; weight ♂ 9.8, ♀♀ (2) 7-7.3 grs.

Short description. Resembles *Phaeomyias*, but smaller and upper parts more olive green, not brown. Under parts more buffish yellow. Not in Tobago.

Field notes. Fairly common and widely distributed in light forest and in trees in secondary growths. Belcher & Smooker consider the species rare, but, although it is rather inconspicuous and may easily escape recognition as long as one does not know its voice, it is nowadays certainly not even uncommon. I have heard the song at the outskirts of Port-of-Spain, and also observed specimens in the Arena Reserve, which shows that the species is not confined to the hilly parts of the island. It may be seen in the tops of high trees as well as in low bushes close to the bottom. The birds are usually seen alone or in pairs.

The song is a weak but not unattractive chirp, which in my notes is des-

cribed as: "pyiĩĩ — pyeeuw — pyeeuw", etc., presumably identical with the sharp little whistle recorded for the species by Belcher & Smooker.

285. *Leptopogon superciliaris pariae* Phelps & Phelps Jr.

Leptopogon superciliaris pariae Phelps & Phelps Jr., Proc. Biol. Soc. Washington, vol. 62, 1949, p. 189 (Cerro Azul, Paria Peninsula, Sucre, Venezuela).

La Laja: 1 ♀ (no. 820).

Mt. Chaguaramal: 1 ♂ (no. 332).

Blanchisseuse Reserve: 1 ♀ (no. 762).

Morne Bleu-Aripo: 1 ♀ (no. 750).

San José: 1 ♀ (no. 800).

Hills SW of Caura: 1 ♀ (no. 529).

Mt. Tabor: 1 ♂ (no. 324).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
324	♂	8-10-1953	69	58	12	15	9.5
332	♂	11-10-1953	68	57	13	17	11.5
529	♀	17-11-1953	62	50	11.5	14	10.5
750	♀	22-1-1954	65	55	12	14	11
762	♀	23-1-1954	64	49	12	15	10
800	♀	1-2-1954	62	53	12	15	9.5
820	♀	2-2-1954	65	51	—	14.5	11.5

Irides brown to greyish brown. Bill black with base of mandible pale orange. Feet bluish grey.

I have not seen *pariae* from Peninsula de Paria described by Phelps & Phelps Jr., but the authors include Trinidad birds into this race. It must be remarked, however, that according to my measurements Trinidad birds appear to be larger. The measurements given for *pariae* are: wing ♂♂ 63-66, ♀♀ (59?) 60-62 mm.

Short description. Upper parts olive green, but crown of head bluish grey. Lores, superciliaries and eye region whitish, ear coverts black. Wings blackish with olive green edgings and broad yellowish tips to wing coverts. Throat greyish, breast greenish yellow, abdomen lemon yellow. Resembles *Myiopagis gaimardii*, but the colour of the head and the lack of a crown patch distinguish it. Not in Tobago.

Field notes. An apparently not uncommon and widely distributed inhabitant of the Northern Range. The birds encountered were always solitary.

286. *Mionectus olivaceus venezuelensis* Ridgway

Mionectes olivaceus venezuelensis Ridgway, Proc. Biol. Soc. Washington, vol. 19, 1906, p. 116 (Guacharo, Bermudez, Venezuela).

Tacarigua: 1 ♀ (no. 379).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
379	♀	22-10-1953	65	48	13	16	15

Irides dark sepia. Bill black with base of mandible yellow. Feet dark lead grey.

Short description. Upper parts vivid olive green. Wings and tail black with olive margins. Inner webs of wing feathers rufous. Throat and breast green with numerous pale striations. Abdomen yellowish. Not in Tobago.

Field notes. Evidently rare. The specimen collected, shot in forest in a young tree that was also attractive to *Pipromorpha oleaginea*, was the only individual ever seen. Contrary to Belcher & Smooker's opinion that this bird inhabits a higher habitat than *Pipromorpha*, the specimen was taken hardly above sea-level, as was Léotaud's specimen. Belcher & Smooker's statement that: "the birds (*Pipromorpha* and *Mionectes*) resemble each other so closely in the field that until some certain diagnostic character can be given as regards the nests...it is difficult to say what the status of *Mionectes* is", is difficult to understand, for apart from their general agreement in size, I see no similarity whatever. The streaked greenish breast of *Mionectes* can in the field be distinguished at a glance from the smooth orangish under surface of *Pipromorpha*.

287. ***Pipromorpha oleaginea pallidiventris*** (Hellmayr)

Mionectes oleaginea pallidiventris Hellmayr, Novit. Zool., vol. 13, 1906, p. 22 (S. Antonio, Bermudez, Venezuela).

Tacarigua: 8 ♂♂ (nos. 107, 113, 134, 177, 459, 473, 590, 592).

Mt. Chaguaramal: 1 — (no. 510).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
107	♂	10-8-1953	66	50	10	16	10
113	♂	12-8-1953	62	47	10	15	10
134	♂	17-8-1953	66	51	10	15	12.5
177	♂	27-8-1953	64	51	11	15	12
459	♂	4-11-1953	62	50	10	16	12.5
473	♂	7-11-1953	65	49	11	15	11.5
510	—	14-11-1953	65	49	10	16	11.5
590	♂	1-12-1953	65	50	11	15	12.5
592	♂	1-12-1953	62	47	11	16	12

Irides dark brown. Bill, maxilla and tip of mandible black, rest of mandible pale orange. Feet bluish pink to bluish grey.

Short description. Upper parts vivid olive green. Under parts yellow ochre, greenish tinged on chin and throat. Wing coverts margined with ochreous. Tail blackish, edged with green.

Field notes. In forest probably the commonest of the small flycatchers (the probably even more plentiful *Contopus cinereus* is not a true forest-bird); it is easily identified by its orange buffish under parts, quite unlike any other flycatcher occurring in Trinidad. I have not observed the species in Tobago.

HIRUNDINIDAE

288. **Progne subis** (L.)

Short description. Robust swallow with forked tail. ♂ with purple blue upper and under side. ♀ with dusky brown throat, whitish abdomen. Tobago; not certainly observed in Trinidad.

289. **Progne chalybea** (Gm.)

Short description. Slightly smaller than foregoing species. ♂ glossy purple blue with white abdomen. ♀ like *subis* but smaller. Not in Tobago.

290. **Stelgidopteryx ruficollis aequalis** Bangs

Stelgidopteryx ruficollis aequalis Bangs, Proc. New England Zool. Club, vol. 2, 1901, p. 58 (Sta. Marta, Colombia).

Tacarigua: 1 ♀ (no. 352).

Maracas Bay: 1 ♂, 1 ♀ (nos. 585, 586).

Point Fortin: 1 ♂ (no. 627).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
585	♂	29-11-1953	106	50	7.5	11	13.5
627	♂	8-12-1953	109	53	7	10	13.5
352	♀	15-10-1953	103	50	8	11	14
586	♀	29-11-1953	104	49	7	11	13.5

Irides dark brown. Bill and feet black.

Short description. Brown-backed swallow with ashy rump and rufous throat and upper breast. Yellowish tinged abdomen and under tail coverts. Flanks brownish grey. Not in Tobago.

Field notes. Fairly common and widely distributed in open country, including the shore, but never seen in large numbers as is usual for the migrant swallows.

291. **Atticora cyanoleuca patagonica** (Lafr. & d'Orb.)

Hirundo patagonica Lafresnaye & d'Orbigny, Syn. Avium, 1, in Mag. Zool., vol. 7, 2, 1837, p. 69 (Patagonia).

Tacarigua: 1 ♂ imm., 1 ♀ imm. (nos. 56, 187).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
187	♂ imm.	28-8-1953	102	51	7	12	15.5
56	♀ imm.	26-7-1953	102	51	7	12	16

Irides brown. Bill and feet black.

Both birds are too large to belong to the nominal race and must be migrants from the south. *A. c. patagonica* has not yet been recorded from Trinidad, all earlier records have been included into *c. cyanoleuca*.

Short description. Upper parts steel blue, under parts white, flanks greyish tinged. Not in Tobago.

Field notes. Large flocks were present at my arrival on Orange Grove Estate, where they used to be resting on the electric wires above the savannah. Especially with sunny weather large numbers assembled in this way. My notes are incomplete, but to give an impression of the numbers actually present, I give here the following counts: on 5 July at least 300 specimens, on 16 July about 1500, on 26 July several hundreds again. They continued to be plentiful throughout the months of August and September, when I saw them almost daily, but after the first week of October they entirely disappeared.

292. **Riparia riparia** (L.)

Short description. Small brown backed swallow. Dark band across the breast. Migrant from N. America.

293. **Hirundo rustica erythrogaster** Bodd.

Hirundo erythrogaster Boddaert, Tabl. Planch. Enlum., 1783, p. 45, based on Planch. Enlum., pl. 724, fig. 1 (Cayenne).

Tacarigua: 1 ♂, 2 (♀ ♀) (nos. 186, 508, 509).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
508	♂	13-11-1953	116	84	8	12	17
186	(♀)	28-8-1953	111	56	8	12	19.5
509	(♀)	13-11-1953	114	70	8	11	17.5

Irides brown. Bill black. Feet greyish black.

Short description. Upper parts blackish blue, under parts pinkish or reddish. Whitish spots on deeply forked tail. Migrant from N. America.

Field notes. The first specimen was observed on 25 August, in company with a number of *Atticora cyanoleuca* drinking in flight from the pond in the savannah of Orange Grove Estate; from then on specimens were always present, but they never attained very large numbers; the greatest numbers I saw were on 13 November, when a total of 116 was counted, and on 24 November, when 277 specimens were present. During the time both species were present the Barn Swallow closely associated with *Atticora* and the birds *Hirundo rustica* no. 186 and *Atticora cyanoleuca* no. 187 were taken in one shot from the electric wires on which they were resting. The species remained common on Orange Grove Estate throughout the months October and November and during the first part of December. In December I left the estate, so that regular observation was no longer possible, but I am convinced that the species hibernates in Trinidad in some numbers.

294. **Iridoprocne albiventer** (Bodd.)

Hirundo albiventer Boddaert, Tabl. Planch. Enlum., 1783, p. 32 (Cayenne).

Point Fortin: 1 ♂ (no. 631).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
631	♂	8-12-1953	100	40	8	10	17

Irides dark brown. Bill and feet black. Testes enlarged.

Short description. Upper parts shining bronzy green with white rump. Under parts white. White patch on wings. Not in Tobago.

Field notes. The specimen collected was shot while resting solitary on an electric wire near the golf course of Point Fortin; two days later I observed two or three individuals perched on the sand of the beach. Elsewhere I never met with the species, which, in agreement with Belcher & Smooker, I consider to be rare.

TROGLODYTIDAE

295. **Thryothorus rutilus rutilus** Vieill.

Thryothorus rutilus Vieillot, Nouv. Dict. Nat., nouv. éd., vol. 34, 1819, p. 55 (Trinidad).

Tacarigua: 4 ♂ ♂, 1 ♀ (nos. 35, 57, 101, 133, 375).

Tacarigua Reserve: 1 — (no. 435).

Mt. Tabor: 1 ♂ (no. 489).

St. Benedict Estate: 1 — (no. 448).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
35	♂	21-7-1953	58	45	14	20	15.5
57	♂	27-7-1953	63	50	17	22	16.5
101	♂	9-8-1953	64	50	17	22	16.5
133	♂	17-8-1953	61	48	17	21	16.5
489	♂	10-11-1953	61	46	16	21	15.5
375	♀	21-10-1953	54	—	17	21	16.5
435	—	2-11-1953	60	47	16	21	15
448	—	3-11-1953	61	51	17	22	17

Irides pale greyish brown. Bill, maxilla black with pale bluish grey tomia, mandible pale bluish grey. Feet bluish grey.

The October specimen shows wing and tail moult.

Short description. Upper parts brown, more rufous on the head. Chin, throat and sides of head very characteristically mottled white and black. Breast orange rufous, abdomen more brownish with whitish centre.

Field notes. A common forest bird. Perhaps most plentiful near the edges of forests. Its loud and melodious song has been adequately described by Belcher & Smooker.

295a. **Thryothorus rutilus tobagensis** (Hellmayr)

Pheugopedius rutilus tobagensis Hellmayr, Anz. Ornith. Ges. Bayern, vol. 1, no. 4, 1921, p. 27 (Tobago).

Caledonia, Tobago: 1 — (no. 870).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
870	—	9-2-1954	65	47	16	23	15.5

The only difference in colour I can see between this specimen and the examples of Trinidad is that the abdomen is slightly darker. Wing and tarsus are a trifle longer.

Field notes. Occurs in the same habitat as its Trinidad relative, from which it is indistinguishable in behaviour and song. My few observations do not permit a conclusion as regards its relative abundance.

296. **Troglodytes musculus albicans** Berlepsch & Taczanowski

Troglodytes furvus albicans Berlepsch & Taczanowski, Proc. Zool. Soc., London, 1883, p. 540 (Guayaquil, Ecuador).

Tacarigua: 1 ♂ (no. 190).

Hills SW of Caura: 1 — (no. 485).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
190	♂	31-8-1953	56	38	12	19	13
485	—	9-11-1953	53	34	12	19	13.5

Irides brown. Bill, maxilla dark greyish, mandible pinkish white. Feet grey.

Compared with 4 ♂♂, 5 ♀♀ from Paramaribo, Surinam, I find no colour differences. The measurements of these birds are:

♂♂ (4) wing 49-53, tail 32-38, culmen 12-14, tarsus 18-19 mm.

♀♀ (5) wing 50-54, tail 34-39, culmen 12-14, tarsus 18-19 mm.

Perhaps Trinidad birds are averaging slightly larger.

T. m. clarus, under which name this population stood until recently, is considered to be indistinguishable from *albicans* by Paynter (1957, p. 12). Chapman & Griscom (1924, p. 292) reached the same conclusion, but Hellmayr (1934, p. 227) still recognized both forms.

Short description. Resembles the European wren. Brown above, barred with black on the wings. Under parts more fawn coloured, throat and middle of abdomen whitish.

Field notes. Common near houses and in open country. The species has an attractive song. On 19 November a nest, containing at least three young with closed eyes, was found in a crevice of a big tree on the savannah of Orange Grove Estate, about two meters from the ground.

296a. **Troglodytes musculus tobagensis** Lawrence

Troglodytes tobagensis Lawrence, Auk, vol. 5, 1888, p. 404 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂ (no. 881).

Back Hill, Tobago: 1 ♀ (no. 916).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
881	♂	11-2-1954	55	37	13	19	12.5
916	♀	12-2-1954	56	38	13	19	13.5

The difference in the colour of the under parts between these birds and specimens from Trinidad is very clear. Tobago birds are much whiter underneath. Culmen slightly longer.

Field notes. Found in cultivated country and about houses throughout the island of Tobago, and seems not to differ in any way, as far as song and behaviour are concerned, from the race *albicans*. On 29 October I twice saw a young Cowbird (*Molothrus bonariensis*) being fed by a House-wren in the cacao cultivations at Caledonia.

MIMIDAE

297. **Mimus gilvus tobagensis** Dalmas

Mimus gilvus tobagensis Dalmas, Mém. Soc. Zool. France, vol. 13, 1900, p. 134 (Tobago).

Tacarigua: 1 ♀ (no. 576).

Laventille Swamp: 1 ♂ (no. 558).

Diamond Estate, Auchenskeoch, Tobago: 1 ♀ (no. 858).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
558	♂	21-11-1953	113	118	17	34	56
576	♀	25-11-1953	106	116	17	32	56
858	♀	9-2-1954	102	102	17	33	51

(worn)

Irides brownish yellow. Bill black, paler at base. Feet black.

I cannot see differences between the two Trinidad specimens and the Tobago bird. In accordance with Hellmayr (1934, p. 315) I bring them to *tobagensis*. The species appears to be introduced not long ago into Trinidad.

Short description. Upper parts grey, under parts whitish. Superciliar streak white. Wings with some white bars. Tail long with large white tips to lateral tail feathers. Legs long.

Field notes. Common in inhabited regions in the northern lowlands of Trinidad. To the knowledge of the gradual distribution over the island I can little contribute, but the species was still absent from Point Fortin where the gardens of the U. B. O. T. village seemed extremely favourable for it. I have been told that occasional stragglers have already been noted at Point Fortin, so that the species may soon colonize the district. From Spring Hill

Estate the species was also absent, though Dr. Wright told me that once he observed a specimen. Here, however, ecological factors may be responsible. Common in similar country in Tobago.

The song is loud and fairly pleasant. The species largely feeds on berries, papaya-fruits, etc.

MUSCICAPIDAE

TURDINAE

298. *Turdus albicollis phaeopygoides* Seebohm

Turdus phaeopygoides Seebohm, Cat. Birds Brit. Mus., vol. 5, 1881, p. 404 (Tobago).

Tacarigua Reserve: 1 ♀ (no. 176).

Arima Valley: 1 ♂ (no. 149).

Brasso Seco: 1 ♂, 1 ♀ (nos. 797, 798).

Heights of Guanapo: 1 ♂, 1 ♂ juv. (nos. 773, 817).

Main Ridge, Tobago: 1 ♂ (no. 906).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
149	♂	20-8-1953	107	86	18	30	47.5
773	♂	27-1-1954	109	82	18	31	47.5
797	♂	29-1-1954	112	87	17	30	52.5
906	♂	12-2-1954	111	85	17	33	49.5
817	♂ juv.	2-2-1954	106	82	17	32	56.5
176	♀	29-8-1953	109	87	16	30	58
798	♀	29-1-1954	107	82	17	29	54

Irides brown, eye lid yellow. Bill, maxilla black, mandible with yellowish base. Feet bluish grey to brownish with toes more yellowish.

Short description. Upper parts olive brown, tail greyish. Under parts whitish, slightly tinged with brown. Chin and throat white with broad blackish brown longitudinal streaks which gives the throat a blackish appearance. Bill and feet dark.

Field notes. A common and widely distributed forest bird. Though it inhabits forests, and can often been seen in dark places far from open spaces, it can also been seen feeding on roads and other open places at the edge of forest. Going over the road to Brasso Seco, one could hardly miss seeing specimens hopping on the road-surface on many places.

299. *Turdus nudigenis nudigenis* Lafr.

Turdus nudigenis Lafresnaye, Rev. Zool., vol. 11, 1848, p. 4 (Caracas, Venezuela).

Tacarigua: 1 ♂ juv. (no. 69).

Mt. Hope: 1 ♀ (no. 568).

La Esperanza Estate: 1 fledgling (no. 125).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂ (no. 871).

Grafton, Tobago: 1 ♀ (no. 909).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
871	♂	10-2-1954	115	93	16	30	54.5
69	♂ juv.	30-7-1953	112	89	17	30	58.5
568	♀	22-11-1953	111	87	16	30	61
909	♀	12-2-1954	115	90	18	32	67.5

Irides orange brown, bare skin around eye greenish yellow, eye lid orange yellow. Bill greenish to orange yellow, greyish at base. Feet pale greyish.

The adult birds are uniform in coloration. Three ad. birds from Surinam are much more brownish on the upper parts, another is nearer the Trinidad birds, but darker. The under parts of the birds from Surinam are decidedly much more buffy brown. Though Todd (1931, p. 53) was convinced that birds from the Guianas had to be considered *gymnophthalmus*, Hellmayr (1934, p. 381, footnote) remarked that the individual variation is too large and consequently synonymized *gymnophthalmus* again with *nudigenis*.

Short description. Upper parts olive coloured (less brownish than in *albicollis*), paler on upper parts. Chin, throat, abdomen and under tail coverts whitish. Chin and throat streaked with dark brown. Naked patch around eye.

Field notes. A common bird of secondary growths, small and isolated patches of forest, bamboos, etc. Absent from large cacao plantations and primary forests, where it is replaced by its congeners.

As regards nidification the following notes were made. On 6 July a specimen was seen with food in its beak; on 28 July a nest was found, about 2 m from the ground in a very young forest tree near Tacarigua, it contained one egg, which was taken. The same nest contained another egg two days later, which was not collected until a few days later, when it appeared that the nest was deserted. The first measured 27.6 × 20.2 mm, the second egg 28.3 × 20.1 mm. On 31 July a nest with an alarming adult bird was seen in an isolated small patch of bamboo growth on Orange Grove Estate, about 4 m from the ground, it could not be closely examined; a fledgling that had only just left the nest was collected on 14 August (no. 125).

Like other thrushes this species largely feeds on berries of various kinds, and also the fruits of *Carica papaya* are greedily eaten.

300. *Turdus fumigatus aquilonalis* (Cherrie)

Planesticus fumigatus aquilonalis Cherrie, Sci. Bull. Mus. Brookl. Inst., vol. 1, 1909, p. 387 (Heights of Aripo, Trinidad).

Tacarigua: 1 ♂, 1 ♀ (nos. 86, 467).

Arima Valley: 1 ♂ (no. 787).

Ortínola: 1 ♂ (no. 698).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
86	♂	5-8-1953	119	98	21	32	73.5
698	♂	21-12-1953	120	92	20	31	66
787	♂	29-1-1954	113	98	20	33	67
467	♀	5-11-1953	113	98	20	33	69

Irides sepia brown. Bill blackish to brownish grey. Feet greyish brown to pinkish grey.

Short description. Dark ochraceous brown upper parts, under parts paler brown. Obscure brown longitudinal streaks on chin and throat. Bill and feet dark. Not in Tobago.

Field notes. This species seems to avoid both true forest, where *T. albicollis* occurs, and open places and secondary growths, where *T. nudigensis* finds its optimum habitat; it is largely, but of course not strictly, confined to shady in cacao plantations, here it is common.

A nest was found in a cacao-tree near Tacarigua on 17 Augustus, but its contents could not be examined.

301. *Platycichla flavipes melanopleura* (Sharpe)

Merula melanopleura Sharpe in Seebohm, Monogr. Turdidae, vol. 2, 1900, p. 87, pl. 103, fig. 2 (Trinidad).

Tacarigua Reserve: 1 ♀ (no. 464).

Arima Valley: 1 ♂, 1 ♀ (no. 712, 719).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
712	♂	2-1-1954	106	78	18	25	52.5
464	♀	5-11-1953	103	80	17	24	55
719	♀	7-1-1954	104	78	17	28	—

Irides dark sepia, eye lid yellow. Bill ♂ yellow, ♀ blackish. Feet ♂ yellow, ♀ brownish yellow.

Short description. Smaller than the *Turdus* species. ♂ black with greyish black back and abdomen. ♀ upper parts olive brown like *albicollis*, under parts pale brown like *fumigatus*, more whitish on abdomen. In the Tobago form (*xanthoscelus*) the ♂♂ are mostly wholly black.

Field notes. An uncommon, though locally (northern part of Arima Valley) fairly common inhabitant of forests of the northern range; found especially on places where fruit- and berry-bearing trees occur.

301a. *Platycichla flavipes xanthoscelus* (Jardine)

On 14 February several specimens were seen and heard singing in a piece of virgin forest in which palms were conspicuous, on the slope of Pigeon Peak, Tobago. The song is strong and beautiful. The singing birds were perched high, and moreover they were shy, so that it proved impossible to collect any.

302. *Catharus aurantirostris birchalli* Seebohm

Catharus birchalli Seebohm, Cat. Birds Brit. Mus., vol. 5, 1881, p. 289 (Mountains NE Venezuela, Sucre).

Morne Bleu: 2 ♂♂, 1 — (nos. 152, 715, 716).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
715	—	4-1-1954	78	56	—	31	21.5
716	♂	4-1-1954	81	—	15	30	21.5
152	♂	21-8-1953	77	56	14	29	25.5

Irides sepia brown, eye lid orange. Bill orange, edge of culmen greyish. Feet yellowish orange.

Short description. The smallest species. Upper parts ochraceous brown, breast greyish, abdomen white. Not in Tobago.

Field notes. Common in the under growth of forest in the higher parts of the Northern Range. This is one of the very few — or perhaps the only — species of Trinidad birds that is strictly confined, by habitat preference, to the greater altitudes; I did not observe it below about 500 m altitude and, among other places, in the forest near the summit of Morne Bleu it is a character-bird. This restricted habitat evidently is the reason that comparatively few of the earlier collectors obtained the species. The birds live solitary or in pairs and give the impression of being definitely territorial; in appearance they are typical thrushes.

The alarm-note is a loud “chàrrrr”; the song is loud, short, but remarkably melodious, I wrote for it: “sěsětyělěk” (the last two syllables loud). I heard the song in December and January.

POLIOPTILINAE

303. *Ramphocaenus melanurus trinitatis* Less.

Ramphocaenus trinitatis Lesson, Rev. Zool., vol. 2, 1839, p. 42 (Trinidad).

Tacarigua: 3 ♂ ♂, 1 ♀, 2 — (nos. 119, 120, 124, 178, 432, 532).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
120	♂	14-8-1953	50	42	20	20	6
124	♂	14-8-1953	50	45	20	21	6
532	♂	18-11-1953	49	49	19	19	7.5
178	♀	27-8-1953	48	39	19	21	8
119	—	13-8-1953	48	45	20	20	—
432	—	2-1-1953	51	42	18	19	8.5

Irides pale brown or greyish. Bill brownish grey with pale base. Feet bluish grey.

Short description. A wren-like bird with a long straight bill. Upper parts brown with rufous tinged head. Throat white, rest of under parts suffused with rufescent. Tail black. Not in Tobago.

Field notes. Fairly common in dense growths in forests, particularly about small clearings, etc., and also in high and dense secondary growths.

The song consists of a series of shocks: “kyee.hee.hee.hee.hee.hee.hee.

hee.hee.", ably described by Belcher & Smooker as: "a long series of even high notes, just not sufficiently run together to be called a trill".

The female no. 178 was shot on the nest. During incubation the little bird had a strange attitude, the bill protruding almost vertically and the eye showing just above the rim of the nest. The cup of the nest was small and deep, and this evidently caused this remarkable breeding-attitude. The nest was about 30 cm from the forest floor, not at all concealed, in three or four stalks of vines and a few young air-roots. The place where it was found was fairly open, with some dense growths in the immediate neighbourhood. The nest contained two eggs of which, unfortunately, one was broken, the other egg is white with dispersed brown little spots, and measures 17.3×13.2 mm.

EMBERIZIDAE

RICHMONDENINAE

304. *Saltator coerulescens brewsteri* Bangs & Penard

Saltator olivascens brewsteri Bangs & Penard, Bull. Mus. Comp. Zool., vol. 62, 1918, p. 91 (Caparo, Trinidad).

Tacarigua: 1 ♂, 1 ♀ juv. (nos. 96, 507).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
96	♂	6-8-1953	98	86	19	26	56
507	♀ juv.	13-11-1953	95	87	17	25	53

Irides brown. Bill, maxilla black, mandible black, base bluish grey (♂), yellowish (♀). Feet dark grey.

The young specimen shows wing and tail moult. The ♂ had the testes enlarged.

Short description. Upper parts ashgrey, slightly tinged with olive. White superciliary streak reaching to the base of the culmen. Throat whitish, bordered by black submalar stripes. Breast greyish white, the colour gradually passes into the fawn colour of abdomen and under tail coverts. Bill black. Young birds have the upper parts tinged with olive and under parts with yellowish olive. Superciliary streak yellowish. Not in Tobago.

Field notes. A common inhabitant of thick secondary growths, particularly on and near the edges of waste fields.

305. *Saltator albicollis striatipectus* Lafr.

Saltator striatipectus Lafresnaye, Rev. Zool., vol. 10, 1847, p. 73 (Cali, Cauca Valley, Colombia).

Monos Island: 1 — (no. 390).

Gasparee Island: 1 ♂ (no. 393).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
390	—	24-10-1953	88	81	18	22	—
393	♂	24-10-1953	93	92	17	23	35.5

Irides grey. Bill black with yellow tip and gape. Feet greenish grey.

Short description. Upper parts olive green, rump and tail brownish grey. Short yellowish superciliary streak, whitish throat with indistinct grey sub-malar stripes. Breast greyish white with broad olive streaks. Abdomen white. Bill black with yellow tip. Not in Tobago.

Field notes. I have not observed this species on Trinidad proper; on Gasparee Island (where *S. caeruleus* also occurs) it appeared to be fairly common; the same probably holds for Monos, where the very short duration of our stay prevented investigations as regards its status.

306. **Paroaria gularis** (L.)

Short description. Upper parts bluish black. Head bright red with black chin spot and black around the eye. Under parts white. Under side of wing and tail blackish. Mentioned for Trinidad by Belcher and Smooker, and Street (Auk, vol. 63, 1946, p. 377). Not in Tobago.

307. **Cyanocompsa cyanea** (Lafr.)

Short description. Rather large. ♂ dark blue with brighter blue on forehead, over the eye, on malar region and upper wing coverts. Bill stout, conical. ♀ coffee brown, darker on wings and tail. Listed by Beebe (1952, p. 181) for Trinidad without particulars.

308. **Tiaris bicolor omissa** Jardine

Tiaris omissa Jardine, Ann. Mag. Nat. Hist., vol. 20, 1847, p. 332 (Tobago).

Diamond Estate, Tobago: 1 ♂ (no. 894).

Anse Bateau, Tobago: 1 ♂ (no. 921).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
894	♂	11-2-1954	51	—	9	16	7.5
931	♂	15-2-1954	54	39	9	15	7.5

Irides brown. Bill black. Feet pale pinkish grey.

Short description. ♂ upper parts dull olive green. Sides of head, throat and breast dull black, rest of under parts greyish washed with olive. ♀ entire under parts dull olive green. Not in Trinidad.

Field notes. Fairly common in open country with low secondary growth in Tobago.

309. **Tiaris fuliginosa fumosa** (Lawrence)

Phonipara fumosa Lawrence, Ann. Lyc. Nat. Hist. New York, vol. 10, 1874, p. 396 (Trinidad).

Tacarigua Reserve: 3 ♂ ♂, 1 ♀ (nos. 383, 436, 437, 438).

Hills SW of Caura: 2 ♂♂ (nos. 483, 528).

Crest of Arima Valley: 1 ♂ (no. 809).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
383	♂	23-10-1953	62	44	9	18	12
436	♂	2-11-1953	63	45	9	17	14.5
437	♂	2-11-1953	62	46	9	17	12.5
483	♂	9-11-1953	62	41	10	17	13.5
528	♂	17-11-1953	61	42	10	17	13
809	♂	1-2-1954	62	47	10	16	12
438	♀	2-11-1953	60	43	9	16	12

Irides brown. Bill black with pinkish gape. Feet dark brown grey.

Short description. ♂ sooty black with a slight olive tinge. ♀ upper parts brownish olive, paler on throat and breast, middle of abdomen yellowish white. Not in Tobago.

Field notes. Though observed in several places, and generally a number of individuals together, this is not a common species, but I would hardly go so far as to call it rare. The species was not encountered until, on 23 October, several hundred meters inside the Tacarigua Reserve, my attention was drawn by an unknown song, rather high pitched, fairly fast, and not loud; this first specimen could be collected. During its song the bird was perched at an altitude of about 10 m, hence far beneath the crowns of the trees and in a fairly dark place. No other specimens were noted. On 2 November, at the same place, there were quite a few individuals and after the three specimens listed for that date had been shot, the song continued from several sides. On 5 November I revisited the place and observed a male carrying a dead leaf; the whole behaviour of course definitely showed that the birds were at the beginning of reproduction. For the description of another locality where the species was observed regularly and in some numbers, see under *Sporophila schistacea*.

310. *Spiza americana* (Gm.)

Short description. ♂ upper parts brownish, warmer on upper back, the latter streaked with black. Wings warm brown. Superciliary streak yellowish. Sides of head grey. Yellow patch at malar region. Upper throat white, lower throat black. Breast yellowish. Abdomen creamy white. Flanks pale ash brown. ♀ lacks the black throat patch and has less yellow on breast. Mentioned by Léotaud.

THRAUPINAE

311. *Tanagra musica intermedia* (Chubb)

Short description. ♂ crown of head and nape blue, rest of upper parts violet black, rump yellow. Front, sides of head and throat blackish violet.

Under parts yellow. ♀ blue head as in ♂, front orange yellow. Upper parts dark olive green, under parts greenish yellow. Not in Tobago.

312. **Tanagra trinitatis** (Strickland)

Euphonia trinitatis Strickland, Contrib. Ornith., 1851, pt. 2, p. 72 (Trinidad).

Tacarigua: 1 ♀ (no. 604).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
604	♀	4-12-1953	54	33	8	15	14

Irides dark brown. Bill pale bluish with dark culmen line and tip. Feet bluish grey.

Short description. ♂ upper parts steel blue, summit of cap yellow, under parts yellow. Throat bluish black, which distinguishes it from *violacea*. ♀ much like ♀ *violacea* but middle of breast and abdomen cinereous. Not in Tobago.

Field notes. Notwithstanding the fact that only a single specimen could be obtained, and though Belcher & Smooker consider it rare, the species must be looked upon as a fairly common and widely distributed resident, a fact of which, however, I became aware only after I learned its song.

The species is easily overlooked, not only because of its small size and inconspicuous plumage, but also because it generally keeps to the tree crowns, where it apparently prefers thick growths of epiphytes and Lorantheae. It was from such a place that the specimen collected, by a chance shot, was taken.

Belcher & Smooker noted that the species has been recorded from both sea-level in the belt of monsoonal scrub in the north-west of Trinidad, and from the higher parts of the Northern Range, and indeed it occurs in a variety of habitats, when only high and *Loranthus*-infested trees are present. I have heard (but rarely seen) it in the Laventille Swamp in the mangroves, in the big trees shadowing cacao plantations where perhaps it is most plentiful, and in the drier type of monsoonal forest as well as in rain forest.

The song is a high but rather penetrant rattle of three notes, the last note higher-pitched than the first two, which are identical: "fēē — fēē — fēē". Though the keeping of birds in cages is legally forbidden, local people seem not acquainted with this fact, and I have on several occasions seen caged specimens. Also I have never seen that any member of the Trinidad Police Force tried to enforce the law as regards cage birds (mainly small tanagers and finches), though even on the main roads close to Port-of-Spain people with birds in cages can often be seen. The local name of *T. trinitatis* is Cravat, an evident corruption of the French name Louis d'or à cravatte.

313. *Tanagra violacea rodwayi* Penard

Tanagra violacea rodwayi Penard, Proc. New England Zool. Club, vol. 7, 1919, p. 30 (Mt. Roraima, Br. Guiana).

Tacarigua Reserve: 1 ♂ (no. 132).

Arima Valley: 1 ♂ (no. 730).

Mt. Chaquaramal: 1 ♂, 1 ♀ (nos. 511, 516).

La Laja: 2 ♀ ♀ (nos. 741, 758).

Morne d'Or: 1 ♀ (no. 569).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
132	♂	17-8-1953	60	32	8	15	13.5
511	♂	14-11-1953	60	31	8	16	15.5
730	♂	19-1-1954	57	31	9	15	13.5
516	♀	14-11-1953	60	32	8	17	15.5
569	♀	24-11-1953	57	32	8	15	15.5
741	♀	20-1-1954	60	32	9	17	15.5
758	♀	22-1-1954	60	31	8	16	14.5

Irides dark brown. Bill, maxilla black, mandible bluish grey with blackish tip. Feet bluish grey.

Birds from the Guianas on an average are smaller than Trinidad birds. 10 ♂♂ from Surinam and British Guiana (Berbice) measure: wing 54-57 (average 56.2 mm), tail 27-31 (average 29 mm), 3 unsexed birds wing 54-58 (average 55.6 mm), tail 27-30 (average 28 mm). 5 ♂♂, 5 ♀♀ from various localities in Venezuela (Uaipan-tepui, Ptari-tepui, Paurai-tepui, La Paragua, Sta Rosalia, Salto Para, Cerro Tigre, all in the province Bolivar) correspond in size with Trinidad birds: wing ♂♂ 58-63 (average 60 mm), tail 32-33 (average 32.4 mm); ♀♀ wing 56-59 (average 57.4 mm), tail 29-31 (average 30.2 mm). Moreover the bill of birds from Trinidad and Venezuela are slightly heavier.

T. v. rodwayi, described by Penard from Mt. Roraima, British Guiana, an account of the larger size and the more violaceous, less bluish upper parts was afterwards synonymized by Bangs (1930, p. 399) with the nominal race and this course was also followed by Hellmayr (1936, p. 54, footnote). Bangs compared the type specimen of *rodwayi* with one other specimen from Mt. Roraima and stated that this bird was similar with birds from other parts of the Guianas' and Trinidad without giving further particulars. Hellmayr stated that the Mt. Roraima birds were slightly larger, but he thought it unnecessary to separate them. My measurements show that the larger population is not restricted to Mt. Roraima, but that these birds form a part of a slightly larger population, inhabiting also eastern Venezuela and Trinidad. The colour differences originally given by Penard are found in some birds, but the birds from British Guiana and Surinam are variable in this character. On account on the difference in size, however, *rodwayi* can be upheld.

Short description. ♂ upper parts and sides of head glossy purple. Under parts orange yellow and a conspicuous orange yellow patch on the front. Outer tail feathers with white on the innerwebs. ♀ upper parts dark yellowish green, under parts greenish yellow, paler on middle of abdomen.

Field notes. In Trinidad common in forest, including light secondary forest and shadow trees in cultivated areas. In Tobago the sole evidence of its occurrence rested on a sight record by Belcher, who observed a solitary male on the banks of Hillsborough Stream. On 14 February I saw a pair at the edge of the forest on the slope of Pigeon Peak. As the birds remained above a steep slope, so that shooting would have resulted in their death, with but a slight chance of recovering them. I did not attempt to collect them. My observation of a pair in a rather remote part of the island indicates that the species can be listed as a wild bird, though it may well owe its existence in Tobago to introduction. The species is often kept as a cage bird, though, as far as I am aware, the males only.

314. *Tangara chrysophrys trinitatis* Todd

Tangara guttata trinitatis Todd, Ann. Carnegie Mus., vol. 8, no. 2, 1912, p. 203 (Aripo, Trinidad).

La Laja: 3 ♂ ♂, 2 ♀ ♀ (nos. 738, 739, 756, 757, 847).

Heights of Guanapo: 1 ♂, 1 ♀ (nos. 138, 774).

El Tucuche, 2600': 1 ♀ (no. 690).

Providence Estate, Aripo: 1 ♂ (no. 778).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
138	♂	19-8-1953	71	53	10	17	17.5
738	♂	20-1-1954	69	52	10	18.5	16
757	♂	22-1-1954	68	50	10	19	18.5
778	♂	27-1-1954	71	51	9	19	18.5
847	♂	5-2-1954	71	50	10	18	18
690	♀	19-12-1953	69	49	10	18	19
739	♀	20-1-1954	69	51	10	18	19.5
756	♀	22-1-1954	69	48	9.5	18	16.5
774	♀	27-1-1954	69	47	10	17	18

Irides dark brown. Bill, maxilla black, mandible bluish grey with black tip. Feet grey.

Short description. Upper parts green with a yellowish tinge, feathers with black centres. Region around eye and front golden yellow. Lores black. Under parts whitish, feathers of the breast with black centres again. Wing feathers black edged with green. Under tail coverts yellowish. Not in Tobago.

Field notes. Apparently confined to the higher parts of the Northern Range, where it is locally common; it favours berry-bearing trees near the edges of forest, and is seen either singly, or in pairs or small parties. Belcher

& Smooker observed the species very rarely, but probably they did not visit the right kind of country, for Léotauds' notes as regards relative abundance agree reasonably well with mine. In some regions (La Laja) this species is very common, and exceeds *T. gyrola* in numbers. It often associates with *T. gyrola* and thoroughly agrees with that species in habits.

315. *Tangara mexicana vieilloti* (Sclater)

Calliste vieilloti Sclater, Proc. Zool. Soc. London, vol. 24, „1856", (1857), p. 257 (Trinidad).

Tacarigua: 2 ♂ ♂ (nos. 87, 118).

Tacarigua Reserve: 1 ♀ (no. 439).

Arima Valley: 1 ♀ (no. 822).

Hills SW of Caura: 1 ♂ (no. 530).

Heights of Guanapo: 1 ♀ (no. 815).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
87	♂	5-8-1953	77	49	10	18	19.5
118	♂	13-8-1953	75	51	9	17	17
530	♂	17-11-1953	73	49	10	16	20
439	♀	2-11-1953	70	49	9	16	18.5
815	♀	2-2-1954	71	48	9	17	18.5
822	♀	2-2-1954	73	51	9	17	22

Irides dark sepia brown. Bill black. Feet dark greyish.

Compared with a series of Surinam and British Guiana (*m. mexicana*) the under parts are darker (more vivid yellow) and the blue of head and breast darker coloured. ♂♂ are slightly larger than ♀♀. 4 ♂♂ from Surinam and British Guiana measure: wing 74-77, 3 ♀♀ 70-72 mm.

Short description. Upper parts black with blue rump and upper tail coverts. Lores and chin black. Front, sides of head and breast blue. Rest of under parts yellow, flanks blackish. Turquoise blue spot on wing coverts. Not in Tobago.

Field notes. Probably the commonest of the three *Tangara*-species, or at least the one most readily observed in inhabited areas as it does not strictly confine itself to forest, but ventures in light secondary woods and in solitary trees outside the forest. Moreover, it seems to prefer the lowlands, at least it does not avoid them. In habits the species agrees with its congeners.

316. *Tangara gyrola viridissima* (Lafr.)

Aglaia viridissima Lafresnaye, Revue Zool., vol. 10, 1847, p. 277 (based on *Tanagra gyrola* Swainson, Zool. Illustr., n.s., vol. 1, no. 6, pl. 28, 1829 (Trinidad, suggested by Hellmayr).

Tacarigua: 2 ♀ ♀ (nos. 92, 591).

Tacarigua Reserve: 2 ♂ ♂ (nos. 504, 594).

Arima Valley: 2 ♂ ♂ (nos. 9, 154).

La Laja: 1 ♂ (no. 818).

Heights of Guanapo: 1 ♂ (no. 142).

St. Benedict Estate: 1 ♂ (no. 442).

San José, 1600': 1 ♂ (no. 799).

Naranja: 1 ♂ (no. 635).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
9	♂	12-7-1953	76	49	10	18	18.5
142	♂	19-8-1953	76	49	9	17	19.5
154	♂	22-8-1953	72	47	10	17	18.5
442	♂	3-11-1953	72	48	10	16	17.5
504	♂	12-11-1953	75	47	11	17	21
594	♂	1-12-1953	74	48	10	18	18.5
685	♂	19-12-1953	74	49	11	18	19
799	♂	1-2-1954	73	47	10	18	18.5
818	♂	2-2-1954	71	46	10	17	18.5
92	♀	5-8-1953	72	48	10	18	17
591	♀	1-12-1953	71	45	10	17	17.5

Irides dark sepia brown. Bill dark grey, more bluish grey at base. Feet bluish grey.

No. 92 is more bluish on the under parts than any of the other specimens.

Short description. Upper and under parts bright green with a yellowish tinge on the upper parts. Head chestnut brown. Not in Tobago.

Field notes. Common and widely distributed in forests and, like the preceding species, often seen feeding in fruit-bearing trees, usually in pairs or in small flocks. Perhaps, as Belcher & Smooker remark, the species prefers the higher levels (I saw it near the summit of El Tucuche, at an elevation of over 900 m), but it is also commonly seen at sea-level, where I never observed *T. chrysophrys*. On 12 July a specimen was seen carrying nesting material.

317. *Thraupis virens nesophila* Riley

Thraupis episcopus nesophilus Riley, Proc. Biol. Soc. Washington, vol. 25, 1912, p. 185 (new name for *Tanagra sclateri* Berlepsch) (Trinidad).

Maturita: 1 ♀ (no. 189).

San José: 1 ♀ (no. 805).

Tacarigua: 1 ♂, 1 — (nos. 66, 540).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
66	♂	30-7-1953	91	61	12	19	36
189	♀	30-8-1953	92	63	13	20	36.5
805	♀	1-2-1954	90	63	13	19	36.5
540	—	19-11-1953	91	64	11	19	34

Irides sepia brown. Bill black with bluish grey base of mandible. Feet grey.

Short description. Head, neck and under parts silvery grey, back greenish blue. Tail blue. Wing feathers black edged with blue. Wing coverts blue.

Field notes. Very common in gardens, parks, and generally in trees and bushes in cultivated country and near human habitations; also on cacao and coffee plantations in the hills, but absent from dense forest. Like other *Thraupinae*, birds of this species largely feed on berries and fruits.

317a. ***Thraupis virens berlepschi*** (Dalmás)

Tanagra berlepschi Dalmás, Mém. Soc. Zool. France, vol. 13, 1900, p. 136 (Tobago).

Caledonia: 1 ♂, 1 ♀ (nos. 864, 899).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
864	♂	9-2-1954	93	65	13	19	33
899	♀	12-2-1954	92	62	12	20	34.5

Irides dark sepia.

Compared with the Trinidad birds the differences are not very pronounced. The Tobago birds are darker blue coloured on rump and humeral patch.

Field notes. Common in Tobago. Agrees in ecology and habits with the preceding subspecies.

318. ***Thraupis palmarum melanoptera*** (Sclater)

Tanagra melanoptera Sclater, Proc. Zool. Soc. London, vol. 24, "1856", (1857), p. 235 (E. Peru).

Tacarigua: 3 ♂♂ (nos. 97, 373, 506).

Verdant Vale: 1 ♂, 1 ♀ (nos. 832, 833).

Tacarigua Reserve: 1 — (no. 503).

Maraval: 1 ♀ (no. 588).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
97	♂	7-8-1953	worn	65	14	22	38.5
373	♂	21-10-1953	103	76	14	22	37.5
506	♂	12-11-1953	102	75	14	21	35
833	♂	4-2-1954	97	68	13	20	35.5
832	♀	4-2-1954	90	66	13	21	35.5
588	♀	29-11-1954	94	69	13	20	37.5
503	—	12-11-1953	91	64	13	21	42.5

Irides brown. Bill black. Feet bluish grey.

Seven ♂♂ from Surinam measure wing 91-96, 1 ♀ 89 mm, five unsexed specimens from British Guiana 90-100 mm, 1 ♂ from Mt. Roraima 102 mm.

Short description. Olive green, paler on top of head, more blackish on back. Under parts dark grey. Under tail coverts yellowish green. Under wing coverts yellow. Not in Tobago.

Field notes. Very common and widely distributed; ecologically close to *T. virens*, but is not quite as plentiful in gardens and open country and, on the other hand, penetrates deeper into wooded land and forests.

319. *Thraupis cyanocephala büsingi* (Hellmayr & Seilern)

Sporathraupis cyanocephala büsingi Hellmayr & Seilern, Verh. Orn. Ges. Bayern, vol. 11, 1913, p. 254 (Aripo, Trinidad).

Chaquaramal: 1 (♀) (no. 331).

Providence Estate: 1 ♂ (no. 777).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
777	♂	11-10-1953	78	65	13	23	28
331	(♀)	11-10-1953	82	67	13	24	31.5

Irides brown. Bill black with pale greyish base of mandible. Feet grey.

Short description. Upper parts yellowish olive, top of head blue, sides of head, lores and front black. Under parts dark grey. Under tail coverts yellowish green. Under wing coverts yellow. Not in Tobago.

Field notes. Though Belcher & Smooker consider it rare, this beautiful tanager should rather be called local, as it is not uncommon in the higher parts of the Northern Range, where only I have found it. It prefers edges of forests, coffee cultivations (coffee-berries are apparently eaten), and flowering *Erythrina*-trees. Often the birds associate in small flocks; the only note I heard is an insignificant chatter.

320. *Ramphocelus carbo magnirostris* Lafr.

Ramphocelus magnirostris Lafresnaye, Rev. Mag. Zool. (2), 5, 1853, p. 243 (Trinidad).

Tacarigua: 1 ♂, 1 ♀ (nos. 78, 609).

Arena Reserve: 1 ♂ imm. (no. 550).

Morne l'Enfer Reserve: 1 ♂ (no. 639).

Maturita: 1 ♂ (no. 188).

Fort Read: 1 ♀ (no. 64).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
188	♂	20-8-1953	82	79	15	21	27.5
609	♂	4-12-1953	84	79	15	21	29
639	♂	9-12-1953	82	81	15	23	26.5
550	♂ imm.	20-11-1953	80	75	16	21	28
64	♀	29-7-1953	78	77	15	20.5	28.5
78	♀	3-8-1953	78	73	15	22	25

Irides brownish red. Bill black, mandible with pale bluish base. Feet black.

Specimens showing wing and tail moult are from August and November.

A specimen from July (no. 64) shows moulting feathers on the head.

Short description. Upper parts velvety black tinged with dark crimson. Throat and upper breast rich crimson, rest of under parts as upper parts. Conspicuous heavy bluish grey mandible. ♀ upper parts duller, under parts reddish coloured. Not in Tobago.

Field notes. A common inhabitant of high second growths and light forests, where the beautiful red plumage readily draws attention.

321. **Piranga rubra** (L.)

Short description. ♂ rosy scarlet, paler below. Wings brownish grey edged with scarlet. Tail feathers brownish grey tinged with scarlet. Bill pale horn coloured. ♀ olive with wings and tail blackish edged with olive. Under parts yellowish. A few times only mentioned for Trinidad. Not in Tobago.

322. **Piranga flava** (Vieill.)

Short description. ♂ entirely red, darker on the upper parts. ♀ upper parts olive yellow, under parts more orange tinged, greenish on the flanks. Bill dark. Northern range. Not in Tobago.

323. **Habia rubica rubra** (Vieill.)

Tachyphonus ruber Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., vol. 32, 1819, p. 359 (Trinidad).

Arima Valley: 1 ♂, 1 ♂ imm. (nos. 729, 766).

Guanapo: 1 ♂ imm. (no. 139).

Arena Reserve: 1 ♂ imm. (no. 548).

Blanchisseuse Reserve: 1 ♂ (no. 763).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
729	♂	19-1-1954	91	74	15	23	32.5
763	♂	23-1-1954	96	77	16	23	29.5
139	♂ imm.	19-8-1953	88	73	15	23	28.5
548	♂ imm.	20-11-1953	85	79	15	22	28.5
766	♂ imm.	24-1-1954	86	73	15	22	27.5

Irides ♂ ♂ brown, ♂ ♂ imm. greyish. Bill, maxilla blackish, mandible dirty brown. Feet pale brown.

Short description. ♂ above dull red with scarlet median crest. Under parts dull rosy red. ♀ olive brown upper parts, yellowish buff under parts. Can easily be confused with ♀ *Tachyphonus rufus*. Not in Tobago.

Field notes. Fairly common and widely distributed in forests where the birds usually are seen in small groups of three to five individuals, moving about at some one to three meters above the ground and drawing attention by their harsh cries: "chrr...chrr...". Curiously enough these parties seemed to consist of males only.

324. **Tachyphonus rufus** (Bodd.)

Tanagra rufa Boddaert, Tabl. Planch. Enlum., 1783, p. 44 (Cayenne).

Tacarigua: 1 ♀ (no. 43).

Arima Valley: 1 ♂ (no. 743).

Mt. Chaquaramal: 1 ♀ (no. 512).

Hills SW of Caura: 1 ♀ (no. 600).

Main Ridge, Tobago: 1 ♀ (no. 903).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
743	♂	20-1-1954	89	77	17	22	33.5
43	♀	24-7-1953	84	76	18	25	40
512	♀	14-11-1953	82	73	18	24	32.5
600	♀	2-12-1953	87	76	18	23	36.5
903	♀	12-2-1954	88	79	17	25	35

Irides dark sepia brown. Bill ♂ black with pale bluish base of mandible, ♀ horn grey with paler base of mandible. Feet ♂ black, ♀ dark greyish.

4 ♂♂ from Surinam measure wing 84-89; 3 ♀♀ 79-84 mm.

Short description. ♂ glossy blue black with a white patch on the wing. Base of mandible conspicuously pale blue. ♀ entirely rufous, but also with pale bluish base of mandible. Distinguished from ♀ *Habia r. rubra* by the more rufous plumage and darker under parts.

Field notes. Common and widely distributed in secondary growths in both islands.

325. *Tachyphonus lectuosus flaviventris* (Sclater)

Chlorospingus flaviventris Sclater, Proc. Zool. Soc., vol. 24, 1856, p. 91 (Trinidad, restricted by Zimmer).

Tacarigua: 4 ♂♂, 1 ♂ imm., 3 ♀♀, 2 (♀♀) (nos. 1, 79, 88, 122, 372, 454, 455, 471, 534, 574).

Arima Valley: 1 ♂ (no. 728).

Verdant Vale Estate: 1 ♂ in change (no. 707).

Ortínola: 1 ♂ in change (no. 699).

Point Fortín: 1 ♂ (no. 628).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
1	♂	1-7-1953	68	57	13	16	11
79	♂	3-8-1953	66	53	13	16	13.5
88	♂	5-8-1953	66	55	12.5	17	12.5
471	♂	6-11-1953	66	54	14	16	12.5
628	♂	8-12-1953	65	54	14	17	13.5
699	♂	21-12-1953	—	—	13	17	11.5
707	♂	31-12-1953	66	57	13	16	13
728	♂	19-1-1954	67	57	13	16	12.5
455	♂ imm.	4-11-1953	66	59	13	17	11.5
122	♀	14-8-1953	62	53	14	17	12.5
372	♀	21-10-1953	62	52	14	16	12.5
454	(♀)	4-11-1953	62	56	12	16	9.5
534	(♀)	18-11-1953	61	54	13	15	11.5
574	♀	25-11-1953	62	54	12	15.5	11.5

Irides dark brown. Bill black with bluish grey base of mandible. Feet bluish grey.

Wing moult takes place in examples of November and December. Nos. 454 and 534 most probably represent young ♀♀. The chin and throat as well as the sides of the head are yellowish tinged. The taxidermist could not ascertain the sex, showing that the gonads were hardly developed.

Zimmer (1945, p. 24) recognized a Trinidad subspecies on account of the larger bill of the island birds. However, also the wing measurements are larger, for 3 specimens (♂♂) from Ecuador measure wing 61-63 mm. Gyldestolpe (1945, p. 278) mentions 29 ♂♂, 10 ♀♀ from North Bolivia measuring wing ♂♂ 60-65, ♀♀ 57-60 mm. These are exactly the distinguishing characters already given by Léotaud for his *albispicularis* (a synonym of *flaviventris*). Birds from Ecuador and Bolivia belong to the nominal race.

Short description. ♂ as *rufus* but much smaller. ♀ upper parts yellowish green, under parts yellow. Chin and throat white, sometimes tinged with yellow. Sides of face grey. Not in Tobago.

Field notes. Curiously enough all previous authors call this species uncommon or rare, whereas I found it common and widely distributed in open woodland, including cacao plantations, at all levels. Usually the birds were seen in pairs, but sometimes in small and rather noisy parties. The call heard at such occasions was a repeatedly uttered short and harsh cry.

TERSININAE

326. *Tersina viridis* (Illiger)

Short description. ♂ turquoise blue with abdomen white and flanks banded with black. Front, area round the eye and throat black. ♀ green with breast and flanks barred with pale yellow. Rare. Not in Tobago.

COEREBINAE

327. *Chlorophanes spiza spiza* (L.)

Motacilla spiza Linné, Syst. Nat., 10th ed., vol. 1, 1758, p. 188 (Surinam).

Tacarigua: 2 ♀♀ (nos. 589, 608).

Maracas Bay: 3 ♂♂ (nos. 355, 356, 357).

Tacarigua Reserve: 1 ♂ (no. 440).

Arima Valley: 1 — (no. 144).

Morne l'Enfer Reserve: 1 — (no. 643).

Hills SW of Caura: 1 ♂ (no. 597).

Valencia Reserve: 1 ♂ (no. 854).

Spring Hill Estate: 1 ♂ (no. 767).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
355	♂	18-10-1953	77	54	14	17	16
356	♂	18-10-1953	73	51	15	18	17.5
357	♂	18-10-1953	73	48	15	19	21.5
440	♂	2-11-1953	74	47	15	19	16.5
767	♂	26-1-1954	74	51	15	18	17.5
854	♂	6-2-1954	72	47	16	18	16.5
597	♂	2-12-1953	72	48	15	18	17.5
	in change						
589	♀	30-11-1953	70	46	14	18	17
608	♀	4-12-1953	70	49	16	18	18.5
144	— imm.	19-8-1953	71	47	13	19	17
643	— imm.	9-12-1953	69	47	14	17	18

Irides reddish. Bill, maxilla black, mandible yellow. Feet greyish green.

Short description. ♂ glossy green with blue reflections. Head and cheeks velvety black. Under wing coverts black. ♀ upper parts grass green, under parts yellowish green with chin and throat yellowish.

Field notes. Belcher & Smooker consider the species uncommon, though widely distributed, but my experience rather agrees with Léotaud's statement that "cet oiseau est commun ici". As Léotaud already noted, this species is plumper and less elegant than the other honeycreepers.

328. **Cyanerpes cyaneus cyaneus** (L.)

Certhia cyanea Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 188 (Surinam, designated by Hellmayr).

Tacarigua: 1 ♂ (no. 572).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
572	♂	25-11-1953	66	38	17	14	13

Irides dark brown. Bill black. Feet coral red.

Short description. ♂ purplish blue with lores, upper back, wings and tail velvety black. Crown of head turquoise blue. Under side of wing partly lemon yellow. Feet coral red. ♀ upper parts dark green, a slightly pronounced greyish white supraloral streak, lores blackish. Throat greyish. Breast and abdomen paler green than upper parts, streaked with greyish. Yellow patch on under side of wing.

Field notes. Léotaud calls this species "très-commun" and *C. caeruleus* "moins commune" whereas Roberts considered it to be slightly more common than its congener. Belcher & Smooker state that it is about as often seen. Therefore it is remarkable that I have been able to identify it only three times satisfactorily (including the specimen collected) and, therefore am forced to consider it decidedly uncommon. In view of the fact that I have been continually on the watch for the species, it seems hardly likely that this lack of observations is accidental. Moreover Dr. Herklotz, in whose company I once watched a ♂, had had the same experience (oral communication). It is therefore reasonable to suppose that the species has become very much scarcer (perhaps only temporarily) during the last twenty years. Many species of birds, of course, are known to undergo strong fluctuations in numbers. The specimen collected was shot from a flowering tree where it had assembled with at least a dozen humming-birds of the species *Chlorestes notatus*, *Chrysolampis mosquitus*, *Saucerottia tobaci*, *Amazilia chionopectus* and *Lophornis ornata*, and also several individuals of *Coereba flaveola*. Other specimens were observed in La Laja and in the Valencia Reserve.

328a. **Cyanerpes cyaneus tobagensis** Hellmayr & Seilern.

Cyanerpes cyanea tobagensis Hellmayr & Seilern, Verh. Orn. Ges. Bayern, vol. 12, 1914, p. 88 (Tobago).

Pigeon Peak, Tobago: 1 ♂ (no. 923).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
923	♂	14-2-1954	69	38	19	14	13.5

Irides dark brown. Bill black. Feet red.

Differs from the Trinidad form by slightly larger size.

Field notes. The specimen was shot out of a pair in a cacao plantation on the eastern slope of Pigeon Peak; this is the only time I met with the species in Tobago.

329. **Cyanerpes caeruleus longirostris** (Cab.)

Arbelorhina longirostris Cabanis, Mus. Heineanum, vol. 1, 1851, p. 96 ("Caracas" = Trinidad (Hellmayr)).

Tacarigua: 1 ♂, 1 ♀ (nos. 108, 374).

Hills SW of Caura: 1 ♂, 1 ♂ in change, 1 ♀ (nos. 486, 487, 602).

Heights of Guanapo: 1 ♀, 1 juv. (nos. 140, 141).

Arima Valley: 1 ♀ (no. 148).

La Laja: 1 ♀ (no. 846).

St Benedict Estate: 1 ♂ (no. 445).

Maracas Bay: 1 ♀ (no. 358).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
108	♂	10-8-1953	60	27	21	15	9.5
445	♂	3-11-1953	59	27	21	15	13.5
487	♂	9-11-1953	56	26	21	15	11.5
602	♂	2-12-1953	59	27	21	15	12
	in change						
141	♀	19-8-1953	58	28	22	15	10.5
148	♀	20-8-1953	56	27	21	15	11.5
358	♀	18-10-1953	57	28	21	15	13
374	♀	21-10-1953	58	28	22	15	12
486	♀	9-11-1953	55	27	21	14	12.5
846	♀	5-2-1954	58	28	20	15	11.5
140	juv.	19-8-1953	57	28	16	15	12

Irides dark sepia. Bill black. Feet ♂ yellow, ♀ yellowish green.

The difference in the length of the bill from specimens from British Guiana is well pronounced. The culmen of 3 ♂♂ from Berbice measure: 18, 18, 19 mm.

Short description. ♂ purplish blue with lores, throat, wings and tail black. Bill black, long and curved. Feet yellow. ♀ upper parts green, lores and throat rusty colour separated by pale blue moustachial streak. Breast and abdomen streaked with yellow, green and blue. Middle of abdomen yellow.

Field notes. A common and widely distributed species of forests, and perhaps particularly of the cacao and orange estates of the Northern Range. For a discussion of the discrepancy between previous observations and my own experience as far as the relative abundance of *C. caeruleus* compared with *C. cyaneus* is concerned, I refer to the notes given with that species.

The specimens nos. 140 and 141 were taken in one shot at the moment the female was feeding the young bird. Several times specimens were seen feeding on oranges, but it seems most unlikely that they are able to do any harm to sound fruit.

330. *Dacnis cayana cayana* (L.)

Motacilla cayana Linneé, Syst. Nat. ed. 12, vol. 1, 1766, p. 336 (Cayenne).

Tacarigua: 3 ♂ ♂, 1 ♂ in change, 2 ♀ ♀ (nos. 6, 36, 80, 320, 429, 605).

Caura Valley: 1 ♀ (no. 488).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
36	♂	21-7-1953	62	42	13	18	11
80	♂	3-8-1953	62	39	12	17	12.5
605	♂	4-12-1953	65	42	13	17	13.5
6	♂	11-7-1953	62	42	11	15	11
	in change						
320	♀	6-10-1953	60	42	12	16	11.5
429	♀	2-11-1953	61	40	12	15	11.5
488	♀	9-11-1953	60	40	12	16	14

Irides brownish red. Bill, maxilla black, mandible brownish grey with black tip. Feet pale flesh colour.

Short description. ♂ turquoise blue with throat, lores, upper back and tail velvety black. Wings black with turquoise edgings. ♀ green, crown and sides of head greenish blue. Throat grey. Wings black edged with green. Not in Tobago.

Field notes. Fairly common and, as Belcher & Smooker already stated, found in both primary forest and second growth, though perhaps most common at edges of forests.

331. *Coereba flaveola luteola* (Cab.)

Certhiola luteola Cabanis, Mus. Heineanum, vol. 1, 1851, p. 96 (Puerto Cabello (?), Venezuela).

Tacarigua: 1 ♂, 2 ♀ ♀ juv. (nos. 44, 60, 127).

Arima Valley: 1 (♀ ?) (no. 759).

Maraval: 1 ♂ (no. 621).

Store Bay, Tobago: 1 ♂ (no. 406)

Pigeon Peak, Tobago: 1 ♂ (no. 924).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
60	♂	27-7-1953	—	—	12	16	11.5
406	♂	28-10-1953	63	41	11	17	10
621	♂	5-12-1953	62	38	13	17	10.5
924	♂	14-2-1954	63	37	12	17	8.5
759	(♀ ?)	22-1-1954	54	32	12	17	7.5
44	♀ juv.	24-7-1953	51	27	12	18	7.5
127	♀ juv	15-8-1953	54	28	11	16	8

Irides dark brown. Bill black. Feet grey.

The ♂ from July (no. 60) shows wing and tail moult.

Short description. Upper parts black, except rump and upper tail coverts, which are lemon yellow. A broad white supraloral streak, which extends along the crown. Throat grey, rest of under parts yellow. Under wing coverts and under tail coverts white. Lateral tail feathers tipped with white. Bill slightly curved and pointed. ♀ slightly paler on the upper parts than the ♂.

Field notes. As stated by previous authors, this is probably the commonest bird of both Trinidad and Tobago.

In our garden at Orange Grove Estate there was a sleeping-nest in which a specimen came roosting very regularly, perhaps even every night. Remarkable in my opinion was that it arrived long before sunset, once I flushed the little bird from its nest as early as 17.15 hrs.

On 15 December I saw how a *Coereba* visited the flowers of *Beloperone guttata* in our garden. It climbed through the twigs of the plants and bit its way to the nectar through the corolla tubes, even more radically ill-treating the flowers than did *Saucerottia tobaci*, the latter species only piercing the corolla tubes.

332. *Conirostrum bicolor bicolor* (Vieill.)

Sylvia bicolor Vieillot, Hist. Nat. Ois. Amérique Sept., vol. 2, 1807, p. 32, pl. 90 bis (Cayenne, restricted by Hellmayr).

Caroni Swamp: 1 ♂, 1 ♀ (nos. 669, 670).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
669	♂	15-12-1953	64	49	9	18	10.5
670	♀	15-12-1953	57	42	10	19	10.5

Irides pale orange brown. Bill, maxilla black, mandible bluish grey.

Short description. ♂ upper parts bluish grey, under parts pale ochraceous, under side of wing partly whitish. ♀ above pale olive green, under parts yellowish. Not in Tobago.

Field notes. Only observed in the mangroves of the Caroni Swamp, usually in pairs together. The only note I heard was a continually uttered feeble: "sēēt...sēēt...".

PARULIDAE

333. **Protonotaria citrea** (Bodd.)

Short description. ♂ entire head and under parts rich yellow. Back yellowish olive green, rump grey. Wings black with grey edgings. Tail feathers black with white inner webs of the lateral rectrices. Under tail coverts white. ♀ like ♂, but head and under parts duller coloured. Upper parts of head olive green. Only recorded by Léoaud for Trinidad. Migrant.

334. **Parula pitiayumi elegans** (Todd)

Compsothlypis pitiayumi elegans Todd, Ann. Carnegie Mus., vol. 8, 1912, p. 204 (Anzoategui, Lara, Venezuela).

Arima Valley: 1 ♂ (no. 747).

Hills SW of Caura: 1 ♂ (no. 603).

Hills St. Benedict Estate: 1 — (no. 447).

Monos Island: 1 (♀) (no. 392).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
603	♂	2-12-1953	52	35	10	16	7.5
747	♂	22-1-1954	54	38	10	16	7.5
392	(♀)	24-10-1953	51	39	9	15	6
447	—	3-11-1953	49	37	10	15	—

Irides dark sepia. Bill, maxilla black, mandible yellow. Feet yellowish brown.

Short description. Upper parts greyish blue with green interscapular spot. Two white wing bars. Lores and ear coverts blackish. Under parts yellow. Chin and breast ochraceous coloured. Bill small, pointed.

Field notes. A locally not uncommon, but inconspicuous species, preferring, as far as my experience goes, edges of forest. It has a pretensionless and feeble, but not unattractive song. The specimens nos. 603 and 747 both were singing previous to their being collected.

335. **Dendroica petechia aestiva** (Gm.)

Motacilla aestiva Gmelin, Syst. Nat., vol. 1, pt. 2, 1789, p. 996 (Canada).

Tacarigua: 1 ♂, 1 ♀ (nos. 457, 533).

Point Fortin: 1 ♂ (no. 635).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
533	♂	18-11-1953	65	45	9	18	9.5
635	♂	8-12-1953	64	42	9	17	8
457	♀	4-11-1953	61	43	9	18	8.5

Irides dark brown. Bill, maxilla black, mandible yellowish. Feet yellowish brown.

Short description. Upper parts yellowish green, under parts yellow with

chestnut streaks on the breast, which are usually lacking in the ♀. Wing blackish brown with broad yellowish green margins. Migrant.

Field notes. A common migrant and winter visitor in Trinidad. The first specimen was observed on 20 September in the *Citrus* cultivations of Spring Hill Estate, and within two or three days from that date, several more were seen in the neighbourhood of Tacarigua. In Tobago a single specimen was seen near Store Bay on 28 October. The species seems to favour open country with dispersed trees.

336. *Dendroica striata* (J. R. Forster)

Muscicapa striata Forster, Philos. Trans., vol. 62, 1772, p. 428 (Hudson Bay).

Tacarigua: 1 ♂, 1 — (nos. 316, 365).

Laventille Swamp: 1 — (no. 328).

Store Bay, Tobago: 1 — (no. 409).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
365	♂	19-10-1953	74	49	11	19	11.5
316	—	6-10-1953	74	47	11	19	—
328	—	10-10-1953	70	46	10	19	—
409	—	28-10-1953	70	48	10	20	13

Irides dark brown. Bill dark greyish with base of mandible pale yellowish. Feet yellowish brown.

The species has not been collected before on Trinidad, but Beebe (1952, p. 180) without further particulars mentions the occurrence of the species in the Arima Valley.

Short description. In the autumn upper parts dull olive green, back with narrow black streaks. Pale yellow streak above the eye. Under parts pale yellowish. Abdomen and under tail coverts white. Two yellowish white bars on the wings. ♂ in spring black-headed with sides of head white. Upper parts broadly streaked with black, white and olive greyish. Migrant.

Field notes. Apparently not an uncommon autumn migrant, occurring on passage from early October to the first part of November, but apparently not hibernating in Trinidad. It is likely that in Tobago its status is the same, but the specimen collected was the only one observed in that island. In Trinidad the species was observed as follows: 6 October, one specimen in a tree in secondary growth near Tacarigua (collected); 10 October, one specimen in a low tree at the edge of the mangrove in Laventille Swamp (collected); 19 October, two specimens together in bamboos at the edge of the savannah of Orange Grove Estate (one collected); 23 October, two specimens together in a tree in secondary growth near Tacarigua (same locality where the species had been collected on 6 October); 5 November, one specimen in almost the same place.

Voous (1957, p. 230), found the species a common migrant in the Netherlands Leeward Islands between 1 October and 10 November, dates that agree nicely with my observations.

337. ***Seiurus noveboracensis noveboracensis*** (Vieill.)

Motacilla noveboracensis Gmelin, Syst. Nat., vol. 1, pt. 2, 1789, p. 958 (New York).

Tacarigua: 1 ♂ ? (no. 456).

Laventille Swamp: 1 ♀ (no. 612).

Diamond Estate, Auchenskeoch, Tobago: 1 ♀ (no. 890).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
456	♂ ?	4-11-1953	74	52	13	20	15.5
612	♀	5-12-1953	71	45	12	21	15.5
890	♀	11-2-1954	74	47	12	21	15

Irides dark brown. Bill, maxilla black, mandible greyish pink with black tip. Feet brownish grey to dirty yellowish pink.

Short description. Upper parts dusky brown. Lores, a line over the eye and along the crown yellowish but sometimes white. Under parts yellowish white with black streaks. Throat spotted. Migrant.

Field notes. A common winter-visitor to both islands, found wherever there is water in combination with some cover of shrubs or trees, along ditches and rivulets, at rain-pools, and particularly plentiful in mangroves. In general appearance and behaviour it is strongly reminiscent of wagtails (*Motacilla alba* and *M. cinerea*).

In autumn the earliest specimen was observed in Dinsley Bamboo on 23 September. On Curaçao Voous (1957, p. 233) saw the first specimen also on 23 September (1951), though he reports that subsequently a specimen was observed as early as 11 September 1953 by Ansingh and Koelers.

Seiurus motacilla (Vieill.)

Short description. Much like *S. noveboracensis*, but slightly larger. Eye stripe white, under parts white with brownish, not blackish streaks. Flanks and under tail coverts tinged with buff. Throat unspotted. Recently mentioned by Street (1946, p. 376) for Trinidad. Sight record only. Not in Tobago.

As nobody else has ever found the species in Trinidad, and as *motacilla* and *noveboracensis* are morphologically very close to each other, we are somewhat worried by the fact that Street mentions having observed not less than six specimens of *motacilla*, as against only one of the plentiful *noveboracensis*. Therefore we feel obliged to query the record.

338. *Geothlypis trichas* (L.)

Short description. ♂ upper parts greyish olive green. Forehead and sides of head black, divided from green upper parts by a whitish grey band. Chin, throat and breast lemon yellow, abdomen buffish white. Under tail coverts yellow. ♀ lacks the black and the white band on the head. There is only a record for Tobago (Kirk). Migrant.

339. *Geothlypis aequinoctialis aequinoctialis* (Gm.)

Motacilla aequinoctialis Gmelin, Syst. Nat. vol. 1, pt. 2, 1789, p. 972 (Cayenne).

Tacarigua: 2 ♂ ♂ (nos. 98, 501).

Laventille Swamp: 1 ♂, 1 ♀ (nos. 337, 362).

Caroni Swamp: 1 ♀ (no. 681).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
98	♂	7-8-1953	60	56	12	22	14
337	♂	13-10-1953	60	52	12	24	12.5
501	♂	11-11-1953	63	57	13	24	14.5
362	♀	19-10-1953	57	54	13	23	11.5
681	♀	18-12-1953	58	52	14	24	14

Irides brown. Bill, maxilla black, mandible basal part yellowish to brownish, tip brownish grey. Feet yellowish brown.

Short description. Upper parts yellowish green, under parts bright yellow. Crown of head grey. Forehead, lores, cheeks and ear coverts black in ♂. Not in Tobago.

Field notes. Not uncommon, but local in distribution, and only observed at the three localities listed above. At Tacarigua it was found inhabiting the low secondary growths on waste sugar-cane land; at the swamps it occurs in the wet savannah, mostly *Scirpus*-vegetation, bordering the mangrove.

The song consists of a series of ten or eleven similar notes; in its intonation it has superficial resemblance to the song of *Phylloscopus trochilus*: "weet-weet-weet-weet-weet-weet-weet-weet-weet-weet"; towards the end it is uttered slower and somewhat lower; the song is not unattractive.

340. *Setophaga ruticilla ruticilla* (L.)

Motacilla ruticilla Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 186 (Virginia, U.S.A.).

Tacarigua: 1 ♂, 1 ♂ imm., 1 ♀ (nos. 200, 335, 535).

Laventille Swamp: 1 ♂, 1 ♂ imm. (nos. 204, 206).

Arena Reserve: 1 ♀ (no. 543).

Morne l'Enfer Reserve: 1 ♀ (no. 638).

Arima Valley: 1 ♀ (no. 746).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
200	♂	1-9-1953	67	55	10	17	8
206	♂	3-9-1953	66	54	10	17	6.5
204	♂ imm.	3-9-1953	61	53	10	16	5.5
535	♂ imm.	18-11-1953	63	53	10.5	16	6.5
543	♀	20-11-1953	61	53	10	17	—
638	♀	9-12-1953	62	52	10	16	7.5
746	♀	22-1-1954	60	51	10	16	6.5
335	(♀)	12-10-1953	60	50	10	17	7.5

Irides dark sepia. Bill dark greyish brown, mandible paler. Feet brownish grey to brownish black.

On account of the pale grey crown and the pale green back, these birds fit best into the nominal race. The specimens could be compared with a series of *ruticilla ruticilla* and some specimens of *r. tricolora*, migrants from the Netherlands Antilles, kindly sent on loan by Dr. Voous.

Short description. ♂ whole head, breast and back black. Abdomen white. Orange patches on wing, tail and sides of breast. ♀ head greyish, rest of upper parts olive green. Patches on wing, breast and tail yellow instead of orange.

Field notes. A common migrant and winter visitor in Trinidad, where it was observed from 1 September (specimen no. 200) onwards. In Tobago a single adult male was seen in piece of mangrove near Store Bay on 30 October.

The species seems to favour forests and is particularly common in mangroves, but I also observed it near the summit of the Morne Bleu above 800 m.

According to Belcher & Smooker the females arrive first, an observation not corresponding with my experience. The remark of these authors that females seem to predominate in numbers is easily explained by the fact that juveniles of both sexes have the female plumage.

The only note I heard from the species was a thin call: "tsēēt...tsēēt...". Several times I was struck by the curiosity of the birds; if one did not make sudden movements, specimens would approach to within a very short range; they seemed actually attracted by human beings.

341. *Basileuterus culicivorus olivascens* Chapman

Basileuterus vermivorus olivascens Chapman, Auk, vol. 10, 1893, p. 343 (Princetown, Trinidad).

Tacarigua: 2 ♂ ♂ (nos. 182, 427).

Mt. Hope: 1 ♂ (no. 565).

Arima Valley: 2 — (nos. 788, 789).

SW of Guamal: 1 — (no. 695).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
182	♂	27-8-1953	59	52	10	20	10.5
427	♂	1-11-1953	63	55	12	19	10.5
565	♂	22-11-1953	61	56	—	18	10.5
695	—	21-12-1953	59	53	12	18	8.5
788	—	29-1-1954	59	53	11	19	8.5
789	—	29-1-1954	63	53	11	19	10

Irides dark brown. Bill, maxilla black, mandible greyish. Feet yellowish brown.

Short description. Upper parts brownish olive green. Along the middle of the crown a rufous brown streak, being grey on the nape. This streak is bordered by a broad black line. A pale yellowish streak above the eye, sides of face grey. Under parts clear yellow. Not in Tobago.

Field notes. Fairly common and widely distributed in forests near the edges in cacao plantations and in rich second growths. They occur solitary or in pairs, are not shy and even inquisitive, and usually are constantly on the move. The only note I heard was a repeatedly uttered fairly strong: "cheep... cheep", but I note that Belcher & Smooker describe the song of the male as a whistling strain of six or seven sharply separated notes, which is repeated at short intervals.

VIREONIDAE

342. *Vireo olivaceus vividior* Hellmayr & Seilern

Virco chivi vividior Hellmayr & Seilern, Verh. Orn. Ges. Bayern, vol. 12, 1913, p. 315 (Caparo, Trinidad).

Tacarigua: 2 ♂♂, 1 ♀, 1 — (nos. 22, 89, 135, 431).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
22	♂	15-7-1953	75	52	12	17	15.5
135	♂	17-8-1953	72	50	13	17	13.5
431	—	2-11-1953	71	48	13	17	15.5
89	♀	5-8-1953	71	48	13	18	15.5

Irides variable in coloration, pale brown, brown or reddish brown. Bill, maxilla dark grey, mandible bluish grey. Feet bluish grey.

Short description. Upper parts bright green. Crown of head and nape grey. Blackish line above the eyes followed by a whitish line from lores to side of nape. Under parts greyish white. Under tail coverts yellowish.

Field notes. Fairly common in light secondary forest and in the big trees shadowing cacao cultivations near Tacarigua, but never observed elsewhere, and on the whole the species must probably be considered uncommon. Food is searched for by fluttering on and against leaves of trees.

343. **Vireo altiloquus** (Vieill.)

Short description. Larger than the preceding species. Upper parts olive green, head tinged with grey, but contrast between head and upper parts not very striking, contrary to *olivaceus*. Buffish line above the eye, dark streak through the eye. Dark moustachial streak. Under parts whitish, flanks pale greenish yellow. Not in Tobago.

344. **Hylophilus aurantiifrons saturatus** (Hellmayr)

Pachysylvia aurantiifrons saturata Hellmayr, Novit. Zool., vol. 13, 1906, p. 12 (Rincon de San Antonio, Sucre, Venezuela).

Tacarigua: 4 ♂ ♂, 2 ♀ ♀, 1 juv. (nos. 14, 25, 42, 105, 175, 458, 469).

La Laja: 1 ♂, 1 — (nos. 819, 843).

St. Benedict Estate: 1 ♂ (no. 450).

Arima Valley: 1 ♂ (no. 790).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
14	♂	14-7-1953	59	43	12	16	8.5
25	♂	17-7-1953	59	44	12	17	7.5
42	♂	23-7-1953	57	44	11	16	7.5
105	♂	10-8-1953	58	42	14	17	7.5
450	♂	3-11-1953	58	47	12	17	8.5
790	♂	29-1-1954	59	44	11	17	8.5
843	♂	5-2-1954	61	46	13	18	10
458	♀	4-11-1953	53	39	13	17	8.5
469	♀	5-11-1953	52	—	—	17	8
819	—	2-2-1954	56	41	11	17	9
175	juv.	27-8-1953	52	38	11	18	9

Irides dark brown. Bill, maxilla brownish grey, mandible pale pinkish. Feet bluish grey.

Short description. Upper parts yellowish citrine, head brownish with a buff tinge. Forehead yellowish, sides of head buffy. Throat whitish, breast buffy tinged. Abdomen yellowish strongest on under tail coverts. Warbler-like. Not in Tobago.

Field notes. Common in forests at all levels, including mangroves, and wherever there are trees. Specimen no. 40 was singing previous to its being collected; the song is reminiscent of the chirp of a Sparrow: "che-chēēlp...che-chēēlp...".

345. **Hylophilus flavipes insularis** Sclater

Hylophilus insularis Sclater, Proc. Zool. Soc., 1861, p. 128 (Tobago).

Diamond Estate, Auchenskeoch, Tobago: 2 ♂ ♂, 1 ♀ (nos. 875, 877, 886).

Store Bay, Crown Point, Tobago: 2 ♂ ♂ (nos. 400, 420).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
400	♂	28-10-1953	60	—	13	19	10.5
420	♂	30-10-1953	61	46	13	20	12
875	♂	10-2-1954	61	49	—	21	9.5
877	♂	10-2-1954	61	44	12	20	10.5
886	♀	11-2-1954	59	48	12	20	11.5

Irides dark brown. Bill, maxilla black, mandible greyish pink. Feet pinkish grey.

Short description. Upper parts greyish green, greyer on head. Lores whitish grey. Under parts olive buff. Not in Trinidad.

Field notes. Common at edges of forest and in trees in more or less open country. The song is very remarkable, it is a single note repeated a number of times: "chwee-chwee-chwee-chwee-chwee-..."; repeated so regularly that it was reminiscent of a clock. I noted from one bird how many times (in one song) the note was repeated and found the following series: 36, 36, 32, 33, 33, 4, 36, 2, 32, 37, 32, 29, 32; a few abortive attempts excepted, it was, in this individual, mainly between 32 and 37.

346. *Cyclarhis gujanensis flavipectus* Sclater

Cyclarhis flavipectus Sclater, Proc. Zool. Soc. London, vol. 26, 1858, p. 448 (Trinidad).

Tacarigua: 1 ♂, 1 ♀, 1 ♀? (nos. 2, 45, 192).

Mt. Tabor: 1 ♀ (no. 323).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
192	♂	31-8-1953	81	60	16	22	22.5
2	♀?	1-7-1953	75	55	17	24	24.5
45	♀	24-7-1953	72	52	17	23	27.5
323	♀	8-10-1953	70	54	—	22	23.5

Irides orange brown. Bill maxilla pinkish, mandible bluish grey. Feet pinkish blue.

Short description. Upper parts bright green. Head and neck grey, broad chestnut stripe from forehead over the eye to the nape. Throat and breast lemon yellow. Abdomen whitish grey. Bill heavy. Not in Tobago.

Field notes. Common in open woodland and in gardens. The song has been described by Belcher & Smooker; I need add only that it reminded me of the call of the Golden Oriole (*Oriolus oriolus*). Another call-note of the male was noted at the time as: "chũ chũ chũ-wrēh", lasting about 0.3 sec. and repeated every 4 to 6 seconds.

ICTERIDAE

347. *Psarocolius decumanus insularis* (Dalmas).

Ostinops decumanus insularis Dalmas, Mém. Soc. Zool. France, vol. 13, 1900, p. 137 (Tobago).

Morne l'Enfer Reserve: 1 ♀ (no. 646).

Diamond Estate, Auchenskeoch, Tobago: 1 ♀ (no. 403).

Grafton, Tobago: 1 ♀ (no. 910).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
646	♀	9-12-1953	172	153	49	40	157
403	♀	20-10-1953	167	143	49	37	124
910	♀	12-2-1954	155	143	47	38	136

Irides blue. Bill ivory. Feet black.

Originally Hellmayr (1906, p. 19) criticized this form, but afterwards (1937, p. 11, footnote) he provisionally recognized *insularis* as possibly maintainable. As had been pointed out by Bangs & Penard (1919, p. 39) especially on account of the slightly paler upper parts and the less chestnut coloured rump of the birds from Trinidad and Tobago as compared with the nominal race, though various specimens were hardly separable.

Compared with 3 ♀♀ from Surinam I cannot find that the upper parts show much difference in colour, in 2 of the Surinam specimens the rump and under tail coverts are brighter coloured, the other specimen is unseparable from the Trinidad and Tobago specimens. The measurements of the Surinam birds are: wing 172-179, tail 140-158, culmen 50-51, tarsus 40-43 mm. This suggests that the island birds might be slightly smaller. On the other hand, however, 12 ♂♂ from Surinam and 1 ♂ from British Guiana measure: wing 200-246 (average ± 221), tail 171-221, culmen 59-69, tarsus 50-55 mm. Hellmayr (l.c., p. 19) gives the wing measurements of 2 ♂♂ from Trinidad and 4 ♂♂ from Tobago as 195-235 (average ± 221 mm). *P. d. insularis* therefore seems only recognizable by the brighter coloured rump, a difference which, however, is not clear in all specimens.

Short description. Large black birds with yellow lateral tail feathers. Rump, upper and under tail coverts dark chestnut. Bill large, pointed, with frontal shield.

Field notes. Common and conspicuous in the high trees shadowing cacao and coffee plantations in the hills and in tall forest trees in the lowlands; scarce in the densely settled areas. Like other estates in the hills, Spring Hill Estate had a colony of these birds; the very long pendular nests, hanging from the highest branches of tall Immortelle-trees, were inhabited during the period of my stay (December-February).

348. *Cacicus cela cela* (L.)

Parus cela Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 191 (Surinam).

Maracas Bay: 1 ♂ (no. 359).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
359	♂	18-10-1953	160	103	38	32	101

Irides pale blue. Bill pale yellow. Feet black.

The measurements of 13 ♂♂ from Surinam and 5 ♂♂ from British Guiana are: wing 150-168, tail 92-108, culmen 34-39, tarsus 30-34 mm. For 7 ♀♀ from Surinam and 2 ♀♀ from British Guiana wing 127-138, tail 83-91, culmen 30-34, tarsus 27-31 mm. The birds from British Guiana are slightly larger on an average: ♂♂ Surinam wing average 155, ♀♀ 129; British Guiana ♂♂ 162, ♀♀ 137 mm.

Short description. In general appearance like *Psarocolius decumanus*, but smaller and with short nuchal crest. Glossy black with lower back, rump, upper and under tail coverts and a patch on the wing bright yellow. Not in Tobago.

Field notes. Contrary to the preceding species, *Cacicus* is generally found in lowlands and near the coast. It was common at Blanchisseuse and in a tree in front of the Police Headquarters at Sangre Grande a flourishing colony was present; I have never observed it in the higher parts of the Northern Range.

The field ornithologist would never place *Psarocolius decumanus* and *Cacicus cela* in different genera, for these species not only agree in general appearance and in having blue irides (a colour not often found in birds), but even share the character of a strong goat odour which even in skins of several years old is still perceptible.

349. *Psomocolax oryzivorus* (Gm.)

Short description. ♂ large bird glossy steel-blue with violet and green reflections. Bill black, with flattened culmen and front shield. Elongated feathers on sides of neck. ♀ much smaller and less glossy.

Field notes. A pair of these birds was regularly present on the savannah of Orange Grove Estate. They were extremely shy and difficult to approach. Also observed at Verdant Vale, Arima Valley. The birds, when feeding on the savannah, are strongly reminiscent of Rooks.

350. *Molothrus bonariensis minimus* Dalmas

Molothrus minimus Dalmas, Mém. Soc. Zool. France, vol. 13, 1900, p. 138 (Tobago).

Laventille Swamp: 1 ♂, 1 ♀ (nos. 618, 660).

Fort Read: 1 ♀ (no. 51).

Caledonia, Tobago: 1 ♀ imm. (no. 413).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
618	♂	5-12-1953	97	59	17	24	41.5
51	♀	25-7-1953	85	61	17	23	31
660	♀	14-12-1953	90	68	16	24	33.5
413	♀ imm.	29-10-1953	85	57	14	22	30.5

Irides dark brown. Bill black. Feet black.

Short description. ♂ glossy purple, bill black. ♀ upper parts drab brown, under parts dusky brown.

Field notes. Fairly common in more or less open country and secondary growths in both islands and also found in mangroves. In December birds were in full song in the Laventille Swamp where I had not previously observed the species. The melodious song perhaps stamps the species as the best songster found in the islands.

351. *Quiscalus lugubris lugubris* Swainson

Quiscalus lugubris Swainson, Anim. Menag., 1837, p. 299 ("Brazil" = British Guiana, substituted by Berlepsch & Hartert).

Tacarigua: 1 ♂, 1 (♂) (nos. 129, 582).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
129	♂	16-8-1953	113	92	25	33	66
582	(♂)	27-11-1953	108	—	25	32	71

Irides pale yellowish brown. Bill and feet black.

Both specimens show tail moult. No. 582 is renewing its primaries and shows moulting feathers on chin and throat. 2 ♂♂ from Surinam measure wing 112, tail 88-93, culmen 25, tarsus 32 mm. A ♂ in change measures wing 107, tail 85 mm. Three ♀♀: wing 97-99, tail 75-80, culmen 21-20, tarsus 30 mm.

Short description. ♂ black, glossed with violaceous and green. Bill larger and much stronger than in *Molothrus*. ♀ blackish, under parts brownish.

Field notes. In Trinidad plentiful in open cultivated country, especially on artificial savannahs, where in general behaviour the species is reminiscent of old world Starlings; in Tobago observed at Diamond Estate.

The roosting habits are of considerable interest; on Orange Grove Estate I regularly saw how late in the afternoon small flocks of Boat-Tails flew at a rather great height in a W. to S.W. direction; often I watched such flocks through my field-glasses, and all the time they remained visible they steadily kept the same height and direction. The question where these birds went was solved on 1 October when towards the evening near the colony of Scarlet Ibises in the central part of the Caroni Swamp, we saw many small troupes of Boat-Tails arrive from the East. The warden who accompanied us told that thousands came in every night for roosting in the mangroves. The savannah of Orange Grove Estate is in a straight line about nine to ten kilometers away from the roosting place and on the Estate I often saw flocks pass overhead, which came from even farther to the East, so that the roosting place apparently attracts birds from a very wide area.

352. ***Icterus nigrogularis trinitatis* Hart.**

Icterus xanthornus trinitatis Hartert, Bull. Brit. Ornith. Club, vol. 33, 1913, p. 76 (Savannah Grande, Trinidad).

Tacarigua: 1 ♂ imm., 1 ♂ juv. (nos. 3, 8).

Laventille Swamp: 1 ♂ (no. 617).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
617	♂	5-12-1953	101	91	20	26	46
8	♂ imm.	12-7-1953	95	88	20	28	41
3	♂ juv.	1-7-1953	—	—	—	—	33

Irides dark brown. Bill black, base of mandible pale blue. Feet bluish grey. In the ♂ juv. wing and tail feathers are growing out.

Short description. Bright yellow with throat, chin, lores black. Wings black, feathers with white margins, tail black. Not in Tobago.

Field notes. Plentiful in low second growths and near houses, also observed in mangroves near the edges. In July there were a few inhabited nests suspended in the row of bamboos bordering the savannah of Orange Grove Estate.

Belcher & Smooker also mention *Icterus icterus* (black and orange coloured) and *Icterus chryscephalus* (black with yellow on crown and rump, yellow wing patches), but it is uncertain, if these observations do not concern specimens escaped from captivity.

353. ***Agelaius icterocephalus icterocephalus* (L.)**

Oriolus icterocephalus Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 163 (Cayenne).

Tacarigua: 1 ♂ (no. 29).

Laventille Swamp: 1 ♂ in change (no. 560).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
29	♂	19-7-1953	90	67	19	28	37.5
560	♂	22-11-1953	83	62	18	27	35.5

Irides dark brown. Bill black, ♂ in change dark brownish grey. Feet black.

Some specimens from Paramaribo, Surinam, measure:

♂♂ (5) wing 81-93, tail 60-67, culmen 17-19, tarsus 25-27 mm.

♀♀ (3) wing 75-80, tail 54-61, culmen 16-17, tarsus 23-24 mm.

Short description. ♂ glossy black with yellow head and throat. Lores black. ♀ upper parts brownish black, slightly margined with dark yellow. Sides of head and throat citron yellow. Under parts greyish black tinged with yellow. Not in Tobago.

Field notes. Plentiful in open wet places. The species was particularly abundant in and about the paddy fields of Laventille, where in a solitary tree

in the middle of the fields I found on 10 October a colony with many old and at least half a dozen new nests containing eggs. The nests were not really pendular, but with their walls attached to forks at the end of branches in the way of an Oriole's (*Oriolus oriolus*) nest.

354. ***Leistes militaris militaris* (L.)**

Emberiza militaris Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 178 (Surinam, suggested by Berlepsch & Hartert).

Fort Read: 1 ♂ (no. 28).

Laventille Swamp: 1 ♂ (no. 559).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
28	♂	18-7-1953	94	53	19	30	43.5
559	♂	22-11-1953	95	56	19	30	43.5

Irides brown. Bill black. Feet dark brownish grey.

The measurements of 15 ♂♂ from Surinam (9) and British Guiana (3) are: wing 94-97, tail 55-63, culmen 19-23, tarsus 30-32 mm. Also in colour these specimens agree exactly with the Trinidad birds.

Short description. ♂ blackish, with throat, breast and part of abdomen and edge of wing vivid red. In non-breeding dress the black feathers are margined with pale brown. ♀ upper parts blackish with broad buff margins to the feathers. Buffish streaks above eyes and over middle of crown. Under parts dull fawn reddish tinged. Tail feathers with greyish cross bars. Not in Tobago.

Field notes. Fairly common in open country; regularly present on the savannah of Orange Grove Estate, on dikes and similar open places in the rice fields bordering Laventille Swamp and at other localities. I heard rumours that the species occurs in Tobago, but did not personally observe it. Of course it may have been introduced in the island in recent years.

FRINGILLIDAE

355. ***Sporophila schistacea longipennis* Chubb**

Sporophila longipennis Chubb, Ann. Mag. Nat. Hist. (9), vol. 7, 1921, p. 193 (Mt. Roraima, Venezuela).

Tacarigua: 1 ♂ (no. 163).

Hills near Caura: 2 ♂♂, 1 ♂ in ♀ plumage (nos. 370, 481, 482).

No.	Sex	Date	Wing	Tail	Culmen	Height bill at nostril	Tarsus	Weight
163	♂	24-8-1953	63	40	10	7.0	13	11
370	♂	20-10-1953	64	42	10	7.0	12.5	12
481	♂	9-11-1953	63	41	9	7.3	13	12.5
482	♂ imm.	9-11-1953	62	41	10	7.0	13	12

Irides dark brown. Bill ♂ ad. yellow, ♂ imm. dirty grey with yellowish grey mandible. Feet greenish grey with pale nails.

The occurrence of this species on Trinidad was a surprise, it had not been recorded before and certainly must have been confused with *Sporophila intermedia*, a species much resembling it.

The ♂ in immature dress is dark olive green on the upper parts, brownish olive on the breast, yellowish white on the abdomen. Under tail coverts buffish. Testes enlarged! A specimen from Lelydorp, Surinam, in the collection of the Museum of Comp. Zoölogy, Cambridge is in the same plumage. I cannot see differences between the 3 ad. ♂♂ and 1 ♂ ad. from Paramaribo and therefore bring the Trinidad birds to the race *longipennis* (cf. de Schauensee, 1952, p. 164). The measurements of the Trinidad birds correspond well with those given for *longipennis* (l.c.).

Short description. ♂ upper parts blackish grey. Sides of head, chin and upper breast of the same colour. Abdomen white. Two white streaks of variable size along the throat. A white wing patch (larger than in *intermedia*) and often white edged median wing coverts. Bill clear yellow. ♀ upper parts olive green, under parts brownish clearly tinged with yellowish olive, abdomen tinged with yellow. Bill dirty grey. Not in Tobago.

Field notes. Because of the great similarity of this species to the preceding, it is difficult to properly judge its exact status in Trinidad, but pending further information it must be considered an uncommon and local resident in the northern part of the island. The specimen from Tacarigua was shot in fairly rich, though light and secondary forest close to the village; specimen no. 370 was collected while singing in fairly light forest in the hills; the two remaining specimens were taken at a large cultivation in the hills, surrounded by forest, on which ripe rice and some corn were growing, and where numbers of small Fringillidae, including *Volatinia jacarina*, *Tiaris fuliginosa* and *Sporophila nigricollis*, were feeding.

Whereas it is difficult to morphologically distinguish between this and the preceding species, even when museum skins can be directly compared, their songs are very different and it was through the song that I began to suspect that two species might be involved. Specimen no. 370 was singing before it was collected, and in notes made on the spot, I described the song as a somewhat hoarse cry, followed by a series of high-pitched notes: "tzchěčě — peezeezeezee", the last four syllables fast, high-pitched. Certainly *S. schistacea* is vocally much less endowed than *S. intermedia*.

356. *Sporophila intermedia intermedia* Cabanis

Sporophila intermedia Cabanis, Mus. Heineanum, vol. 1, 1851, p. 149 (Puerto Cabello, Venezuela).

Tacarigua: 1 ♂, 1 ♀?, 1 unsexed imm. (nos. 185, 344, 595).

Piarco: 1 ♂, 1 pull. (nos. 74, 167).

Morne l'Enfer Reserve: 1 ♂ (no. 645).

No.	Sex	Date	Wing	Tail	Culmen	Height bill at nostril	Tarsus	Weight
74	♂	1-8-1953	58	46	10	7.8	15	11
595	♂	1-12-1953	56	44	10	8.0	16	11.5
645	♂	9-12-1953	57	44	10.5	8.0	15	12
185	♀?	28-8-1953	56	44	10	8.3	16	10.5

Irides dark brown. Bill ♂ pinkish yellow to orange, ♀ black. Feet dark grey to black, nails dark.

♂ no. 645 has the upper breast and sides of breast slightly more brownish grey, the abdomen shows more white than in the other ♂♂.

Gilliard (1946, p. 571) has separated Trinidad birds as *insularis* on account of the fact that they should have white postauricular patches, which should be lacking in the nominal race. As a matter of fact these patches are small; in no. 74 they are whitish, more brownish grey tinged in no. 645, not visible in no. 595. De Schauensee already synonymized *insularis* with the nominal race.

Short description. ♂ upper parts grey with the chin, throat and breast paler grey. Abdomen whitish. A small white patch on the wing. Bill pinkish yellow. ♀ upper parts brown with a slight olive tinge, under parts buffish brown. Bill black. Not in Tobago.

Field notes. Widely distributed at the edge of forest in both lowlands and hilly country, but, as Belcher & Smooker already remarked, only locally plentiful, and over the whole of the island I would call it fairly common at most.

As Chapman (1894) and Belcher & Smooker stated, *S. intermedia* is a good songster. The song is varied and attractive, somewhat reminiscent of that of *Acrocephalus schoenobaenus* and *A. palustris*, but more feeble than either, without sharp notes, and slightly less varied than the latter. There is much imitation in the song, so it was easy to recognize in it the familiar cry of *Elaenia flavogaster*.

357. *Sporophila americana americana* (Gm.)

Loxia americana Gmelin, Syst. Nat., vol. 1, pt. 2, 1789, p. 863 (Cayenne).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂ (no. 893).

Pigeon Peak, Tobago: 1 ♀ (no. 917).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
893	♂	11-2-1954	58	48	11	26	12.5
917	♀	14-2-1954	56	47	11	27	12

Irides brown. Bill and feet black.

Short description. ♂ upper parts and sides of face black, a band across the sides of the neck white. Rump grey. Throat, breast and abdomen white with a greyish undefined band across the upper breast, flanks greyish. A white wing patch. Median and greater wing coverts edged with white. Bill black. ♀ very near ♀♀ of *intermedia*, but less clear brown on head and especially sides of head, chin and throat whitish. Not in Trinidad.

Field notes. Apparently local in Tobago, but not rare. The male specimen was taken in a piece of citrus cultivation with an undergrowth of high grasses and weeds. The species has an attractive song.

358. *Sporophila nigricollis nigricollis* (Vieill.)

Pyrrhula nigricollis Vieillot, Tabl. Enc. Méth. Orn., livr. 93, 1823, p. 1027 (Brazil).

Arima Valley: 1 ♂ (no. 749).

La Laja: 1 ♀ (no. 234).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
749	♂	22-1-1954	55	45	8	14	9
234	♀	13-9-1953	51	40	8	14	—

Irides dark chestnut brown. Bill pale blue. Feet dark grey.

Short description. ♂ head, throat and upper breast black. Black of the head gradually passing into the dark olive green of the back and rump. Lower breast and abdomen yellow. ♀ very near ♀ *lineola*, but abdomen more yellowish, mandible dusky.

Field notes. Rather more common than the few specimens collected would indicate and often found in gardens and elsewhere in cultivated places near human habitations, though also in neglected cultivations in the hills and observed on Gasparee Island. Nevertheless, it is certainly not a plentiful species. We had a pair in our garden in Orange Grove Estate, the male of which used to sing on the electric wire leading to our house; its song, in my ears, was strongly reminiscent of that of the European Wren *Troglodytes troglodytes*, with the exception that the strong final quaver so characteristic of the latter species is entirely absent, so that the song ends somewhat abruptly. The song was sometimes uttered in flight. In Tobago observed in the *Citrus* trees of Diamond Estate.

359. *Sporophila lineola bouvronides* (Less.)

Pyrrhula bouvronides Lesson, Traité d'Orn., livr. 6, 1831, p. 450 (Trinidad).

Arima Valley: 1 ♂ (no. 161).

Manzanilla: 1 ♂ (no. 171).

Hills SW Caura: 1 ♀ (no. 683).

Caledonia, Tobago: 1 ♀ (no. 410).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
161	♂	22-8-1953	56	42	8	14	7
171	♂	26-8-1953	57	42	7.5	14	9
410	♀	29-10-1953	56	42	7	14	8.5
683	♀	19-12-1953	53	43	8	13.5	7.5

Irides dark sepia. Bill ♂ black, ♀ blackish brown, mandible yellowish. Feet black or dark grey.

Short description. ♂ upper parts including head and throat bluish black. Rump white. Cheeks white, sometimes some white from base of bill to crown. Under parts white slightly suffused with grey. Wing patch white. Under side of wing white. Bill black. ♀ upper parts brownish olive, under parts isabelline buff, paler on abdomen, which is slightly yellowish tinged.

Field notes. In Trinidad widely distributed and not uncommon near the edges of forest where high grasses are growing. Besides the places where material was collected, an occasional specimen was observed near Tacarigua, and on 7 December two males and a female were seen feeding on seeds of tall grasses in an open space in the forest near Point Fortin.

About the status in Tobago I can say nothing, as the single female collected in the island was only subsequently recognized as belonging to the present species, and I am not aware of having met with it on other occasions.

Roberts (1934) claims his specimens to be the first record of the species in Trinidad since Léotaud, but he overlooked the fact that Williams (1922) mentions having collected a specimen.

The song is described in my notes as a Greenfinch-like "krrrrrrrrre" and it is interesting to find that Belcher & Smooker, whose paper at the time was not at my disposal and can have had no influence on my judgment, also wrote that it reminds one of a nesting Greenfinch.

360. *Sporophila minuta minuta* (L.)

Loxia minuta Linné, Syst. Nat., ed. 10, vol. 1, 1758, p. 176 (Surinam).

Tacarigua: 1 ♂, 1 ♀ (nos. 41, 538).

Point Fortin: 1 ♀ (no. 651).

Piarco: 1 ♀ (no. 73).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
538	♂	18-11-1953	49	36	8	13.5	6.5
41	♀	23-7-1953	47	36	8	14	6.5
73	♀	1-8-1953	48	35	7	14	7
651	♀	10-12-1953	48.5	40	8	14	7.5

Irides dark brown. Bill dark brownish grey. Feet blackish.

Short description. The smallest of the *Sporophila* species. ♂ upper parts dusky greyish brown with chestnut rump. Under parts chestnut, tail blackish

brown. Inner secondaries and wing coverts edged with greyish brown. ♀ upper parts earthy brown with a slight olive tinge, under parts pale ochraceous brown, paler on abdomen. Inner secondaries and wing coverts edged with ochreous grey.

Field notes. Widely distributed in open country in Trinidad and very common in the waste sugar cane fields and on the savannah of Orange Grove Estate. My impression is that this species usually inhabits more open country and lower vegetation than its congeners.

On 9 August an adult male was observed while catching insects. The bird was perched on an electric wire in our garden, and again and again made fluttering flights, often several meters away from its perch, catching insects on the wing like a flycatcher. The performance was repeated tens of times and, as far as could be ascertained, every time an insect was caught. A female finch, in its company, was behaving in exactly the same manner; probably the latter bird was *S. nigricollis*.

361. *Oryzoborus crassirostris* (Gm.)

Short description. ♂ black with a white speculum and heavy whitish bill. ♀ olive grey upper parts, fawn coloured under parts, no wing speculum. Bill black. Not in Tobago.

362. *Oryzoborus angolensis torridus* (Scop.)

Loxia torrida Scopoli, Annus I. Hist. Nat., 1769, p. 140 (N coast Venezuela).

Tacarigua: 1 ♂ imm. (no. 578).

Arima Valley: 2 ♂ ♂ (nos. 810, 821).

Spring Hill Estate, Arima Valley: 2 ♂ ♂ (nos. 709, 731).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
709	♂	1-1-1954	60	55	12	16	9.5
731	♂	20-1-1954	60	53	12	17	12
810	♂	1-2-1954	58	52	13	16	11.5
821	♂	2-2-1954	61	54	13	16	12
578	♂ imm.	26-11-1953	57	52	13	16	13.5

Irides brown. Bill and feet black.

Specimens nos. 731 and 810 show tail moult.

Short description. Smaller than *crassirostris*. ♂ head, throat, upper breast and under tail coverts deep chestnut. Under wing coverts white. Bill black. In the ♀ the upper parts are olive brown, tail and wing feathers blackish. Under parts pale reddish brown. Not in Tobago.

Field notes. Locally (Arima Valley) not uncommon, but generally rather scarce. Inhabits rich secondary growths and cultivations near the forest edge. The species has a varied and pleasant song that, according to Belcher &

Smooker, is to be heard from the end of January onwards, but I have heard specimens in full song at least a month earlier and specimen nr. 709 was singing previous to being collected.

363. **Volatinia jacarina splendens** (Vieill.)

Fringilla splendens Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., vol. 12, 1817, p. 173 (Cayenne).

Tacarigua: 1 ♂, 1 ♀ (nos. 10, 90).

Arima Valley: 1 ♂ (no. 786).

Diamond Estate, Auchenskeoch, Tobago: 1 ♂ (no. 879).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
10	♂	13-7-1953	48	40	9	15	8.5
786	♂	28-1-1954	49	—	9	15	7.5
879	♂	10-2-1954	49	40	10	14	7.5
90	♀	5-8-1953	50	40	10	15	9.5

Irides dark brown. Bill, maxilla black, mandible bluish grey with dark tip. Feet grey.

Short description. ♂ glossy blue black with white axillaries and pale mandible. ♀ upper parts earthy brown, sides of head clearer brown, throat whitish brown. Breast and flanks yellowish brown with dusky streaks, abdomen whitish.

Field notes. Perhaps the commonest little finch in both Trinidad and Tobago, generally found in places where the high grasses grow, on the seeds of which they feed. The typical "song" and behaviour have already been described by Belcher & Smooker; in my own notes it is recorded as follows (Orange Grove Estate, waste sugar land, 10 July) :

The specimen was perched in a shrub and at regular intervals made short flights, hardly more than jumps, of about 60 cm high, not higher, however, than to the level of the top of the shrub. At about the highest point of its jump, it would start a sort of cry, continued while falling back to its perch: "pszēēt". The jumping and crying continued with a remarkable regularity. On another occasion a bird, while uttering its cry, remained perched. Birds in the subadult mottled plumage were already in full song.

364. **Spinus cucullatus** (Swainson)

Short description. ♂ entire head and upper breast black. Wing and tail black. Rest red, red wing patch and reddish tinged wing coverts. Under side wing greyish white tinged with red. ♀ ashy grey above, lower back, rump, and upper tail coverts red. Sides of head and throat greyish, breast orange red, abdomen white. Mentioned only a few times. Not in Tobago.

***Sicalis columbiana* Cabanis**

Short description. Smaller than *S. flaveola*, ♂ darker green on upper parts. Under parts less bright yellow, more orange or cadmium yellow. ♀ pale brown above whitish below with a buffish tinge on breast and flanks. Occurrence on Trinidad needs confirmation. Not in Tobago.

365. *Sicalis flaveola flaveola* (L.)

Fringilla flaveola Linné, Syst. Nat., ed. 12, vol. 1, 1766, p. 321 (Surinam).

Tacarigua: 4 ♂♂, 2 ♂♂ imm., 2 ♀♀ (nos. 62, 63, 349, 350, 381, 539, 579, 580).

No.	Sex	Date	Wing	Tail	Culmen	Tarsus	Weight
63	♂	29-7-1953	71	49	10	20	19
350	♂	15-10-1953	68	—	10	20	17.5
539	♂	18-11-1953	71	48	10	19	18
580	♂	27-11-1953	74	54	11	21	19.5
62	♂ imm.	29-7-1953	67	50	11	20	—
381	♂ imm.	22-10-1953	68	—	10	19	17.5
349	♀	15-10-1953	69	—	10	20	19.5
579	♀	27-11-1953	—	—	10	19	18.5

Irides dark brown. Bill, maxilla dirty yellow, mandible dirty yellow with dark tip. Feet greenish or yellowish grey.

October and November specimens show wing and tail moult. The immature ♂ no. 62 has a yellow breast band and few indistinct streaks on the belly. No. 381 is in an earlier plumage, browner on the upper parts, breastband paler and streaks on the under parts more pronounced.

The birds correspond well with a series from Venezuela, these measure: wing ♂♂ 70-73, ♀♀ 70-71; tail ♂♂ 48-53, ♀♀ 70-71; culmen 10-11; tarsus 18-20 mm.

Short description. ♂ upper parts greenish yellow, forehead and crown bright orange. Under parts bright yellow. Wing and tail feathers blackish brown with broad yellowish green margins. ♀ as ♂, but less brightly coloured. Young birds have brownish to yellowish green upper parts with dark streaks. Under parts whitish to yellowish with streaks. Not in Tobago.

Field notes. Common on and near the savannah of Orange Grove Estate, usually in pairs, but one or more flocks of about twenty specimens, largely consisting of immature birds, were also regularly observed. They were usually seen feeding on the ground, apparently largely on grass-seeds. I have never observed the species elsewhere and it must be considered decidedly local, probably being confined to the large artificial savannahs between Port-of-Spain and Tacarigua. At Nelson's Estate, where Smooker discovered the species, there is a similar habitat. The song is fairly attractive.

APPENDIX

List of the birds now known to occur on Tobago (* not known from Trinidad)

1. *Podiceps dominicus*
2. *Podilymbus podiceps*
- *3. *Puffinus lherminieri*
- *4. *Phaethon lepturus*
5. *Pelecanus occidentalis*
6. *Sula sula*
7. *Sula leucogaster*
8. *Anhinga anhinga*
9. *Fregata magnificens*
10. *Ardea herodias*
- *11. *Butorides virescens*
12. *Butorides striatus*
13. *Florida caerulea*
14. *Egretta alba*
15. *Leucophox thula*
16. *Nycticorax nycticorax*
17. *Nyctanassa violacea*
18. *Ajaia ajaja*
- *19. *Anas platyrhynchos*
- *20. *Anas crecca*
21. *Anas americana*
22. *Aythya affinis*
23. *Nomonyx dominicus*
- *24. *Bulco platypterus*
25. *Urubitinga urubitinga*
26. *Spizaetus ornatus*
Spizaetus tyrannus?
27. *Circus brasiliensis*
28. *Pandion haliaetus*
29. *Falco ruficularis*
30. *Falco columbarius*
- *31. *Ortalis ruficauda*
32. *Porzana carolina*
33. *Gallinula chloropus*
34. *Fulica spec?*
35. *Porphyryula martinica*
36. *Haematopus ostralegus*
37. *Pluvialis dominicus*
38. *Charadrius collaris*
- *39. *Charadrius vociferus*
40. *Bartramia longicauda*
41. *Numenius borealis*
42. *Numenius americana*
43. *Limosa fedoa*
44. *Tringa flavipes*
45. *Tringa solitaria*
46. *Actitis macularia*
47. *Catoptrophorus semipalmatus*
48. *Arenaria interpres*
49. *Limnodromus griseus*
50. *Gallinago gallinago delicata*
51. *Calidris melanotos*
52. *Calidris pusillus*
53. *Calidris minutilla*
54. *Crocethia alba*
55. *Recurvirostra americana*
56. *Larus atricilla*
57. *Sterna dougallii*
58. *Sterna fuscata*
59. *Sterna sandvicensis eurygnatha*
60. *Anous stolidus*
Columba speciosa?
61. *Columba cayennensis*
62. *Zenaidura auriculata*
63. *Columbigallina talpacoti*
64. *Leptotila verreauxi*
65. *Geotrygon montana*
66. *Geotrygon linearis*
67. *Amazona amazonica*
68. *Coccyzus americana*
69. *Coccyzus minor*
70. *Crotophaga ani*
71. *Tyto alba*
Otus choliba?
- *72. *Rhinoptynx clamator*
Nyctibius griseus?
73. *Chordeiles acutipennis*
- *74. *Chordeiles minor*
75. *Podager nacunda*
76. *Caprimulgus cayennensis*
77. *Chaetura cinereiventris*
78. *Chaetura brachyura*
79. *Panyptila cayennensis*
80. *Glaucis hirsuta*
- *81. *Campylopterus ensipennis*
82. *Florisuga mellivora*
83. *Anthracothorax nigricollis*
84. *Chrysolampus mosquitus*
85. *Saucerottia tobaci*
Sericotes holosericeus?
86. *Trogon collaris*
87. *Ceryle alcyon*
88. *Chloroceryle americana*
89. *Momotus momota*
90. *Galbula ruficauda*
91. *Piculus rubiginosus*
- *92. *Melanerpes rubricapillus*
93. *Veniliornis kirkii*
94. *Dendrocicla fuliginosa*
- *95. *Sittasomus griseicapillus*

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| 96. <i>Xiphorhynchus guttatus</i> | 122. <i>Platycichla flavipes</i> |
| 97. <i>Synallaxis cinnamomea</i> | *123. <i>Tiaris bicolor</i> |
| 98. <i>Sclerurus albigularis</i> | 124. <i>Tanagra violacea</i> |
| 99. <i>Thamnophilus doliatus</i> | 125. <i>Thraupis virens</i> |
| 100. <i>Dysithamnus mentalis</i> | 126. <i>Tachyphonus rufus</i> |
| *101. <i>Formicivora grisea</i> | <i>Chlorophanes spiza?</i> |
| 102. <i>Pachyrhamphus polychropterus</i> | 127. <i>Cyanerpes cyaneus</i> |
| *103. <i>Chiroxiphia pareola</i> | 128. <i>Coereba flaveola</i> |
| 104. <i>Muscivora tyrannus tyrannus</i> | 129. <i>Parula pitiauyumi</i> |
| 105. <i>Tyrannus melancholicus</i> | 130. <i>Dendroica aestiva</i> |
| 106. <i>Tyrannus dominicensis</i> | 131. <i>Dendroica striata</i> |
| 107. <i>Myiodynastes maculatus</i> | 132. <i>Seiurus novaboracensis</i> |
| 108. <i>Myiarchus tyrannulus</i> | *133. <i>Geothlypis trichas</i> |
| *109. <i>Myiarchus ferox insulicola</i> | 134. <i>Setophaga ruticilla</i> |
| 110. <i>Cnemotriccus fuscatus</i> | 135. <i>Vireo virescens</i> |
| 111. <i>Platyrinchus mystaceus</i> | *136. <i>Hylophilus flavipes</i> |
| 112. <i>Tolmomyias flaviventris</i> | 137. <i>Psarocolius decumanus</i> |
| 113. <i>Elaenia flavogaster</i> | <i>Psomocolax oryzivorus?</i> |
| 114. <i>Pipromorpha oleaginea</i> | 138. <i>Molothrus bonariensis</i> |
| *115. <i>Progne subis</i> | 139. <i>Quiscalus lugubris</i> |
| 116. <i>Hirundo rustica</i> | *140. <i>Sporophila americana</i> |
| 117. <i>Thryothorus rutilus</i> | 141. <i>Sporophila nigricollis</i> |
| 118. <i>Troglodytes musculus</i> | 142. <i>Sporophila lineola</i> |
| 119. <i>Mimus gilvus</i> | 143. <i>Sporophila minuta</i> |
| 120. <i>Turdus albicollis</i> | 144. <i>Volutinia jacana</i> |
| 121. <i>Turdus nudigenis</i> | |

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APPENDIX

When this paper was in press, the 1957 issue of the "Journal of the Trinidad Field Naturalists' Club" has been received. In this number D. W. Snow published a paper "Bird notes from the Arima Valley, with three new records for Trinidad". The new records are *Nuttallornis borealis* (the author mentions the collecting of a specimen at Simla, Arima Valley, on March 20th, 1951 by Beebe), *Dendroica striata* and *Dendroica castanea*. Two of these species have already been collected by Mees and therefore are mentioned in our paper. *Dendroica castanea*, a northern migrant, is not included in our list and brings the total number of birds known from Trinidad at 348, the number of northern migrants for this island at 57. For the sake of completeness a short description of this species is added.

366. *Dendroica castanea* (Wilson)

Short description. In autumn much like *D. striata*, but upper parts more green fewer streaks. Under parts more buffish (less yellowish) and under tail coverts buffish, not white. ♂ in spring has the crown and neck chestnut, front and cheeks black, a buff patch on side of neck. Throat, breast and flanks chestnut. ♀ has the same pattern, but more faintly indicated.

Snow observed a ♂ in breeding plumage on March 8th, 1957 at Simla, Arima Valley.