

BULLETIN
OF THE
American Museum of Natural
History.

Vol. VI, 1894.

NEW YORK :
Published by order of the Trustees.

1894.

WM. C. MARTIN PRINTING HOUSE,
No. 111 John Street,
New York.

BULLETIN
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AMERICAN MUSEUM OF NATURAL HISTORY.

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Article I.—ON THE BIRDS OF THE ISLAND OF TRINIDAD.

By FRANK M. CHAPMAN.

The Island of Trinidad is situated at the northeastern extremity of South America, from which it is separated by the Gulf of Paria with its passages to the sea. The southern passage, known as the Serpent's Mouth, is at its narrowest point only seven miles in width. At the northern outlet, or Dragon's Mouth, the same distance intervenes between the Venezuelan headland and Chacachacare, one of the three small islands off the northwest coast of Trinidad.

The average length of Trinidad is forty-eight miles ; the average width thirty-five miles. The area, according to Wall and Sawkens, is 1734 square miles, or nearly one and one-half times that of the State of Rhode Island. The northern part of the island is mountainous, the highest peak having an altitude of 3012 feet. Two ranges of hills, running in a generally eastern and western direction, cross the island, one near the middle, the other along the southern coast. The ground between these ranges is, as a rule, rolling and watered with small streams. Only a comparatively small part of the island is under cultivation, the principal products being sugar and cacao. The area devoted to sugar is confined almost entirely to the western coast of the island, while cacao is grown in the valleys of the interior.

[January, 1894.]

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The year is divided into two seasons, a wet and a dry. The former generally begins in May and continues until December. The annual rainfall for the whole island, based on numerous observations extending over many years, is given by Dr. de Verteuil as 66.28 in. There is, however, apparently much variation with locality. For example, the rainfall at the Indian Walk Rest-house, at the edge of the forest, for 1891, was 126.17 in., and for 1892, 157.77 in. The latter year, however, was an exceptional one, the rainfall for the island averaging about 120 in. There is comparatively little variation in temperature throughout the year. Observations at the Botanic Gardens in Port-of-Spain show that the mean temperature at 9.30 A. M. ranges from about 78° to 84° F., and at 3.30 P. M. from 77° to 84° F.

During the dry season a fresh trade-wind blows from the eastward. During the rainy season the winds are light and variable.

With these brief introductory remarks on the principal physical and climatic characteristics of the island I proceed to a description of the localities where the collections and observations upon which this paper is based were made.

San Fernando (Feb. 23).—I reached Port-of-Spain, the principal city of Trinidad, February 21, 1893. On the night of the 22d, through the courtesy of the officers of the S. S. 'Alps' I sailed southward on that steamer and anchored the following morning off the city of San Fernando. Here, at the mouth of the Ciperó River, I passed a few hours ashore. The locality is quite different from any that I subsequently visited, and brief as was my stay I met with several species which I did not afterward observe. At the entrance of the river into the gulf there are a few mangrove bushes, but a short distance from its mouth sugarcane fields and meadows or 'savannas' appear. The following birds were seen only at this point: *Synallaxis cinnamomea*, *Leistes guianensis*, *Agelaius icterocephalus*, *Quiscalus lugubris*, *Tachycineta albiventris*.

La Brea (Feb. 23-26).—On the afternoon of the same day we steamed to La Brea and, while loading pitch from the celebrated Pitch Lake, were anchored here until the night of the 26th.

The part of the coast which I saw here is dry and sandy, and a low, dense, scrubby growth, composed largely of different species of palms, reaches to the water's edge. The locality is not a very favorable one for birds. Three species were seen here which were not elsewhere met with. They are: *Chætura polioura*, *Panyptila cayennensis* and *Myiozetetes sulphureus*.

Indian Walk Rest-house (Feb. 28–April 29).—After returning to Port-of-Spain I left on the morning of the 28th for Princetown, about 35 miles to the southward, at the terminus of the railway. Here I secured conveyance for myself and outfit and proceeded to the Indian Walk Rest-house, on the Moruga Road, seven miles southwest of Princetown and twelve miles directly north of the southern shore of the island at Moruga, a point midway between the eastern and western coasts. I resided at the rest-house from February 28 to April 29, making during this time one trip to the coast. The rest-house is a government station in charge of Corporal Stoute, who with his wife well deserves the reputation he has acquired in attending to the wants of the occasional travelers who stop at the rest-house in passing to or from the coast. It is at the border of the primæval forest, which, broken only by a bridle path and a few small clearings, stretches to the southern shore of the island. The locality is an excellent one for land-birds. The cleared ground borders the road, and is devoted to cacao groves, which are in various stages of cultivation from the newly cleared and burned fields to those containing bearing trees. In some neglected groves a growth of grass had sprung up which attracted certain Finches.

The forest is quite typical of the tropics. There is a luxuriant growth of parasitic plants, a confusing tangle of lianes, and many trees reaching to a height of 150 feet.

During the rainy season the region is well watered by numerous small streams, which at the time of my visit were for the most part dry. The varied character of the ground at the rest-house made it a most favorable point for collecting, and while many species known from the island were not seen there, I doubt if a better locality could be found for an observer whose time was necessarily limited. The average temperature during my stay was as follows :

	7 A. M.		2 P. M.		9 P. M.	
	March.	April.	March.	April.	March.	April.
Mean.	64.4°	70°	88°	88°	74°	77°
Highest.	74	75	92	93	78	79
Lowest.	60	65	84	78	70	74

The rainfall, as shown by the government rain-gauge, was, for March 1.85 in.; in April we had 1.82 in. from the 1st to the 22d. On the latter date the rainy season began, and from then to the 28th we had 6.22 in.

Moruga (April 21-24).—April 21 I went to Moruga, on the south coast, returning to the rest-house on the 20th. The way led through the forest and over a broken range of hills running east and west. Corn-birds (*Ostinops* and *Cassicus*), Toucans, Parrots, Plumbeous Kites, and Trogons are the characteristic birds seen in passing along this road. Smaller birds are less common than in partially cleared districts.

At Moruga there is a fine, gently sloping beach on which scarcely a shell is to be seen. At high-tide the water reaches back to rather scrubby woods, or patches of roseau palms, or beats against the precipitous sides of some sandstone headland. One of these promontories, on which were growing old forest trees, was nearly one hundred feet in height, and was being gradually washed away by the encroaching waves. Two small rivers, the Morikeet and Moruga, enter the sea at this point. Both are bordered by mangroves (*Rhizophora*) for some distance from their mouths. Large sand-flats extend from the mouth of the Moruga River, and here were observed a few small Sandpipers and Plovers. Not a Gull, Tern, nor Pelican was seen, and here, as elsewhere on the coasts, I was struck by the scarcity of seabirds. I ascended the Moruga River for some distance, but the hour was not favorable, and I saw comparatively few birds, and only one, *Aramides axillaris*, which had not been previously taken.

Caroni River (May 3).—May 1 I again reached Port-of-Spain, and early on the morning of the 3d passed several hours near the

mouth of the Caroni River, which enters the Gulf of Paria a few miles south of that city. The river reaches the gulf through vast mangrove (*Rhizophora*) swamps, and these, with the mud-flats which are exposed at low-tide, are said to form the feeding ground of many water-fowl. At the time of my visit, however, these flats were covered, and beyond a few Brown Pelicans, and a number of Blue Herons (*Ardea cærulea*), White Egrets (*A. egretta*), and Green Herons (*A. cyanura*), water-birds were not abundant. *Dacnis bicolor*, which was not seen elsewhere, was common here in the mangrove bushes.

Monos Island (May 4-7).—The following morning I went to Monos Island, staying at Mr. Morrison's until May 8. The chief object of my visit was to see the famous Gúacharo caves and also to secure specimens of the Fish-eating Bat (*Noctilio leporinus*). Much to my regret I had little time left to explore the island itself, but the brief glimpse I obtained was sufficient to show me that the avifauna of Monos differs markedly from that of the vicinity of the rest-house, and indeed from that of any locality I had previously visited. The vegetation on Monos is entirely unlike that of the southern part of Trinidad. The whole island is covered with a growth of small, slender trees. The woods are rather open, and resemble a northern second-growth forest about twenty years old. It was to be expected, therefore, that many forest-loving species should be wanting, but I was not prepared to find in the short time at my command so many species not met with before. Of the twenty-six species of land-birds seen on Monos the following had not previously been observed: *Saltator albicollis*, *Spinus cucullata*, *Empidochanes cabanisi*, *Sublegatus glaber*, *Myiopatis semifusca*, *Coccyzus americanus*.

Compothlypis pitiayumi, *Myiarchus tyrannulus*, and *Engyptila verreauxi*, birds which were exceedingly rare at the rest-house, were among the most common species at Monos. The presence of *Saltator albicollis*, *Sublegatus glaber*, and *Spinus cucullata*, species not known south of Venezuela, is perhaps due to the proximity of this part of Trinidad to the mainland, and suggests that comparison of the faunæ of northern and southern Trinidad will show a Venezuelan element in the former that is wanting in the

latter, which in turn may show Guianan affinities not present in the northern part of the island.

The Faunal Position of Trinidad.—While the political divisions of the earth's surface are, as a rule, based on purely artificial boundaries, they become in time so strongly fixed in our minds that we frequently ascribe to them a significance they are far from possessing. There can be no better illustration of this than the popular idea of the geographical position of the island of Trinidad. Politically, Trinidad belongs to what are known as the British West Indies; faunally, that is naturally, Trinidad has no connection whatever with the West Indies, but is entirely South American in its affinities. Indeed, both zoölogical and geological evidence place beyond doubt the fact of its recent connection with the mainland. Looking from the northwest point of Trinidad westward past the small detached mountain-islands, Monos, Huevos, and Chacachacare, the mountains of the Venezuelan headland, distant only seven miles from the last named island, may be seen so distinctly that political lines vanish and the whole appears as it really is, a continuous mountain-chain, through whose deep valleys, due to subsidence, the sea now flows.

The continental relationships of Trinidad have been known for many years, and have often been pointed out by both zoölogists and geologists,¹ nevertheless there are many naturalists who consider Trinidad a truly West Indian island, while to the popular mind the initials "B. W. I." irrevocably decide its position. In the paper referred to Mr. Guppy places the time of the disruption of what he has termed the Parian or Northern Range, and the consequent formation of the Bocas and the Gulf of Paria, as subsequent to the close of the Miocene period. The absence of races widely differentiated from their mainland ancestors through insular isolation tends also to show that the continental connection existed at a comparatively recent time. It might be urged that the proximity of Trinidad to the mainland has prevented the complete isolation necessary for the development of new forms. I do not believe, however, that this is true.

¹ See especially a recent paper by Mr. Guppy (Quart. Journ. Geol. Soc., XLVIII, 1892, p. 519), with whose views concerning a supposed Caribbean continent I cannot, however, agree.

The island of Cozumel is situated only twelve miles off the coast of Yucatan, but in spite of its small size and nearness to the mainland it has some sixteen peculiar forms.

Certain migratory birds, for example, *Milvulus tyrannus* (cf. Léotaud) annually visit Trinidad, but beyond this migration the passage of birds from the main to the island, or *vice versa*, is apparently infrequent and accidental.

We can thus in a general way determine the relationships of Trinidad to the continent, and it is therefore of special interest to note the effects of this recent insulation on the birds of the island. Unfortunately we have not as yet sufficient exact data from the adjoining main to make a satisfactory comparison, but as before stated, the relationships of the birds of the island to those of the continent are remarkably close. As far as we at present know the following species and subspecies of birds are peculiar to Trinidad or to Trinidad and Tobago :

<i>Merula xanthosceles</i> ,	<i>Basileuterus vermivorus olivascens</i> ,
<i>Cyclorhis flavipectus</i> ,	<i>Lanio lawrenceii</i> ,
<i>Chlorospingus leotaudi</i> ,	<i>Sporophila lineola trinitatis</i> ,
<i>Platyrrhynchus mystaceus insularis</i> ,	<i>Ramphocæus melanurus trinitatis</i> ,
<i>Myrmeciza longipes albiventris</i> ,	<i>Amazilia erythronota</i> ,
<i>Momotus swainsoni</i> ,	<i>Pipile pipile</i> .

Most of these birds are simply insular representatives of mainland species to which they are closely allied. They serve to show that, in spite of its comparatively recent separation and proximity to the continent, Trinidad still presents a habitat sufficiently isolated to permit of the differentiation of some of the species inhabiting it.

An analysis of the distribution of the 199 resident land-birds common to Trinidad and the continent shows that it belongs in the Colombian, rather than in the Amazonian subregion. Thus 153 of these birds are found in both Guiana and Venezuela, while twenty-five are found in Venezuela but not in Guiana, and only eleven are found in Guiana but not in Venezuela.

The relationships of Tobago to Trinidad are much the same as are those of the latter island to the mainland. Tobago was probably joined to Trinidad at the time of the continental connection previously mentioned, and its separation may have occurred at

the time when, as Mr. Guppy has shown, the Bocas were formed through subsidence.

In a previous paper¹ I stated that Tobago had no birds not found in Trinidad. Subsequent investigation proves this statement to be erroneous. Most of the birds found there are identical with those of Trinidad, but the much smaller size of the island has tended to restrict the avifauna. There is an excellent opportunity here, for one familiar with both islands and their birds, to determine some of the causes which govern the distribution of species. For instance, Trinidad is exceedingly rich in Falconidæ, of which twenty-one species have been found in the island. Tobago, on the other hand, has only three species, and such common birds as *Cathartes* and *Catharista* are among the missing. Local conditions, perhaps insufficient food-supply, may be the cause in this case, but the real cause can be determined only by observation. The species found in Tobago, but which are as yet unknown from Trinidad, are the following: *Mimus gilvus*, *Chiroxiphia pareola*, *Campylopterus ensipennis*, *Centurus tricolor*, *Sittasomus olivaceus*, *Ortalis ruficauda*. These are all South American species, some of which may still be found in Trinidad.

The relationships of Grenada, the most southern of the Antilles, to Trinidad have been briefly considered in a previous paper.¹ The distinctness of its avifauna from that of Trinidad would seem to indicate that no connection has existed between the two islands.

The South American element in the avifauna of Trinidad, Tobago, and Grenada is shown by the following table, in which are scheduled only the resident South American land-birds, or their representatives, which occur in each:

	Trinidad.	Tobago.	Grenada.
Tinamidæ.....	I		
Cracidæ.....	I	I	
Columbidæ.....	7	4	
Falconidæ.....	21	3	I
Strigidæ.....	4		
Psittacidæ.....	5	I	

¹ Bull. Am. Mus. Nat. Hist., Vol. IV, p. 322.

	Trinidad.	Tobago.	Grenada.
Cuculidæ.....	6	1	1
Trogonidæ.....	3	1	
Alcedinidæ.....	4	1	
Galbulidæ.....	1	1	
Momotidæ.....	1	1	
Ramphastidæ.....	1		
Picidæ.....	5	3	
Caprimulgidæ.....	5	3	
Cypselidæ.....	6	1	2
Trochilidæ.....	17	6	1
Formicariidæ.....	9	3	
Dendrocolaptidæ.....	11	5	
Cotingidæ.....	4	3	
Pipridæ.....	2	1	
Tyrannidæ.....	24	7	4
Icteridæ.....	8	3	1
Fringillidæ.....	8	4	1
Tanagridæ.....	18	2	1
Hirundinidæ.....	4		
Vireonidæ.....	3	2	1
Cœrebidæ.....	6	4	
Mniotiltidæ.....	3		
Troglodytidæ.....	2	2	1
Turdidæ.....	5	2	2
Total.....	195	65	16

Bibliography of the Trinidad Avifauna.—The first paper of importance relating to the birds of Trinidad was published in Dr. de Verteuil's 'Trinidad, its Geography, Resources, etc.,' in 1858. This, the first edition of this work, I have not seen. According to Coues (Orn. Bibl.) the ornithological matter appeared on pages 118-126 and 423-429. In the second edition¹ I believe the same matter is given on pages 89-97 and 365-381. The first article is by Dr. de Verteuil, and treats in a general way of the better known species; the second article is entitled, 'An Essay on the Ornithology of Trinidad,' by Antoine Léotaud, M.D.P. A nominal list of species is followed by some general remarks on the avifauna of the island, 'Nidification,' 'Migration,' 'Game,' 'Note and Song.'

In 1864 this was followed by a paper by Mr. E. C. Taylor²

¹ Trinidad: Its Geography, Natural Resources, Administration, Present Condition and Prospects. By L. A. A. de Verteuil, M.D.P.....Second Edition. Cassell & Company, Limited. London, Paris and New York. 1884. 8vo. pp. i-xi, 1-484.

² Ibis, 1864, pp. 73-97.

based on observations made between December 22, 1862, and March 24, 1863. During this time Mr. Taylor traveled over the greater part of the island, and also visited the mainland. As a result of his explorations in Trinidad, he gives an annotated list, consisting of 109 species of land-birds and nine species of water-birds. Two years later Dr. Léotaud's important work¹ appeared. Later writers (see Sclater and Finsch) have correctly estimated the value of this work to science. It was published at a time when papers on South American ornithology based on personal observations were limited in number, and Dr. Léotaud's many years of field experience gave him advantages which few ornithologists had possessed.

At the time when Dr. Léotaud worked the correct identification of tropical birds was possible only for a few specialists. There were no general works, and a large library was a necessary adjunct to the satisfactory determination of species. With few books at his command it was to be expected that Dr. Léotaud would sometimes wrongly identify his specimens. Indeed, these errors indicate the difficulties under which he labored, and as such give evidence of the enthusiasm which enabled him to complete his work. Dr. Léotaud gave 297 species, of which 208 are land-birds and 89 water-birds. Adding to this number four species of land-birds recorded by Taylor, but not mentioned by Léotaud, the total number of species known from the Trinidad fauna in 1866 was 301.

The following year Dr. Sclater² published a review of Dr. Léotaud's work, in which he made some general remarks on its character, and corrected in detail a number of misidentifications.

In 1870³ Dr. Finsch published an extended paper on Trinidad birds based on a collection of 115 species brought from the island by a captain of a vessel. In this collection Dr. Finsch found no less than ten species which had not been recorded by either Taylor or Léotaud, and, I may add, have not been met with by subsequent observers. Among this number were: *Sturnella*

¹ Oiseaux de l'île de la Trinidad (Antilles), par A. Léotaud, Docteur en Médecine de la Faculté de Paris; Membre Correspondant de la Société de Médecine de Gand. Ouvrage publié par souscription nationale. Port d'Espagne: Chronicle Publishing Office. 1866. Roy. 8vo, pp. i-xx; 1-560; i-iv.

² *Ibis*, 1867, pp. 104-108.

³ P. Z. S., 1870, pp. 552-589.

hippocrepis, *Icterus vulgaris*, *Cardinalis phoeniceus*, *Sycalis brasiliensis*, *Ramphastos erythrorhynchus*, etc. The fact that so many conspicuous birds could have escaped the long-continued observations of Dr. Léotaud, and also that Taylor asserts specifically that some of them do not occur in Trinidad, aroused my suspicions as to the correctness of their alleged place of capture. These suspicions were more than confirmed by Sylvester Devenish, Esq., and H. Caracciolo, Esq., gentlemen well qualified to know, who informed me that previous to the recent passage of laws prohibiting the killing and exportation of birds, hundreds of thousands of bird skins were received in Trinidad from the mainland and thence reshipped to the marts of Europe for sale as millinery or decorative specimens.

It is obvious, therefore, that although a bird's skin may have come directly from Trinidad, it does not necessarily follow that the bird was killed in that island. Thus the many millinery skins existing in collections labeled with the general locality "Trinidad" or "Trinidad make," may or may not have come from Trinidad, and the doubt makes them valueless for purposes of exact comparison. In the case of Dr. Finsch this is particularly unfortunate, for he makes his collection the occasion for extended comparison between "Trinidad" birds and their representatives on the continent.

It is evident from the presence of some species, *e.g.*, *Momotus*, that some of Dr. Finsch's specimens were actually taken in Trinidad, but the presence of the species cited above makes the locality of them all open to question, and, much to my regret, I must ignore Dr. Finsch's paper in the present connection.

Dr. Finsch gives a table of thirty species, which are included in Dr. Sclater's 'Catalogue of American Birds,' as from Trinidad. The fact that twenty-six of these were not observed by either Mr. Taylor, Dr. Léotaud or myself, strengthens my opinion that many so-called 'Trinidad' birds in reality were not killed in that island. For this reason I admit no species in the following list of Trinidad birds unless its claim to rank as such is based on accurate data.

As far as I know, no other papers relating especially to the Trinidad avifauna appeared until 1884, when Mr. Ridgway pub-

lished a nominal list¹ of fifteen species taken on and near Monos Island by the Naturalists of the U. S. Fish Commission S.S. 'Albatross,' from January 30 to February 2, 1884.

In the same year also a second edition of Dr. Verteuil's book appeared containing the late Dr. Léotaud's paper on Trinidad ornithology, as above mentioned.

The present paper is based primarily on collections made by myself from February 23 to May 7, 1893, under circumstances previously explained. During this time I identified 136 species of land-birds and fifteen of water-birds, of which five appear to be new to the island. In addition I am enabled to incorporate the results of an examination of Dr. Léotaud's collection of birds, which is on exhibition in the Victoria Institute, Port-of-Spain, where, through the courtesy of the authorities of the Institute, I was given every opportunity to study it. The specimens are all mounted, and, except for injury due to the continued exposure to the light, are, as a rule, in excellent condition. They are labeled with numbers corresponding to those given by Dr. Léotaud in his work, and the sex is generally given, but there is no further record. I regret that an entire absence of books, except Dr. Léotaud's, and of material for comparison, prevented my examination of these specimens being in every instance satisfactory. It was made, however, after I had practically completed my own collections, and I brought with me to the Institute specimens of the more obscure species for comparison with Dr. Léotaud's. In this way I was enabled to identify a number of Dr. Léotaud's species, the correct names of which have previously been unknown. As far as my own collections go, and in the case of North American species, my identification of Dr. Léotaud's birds may, I think, be accepted.

Additions to the Trinidad Avifauna.—The following species do not appear to have been previously recorded from Trinidad: *Dysithamnus mentalis spodionotus*, *Sclerurus albigularis*, *Sublegatus glaber*, *Myiozetetes sulphureus*, *Chlorospingus leotaudi* (sp. nov.).

Species Described as New and Changes in Nomenclature.—The following new or emended names are proposed in the present

¹ Proc. U. S. Nat. Mus., VII, p. 173.

paper: *Pipile pipile* Jacq. proves not to be synonymous with *P. cumanensis* of the same author; *Myrmeciza longipes albiventris* is described as new; *Ramphocænus melanurus trinitatis* (Less.) is given subspecific rank; *Empidochanes arenaceus* Scl. & Salv. apparently becomes a synonym of the previously described *E. cabanisi* Léotaud; the Tobagan form of this genus is described as *Empidochanes cabanisi canescens*; *Myiarchus coolei* Ridgw. is considered inseparable from *M. tuberculifer* d'Orb. & Lafr.; *Chlorospingus leotaudi*¹ and *Basileuterus vermivorus olivascens*¹ are described as new. *Cyclorhis flavipectus trinitatis* Allen is shown to be a synonym of *C. flavipectus* Scl.; and *Troglodytes tobagensis* Lawr. is not considered separable from *T. rufulus*.

During my entire trip I was everywhere received with so much courtesy that I find it difficult to properly express my appreciation of the assistance which was always graciously rendered me. To the following gentlemen I am especially indebted for favors which contributed materially to whatever success has attended my efforts: Captain Byers and Chief Engineer Walker of the Trinidad Line of Steamers; Harry Vincent, Esq., Trinidad's Commissioner to the World's Fair; William Cunningham, Esq., formerly of Port-of-Spain; H. Caracciolo, Esq., President of the Trinidad Field Naturalists' Club; and Henry C. Warner, Esq., Warden of Savanna Grande.

I.—GENERAL REMARKS ON TRINIDAD BIRD-LIFE.

The following remarks are based principally on my experience at the rest-house, where a residence of two months permitted me to become fairly familiar with the birds of a limited area, but nevertheless an area which seemed to present many phases of tropical bird-life.

Number of Species.—During my stay at the rest-house I identified 115 species of resident land-birds. In addition to this number I observed or heard at least six species which I did not secure. No additions were made to my list after the first month, and I think the number given fairly represents the avifauna of the

¹ A preliminary description was published in 'The Auk,' 1893, p. 342.

locality during March and April. With one or two exceptions these birds were found within half-a-mile of the rest-house, and the richness of the avifauna will therefore be readily seen.

The average number of birds seen daily was fifty-six. If, however, I visited ground of varying character the number of species observed in a single day might reach seventy. The 115 species recorded may be classed according to their relative numbers as follows: Abundant, 14; common, 45; tolerably common, 26; rare, 30. In considering these figures my unfamiliarity with the avifauna and the difficulty with which some birds were observed must of course be taken into account.

While the presence of birds in large numbers was dependent upon the supply of food, bird-life was nevertheless very generally distributed, and there was comparatively little variation in the number of birds seen daily.

Migration.—Using the word in its restricted sense, the migratory birds which regularly visit Trinidad are too few in number to make any impression upon the character of the land-bird avifauna, which, as a whole, is apparently much the same throughout the year. There are a few species, notably *Milvulus tyrannus*, which come from the mainland in the summer, or wet season, and return to the continent for the winter, or dry season, but as a rule the land-birds of the island are resident.

Although my observations covered so brief a period they gave me some idea of the fluctuations in tropical bird-life due to food-supply.

It is a well-known fact that a large class of tropical birds consists of fruit and flower feeding species, whose presence is dependent upon the flowering of certain trees or the ripening of their favorite fruits.

On my arrival at the rest-house, March 1, the *bois immortel* trees (*Erythrina coccinea*) were in full bloom. Among the birds which were attracted to their blossoms, Hummingbirds and Blue Honey-creepers (*Arbelorhina cyanea* and *A. cerulea*) were especially abundant. March 15 the blossoms had almost disappeared, and from that date until my departure some of the Hummingbirds previously so common were not observed again, while the Honey-

creepers, which had been as abundant as swarming bees, were rarely seen. Doubtless they were attracted to some fresh food which took them beyond the boundaries of my field of observation. At Monos Island I was told that some species, Pigeons among the number, are drawn from the mainland to Trinidad by the ripening of certain fruits. Instances of this kind, however, probably occur only among the roving species possessed of extended powers of flight.

With the exception of shore-birds few North American migrants visit Trinidad. The island is beyond their line of flight. Four species of Ducks, one of Rail, and twenty-nine species of Snipes and Plovers, show that the island is a winter resort for some of our water-birds, but of land-birds only the following have been recorded: *Coccyzus americanus*, *Coccyzus erythrophthalmus*, *Ceryle alcyon*, *Spiza americana*, *Piranga rubra*, *Chelidon erythrogaster*, *Protonotaria citrea*, *Dendroica aestiva*, *Seiurus noveboracensis* and *Setophaga ruticilla*. Of these *Spiza americana* and *Protonotaria citrea* have not been recorded from the Lesser Antilles, and the occurrence of the former indicates the probability of their having reached Trinidad from Venezuela.

The remaining seven species are more or less common in the Lesser Antilles, and their presence in Trinidad is in support of Prof. Julien's¹ observations on the arrival of birds in the island of Sombrero from the northwest.

Indeed it seems not improbable that, as Prof. Julien has suggested, some of these birds may have reached Sombrero by a direct flight from the Bermudas, a distance of over 800 miles.

According to Reid, the land-birds which visit the Bermudas with more or less regularity are *Ceryle alcyon*, *Coccyzus americanus*, *Chordeiles virginianus*, *Dolichonyx oryzivorus* and *Seiurus noveboracensis*. The North American land-birds recorded by Prof. Julien from Sombrero are: *Setophaga ruticilla*, *Chelidon erythrogaster*, *Dolichonyx oryzivorus* and *Coccyzus americanus*. Passing southward to Grenada, the last of the Antillean chain, we find the following North American land-birds recorded from that island by Wells:² *Ceryle alcyon*, *Dolichonyx oryzivorus*, *Chelidon*

¹*Cf.* Ann. Lyc. Nat. Hist. New York, VIII, 1864, p. 93.

²Proc. U. S. Nat. Museum, IX, 1886, p. 609.

erythrogaster, *Setophaga ruticilla* and *Seiurus noveboracensis*. Thus the five North American land-birds which occur more or less regularly in the Bermudas represent 50% of those which have been recorded from Sombrero, 60% of those known from Grenada, and three of the five have been taken in Trinidad. This rather remarkable agreement in numbers and species of migrants visiting these islands would seem to imply a direct flight from the Bermudas to Sombrero, and thence southward through the islands. It is true that all the regular Bermudan migrants, except *Dolichonyx*, have been found in Porto Rico, and while many North American species winter in that island, others no doubt pass southward through the Lesser Antilles. Nevertheless the observations of Prof. Julien, and the facts just cited are strong evidence in support of a regular migration of birds from the Bermudas to the northern Lesser Antilles, the longest flight, as far as I know, made by migrating birds.

Call-Notes and Songs.—Probably the most fascinating part of one's experience in a new avifauna consists in learning the notes of species which he has not previously observed. This pleasure is of course heightened as increasing familiarity with living birds gives additional data for comparison.

After returning from my first outing in Trinidad forests my mind was so confused by the great variety of strange calls, cries, and whistles that I had clear impressions of the notes of but few birds. Except for the advantage of knowing most of the birds as 'skins,' it was very much like beginning the study of field ornithology over again. After I had learned to recognize birds by their notes I was struck by three things, the first of which has been commented on by most writers on tropical birds; that is, the comparative absence of singing birds. Of the 115 land-birds seen at the rest-house only three had songs which were sustained more than a few seconds. They are a Thrush (*Merula gymnophthalma*), a small Tanager (*Euphonia violacea*), and a Finch (*Sporophila grisea*). To this number may be added a number of species which would come under the general head of song-birds, though their vocal efforts are restricted to a few notes, which are not sung continuously. The leaders among these are *Troglodytes*

rufulus, *Thryothorus rutilus*, *Cyclorhis flavipectus*, *Geothlypis æquinoctialis*, *Basileuterus vermicivorus olivascens* and *Vireo chivi agilis*. There are others which, strictly speaking, should be ranked as song-birds, but their notes are too insignificant to make them prominent. But the class of birds whose notes give character to the avifauna are not true song-birds; though species are included which possess more vocal ability than many birds so classed. These birds, however, do not sing, but squeak, squawk, chuckle, whistle, chatter, quack, scream, or coo, in fact make all manner of sounds musical and unmusical. The principle species in this class are the Tanagers (*Ramphocelus* and *Tanagra*), the Cassiques (*Ostinops* and *Cassicus*), *Icterus*, *Pitangus*, *Tyrannus*, *Formicarius*, *Myrmeciza*, *Crotophaga*, *Ramphastos*, Parrots, Trogons, Owls, Doves and Tinamous.

The second thing about the notes of Trinidad birds which impressed me was a generic resemblance in song. For example, any one familiar with the song of the House Wren (*Troglodytes ædon*) would at once recognize the Trinidad House Wren by its song. In a similar manner the notes of *Vireo chivi agilis*, *Icterus*, *Molothrus*, *Tyrannus*, *Trogon*, *Amazona*, *Chætura*, *Glaucidium*, and the Doves, at once betrayed the generic relationship of the singer. Several of these instances are particularly interesting, giving, as they do, evidence of a common origin, and also of the stability of characteristic calls and songs.

But on the other hand I was struck by the remarkable resemblance among the notes of birds very distantly related. Thus some of the notes of *Synallaxis albescens*, *Thamnophilus doliatus*, *Dendroornis*, and *Trogon meridionalis*, were so like some of those of *Sayornis phæbe*, *Corvus americanus* and *Colaptes auratus*, respectively, that were either bird heard in the habitat of the other its identity would not be suspected.

Nesting.—March 1, when I reached the rest-house, many birds were nesting and young birds were on the wing. May 1, when I left the rest-house, the nesting season had apparently not reached its height.

In the tropics the nesting season is not necessarily governed, as it is in the north, by climatic conditions and the food-supply.

[February, 1894.]

One month is much like another, and a bird may nest in June or December as far as external conditions are concerned. It is worthy of note, therefore, that although a tropical nesting season is less sharply defined than a boreal one, it is nevertheless a nesting season of periodic and regular occurrence.

A comparison of the nests of northern with those of tropical birds shows how much more complex in form are the latter. The eggs and young of tropical birds are exposed to so many dangers which do not threaten those of northern species that special types of nest structure appear to have been evolved as a means of protection. Tree-snakes, lizards, opossums, monkeys, ants, large spiders, and nest-robbing birds are probably the most destructive foes of nesting birds, and the heavy rains of the wet season may destroy the homes of some species.

It is doubtless these causes which have been effective in producing such architectural marvels as the nests of *Ostinops*, *Rhynchocyclus*, *Synallaxis*, and, to go out of Trinidad, the many extraordinary nests of birds throughout the tropics.

I was impressed by the fact that some simple nests, so to speak, were covered and had entrances at the side. For example, *Pitangus* and *Cæreba*. Nests constructed in this way would effectually shed water and thus be habitable during the wet season.

We know as yet comparatively little concerning the nesting habits of tropical birds, and, aside from other reasons, the density of the vegetation, as Dr. Léotaud remarked, often successfully defies the best attempts to discover the treasures the birds have confided to its keeping.

The Colors of Tropical Birds.—In Trinidad I saw alive for the first time many species of birds which had long been familiar to me as 'specimens.' Several of these birds interested me greatly by the display of markings, which in the dried 'skin' are entirely concealed. Thus the white lesser wing-coverts of *Tanagra melanoleucus* were conspicuous when the bird was flying, while the habit of nervously flitting its wings made a similar marking in *Oryzoborus* easily visible. Again the white nuchal collar in *Florisuga* was frequently displayed while the bird was in flight, and my observations on the mating habits of *Thamnophilus major*

show, I think, that the white dorsal patch is intentionally displayed.

The relation of color to environment is so complex a subject, and any attempt at its explanation involves so exact a knowledge of the governing causes, that my own brief experience was sufficient only to show me how necessary field experience is to the solution of problems of this kind. Only a close study of the living bird *in a part of its habitat which has not been altered by man's agency* will result in the accumulation of data from which we may rightly attempt to draw conclusions. It seems to me of the utmost importance that a species should be found in what is absolutely a state of nature if we are to appreciate the harmony which exists between it and its environment. In clearing the forests, planting crops, etc., man has brought about a new condition of things to which many species have succumbed, while others apparently have adapted themselves to their changed surroundings. But what the result will be it is too soon for us to say. In the meantime we must go to primæval nature if we are to gain a proper understanding of the life-history of any animal. The forests at the rest-house afforded me such an opportunity, and in even my short visit I was struck by the distribution of bird-life in them.

Forest birds may be placed in five classes, as follows: (1) The birds of the tree-tops. These are largely insect, fruit, or flower-eating species. Honey-creepers and Honey-suckers (*Cæreba*, *Arbelorhina*, *Dacnis* and *Chlorophanes*), Tanagers (*Ramphocelus*, *Tanagra*), Orioles, Parrots and Paroquets, and Hummingbirds, except *Phaëthornis*, *Pygmornis*, and *Glaucis* are characteristic species of this class. (2) The birds of the trees. These are fruit and insect-eating species, which as a rule inhabit the body of the trees rather than their outer branches. They are less active and more sedentary than the birds of the first group. Representative species are *Cyclorhis*, *Saltator*, *Vireo*, *Trogon*, *Myrmotherula*, *Dysithamnus*, and several of the green Flycatchers. (3) The birds of the tree-trunks. These of course are scansorial birds. Examples are *Dendrocincla*, *Dendroornis*, *Picolaptes*, *Dendrobates* and *Chloronerpes*. (4) The birds of the undergrowth. These are generally found about the borders of the forest where

the added light permits a denser low growth. Wrens, Thrushes, *Ramphocænus*, *Platyrrhynchus*, *Thamnophilus*, *Glaucis*, *Phaëthornis*, and *Pygmornis* may be included here. (5) The birds of the ground. This class contains such purely terrestrial species as *Aramides*, *Heterocnemis*, *Myrmeciza*, *Nyctidromus*, *Engytla*, and Tinamous. Now there is a remarkable agreement in color among the birds of these five groups *inter se*. The first class is composed of the most brilliantly colored birds of the tropics. To their misleading abundance, in what may be termed popular collections of birds, we owe the general belief that tropical birds are generally of bright plumage, whereas the truth is they are greatly exceeded in numbers by plainly colored species. The second class might be called green birds, though they are not all of this color. The remaining classes are, generally speaking, brown birds. Some are black, or black and white, but they are all inconspicuously colored. A comparison of the members of the first group with those of the fourth or fifth, emphasizes the great difference in color which exists between them. In no birds is it better shown than in the Hummers. Those of the first group are famous for the brilliancy of their plumage, while those of the fourth are dull and obscurely colored.

An attempt to explain this distribution of colors opens a wide field for speculation, upon which I confess I hesitate to venture. I believe, however, that the first object of color is concealment. That is, harmony in color between a bird and its immediate surroundings which will result not alone in concealing it from its enemies, but by rendering it less conspicuous will enable it to secure its food.

The colors of the birds I have mentioned are of this nature. The gayly plumaged birds of the first class are brought into contrast with the bright fruit or flowers; those of the second class are generally green like the foliage about them; those of the remaining three classes are for the most part brown like their background of bark or dead leaves.

While it may not be questioned that in their distribution these birds do harmonize in color with their surroundings, it might be suggested that their colors were in some way dependent on their exposure to light. But a consideration of the dull colors

of plain-inhabiting species, which, like the brightly-colored tree-top birds, are constantly exposed to the direct rays of the sun, shows apparently that light is here not an active agent.

I do not speak particularly of the birds of the clearings or cacao groves near the rest-house, for the conditions in both these places were not natural, though even here it was evident that birds sought what were approximately their true haunts. For instance, the tops of the blossoming *bois immortel* trees in the cacao groves would be thronged with many species of the first class. Lower down the green Flycatchers lived, while although the brown Hummers (*Phaëthornis*, *Pygmornis*, and *Glaucis*) were frequently seen probing banana blossoms beneath the *bois immortel* trees, I never once saw one feeding from their brilliant blossoms. Where the grass had been permitted to grow in the groves, Finches or brown Synallaxes might be found. Thus, as in the forest, there was a protective resemblance between a bird and its surroundings.

Beyond this claim for the primary importance of protective coloration I do not for the present care to go. The intensity of the struggle for existence reaches its maximum in the tropics. Birds are there beset by so many dangers that survival means perfect harmony with the environment.

II.—A LIST OF THE BIRDS OF THE ISLAND OF TRINIDAD.

While I believe that the most natural order in which to arrange lists of species of any class of animals is to begin with the lowest forms and end with the highest, most writers on South American birds have followed exactly the opposite plan, and any attempt to change would now result in so much confusion that I have decided to follow the system of previous writers, even though I disapprove of it.

The native English and Creole names given in the present paper have been furnished me by Thomas W. Carr, Esq., of Port-of-Spain. Mr. Carr has for several years been compiling a list of the popular names of Trinidad birds, and has very generously placed a copy of it at my disposal.

The French names are taken from Léotaud's work. The references to 'Léotaud' and 'Taylor' are to the respective works of these authors on Trinidad birds already cited (*antea*, pp. 9, 10). The notes given refer only to my own observations, and the absence of annotations implies that the species was not met with by me.

Order PASSERES.—Perching Birds.

Family TURDIDÆ.—THRUSHES.

1. ***Merula flavipes*** (*Vieill.*).—YELLOW-FOOTED THRUSH.
GRIVE À PATTE JAUNE.

Turdus flavipes TAYLOR, p. 80; LÉOTAUD, p. 199.

2. ***Merula phæopygus*** (*Cab.*).—WHITE-THROATED THRUSH.
GRIVE À CRAVATTE.

Turdus phæopygus LÉOTAUD, p. 197.

3. ***Merula xanthoscelus*** (*Jard.*).—BLACK-BIRD. GRIVE NOIRE.

Turdus xanthoscelus LÉOTAUD, p. 201.

4. ***Merula fumigata*** (*Licht.*).—CACAO THRUSH. GRIVE DES CACAOS.

Turdus fumigatus TAYLOR, p. 80.

Turdus casius LÉOTAUD, p. 204.

Not common.

5. ***Merula gymnophthalma*** (*Cab.*).—BARE-CHEEKED THRUSH. GRIVE À PAUPIÈRES JAUNES.

Turdus gymnophthalmus TAYLOR, p. 80.

Turdus nudigenis LÉOTAUD, p. 201.

Common near the borders of the forests and in partial clearings. They are shy, suspicious birds, and some caution is necessary in approaching them. In general appearance they are typically Thrush-like, and their manner of flitting their tail on alighting is exactly like that of a Robin (*Merula migratoria*). Their

ordinary call-note is a low *chât* quite unlike the call of any Thrush with whose notes I am familiar.

They began to sing on April 6, and in a few days were in full song. The song is so like that of a Robin that if it was heard in the habitat of that species it would pass as a slightly aberrant Robin's song. It is not quite so loud as the song of the Robin, is lacking in variety, and is sung less continuously, but the character is the same.

Family TROGLODYTDÆ.—WRENS.

6. *Troglodytes rufulus* Cab.—GOD-BIRD. ROSSIGNOL.

LÉOTAUD, p. 170.

Troglodytes tobagensis LAWR. Auk, V, 1888, p. 403.

Both in song and habits this bird resembles our House Wren (*Troglodytes ædon*). A pair was always to be found near every cabin, and I rarely saw it far from the vicinity of houses. In Port-of-Spain it is not uncommon in the busiest part of the city.

My specimens represent both the gray and brown phases of color. In the former the underparts are whiter, while in the latter they are more or less washed with buffy. In one specimen the under tail-coverts are without bars.

Comparison with the type of *T. tobagensis* shows it to be inseparable from this species.

7. *Thryothorus rutilus* Vieill.—BUSH WREN. ROSSIGNOL DES HALLIERS.

TAYLOR, p. 81.

Troglodytes rutilus LÉOTAUD, p. 173.

This is a not uncommon species, but it inhabits the denser undergrowth, and is much more frequently heard than seen. Its song is a loud, musical whistle, delivered with much energy and rapidity.

One of my examples agrees closely with the Panama specimens, and others are so near that there is apparently little doubt that the form from that locality should stand as *Thryothorus rutilus hyperythrus*.

Family MNIOTILTIDÆ.—WOOD-WARBLERS.

8. *Protonotaria citrea* (Bodd.).—PROTHONOTARY WARBLER.
FAUVETTE À TÊTE JAUNE.

Mniotilta citrea LÉOTAUD, p. 179.

There is no specimen of this bird in Léotaud's collection.

9. *Compsothlypis pitiayumi* (Vieill.).—GOLDEN SUCRIER.
SUCRIER DORÉ.

Mniotilta venusta LÉOTAUD, p. 181.

A rare bird at the rest-house, where it was observed only once, but on Monos Island it was very common.

10. *Dendroica æstiva* (Gm.).—CANARY. FIGUIER.

TAYLOR, p. 81.

Mniotilta petechia LÉOTAUD, p. 176.

About a dozen birds of this species were observed near the rest-house, and several were taken.

11. *Seiurus noveboracensis* (Gm.).—WATER THRUSH.
BATTE-QUEUE.

Enicocichla noveboracensis LÉOTAUD, p. 175.

Observed on half-a-dozen occasions on the banks of the forest brooks. Several specimens were taken.

12. *Geothlypis æquinoctialis* (Gm.).—MANICOU.

TAYLOR, p. 81.

Trichas velatus LÉOTAUD, p. 183.

Not common. I observed it at La Brea, and there were a few pairs at the rest-house. Its song is a low, softly modulated warble of about six double notes, quite unlike the song of *G. trichas*, which species, however, it resembles in habits.

13. *Setophaga ruticilla* (L.).—REDSTART. OFFICIER.

TAYLOR, p. 81; LÉOTAUD, p. 248.

14. *Basileuterus vermivorus olivascens* Chapm.—FAUVETTE DES HALLIERS.

Trichas bivittatus LÉOTAUD, p. 184.

Basileuterus vermivorus olivascens CHAPM. Auk, X, 1893, p. 343 (preliminary descr.).

Chars. subsp.—Similar to *Basileuterus vermivorus* (Vieill.), but the bill averages larger, and the upper parts are constantly grayer.

Description of Type (No. 58, 974, Am. Mus. Nat. Hist., adult male, Princetown, Trinidad, March 1, 1893; Frank M. Chapman).—Back grayish olive green, exposed surface of wings and tail more brownish, centre of crown reddish brown, the feathers tipped with grayish and bordered by black lines reaching to the neck, which in turn is margined by a narrow, whitish line passing from the base of the bill over the eye; a dusky line through the eye; cheeks and ear-coverts grayish; underparts bright yellow, sides greenish; legs flesh-color; bill brownish black, lighter below. Sexes alike.

Mr. Sharpe (Cat. Bds. B. M., X, p. 393) has called attention to the differences which distinguish the Trinidad bird, and comparison of six specimens from the island with an equal number from the mainland shows the insular form to be well worthy of recognition as a race.

This bird lives in the thickets of second growth or denser undergrowth, but is not common anywhere. Its call-note is a sharp *peek*, while its song is a *Dendroica*-like *wee-chee-ee-ee*.

Family CEREVIDÆ.—HONEY CREEPERS.

15. *Cœreba luteola* Cab.—SUCRIER.

Certhiola luteola TAYLOR, p. 81; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.
Certhiola flaveola LÉOTAUD, p. 126.

This was the commonest species observed by me in Trinidad. It is quite generally distributed, and always to be found near blossoming trees, the *bois immortel* proving especially attractive. They are active little birds, in no sense 'Creepers,' but suggesting rather a *Dendroica* in their movements. Their song is an unmusical effort which may be expressed by the syllables *pita*, *pita*, *pita*, *ker-chèr*, *ker-chèr*.

The nest is a rather bulky affair—of dried grasses and strips of banana bark, having the entrance on the side. It is placed, as a rule, in a thickly-leaved tree, preferably an orange tree, not more than ten feet from the ground. Young just from the nest were seen March 13. A female seen April 6 was gathering nesting material, and another seen April 18 was pulling an old nest to pieces and using the material to build a new one.

16. *Arbelorhina cærulea* (L.).—GREEN-LEGGED GRAMPO. GRIMPEREAU À PATTES SOUFRE.

Cœreba cærulea TAYLOR, p. 81; LÉOTAUD, p. 120.

This bird, like *A. cyanea*, was abundant in the blooming *bois immortel*, on the blossoms of which it was feeding. But from March 16, when the trees were practically out of bloom, until my departure, I saw only one bird.

17. Arbelorhina cyanea (L.).—RED-LEGGED GRAMPO.
GRIMPEREAU À PATTES ROSES.

Cæreba cyanea TAYLOR, p. 81; LÉOTAUD, p. 118.

Early in March, when the *bois immortel* was blooming, this species was exceedingly abundant, feeding on the blossoms of these trees. By March 16th the trees had ceased blooming, and from that date until my departure this species was observed only four times.

18. Chlorophanes spiza (L.).—BLACK-HEADED GREEN
HONEY SUCKER. VERT-VERT À TÊTE NOIRE.

Chlorophanes atricapilla TAYLOR, p. 81.

Dacnis spiza LÉOTAUD, p. 122.

Observed on only three occasions.

19. Dacnis cayana (L.).—VERDIGREE. VERT DE GRIS.
TAYLOR, p. 81; LÉOTAUD, p. 124.

Observed on only two occasions.

20. Dacnis plumbea (Lath.).—SUCRIER DES MANGLES.
Mniotilta bicolor LÉOTAUD, p. 180.

Found only on the banks of the Caroni River, where it was apparently common. Its song is a pleasant, tinkling warble.

Family VIREONIDÆ.—VIREOS.

21. Cyclorhis flavipectus ScL.—PIE-GRIÈCHE.

Cyclorhis flavipectus TAYLOR, p. 81; LÉOTAUD, p. 263.

Cyclorhis flavipectus trinitatis ALLEN, Bull. Am. Mus. Nat. Hist. II, 1889, p. 131.

A very common and generally distributed species, frequenting the trees in both the forest and partial clearings. It is a most

unwearying songster, and its notes can be heard from early morning until late in the afternoon. Its song is a loud and musical whistle, consisting of seven notes delivered with much energy. If one answered the caller it would change the order of its notes until they became a refrain of the ordinary call. At times two birds would respond to each other in this way, continuing the performance for many minutes. Their notes were in a measure suggestive of those of *Vireo noveboracensis*.

The Trinidad bird has been described by Dr. Allen as *Cyclorhis flavipectus trinitatis* (l. c.), but as Dr. Sclater's type of *flavipectus* came from Trinidad (*cf.* orig. descr., P. Z. S., 1858, p. 448, and Cat. Bds. B. M., VIII, p. 320) the name *trinitatis* becomes a pure synonym of that species.

Specimens from Venezuela and Colombia, to which Dr. Allen restricted the name *flavipectus*, seem to me to be inseparable from the Costa Rican *subflavescens*.

22. *Vireo chivi agilis* (Licht.).—PETIT SIFFLEUR À TÊTE GRISE.

Vireo olivaceus LÉOTAUD, p. 250.

Common. Its song closely resembles that of *Vireo olivaceus*, but is not so loud, and is delivered more slowly.

Trinidad and Tobago evidently form the northern limit of the range of this species, while *V. calidris* apparently does not nest south of Grenada.

23. *Vireo calidris* (L.).—GRAND SIFFLEUR À TÊTE GRISE.

Vireo altiloquus LÉOTAUD, p. 250.

24. *Hylophilus aurantiifrons* Lawr.—PETIT GOBE-MOUCHE.

Hylophilus insularis LÉOTAUD, p. 186.

Common in the forests and partial clearings where they frequent the trees. Several are generally seen together flitting about actively and uttering a *cack* note like that of the Ruby-crowned Kinglet. Their song is a warble, composed of six notes and suggesting a part of the song of *V. olivaceus*.

On comparison with the type of *H. aurantiifrons*, my specimens show, as Dr. Gadow has suggested, that the Trinidad bird is not separable from that species.

Family HIRUNDINIDÆ.—SWALLOWS.

25. *Progne chalybea* (Gm.).—MARTIN. HIRONDELLE NOIRE.

Progne purpurea LÉOTAUD, p. 92.

Observed only at the mouth of the Ciperó River, at Moruga, and in the Monos Boca. In the two last-named localities it was common and was nesting in crevices in the rocky cliffs.

26. *Atticora cyanoleuca* (Vieill.).—SWALLOW. HIRONDELLE À VENTRE BLANC.

Hirundo cyanoleuca LÉOTAUD, p. 90.

27. *Tachycineta albiventris* (Bodd.).—SWALLOW. HIRONDELLE À DOS VERT.

Hirundo albiventer LÉOTAUD, p. 91.

Observed only at the mouth of the Ciperó, where it was not uncommon.

28. *Chelidon erythrogaster* (Bodd.).—BARN SWALLOW. HIRONDELLE À VENTRE ROUX.

Hirundo rufa LÉOTAUD, p. 88.

29. *Stelgidopteryx uropygialis* (Lawr.).—SWALLOW. HIRONDELLE À VENTRE JAUNE.

Cotyle uropygialis LÉOTAUD, p. 94.

Common on the coast and occasionally seen at the rest-house.

Family TANAGRIDÆ.—TANAGERS.

30. *Procnias viridis* Ill.—BLUE MANTLE. COTTINGA BLEU.

Tersa ventralis LÉOTAUD, p. 257.

31. *Euphonia violacea* (L.).—LOUIS D'OR SIMPLE. TAYLOR, p. 82; LÉOTAUD, p. 306.

Not uncommon. This bird easily takes first place among the limited number of Trinidad song-birds. Its song is a sweet, varied warble, which sometimes is continued for a minute or more.

Like the song of *Sporophila grisea*, however, it lacks in volume and can be heard only a short distance.

32. Euphonia trinitatis *Strickl.*—CRAVAT. LOUIS D'OR À CRAVATTE.

Euphonia chlorotica LÉOTAUD, p. 308.

33. Euphonia nigricollis (*Vieill.*).—LOUIS D'OR À TÊTE BLEU.

TAYLOR, p. 81.

Euphonia aureata LÉOTAUD, p. 310.

34. Calliste desmaresti *Gray.*—WORTHLESS. VERT-VERT À TÊTE CACO.

TAYLOR, p. 82 ; LÉOTAUD, p. 302.

35. Calliste flaviventris vieilloti (*Scl.*).—VARIEGATED TANAGER. DIABLE ENRHUMÉ.

Calliste vieillotii TAYLOR, p. 82 ; LÉOTAUD, p. 303.

Occasionally seen in pairs, threes or fours, but by no means common. They are restless birds, and pass little time in one place unless attracted by their food, which seemed to consist largely of berries. I did not hear them utter a note.

36. Calliste guttata (*Cab.*).—TIGER TANAGRA. ARRIVANT. TAYLOR, p. 82 ; LÉOTAUD, p. 305.

37. Tanagra cana sclateri (*Berl.*).—BLUE-BIRD. OISEAU BLEU.

Tanagra cana TAYLOR, p. 82.

Tanagra glauca LÉOTAUD, p. 293.

Tanagra sclateri RIDGW. Proc. U. S. N. M. VII, 1884, p. 183.

A very common species. They are very active, restless birds, almost constantly on the move. They seem to prefer trees having little foliage, and alight on the bare branches, pausing only for a moment and then continuing their apparently objectless flight. Their call-note, which they utter when about to take wing, is an unmusical, long-drawn *s-e-e-e-p*, and their song is made up of the same unattractive sound.

On March 15 I saw a nestling of this species following two adults, probably its parents.

38. *Tanagra palmarum melanoptera* (Hartl.).—PALMISTE.

Tanagra melanoptera TAYLOR, p. 82.

Tanagra olivascens LÉOTAUD, p. 295.

Tanagra palmarum RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Very common. Pairs and small groups of three to six individuals could be seen at almost any time during the day. They are much on the wing, and resemble *Tanagra c. sclateri* in their nervous restlessness.

They were particularly common in the *bois immortel*, apparently feeding on the blossoms. As a rule they alight on the tops of leafless trees, where they hop actively from limb to limb, flitting both wings and tail, and occasionally breaking into a chorus of song. Their notes resemble those of *sclateri*, and consist of a sharp, metallic call-note which may be written *swer*, while their song is a rambling kind of weak, squeaky warble.

39. *Tanagra cyanocephala subcinerea* (Scl.).—BLUE-HEADED TANAGRA. GROSBECH À TÊTE BLEU.

Tanagra subcinerea LÉOTAUD, p. 296.

40. *Ramphocelus jacapa magnirostris* (Lafr.).—SILVER-BEAK. BEC D'ARGENT.

Ramphocelus magnirostris TAYLOR, p. 82.

Ramphopsis jacapa LÉOTAUD, p. 288.

Very common. Generally four or five were seen together at the borders of second growth or in the *bois immortel*. Like the other Tanagers, they are active, restless birds. The only note I heard is a hoarse *cheep*, very much like the call-note of a Song Sparrow (*Melospiza fasciata*). A nestling attended by the parents was seen on March 13.

41. *Piranga rubra* (Linn.).—SUMMER TANAGER. COTTINGA ROSE.

Piranga aestiva LÉOTAUD, p. 290.

A specimen in the Léotaud Collection.

42. *Piranga hæmalea* S. & G.—RUFIOUS TANAGER. CARDINAL À GROS-BEC.

Piranga hepatica LÉOTAUD, p. 291.

One specimen, apparently of this species, is in the Léotaud Collection.

43. *Phœnicothraupis rubra* (Vieill.).—CARDINAL.

TAYLOR, p. 82.

Tachyphonus ruber LÉOTAUD, p. 297.

Not uncommon. Unlike the other Tanagers, it was never seen in the clearings, but was found only in the forests, where it lives near the ground. In the subdued light of these localities the male appears to be brown in color. Their call is a sharp, pebbly, clicking note, which sometimes becomes a long, rolling call. They are shy birds, and can be approached only by using caution.

44. *Lanio lawrencei* (Scl.).

Tachyphonus atricapillus LAWR. Proc. Acad. Nat. Sci. Phila. 1868, p. 360.

Lanio lawrencei SCL. Ibis, 1885, p. 272, Pl. vi, Fig. 2.

The type of this bird, which Mr. Lawrence definitely states was killed by Mr. Alexander in Trinidad, still remains unique. I follow Dr. Sclater in placing it in *Lanio*, though, as far as one can judge from this single immature specimen, it has little affinity in color with the members of that genus.

45. *Tachyphonus luctuosus* Lafr. — LITTLE PARSON.

PETIT PÈRE NOIR.

Tachyphonus albispicularis LÉOTAUD, p. 300.

46. *Tachyphonus rufus* (Bodd.).—PARSON. PÈRE NOIR.

Tachyphonus melaleucus TAYLOR, p. 82; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Tachyphonus beauperthuyi LÉOTAUD, p. 299.

Very common. They were generally seen in pairs which frequented the partial clearings and cacao groves. While perching they maintain a constant nervous flitting of the wings, an action which in the male shows the white lining of the wings conspicuously. The same mark is seen when the bird is flying.

47. *Chlorospingus leotaudi* Chapm.

Chlorospingus leotaudi CHAPM. Auk, X, 1893, p. 343.

Char. sp.—Apparently most like *C. chrysogaster* Tacz. in coloration, but much smaller, and with a larger bill.

Description of Type (Coll. Am. Mus. No. 59,051, female, Princetown, Trinidad, March 28, 1893; Frank M. Chapman).—Crown and nape cinereous, washed with olive green; back bright olive green; wings and tail fuscous, the exposed margins of the feathers olive green; auriculars cinereous; throat and upper part of the breast pale grayish white, rest of the underparts bright yellow; bill horn-black; feet brownish black. Wing, 2.40; tail, 2.25; exposed culmen, .50; height of bill at anterior margin of nostril, .22 in.

I have not seen a specimen of *C. chrysogaster*, described by Taczanowski from Peru. While evidently near *C. leotaudi*, it belongs in the small-billed section of the genus (subgenus *Hemispingus*), and Taczanowski remarks that it is one of the smallest-billed species of the genus. *C. leotaudi*, on the contrary, belongs in the large-billed section, and has a bill as large as any species with which I am familiar. Compared with *C. rubrirostris*, the bill is thicker, and horn-color instead of red; the cinereous of the head does not extend as far down the nape, and the grayish white does not reach so far down the breast. I have named this apparently distinct species in honor of the late Dr. Léotaud, in recognition of his devotion to the study of ornithology.

The specimen described was secured in the forest, and was the only one observed.

48. *Saltator albicollis* Vieill.—GROS-BEC TACHETÉ.

Saltator striatipectus LÉOTAUD, p. 286.

This species was observed only on Monos Island, where it was common.

49. *Saltator olivascens* Cab.—GROS-BEC.

TAYLOR, p. 83.

Saltator icterophrys LÉOTAUD, p. 285.

A common species at the borders of the forest, where it frequented the tree-tops. Its song is unmusical, but possessed of decided character, and it is rather singular that it has not served as the basis for a popular name. It may be almost exactly expressed by the syllables *pitt-quit-you*, *sit-quat-you*, followed by some indeterminate warbling.

Family FRINGILLIDÆ.—FINCHES,
SPARROWS, ETC.

50. *Spinus cucullata* (Swains.).—COLORADO.

Two individuals were seen on Monos feeding on the fruit of a large cactus. They are said to be common there at times.

This species is given by neither Taylor nor Léotaud, but 'Trinidad' specimens are included in the Catalogue of the Birds of the British Museum, Volume XII.

51. *Spiza americana* (Gm.).—DICKCISSEL. MOINEAU.

Euspiza americana LÉOTAUD, p. 314.

There are three specimens of this bird in the Léotaud Collection.

**52. *Volatinia jacarini splendens* (Bp.).—BLACK FINCH.
PETIT ÇIÇI-ZÈBE NOIR.**

Volatinia jacarina TAYLOR, p. 83.

Tiaris jacarini LÉOTAUD, p. 312.

Common in flocks in the grasses of uncultivated cacao groves. The white shoulder-mark can be seen when the bird is on the wing.

While *en route* from Trinidad to Grenada a female of this species boarded our steamer. We were then about halfway between the islands. The bird was in an exhausted condition, and was caught without difficulty. We anchored about half a mile off the harbor of St. Georges, Grenada, where I have no doubt the bird went ashore, as I did not see it after leaving the island.

This instance is of interest in showing how certain South American species may have originally been introduced on islands near the mainland.

53. *Sporophila grisea* (Gm.). — GRASSBIRD. ÇIÇI-ZÈBE GRIS.

Spermophila intermedia TAYLOR, p. 83.

Spermophila cinerea LÉOTAUD, p. 319.

Common, frequenting the same localities in which *O. torridus* was found.

[February, 1894.]

This was one of the few birds met with which deserves the name of songster. Its song is musical, varied and well-sustained, and reminded me of the songs of both a Mocking-bird and a Canary. If this song possessed volume the bird would take high rank as a vocalist, but unfortunately it is uttered in such a weak tone that it is not audible more than 100 feet. Furthermore, the bird does not seem to sing frequently, and its song is, therefore, apparently unknown to the natives.

54. *Sporophila lineola trinitatis* (Sharpe).—GRASSBIRD. ÇIÇI-ZÈBE À CRAVATTE NOIRE.

Spermophila bouvreinoides LÉOTAUD, p. 318.

55. *Sporophila gutturalis* (Licht.).—GRASSBIRD. ÇIÇI-ZÈBE À VENTRE JAUNE.

Spermophila gutturalis LÉOTAUD, p. 321.

Observed on five occasions.

56. *Sporophila minuta* (L.).—GRASSBIRD. ÇIÇI-ZÈBE À VENTRE ROUX.

Spermophila minuta TAYLOR, p. 83; LÉOTAUD, p. 322.

There was comparatively little ground near the rest-house suitable for Finches, and this species was observed on five occasions.

57. *Oryzoborus torridus* (Scop.).—ÇIÇI-ZÈBE À DOS NOIR.

Pitylus torridus LÉOTAUD, p. 283.

Common near the borders of low, bushy second-growth, in which, on being alarmed, it sought refuge. When perched it frequently flits its wings in a quick, nervous manner, and this action displays conspicuously their white under surface. I heard no call-note or song from this species.

58. *Oryzoborus crassirostris* (Gm.).—GRASSBIRD. GROS ÇIÇI-ZÈBE NOIR.

Spermophila crassirostris LÉOTAUD, p. 316.

Only one was secured.

Family ICTERIDÆ.—BLACKBIRDS, ORIOLES,
CASSIQUES, etc.

59. *Ostinops decumanus* (Pall.).—CASSIQUE. CAÏQUE
HUPPÉ.

Ostinops cristatus TAYLOR, p. 83.

Cacicus cristatus LÉOTAUD, p. 271.

Locally common in the forests. The life-history of this species would no doubt fill a volume. It is a bird of marked character, and its notes and habits are of more than usual interest. There were no birds resident in the immediate vicinity of the rest-house, and for this reason I had no opportunity to study the species closely. During March and April they were nesting. Their nests were generally placed at the extremity of the upper branches of forest trees. In riding from the rest-house through the forest to Moruga, a distance of twelve miles, I saw some fifteen trees bearing nests of *Ostinops*, all of which were apparently occupied. One tree held twenty-six of these long, pendulous structures, and in addition six nests of *Cassicus*. The largest nest I measured was four feet in length. In building them the birds seem to work from the inside. They enter the holes very quickly, in reality flying into them.

Henry C. Warner, Esq., the Warden of Savanna Grande, who has had many years experience in Trinidad forests, called my attention to the fact that these birds nearly always place their nests upon a tree having a smooth bark, and I noted only one exception to this apparent rule. The object of the birds in selecting trees of this nature is presumably to find security from the attacks of tree-snakes or nest-robbing mammalia.

The notes of these birds are among the strangest I have ever heard. Many of them suggest the singular vocal performances of the Great-tailed Grackle (*Quiscalus macrourus*). They squeak, squawk, quack, chuckle and whistle in indescribable ways. The male, bending his head low and ruffling his plumage, utters a long-drawn, creaking call, which resembles the sound produced by chafing trees in a gale. Then he strikes his wings together over his back, producing a crackling sound like the snapping of

branches. Other notes are as mellow as those of a cuckoo-clock. When flying their rapid wing-beats sound like the paddles of a distant side-wheel steamer striking the water.

Their favorite food consisted of the fruit of the 'agalee' or 'cupey' tree.

60. *Cassicus persicus* (L.).—CORNBIRD. MERLE À CROU-PION JAUNE.

TAYLOR, p. 84; LÉOTAUD, p. 273.

This species was found in about the same numbers as *Ostinops decumanus*, which it resembles in habits. Its notes are somewhat similar in character to those of that species, but are easily distinguishable. Its nests are much smaller than those of *Ostinops*, and measure about one foot in length. Young, just from the nest, were seen March 10, but the species was still nesting late in April.

61. *Icterus xanthornus* (Gm.).—CAROUGE.

TAYLOR, p. 84; LÉOTAUD, p. 275.

Common about cacao groves and partial clearings. They are particularly fond of the blossoms of the banana, and also frequent the blooming immortal trees. Their song consists of six high flute-like notes, but they rarely sing more than two notes at a time. Their call-note is a sharp, harsh *weet, weet*. Several nests seen on Monos Island were pendulous, one foot in length, and were placed about twenty-five feet from the ground.

62. *Molothrus atro-nitens* (Cab.).—LITTLE BLACK STARE. PETIT MERLE NOIR.

Molothrus bonariensis LÉOTAUD, p. 277.

Not common. The note of the male is a bubbling twitter, sufficiently like that of *M. ater* to show at once the generic relationship of the singer.

63. *Agelaius icterocephalus* (L.).—YELLOW-HEADED CAROUGE. MERLE À TÊTE JAUNE.

Xanthosomus icterocephalus TAYLOR, p. 84.

Chrysomus icterocephalus LÉOTAUD, p. 281.

Seen only at the mouth of the Cípero.

64. *Liestes guianensis* (L.).—SOLDIER-BIRD. ROUGE-GORGE.

TAYLOR, p. 84.

Liestes americanus LÉOTAUD, p. 279.

A few were seen at the mouth of the Ciperó.

65. *Quiscalus lugubris* Swains.—TRINIDAD BOAT-TAIL. MERLE À QUEUE EN BATEAU.

TAYLOR, p. 84.

Quiscalus barita LÉOTAUD, p. 268.

This bird was taken only at the mouth of the Ciperó.

66. *Cassidix oryzivora* (Gm.).—BLACK CORN-BIRD. TAÏ-RICO.

Scaphidurus ater LÉOTAUD, p. 269.

Not uncommon in or near cornfields. The only note I heard was of a cracked, reedy character. An adult male in full breeding plumage has the feathers of the sides of the neck much lengthened, forming, when erected, a ruff an inch in length.

Family TYRANNIDÆ.—FLYCATCHERS.

67. *Fluvicola pica* (Bodd.).—WIDOW. VEUVE.

TAYLOR, p. 85 ; LÉOTAUD, p. 205.

Common at the mouth of the Ciperó, but only a few were observed near the rest-house, where they frequented the vicinity of brooks in the forest. They seemed to be silent birds, and on no occasion did I hear them utter a note.

68. *Arundinicola leucocephala* (L.).—WHITE-HEADED WIDOW. VEUVE À TÊTE BLANCHE.

LÉOTAUD, p. 207.

Two were observed at the mouth of the Ciperó.

69. *Platyrhynchus mystaceus insularis* Allen.—BROAD-BILL. GOBE-MOUCHE À BEC PLAT.

Platyrhynchus cancrum LÉOTAUD, p. 243.

A rather rare species. It frequents the denser undergrowth in

the forests, where even on the brightest days a semi-gloom prevails. Its note is a sharp, unexpectedly loud *peek*.

The nature of this bird's haunts suggests that its remarkably broad bill and large mouth may assist it in catching insects, and that they are thus analogous to the large mouth and rictal bristles of the night-feeding Caprimulgidæ.

70. *Mionectes olivaceus* Lawr.—GOBE-MOUCHE VERT.

Elania striaticollis LÉOTAUD, p. 238.

There is one specimen in the Léotaud Collection. I have compared it with the type of *M. olivaceus* Lawr.

71. *Mionectes oleagineus* (Licht.).—GOBE-MOUCHE ROUS-SÂTRE.

TAYLOR, p. 85.

Elania oleaginea LÉOTAUD, p. 235.

A not common species, frequenting second-growth.

72. *Myiopatis semifusca* (Scl.).

Phyllomyias semifusca TAYLOR, p. 86.

I found this species only on Monos Island.

73. *Ornithion pusillum* (Cab.).—PETIT TILLON.

Camptostoma imberbe TAYLOR, p. 86.

Myiopatis pusilla LÉOTAUD, p. 234.

Not common. It seems to be more of a gleaner, like the Vireos, than a typical Flycatcher. Its note is a musical *tee-oo*.

74. *Elainea gaimardi* (d'Orb.).—PETIT TILLON À HUPPE BLANCHE.

Elania fallax LÉOTAUD, p. 236.

A common species in the forests, second-growth and cacao groves. Its call is a soft *pee-a-wee*, which might be easily mistaken for that of *Contopus virens*.

75. *Elainea pagana* (Licht.).—WHITE-TUFTED PETCHARY. TILLON.

TAYLOR, p. 86.

Myiobius martinicus LÉOTAUD, p. 224.

A very common species at the borders of the forests and in the cacao groves. It is an active bird, and with crest erect

seems to be constantly on the alert. Its notes, consisting of a hoarse, scolding whistle, followed by a Phœbe-like chattering, are frequently uttered. It is by no means a typical Flycatcher, but seems to feed quite as much on fruit as on insects. A female shot on April 14 was laying.

76. *Legatus albicollis* (Vieill.). — BLACK - BANDED PET-CHARY. GOBE-MOUCHE À BANDEAU.

Myiobius leucophaeus LÉOTAUD, p. 227.

There is one specimen in the Léotaud Collection.

77. *Sublegatus glaber* Scf.

Found only on Monos Island.

78. *Myiozetetes sulphureus* (Spix).

One of two specimens seen at La Brea was taken.

79. *Rhynchocyclus flaviventris* (Wied.). — BROAD - BILL. GOBE-MOUCHE À DOS VERT.

Platyrhynchus flaviventris LÉOTAUD, p. 247.

A common inhabitant of the forests and second-growths, where it frequents the lower trees. Its note is a loud, high *s-e-e-e-p*.

80. *Rhynchocyclus sulphurescens* (Spix). — BROAD-BILL. TILLON À LARGE BEC.

Platyrhynchus equinoctialis LÉOTAUD, p. 245.

Not uncommon in the forests.

A nest of this species, found April 17, is a remarkable structure. It is composed of leaf-stems, vegetable fibres and black rootlets woven firmly together, and was hung from near the end of a slender branch about fifteen feet from the ground. It is twelve inches in length and five in width at its widest part. The outline of one side is nearly straight, of the other convex. The curve of this side meets an imaginary perpendicular line drawn from the upper to the lower end of the nest, two inches from the lower end, and is then continued in a line parallel to the other side, but three inches from it. The lower end, therefore, forms a neck two inches in length and two in internal diameter, which constitutes the entrance to the nest, while the nest itself is placed in the convexity of the curved side. The plan of the structure

is therefore similar to that seen in the nests of some Weaver-birds, but is, as far as I know, unique among the Flycatchers. Its object is obviously protection from the attacks of tree-snakes and nest-robbing opossums.

When found it was not quite completed, and both birds were present, though only one seemed to be at work. They entered the tubular mouth of the nest in full flight, but with such unerring aim that their passage caused the structure to sway but slightly.

81. *Pitangus sulphuratus* (L.) — QU'EST-CE-QU'IL-DIT À BEC ÉTROIT.

Pitangus rufipennis TAYLOR, p. 86.

Saurophagus sulphuratus LÉOTAUD, p. 210.

This species is one of the commonest and most generally distributed birds of Trinidad. It is a very noisy bird, and its rather harsh call, from which it receives its local name, with other rolling, chattering notes, are among the most characteristic sounds of the Trinidad bird-world. It is one of the first birds to call in the morning and the last to be heard at night. The notes of the first caller are the signal for a chorus of *Qu'est-ce-qu'il dits*, which echo from every side. Their favorite haunts are the more open growths or partial clearings, and they are always to be found in the cacao groves. Here they place their nests in the main crotch of the immortal trees at a distance of about twenty feet from the ground. The nesting season is evidently a long one. On my arrival I found completed nests, and new ones were being made at the time of my departure. They are large structures, composed of fine, dry grasses rather loosely put together, and are arched over, the entrance being on one side. Both sexes work in their construction, and I have seen one bring material to its mate who was on the nest adjusting it.

Three specimens of this bird are clearly referable to *Pitangus sulphuratus* rather than to *P. derbianus rufipennis*. The tail feathers have only a very slight margin of rufous on their outer webs, while on the primaries this color does not reach to the vane of the feather. These parts are therefore less marked with rufous than in the northern *P. derbianus*. It is obvious then that

the birds cannot be referred to *P. d. rufipennis*, in which the rufous markings reach the maximum. For comparison with the Trinidad specimens I have had numerous examples of *derbianus* from Mexico, one of *P. d. rufipennis* from Bogota, and two from Santa Martha, while of *P. sulphuratus* I have one specimen from each of the following localities: El Pilar, Venezuela; the Essequibo River; and Cayenne (the type locality).

82. *Myiodynastes audax* (Gm.).—PIPIRI.

TAYLOR, p. 86.

Myiobius audax LÉOTAUD, p. 219.

Not uncommon in pairs in the forests. Its note is a harsh chatter.

83. *Megarhynchus pitangua* (L.).—QU'EST-CE-QU'IL-DIT À BEC LARGE.

TAYLOR, p. 86.

Megarhynchus chrysogaster LÉOTAUD, p. 208.

Apparently not common. Its notes are a hoarse, chattering whistle, easily recognizable from those of *Pitangus sulphuratus*.

84. *Myiobius navius* (Bodd.).—YELLOW-CRESTED PETCHARY. GOBE-MOUCHE À HUPPE JAUNE.

Myiobius crysoceps LÉOTAUD, p. 222.

Not uncommon. Unlike other Flycatchers it did not frequent the forests or second-growths, but preferred brush-lots or grass-grown fields, choosing much the same locations in fact as *Synalaxis* lived in. The nature of its haunts suggests protective coloration, as the explanation of this bird's rather unusual color. The brown of its upper surface rendered it much less conspicuous than the green color of the tree-haunting Flycatchers would have done. It generally perched near the ground and remained quiet for many minutes, while uttering its simple, rolling, twittering notes.

85. *Empidochanes cabanisi* (Léotaud). — LÉOTAUD'S PETCHARY.

Empidonax cabanisi LÉOTAUD, p. 232; SCLATER, Ibis, 1867, p. 108.

Ochthaca arenacea SCL. & SALV. P. Z. S. 1877, p. 20.

Empidochanes arenaceus SCL. Cat. Bds. Brit. Mus. XIV, 1888, p. 217.

I found this species only on Monos Island, where it is not uncommon.

An examination of Léotaud's specimens shows that his *Empidonax cabanisi* is the same as Sclater and Salvin's *Empidochanes arenaceus*, and as Léotaud's name has ten years' priority, it must replace the one subsequently given.

An *Empidochanes* from Tobago in the American Museum Collection is apparently so distinct from the Trinidad species that I have no hesitation in describing it as

86. *Empidochanes cabanisi canescens*, subsp. nov.

Char. sp.—Similar to *E. cabanisi*, but upperparts grayish brown without any tinge of greenish or yellowish; wing-coverts much paler, and underparts with scarcely a trace of yellowish.

Description of Type (Coll. Am. Mus. No. 42,760 *bis*, male, Tobago, May; Ober).—Upperparts dull grayish brown, becoming browner on the rump; tail of nearly the same color as the back, the outer webs of the feathers with slight brownish margins; wings somewhat darker than the tail, the outer edge of the first primary and of the secondaries margined with sandy grayish, the lesser and greater coverts tipped with pale isabelline; a white superciliary line; auriculars grayish; throat dirty white, breast grayish; belly white, with an almost imperceptible yellowish suffusion; flanks grayish.

For comparison with the type I have two specimens of *cabanisi* from Trinidad, and one from Venezuela. The Venezuelan specimen is practically identical with those from Trinidad.

87. *Empidonax lawrencei* Allen.—GREENISH-BELLIED PET-CHARY. GOBE-MOUCHE À POITRINE VERDÂTRE.

ALLEN, Bull. Am. Mus. Nat. Hist. II, 1889, p. 150.

Myiobius flaviventris LÉOTAUD, p. 229.

Octhaeca flaviventris LAWR. Ann. N. Y. Acad. Sci. IV, 1887, p. 60.

Not uncommon, but confined exclusively to the forests. Its note is described in my journal as *pee, ee-dee, dee-dee-dee*, given with a kind of *purling* sound.

Comparison with the unique type of *E. lawrencei* shows that my specimens should be referred to that species, the habitat of which has been before unknown. The relationships of this bird have been discussed by Dr. Allen (l. c.).

88. *Contopus brachytarsus* (Scl.).—BUFF-BELLIED PETCHARY. GOBE-MOUCHE À VENTRE JAUNÂTRE.

Contopus bogotensis TAYLOR, p. 87.

Myiobius virens LÉOTAUD, p. 226.

A common species, particularly interesting to me because of its resemblance in coloration to our *C. virens*. This resemblance is so close that Dr. Sclater remarks: "In some cases it is difficult to discriminate between this species and dwarfed or immature examples of *C. virens*." In life, however, the two species would never be confounded. *C. virens*, as is well known, is a bird which frequents higher trees of the woods, where its musical *pee-a-wee* is a characteristic sound. *C. brachytarsus*, on the other hand, was not found in the forests, but favored more open growths, cacao groves being favorite resorts. Here it perched near the ground. I rarely saw it higher than twenty feet, while its call is an unmusical, low rolling twitter.

On April 14 a pair were seen building a nest on a *bois immortel*, about twenty feet from the ground.

89. *Myiarchus tuberculifer* (d'Orb. & Lafr.).—FOOLISH PETCHARY. GOBE-MOUCHE BRUN.

Tyrannus tuberculifer D'ORB. & LAFR. Syn. Av. I, p. 43.

Myiarchus tuberculifer BERL. Ibis, 1883, p. 141.

Myiobius stolidus LÉOTAUD, p. 221.

Myiarchus tricolor PELZ. Orn. Bras. 1869, p. 182.

Myiarchus gracilirostris, *ibid.* p. 183.

Myiarchus coalei RIDGW. Proc. U. S. N. M. IX, 1886, p. 521 (type examined).

Myiarchus nigriceps SCL. Cat. Bds. Brit. Mus. XIV, 1888, p. 258 (in part).

A laying female taken April 24 was the only one observed.

Comparison shows this specimen to be the same as *Myiarchus coalei*, the type of which Mr. Ridgway has kindly loaned me. Both birds agree with a *Myiarchus* collected by Goering at Merida, Venezuela, and labeled by Count von Berlepsch "*Myiarchus tuberculifer* Lafr. & d'Orb." The same ornithologist has examined the type of *coalei*, and on the back of the label I find the pencilled identification, "*=Myiarchus tuberculifer* Lafr. & d'Orb."

Dr. Sclater (Cat. Bds. Brit. Mus., XIV, p. 259), who has examined d'Orbigny's specimens of *tuberculifer* in the Paris Museum, considers them to belong to either *Myiarchus atriceps* or *M. tricolor*.

In size, however, judging from d'Orbigny's description, they would seem to agree more closely with the latter.

Count von Berlepsch has examined Von Pelzen's types of *M. tricolor* and *M. gracilirostris*, and concludes that both are identical with *tuberculifer* of d'Orbigny, a name which he would apply to the birds with a sooty-black or brownish cap, "found in New Granada, Venezuela, [Trinidad], Guiana, Eastern Ecuador, Brazil, and Bolivia," restricting the name *nigriceps* of Sclater to the black-capped birds of Western Ecuador, Peru, and, I may add, Panama. Comparisons of specimens from Panama (Galbraith) and Quito with those from Venezuela and Trinidad convince me of the correctness of Count von Berlepsch's determinations.

90. *Myiarchus tyrannulus* (Müll.).—BLACK-BILLED PETCHARY. OISEAU FOU.

Myiarchus ferox TAYLOR, p. 87.

Myiobius nigriceps LÉOTAUD, p. 231.

Rare at the rest-house, where I observed it on only two occasions, but common on Monos. Its song is markedly different from that of *M. crinitus*.

91. *Tyrannus melancholicus satrapa* (Licht.).—QU'EST-CE-QU'IL-DIT À TÊTE GRISE.

Tyrannus melancholicus TAYLOR, p. 87; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Tyrannus verticalis et *T. vociferans* LÉOTAUD, p. 213.

Common; frequenting clearings and the more open growth. Its favorite perch was on the wires of a telegraph line which ran through the forest to Moruga, and it seemed to be the only species which regularly used them. Its call is a long, twittering, Kingbird-like roll.

Dr. Allen has recently discussed the relationships of this bird (Bull. Am. Mus. Nat. Hist., IV, 1892, p. 349).

92. *Tyrannus rostratus* ScL. — QU'EST-CE-QU'IL-DIT À VENTRE BLANC.

TAYLOR, p. 87.

Tyrannus magnirostris LÉOTAUD, p. 215.

93. *Milvulus tyrannus* (L.). — SWALLOW-TAILED FLY-CATCHER. LONGUE-QUEUE.

LÉOTAUD, p. 217.

Family PIPRIDÆ.—MANAKINS.

94. *Pipra aurocapilla* (Licht.).—MANAKIN À TÊTE D'OR.

TAYLOR, p. 87.

Pipra erythrocephala LÉOTAUD, p. 255.

This beautiful little bird is not uncommon, and a few were observed nearly every day. They were generally found on a low tree bearing small berries, which grew at the border of the forest just back of the rest-house. They took these berries as Trogons do, by flying at them and picking them off while on the wing. They also feed on insects, which they capture after the manner of Flycatchers. One male passed the entire day among the rafters at the rest-house. He seemed perfectly at home, and flitted from one perch to another while in pursuit of the insects gathered there.

Their note is a short, sharp twitter, not frequently uttered.

95. *Manacus manacus* (L.).—WASHERWOMAN. CASSE-NOISETTE.*Chiromacheris manacus* TAYLOR, p. 87.*Pipra gutturalis* LÉOTAUD, p. 253.

A not uncommon species. They were generally found in and at the borders of the forests, where they haunt the lower growth of bushes. They were frequently found in small companies of four to six individuals. Their chief food seemed to be small berries, which they picked while on the wing, thus resembling *Pipra aurocapilla* in feeding habits.

This bird possesses unique gifts as a musician. It produces no less than four different sounds in as many different ways. The first is vocal, and consists of a short, sharp twitter, very much like that uttered by *P. aurocapilla*. The second is presumably made by snapping the mandibles together. It can be closely imitated by quickly breaking a dry twig about the size of a lead-pencil. This is heard only when the bird is on the wing. The remaining two sounds are produced by the wing-quills. I find them described in my journal as follows: "The presence of *Manacus* is as frequently announced by the bird's whirring, buzzing flight as by a sight of the bird itself. This sound, which can

be easily heard at a distance of fifty feet, seems to accompany even the shortest flight. . . . The whirring is apparently occasioned by the four outer attenuate primaries, as in other birds having feathers of this description. The buzzing, however, appears to be produced in an entirely different manner. The same sound can be made by simply opening and closing the wing of a freshly-killed bird. This action causes the edge of the wide, stiffened outer margins of each secondary to rub over the inner margin of the feather next to it. The result is a slight grating sound of the same character, but of course lower in tone than the buzzing produced by the bird in flying."

I afterwards held wounded birds by the bill, and in fluttering their wings they made both the whirring and the buzzing sounds.

Being thus so singularly gifted, *Manacus*, as might be expected, proved an exceedingly interesting bird. I regret that I could not determine the significance of the snapping sound, which is apparently reserved for special occasions. I heard it only when a number of the birds were together, when, evidently animated by the same motive, they hopped and flitted about in the undergrowth.

Such a scene is described in my journal under date of April 5: "An interesting bit of bird-life had for its actors four Manakins (*Manacus*). Three were in adult male plumage, the fourth was in female plumage, but, to my surprise, proved on dissection to be an immature male. The birds were in the lower bushes at the edge of the forest. They were all uttering, in an excited way, their sharp, twittering call, at the same time they were jumping back and forth from bush to bush, buzzing and whirring at every wing-stroke, and frequently, with each jump, making the sharp snapping sound. Sometimes two birds would engage in what seemed a desperate combat; at others, the activity of all would reach a maximum, and the result was the strangest chorus of bird 'music' I have ever heard."

Family COTINGIDÆ.—COTINGAS.

96. *Tityra cayana* (L.).—BLACKCAP. BÉNÉDICTIN.

LÉOTAUD, p. 239.

Not common. I found it only in the forests, where it frequented trees bearing fruit, on which it fed. The only note I heard was a loud, reedy *cack*, not unlike that which can be produced with a duck-call.

97. *Pachyrhamphus albogriseus* Scl.

TAYLOR, p. 87.

**98. *Pachyrhamphus niger* Spix. — BLACK HARDBEAK.
BECDU.**

TAYLOR, p. 87.

Tityra nigra LÉOTAUD, p. 241.

Not common. It seemed to favor second-growths.

**99. *Chasmorhynchus variegatus* (Gm.). — BELL - BIRD.
CONG. CAPUCIN. CAMPANERO.**

Chasmorhynchus niveus TAYLOR, p. 88.

Chasmorhynchus variegatus SCL. *Ibis*, 1866, p. 407; *ibid.* 1867, p. 108.

Procnias variegata LÉOTAUD, p. 259.

Procnias nivea LÉOTAUD, p. 261.

As Dr. Sclater remarks, there is doubtless but one species of Bell-bird in Trinidad. Mr. Taylor's record was not based on specimens of *niveus*, nor are there specimens of this species in the Léotaud Collection.

From many sources I was told that the Campanero was frequently heard in the Moruga forests. I made several trips to localities said to be favored by it, but was not fortunate enough to meet with one.

**Family DENDROCOLAPTIDÆ.—WOOD-
CREEPERS, OVENBIRDS, ETC.**

100. *Sclerurus albigularis* Swains.

On three occasions I met with single individuals of this bird. They were on the ground in the forest, and uttered sharp, metallic notes of alarm.

101. *Synallaxis cinnamomea* (Gm.). — GUIOUTI DES JONCS.

Synallaxis ruficauda LÉOTAUD, p. 155.

This species was met with only at the mouth of the Ciperó River.

102. *Synallaxis albescens* Temm. GUIOUTI.

Synallaxis ruficapilla LÉOTAUD, p. 153.

A not uncommon species in the tall grasses of some uncultivated cacao groves or clearings. It clings to the grass stalks in a manner which reminds one of a Marsh Wren. Its song, which is uttered with great persistency, consists of two wheezy notes twice repeated, thus: *wèr-chee, wèr-chee*. On being alarmed it has a sharp rolling twitter.

The immature bird of this species differs from the adult in lacking the rufous cap and wing-coverts, and in being washed with brownish below.

103. *Synallaxis terrestris* Jard.—GUIOUTI À GORGE GINGA.

Synallaxis cinerascens LÉOTAUD, p. 152.

104. *Xenops rutilus* Licht.—PETIT GRIMPEUR.

TAYLOR, p. 85; LÉOTAUD, p. 156.

105. *Dendrocicla merula meruloides* (Lafr.).—LITTLE CACAO INSECT-PECKER. PETIT MANGEUR DE CACAO.

Dendrocops meruloides LÉOTAUD, p. 167.

A common species in the forests and cacao groves, where it resembles a Creeper in habits. It is apparently a very silent bird; the only notes I heard from it were a low *chüh, chüh*.

106. *Dendrocolaptes altirostris* Léotaud.—CHARPENTIER À BEC COURBE.

LÉOTAUD, p. 166.

The type of this species, according to Léotaud, was submitted to Lafresnaye, who considered it a valid species. It is not now represented in the Léotaud Collection.

107. *Dendroornis susurrans* (Jard.).—CACAO INSECT-PECKER. MANGEUR DE CACAO.

TAYLOR, p. 85.

Nasica sussurans LÉOTAUD, p. 160.

Common. It frequents the forests and cacao groves, and is generally seen in pairs. It secures its food not by drilling, as do Woodpeckers, but from crevices in the bark, etc., as do the true Creepers (*Certhia*). The usual call of this species is a short *kēē*.

you, so exactly like the call of a High-hole (*Colaptes auratus*) that were the two birds calling it together it would not be possible to distinguish them by their notes. In addition to this call it has a loud, musical piping whistle, composed of quarter notes. This greatly resembles the call of *Galbula*, but is louder.

My series is very uniform in coloration, and, beyond a slight difference in intensity of coloration, presents little variation.

108. *Dendroplex picus* (Gm.).—MANGROVE PECKER. CHARPENTIER DES MANGLES.

Dendrocolates picus LÉOTAUD, p. 164.

109. *Picolaptes albolineatus* (Lafr.). — CHARPENTIER RAYÉ.

Picolaptes lineaticeps LÉOTAUD, p. 158.

Observed on only two occasions.

Family FORMICARIIDÆ.—ANT-BIRDS.

110. *Thamnophilus major* Vieill.—COUCOU.

TAYLOR, p. 85.

Thamnophilus stagurus LÉOTAUD, p. 266.

A common species, living in the lower growth in and at the borders of the forest. My experience with it may be given by several quotations from my journal :

“ March 15.—I identified this evening the call of *Thamnophilus major*. The bird was thirty feet from the ground in a tree in the forest. Its low call commenced very slowly and deliberately, *chüh—chüh—chüh*, getting faster and faster, until one could not distinguish the syllables, and ending quite unexpectedly in a long, drawn out *chäär*, so unlike the preceding notes, I could not believe, at first, that they were uttered by the same bird.”

A bird seen on April 6 seemed by its actions to explain the use of the concealed white dorsal patch of this species. To quote again from my journal : “ Two males were wooing a female. She remained in the undergrowth, while, most of the time, they were in the lower trees above her. Her preference I had no means of knowing, but certainly there was no question as to which was the most valorous of the males. One was a cringing, cowardly fellow

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who made no attempt at display, and uttered a whining note as the other chased him about. The other was a most gallant wooer. After a vigorous rush at his ever-fleeing rival he would pose, presumably for the benefit of the modest brown bird below him. Throwing out his breast, he raised his head until the bill pointed slightly backwards, and remained this way for several seconds. It was a position typical of the vaunting, defiant conqueror. His crest was raised, his red eye glared, and in the centre of the back was a distinct white line, which at times increased to a large round spot. This was visible both when he was at rest and on the wing, and was evidently displayed as an adornment. In the other male it was not visible."

III. *Thamnophilus doliatus* (L.).—PINTADE.

TAYLOR, p. 85; LÉOTAUD, p. 264.

A very common bird at the borders of the forests and in thickets of second-growth, beyond which, except for occasional visits to neighboring cacao groves, it was never seen. The calls of both sexes are alike. Their common note is a long-drawn rolling call, resembling in character, but easily distinguishable from, that of *T. major*. It is not concluded by the singular *chāār* of *major*, but *doliatus* has a somewhat similar note which it utters without reference to its regular call. This is a hoarse *cāār*, and might be mistaken for the *caw* of a Fish Crow. At times it utters also low croaks.

II2. *Thamnophilus cirrhatus* (Gm.).—CHARBONNIER.

Thamnophilus atricapillus TAYLOR, p. 85; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Formicarius cirrhatus LÉOTAUD, p. 195.

This bird was found more or less commonly at all points on the coast which I visited, but was not seen in the interior.

It resembles *T. doliatus* in habits, and the only call I heard was not unlike the rolling call of that species.

II3. *Dysithamnus mentalis spodiionotus* (Salv. & Godm.).

This bird was found in small companies of not more than six individuals in the lower trees in the forests. They were generally associated with *Myrmotherula axillaris*. Their call, of three or

four low, sweet notes, is given by both sexes. It is Thrush-like in tone, and resembles the soft, querulous alarm notes of a Robin (*Merula migratoria*).

Adult males agree with the description of this race in being nearly concolor above, and in having the underparts without an olivaceous wash.

114. *Myrmotherula axillaris* (Vieill.).—PETIT CHARBONNIER.

TAYLOR, p. 85.

Formicarius axillaris LÉOTAUD, p. 194.

Found in the forests, where, in company with *Dysithamnus*, it frequented the lower trees. The only note I identified was a low cack.

115. *Formicivora intermedia* Cab.

TAYLOR, p. 85.

116. *Myrmeciza longipes*¹ *albiventris* Chapm.—PETIT FOURMILIER.

Myrmeciza longipes albiventris CHAPM. Auk, X, 1893, p. 342 (preliminary descr.).

Formicarius longipes LÉOTAUD, p. 191.

Char. subsp.—Similar to *Myrmeciza longipes* (Swains.), but somewhat smaller, and with the flanks and abdomen but slightly or not at all washed with cinereous.

Description of Type (No. 59,329, Coll. Am. Mus. Nat. Hist., adult male, Princetown, Trinidad, March 10, 1893; Frank M. Chapman).—Back and exposed surface of the wings rufous brown, tail slightly darker, crown and hind-neck darker than the tail, bordered laterally and anteriorly by cinereous; throat, breast, cheeks and ear-coverts black; sides of the breast with a slight cinereous wash; abdomen white, sharply defined from the black breast; sides washed with fulvous brown, heavier on the flanks and crissum; feet and legs flesh color, bill black; anterior parts of the skin of the head and throat in life deep, dull blue. Female similar to the female of *longipes*.

¹ The continental form of this bird has long been known as *Myrmeciza longipes* (Vieill.) Count von Berlepsch has shown, however, that Vieillot's description undoubtedly does not apply to this bird, and he has therefore renamed it *Myrmeciza swainsoni* Berl. In doing this, Count von Berlepsch considers that the *Dryophila longipes* of Swainson, while answering exactly to the *Myrmeciza longipes* of authors, is a synonym of the unrecognizable *Mymothera longipes* of Vieillot. I cannot agree with this decision, and prefer to accept Swainson's name, the synonymy of which will stand as follows:

***Myrmeciza longipes* (Swains.).**

Dryophila longipes SWAINS. Zool. Journ. 1824, II, p. 152 (not *Mymothera longipes* VIEILL. Nouv. Dict. XII, 1817, p. 113).

Myrmeciza longipes of most authors.

Myrmeciza swainsoni BERL. Ibis, 1888, p. 130; SALV. & GODM. Biol. Cent. Am. II, p. 229.

Ten males from Trinidad compared with two from Panama and one from Carthagenia show that while the characters on which this new form is based are slight, they are constant and easily recognizable.

This is a very common species in the vicinity of the rest-house. It is found in pairs in the second-growth, and also in the dense undergrowth at the borders of the woods, but I never saw it in the depths of the forest. It passes most of the time on the ground, gleaning among the leaves, with which it harmonizes so exactly in color that unless its breast is turned toward one it is exceedingly difficult to distinguish the bird from its surroundings. They are unsuspicious birds, and by using a little caution one can approach to within a few feet of them. The call of the male is a loud, ringing whistle. The first note is the highest and loudest; the call then descends, and at the same time decreases in volume and rapidity. It has all the *suddenness* of the calls of some Rails, and when heard at short range is a startling performance. The female, as far as I could learn, does not utter this call, but at its conclusion she frequently adds an appreciative twitter. Although so much of a ground bird, this species does not walk but hops.

117. *Rhamphocœnus melanurus trinitatis* (Less.).—
ECHELETTE.

Rhamphocœnus trinitatis LESSON, Rev. Zool. 1839, p. 42.
Rhamphocœnus melanurus LÉOTAUD, p. 168.

A not uncommon bird, frequenting in pairs low second-growth or the smaller trees at the border of the forest. It is a nervous, active little bird, constantly on the move, and its long tail is twitched about with all the energy of a Wren. Its call is a monotonous, high, rattling, metallic trill.

The Trinidad bird is well deserving of recognition as a race. It resembles *melanurus* in the coloration of the underparts, but has the head, nape, cheeks and sides of the neck rufous brown, as in *R. rufiventris*.

118. *Heterocnemis nævia* (Gm.).—BÉCASSINE À RIVIÈRE.
Formicarius lineatus LÉOTAUD, p. 192.

At the rest-house this species was rather rare, and was found only near brooks in the forest. On the banks of the Moruga and Caroni Rivers they were apparently common in the mangroves. As far as my experience goes they are shy, active, nervous birds, reminding me in their movements of a Water Thrush and the Carolina Wren. They feed on the shore of the brooks or from projecting roots, twitching out water-soaked leaves with a flirt of the bill. Their notes are sharp and metallic, resembling somewhat those of *Sclerurus*, or, when joined in a long rattling call, they suggest a similar performance by the Carolina Wren.

119. *Formicarius analis saturatus* (Ridgw.). — Coq-BOIS.

Formicarius saturatus RIDGW. Proc. U. S. N. M. XVI, 1893, p. 677.

Formicarius hoffmanni LÉOTAUD, p. 187.

This species is found only in the forests, where it is not uncommon, but is much more frequently heard than seen. Its usual call consists of four loud, clear, flute-like whistles; the first is the highest and longest, the last three are about one-third the length of the first. Occasionally the concluding notes are repeated many times, and are then given more rapidly. When heard in the depths of the dark, silent forest the musical notes of this bird are sure to command the attention of the most unobservant. The bird readily responds to even a poor imitation of its call, and walks rapidly towards the point at which its supposed friend or foe is stationed. I was struck not alone by the promptness with which they replied, but by the ease with which they located the position of the caller. On one occasion, while watching for Agoutis from a hunter's perch in the forest, I answered a Coq-bois which was whistling not nearer to me than seventy-five yards. I called only once, but in a few minutes the bird came directly to me, and, pausing almost beneath my perch, called frequently, at the same time looking anxiously from side to side. After circling about for several minutes it started to return by the same route it had come, but on my whistling it at once came back to me.

The Coq-bois is preëminently a ground bird. It is difficult to make it fly, and it takes wing only as a last resort. Its flight is

then short, and resembles somewhat that of a Sora Rail (*Porzana carolina*). It walks quickly and gracefully over the fallen leaves, sometimes mounting fallen logs, but never, so far as I observed, perching in the branches of bushes or trees. When walking, and even when feeding, the tail is carried erect at right angles to the back, and the reddish brown crissum is then a conspicuous character.

Order MACROCHIRES.

Hummingbirds, Swifts, Goatsuckers, etc.

Family TROCHILIDÆ.—HUMMINGBIRDS.

120. *Glaucis hirsutus* (Gm.). — BROWNBREAST. COLIBRI BALISIER.

Glaucis maseppa TAYLOR, p. 90.

Polytmus hirsutus LÉOTAUD, p. 139.

One of the most common species of Hummingbirds. They frequented only the lower-growth, and I do not remember ever having seen one more than fifteen feet from the ground. Their favorite resort was among the luxuriant 'wild bananas' (*Heliconia*), in or at the borders of the forests, from the flowers of which they obtained a large part of their food.

These flowers average one and one-half inches in length, are slightly curved in shape, and have the petals tightly wrapped together about the pistils. They stand upright in rows in the conspicuous *Heliconia* cups. In probing them the Hummingbirds insert their bill by a downward thrust, made from a position above the flower, and then let their body fall to a level below that of the top of the flower. They are enabled to assume this position through the curved shape of their bill, which corresponds exactly to the curve of the flower. This method of feeding is so marked a characteristic of this species, as I observed it, that it seems not improbable that the habit has resulted in modifying the shape of the bird's bill. At times they alight on the edge of the cup, and probe the flower more at leisure.

They also feed on insects taken from the under sides of leaves. These were captured with the tongue, which is capable of being extended an inch beyond the tip of the mandibles.

On rare occasions I heard this species sing a weak song.

121. *Pygmornis longuemareus* (Less.).—COLIBRI À RAQUETTE. RATCHETTE.

TAYLOR, p. 91; LÉOTAUD, p. 128.

Found in about the same numbers as *Glaucis hirsutus*, which it closely resembles in distribution and habits.

This species has a song of decided character. The circumstances under which I first heard it may best be described by a quotation from my journal under date of March 2: "As I entered a growth of low 'roseau' palms I was attracted by a chorus of squeaky voices, which at first I attributed to *Arbelorhina*. They seemed to be near the ground and very close to me, but, look as carefully as I would, I could see neither birds nor moving leaves. Finally, after several minutes, I espied a tiny Hummingbird perched on a twig about ten feet from me, and one foot from the ground. He was quivering with song. His bill was upraised, and his body trembled with the violence of his vocal effort. It was not much of a song, as songs go, but for a Hummingbird it was a remarkable performance. It consisted of seven notes, *swer-e-e-e-e-wèr*, the first six the same, the last accented and lower.

Not less interesting than the bird's song was its surroundings. This species is a dull, brownish bird with only a faint greenish tinge on the back, and is thus without the brilliant colors of other Hummers. The space beneath these low palms was partly filled with hanging or fallen dead, brown palm leaves. It was among these *Pygmornis* was perching. It was not too dense to see for a distance of twenty feet in any direction, but so exactly did the bird harmonize with its surroundings in color that even when within a few feet of me it was almost invisible. Their songs came from every side, a chorus of them, but only by the closest scrutiny and with help from my negro guide could I see birds which were singing vigorously and continuously within ten feet

of me. Where the palms merged into other undergrowth the Hummers were no longer seen.

Subsequent experiences seemed to show that although the species was generally distributed, this locality was a favorite one for it, and as a rule I always found at least a few birds singing there.

122. *Phaethornis guyi* (Less.).—BRIN-BLANC.

TAYLOR, p. 90; LÉOTAUD, p. 129.

Not common, and always found in the depths of the forest, where it lived near the ground.

123. *Lampornis violicauda* (Bodd.).—MANGO HUMMER. PLASTRON.

Lampornis mango TAYLOR, p. 91.

Polytmus mango LÉOTAUD, p. 131.

Observed commonly only while the bois immortel was blooming.

124. *Lampornis gramineus* (Gm.).—ROSCAL. HAUSSE-COL. WOSCAL.

TAYLOR, p. 91.

Lampornis dominicus LÉOTAUD, p. 132.

125. *Florisuga mellivora* (L.).—JACOBINE.

TAYLOR, p. 91.

Topaza mellivora LÉOTAUD, p. 141.

Very common about the blooming bois immortel, but after they had passed out of blossom it was rarely observed. Its white tail, when the bird was on the wing, was generally spread to the utmost, while the white collar was also frequently displayed.

Two specimens, one nearly adult, the other obviously a bird of the year, have the outer pair of tail-feathers without black tips; the next pair have a black terminal spot on their inner web, and a narrow black margin along the greater part of the outer web; the remaining pairs are broadly tipped with greenish blue, and more or less margined with blackish.

126. *Lophornis ornatus* (Bodd.).—WHISKERANDO. CO-QUETTE. HUPPE-COL.

TAYLOR, p. 91.

Mellisuga ornata LÉOTAUD, p. 148.

127. Calliphlox amethystina (Gm.).—AMÉTHISTE.

Calothorax enicurus LÉOTAUD, p. 143.

**128. Chrysolampis mosquitus (L.).—RUBEY AND TOPAZ.
RUBIS-TOPAZE.**

TAYLOR, p. 92.

Mellisuga moschita LÉOTAUD, p. 145.

A female was secured at the rest-house, and an adult male observed on the Caroni River.

**129. Petasophora delphinæ (Less.).—BLUE-EARED HUM-
MER. COLIBRI À OREILLES.**

Polytmus delphinæ LÉOTAUD, p. 134.

**130. Floricola longirostris (Vieill.).—CARMINE. GORGE
CARMIN.**

Helimaster longirostris TAYLOR, p. 92.

Mellisuga longirostris LÉOTAUD, p. 147.

**131. Agyrtria chionipterus (Goula).—WHITE - BREAST.
COLIBRI À GORGE BLANCHE.**

Thaumantias chionipterus TAYLOR, p. 92.

Polytmus chionopectus LÉOTAUD, p. 140.

Not uncommon. A nest of this species, found March 3, was about twelve feet from the ground, saddled on a small twig near its end. Only one bird, presumably the female, was ever seen near the nest. She apparently began to sit about March 5. I did not learn on what date the one young bird was hatched, but it left the nest April 10.

132. Polytmus thaumatias (L.).—PEARL. VERT-PERLÉ.

Chrysobronchus virescens TAYLOR, p. 92.

Polytmus viridis LÉOTAUD, p. 135.

**133. Amazilia erythronota (Less.). — EMERALD. RAI-
MÔNDE.**

Erythronota antiqua TAYLOR, p. 92.

Polytmus erythronotus LÉOTAUD, p. 137.

Not common.



134. *Eucephala cærulea* (Vieill.).—SAPHIR.

TAYLOR, p. 92.

Hylocharis cærulea LÉOTAUD, p. 150.

The commonest of the tree-haunting Hummers.

135. *Chlorostilbon atala* (Less.).

TAYLOR, p. 92.

136. *Panyptila cayanensis* (Gm.).—HIRONDELLE À GORGE BLANC.

Cypselus cayennensis LÉOTAUD, p. 81.

Common at La Brea, the only locality at which it was observed.

137. *Chætura cinereiventris lawrencei* Ridgw.—RAIN-BAT. PETITE HIRONDELLE À CROUPION GRIS.

Chætura lawrencei et *C. cinereiventris lawrencei* RIDGW. Proc. U. S. Nat. Mus. XVI, 1893, p. 43.

Acanthylis oxyura LÉOTAUD, p. 84.

Less common than *Chætura spinicauda*, with which it was found associated.

138. *Chætura spinicauda* Temm.—RAIN-BAT. HIRONDELLE À CROUPION GRIS.

Acanthylis poliourus LÉOTAUD (in part).

Common in scattered companies of ten to thirty individuals, which night and morning coursed rapidly over the forests and clearings, generally out of gunshot. Their notes resemble in character those of our *Chætura pelagica*, but they are not so loud and are less frequently uttered.

139. *Chætura polioura* (Temm.).—HIRONDELLE À CROUPION GRIS.

Acanthylis poliourus LÉOTAUD, p. 86 (in part).

I secured one specimen at La Brea.

140. *Hemiprocne zonaris* (Shaw).—RINGED GROWRIE. HIRONDELLE À COLLIER BLANC.

Acanthylis collaris LÉOTAUD, p. 83.

141. *Cypeloides rutilus* (Vieill.).—HIRONDELLE À COLLIER ROUX.

Hirundo rutila LÉOTAUD, p. 87.

There is one specimen in the Léotaud Collection.

142. *Chordeiles acutipennis* (Bodd.).—NIGHTHAWK. EN-GOULEVENT À QUEUE FOURCHUE.

Chordeiles minor LÉOTAUD, p. 76.

143. *Nyctibius jamaicensis* (Gm.).—POTOO. GROS EN-GOULEVENT.

Nyctibius pectoralis TAYLOR, p. 90.
LÉOTAUD, p. 70.

There is an animal in the Trinidad forests whose call is so inexpressibly sad that it affects even the negroes, and they have given to its author the name of "Poor-me-one," meaning, "poor me, all alone." These words express in a measure the hopeless sorrow of a voice which is so sweet and human in quality that it might easily be considered a woman's rich contralto. This impressive call is heard only at night. At the rest-house I heard it only on moonlight nights, and then at infrequent intervals. It is generally supposed to be uttered by the little Ant-eater (*Cyclothurus didactylus*), which, for this reason, is commonly known as Poor-me-one. I am told, however, by Mr. Albert B. Carr of Trinidad, a gentleman who is very familiar with the animals of the forests, that the Poor-me-one is in reality a Goatsucker, and that he has shot the bird in the act of calling. Unfortunately the bird was not preserved, so for the present its specific identity must remain in doubt. I have placed these remarks under *Nyctibius* for the reason that Waterton's description of the "largest Goatsucker in Demerara" with little doubt refers to what in Trinidad is known as Poor-me-one. Gosse, however (*Birds of Jamaica*), does not describe this call, and as it does not seem possible that so close an observer could have overlooked it, it is probable Waterton may have erred in his identification.

144. *Lurocalis semitorquatus* (Gm.).—ENGOULEVENT À TACHES ROUSSES.

TAYLOR, p. 90.
Lurocalis gouldii LÉOTAUD, p. 74.

145. *Podager nacunda* (Vieill.).—NACUNDA. ENGOULEVENT À COLLIER BLANC.

Podager nacunda LÉOTAUD, p. 79.

146. *Nyctidromus albicollis* (Gm.).—ENGOULEVENT DES CHEMINS.

Nyctidromus guianensis TAYLOR, p. 90.

Caprimulgus albicollis LÉOTAUD, p. 72.

Common. Its notes resemble those of the Texan *N. a. merrilli*, but are not so loud and lack the bass undertone. They feed at night in the roads and footpaths, and for this reason are called by the natives by a Spanish name meaning Watchman of the Road. This habit causes their notes to be popularly translated as: '*I see you, I see you*, or, *who are you, who are you*,' while a less frequent and very different call is also excellently given as: '*I work, I work, I work—well*.'

147. *Steatornis caripensis* Humb.—GUÀCHARO. DIABLOTIN.

TAYLOR, p. 88; LÉOTAUD, p. 65; RIDGW. Proc. U. S. N. M. VII, p. 173; HORNADAY in Standard Nat. Hist. IV, 1885, p. 386.

May 5 I visited the Guàcharo cave on Huevos Island described by Mr. W. T. Hornaday (l. c.), but I can add nothing to his excellent description of it. I estimated the number of birds in this cave at 200, a number which I find corresponds with that given by Mr. Hornaday. A female secured was laying, and my guide, Mr. Morrison, the discoverer of the cave, of whom Kingsley wrote over twenty years ago, was of the opinion that the birds nested more or less every month in the year.

A second cave which I visited is situated on the main island of Trinidad in the first Boca. It contained apparently not more than fifty birds. There is no beach or floor in this cavern; the water reaches to its innermost parts, and as the walls are precipitous I was unable to explore it for nests.

148. *Chloronerpes rubiginosus* (Swains.).—BLUE-HEADED WOODPECKER. CHARPENTIER À TÊTE BLEUE.

TAYLOR, p. 93; LÉOTAUD, p. 339.

Much less common than *Dendrobates kirkii*, which it greatly resembles in habits.

149. *Dendrobates kirkii* (Malh.).—LITTLE RED-HEADED WOODPECKER. PETIT CHARPENTIER À TÊTE ROUGE.

Chloronerpes kirkii LÉOTAUD, p. 341.

Common. Its call, a strong, high, penetrating *chee, chee, chee*, was heard nearly every day.

150. *Celeus elegans* (Müll.).—YELLOW-HEADED WOODPECKER. CHARPENTIER À TÊTE JAUNE.

Celeus cinnamomeus TAYLOR, p. 93; LÉOTAUD, p. 338.

151. *Campephilus melanoleucus* (Gm.).—BIG RED-HEADED WOODPECKER. CHARPENTIER À TÊTE ROUGE.

Dryocopus albirostris LÉOTAUD, p. 334.

Three were secured.

152. *Ceophlœus lineatus* (L.).—BLACK-THROATED WOODPECKER. CHARPENTIER À GORGE RAYÉE.

Dryocopus erythropus TAYLOR, p. 93.

Dryocopus lineatus LÉOTAUD, p. 336.

Not uncommon.

153. *Momotus swainsoni* Gray.—KING OF THE WOODS. HOUTOU.

TAYLOR, p. 88.

Momotus bahamensis LÉOTAUD, p. 96.

This is apparently an uncommon bird in the vicinity of the rest-house. I observed it on only three occasions, and it was unknown to the natives. One bird, which I watched for some time, made a low, clucking sound, which was accompanied by a quick, but deliberate wagging of the tail from side to side. Occasionally this motion was varied by a rapid, circular sweep, when the pendulum-like wagging was resumed.

154. *Ceryle americana* (Gm.).—RED-BELLIED KINGFISHER. MARTIN-PÊCHEUR À POITRINE ROUGE.

LÉOTAUD, p. 112.

Chloroceryle americana TAYLOR, p. 88.

A few pairs were seen on the Caroni, Ciperó, and Moruga Rivers, and one pair frequented a small stream in the forest near the rest-house. On one occasion the male of this pair was perched on a stump over the brook, holding in his bill some food. The female came and alighted near him, and he immediately passed the delicacy over to her.

Their call when on the wing is a sharp, rattling twitter, not in the least resembling the call of *C. alcyon*. When they alight this is changed to a rapid, excited *ticking*, like the ticking of a clock which has been disturbed. Gradually this decreases in rapidity and volume, and in less than half a minute ceases.

155. *Ceryle superciliosa* (L.).—LITTLE KINGFISHER. PETIT MARTIN-PÊCHEUR.

LÉOTAUD, p. 114.

Chloroceryle superciliosa TAYLOR, p. 88.

156. *Ceryle alcyon* (L.).—BELTED KINGFISHER. MARTIN-PÊCHEUR À CEINTURE BLEUE.

LÉOTAUD, p. 108.

157. *Ceryle amazona* (Lath.).—AMAZON KINGFISHER. MARTIN-PÊCHEUR À LONG BEC.

LÉOTAUD, p. 111.

158. *Ceryle torquata* (L.).—GREAT KINGFISHER. GROS MARTIN-PÊCHEUR.

LÉOTAUD, p. 106.

159. *Trogon collaris* Vieill.—COLLARED TROGON. COUROU-COU À VENTRE ROUGE.

TAYLOR, p. 88 ; LÉOTAUD, p. 103.

This species was found in the forest six miles south of the rest-house, where I shot one individual and observed another. Its notes were a soft *coo-coo*, like those of *T. viridis*, but they were uttered so slowly my attention was at once attracted by them.

160. *Trogon viridis* Linn.—COUROUCOUAI. GRAND COUROUCOU À VENTRE JAUNE.

TAYLOR, p. 88 ; LÉOTAUD, p. 98.

Common. It frequents the denser parts of the forest, and rarely, if ever, makes extended flights. I have seen them, however, cross a small clearing, when their flight was strong and undulating, like that of a Goldfinch (*Spinus tristis*). The call of both sexes is alike, and consists of a melancholy *coo, coo*, repeated rather slowly many times. They feed on fruit, which they pick

on the wing. Perching near a tree bearing their food, they make dashes at it, and then, like a Flycatcher, return to their perch to swallow it. From an experience with a wounded bird, I should judge that the sharp serrations on both mandibles are of great assistance to Trogons in this mode of procuring food.

161. Trogon meridionalis SWAINS.—LITTLE YELLOW-BELLIED TROGON. PETIT COUROUCOU À VENTRE JAUNE.

Trogon sulphureus LÉOTAUD, p. 101.

Quite as common as *T. viridis*, with which it was associated. Its notes are similar in tone to those of *T. viridis*, but are uttered more rapidly, and almost exactly resemble the long, rolling call of our High-hole (*Colaptes auratus*).

162. Galbula ruficauda Cuv.—JACAMAR.

TAYLOR, p. 88 ; LÉOTAUD, p. 116.

A not uncommon bird at the borders of and in the forests. Its appearance, at first sight, would seem to support its reputation for stupidity, but closer observation will, I think, induce one to believe that these birds are by no means so stupid as they have been said to be.

They are the most expert 'Flycatchers' I have ever seen, and this, in spite of the fact that the shape of their bill would seem better to fit them for almost any other mode of existence. Sitting all *drawn in* on a dead limb, generally near the ground, they may be compared to a set spring. Their watchfulness permits no insect to pass in safety. They maintain a constant lookout, turning the head quickly from side to side, above, or even half-way around. The dart into the air is made with wonderful celerity. Sometimes it is straight up, again at various angles, and they go as far as thirty to thirty-five feet from their perch. As a rule they return to the same perch after each sally, and may occupy this for many minutes.

As they rest they utter a singular call—a loud, clear, piping whistle, not unlike the call of a lost duckling. This is delivered in a variety of ways. Sometimes it is given as a single whole note, when it may be repeated at intervals of a second for minutes at a time. The dart into the air for an insect interrupts this

musical reverie only momentarily, and, on returning to their perch, the plaintive calling is continued. At other times their notes are uttered more rapidly, and may rise into a high, prolonged trilling. This may be *ground out* as revolutions of sound, when the effect is most peculiar.

163. *Crotophaga ani* Linn.—TICKBIRD. MERLE CORBEAU.
TAYLOR, p. 92; LÉOTAUD, p. 355.

Common in the cacao groves and second-growth, in flocks of six to twelve individuals. They were nesting in April, but I succeeded in finding only one nest. This was loosely made of sticks placed in the centre of a vine-covered limb, about twenty feet from the ground. It was completed about April 14, but although birds were generally seen at or near it, it was apparently not occupied at the time of my departure.

164. *Crotophaga major* Gm.—MARSH TICKBIRD. GROS MERLE CORBEAU.
TAYLOR, p. 93; LÉOTAUD, p. 358.

165. *Diplopteryx nœvius* (L.).—TRINITÉ. TRINITÉ QUATRE AILES.

TAYLOR, p. 93; LÉOTAUD, p. 343; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

A common, rather shy bird found in and near thicket-grown clearings. It passes much of its time on the ground, but frequently ascends to the topmost branches of the smaller trees to call. Its calls are also uttered from the ground. They are given more or less throughout the day, and were among the most pleasing and characteristic bird-notes heard near the rest-house. They are of two kinds, and one is heard quite as frequently as the other. Both are in a minor key; the first consists of two notes, the second half a tone lower than the first. The second call is translated by the negroes as *chloë*, *chloë*, *chloë-dead*, *chloë-dead*.

On one occasion, while watching one of these birds *walking* over some recently burned ground, I was surprised to observe a most singular action. The bird walked rapidly for a few yards, then stopping, raised and lowered its crest and turned the black

feathers of the alula forward until they pointed toward the breast. This was repeated several times, and I find my observation confirmed by Léotaud's account, with which, at the time, I was not familiar.

166. *Piaya cayana* (L.).—BOOCOOTOO. COUCOU MANIOC. TAYLOR, p. 93; LÉOTAUD, p. 346.

Not common. I saw about a dozen individuals, which, with one exception, were in the forest. Their flight is weak, and consists of short sails followed by intervals of flapping. The only note I heard was a sharp *chick*.

167. *Piaya minuta* (Vieill.). — LESSER PIAVA. PETIT COUCOU MANIOC. LÉOTAUD, p. 348.

Only six individuals were observed. In notes and habits they seemed to resemble the preceding species.

168. *Coccyzus melanocoryphus* Vieill. — RED-BELLIED PIAVA. COUCOU MANIOC À VENTRE ROUSSÂTRE. *Piaya melacorypha* LÉOTAUD, p. 349.

169. *Coccyzus minor* (Gm.).—MANGROVE CUCKOO. COUCOU MANIOC GRIS. LÉOTAUD, p. 353.

170. *Coccyzus erythrophthalmus* (Wils.). — BLACK-BILLED CUCKOO. COUCOU MANIOC À BEC NOIR. LÉOTAUD, p. 352.

171. *Coccyzus americanus* (L.). — YELLOW-BILLED CUCKOO. COUCOU MANIOC AUX AILES ROUSSES. LÉOTAUD, p. 350.

A female was taken on Monos, May 4.

172. *Ramphastos vitellinus* (Licht.).—TOUCAN. TAYLOR, p. 93; LÉOTAUD, p. 325.

Common in the forests. Their call, a loud, harsh, double-noted whistle, was one of the characteristic notes heard at the rest-house. When calling the birds perch on the topmost limb [February, 1894.]

of one of the taller forest trees and utter their unmusical notes for many consecutive minutes. Generally two could be heard at the same time. It was not usual to see them make extended flights unless clearings interrupted the continuity of the forests. In crossing these their flight consisted of alternate flapping and sailing. About a dozen rapid strokes were followed by a short, downward sail. They seemed to be shy, silent birds when among the lower branches feeding, and I did not have an opportunity to study their habits. Those seen in the trees were actively hopping from limb to limb, with their tails cocked up forming various angles with their backs, reminding one of gigantic Wrens.

173. *Ara makawuanna* (Gm.).—PETIT ARA VERT.

LÉOTAUD, Appendix, p. 557.

This species is given by Léotaud without remark. I did not meet with Macaws of any species, but received reliable information of the occurrence of some species of *Ara*, but whether the present or some other I could not determine with certainty.

174. *Amazona amazonica* (L.).—GREEN PARROT. GROS JACQUOT.

Chrysotis, sp? TAYLOR, p. 94.

Psittacus agilis LÉOTAUD, p. 327.

Common, and like most Parrots very restless, spending much time on the wing. Their notes were loud and discordant, and, so far as I learned, consisted of two kinds. One was uttered by a pair of birds when on the wing or, less frequently, when at rest. The other was a far more complicated series of squawks, and was heard only when two or more pairs came together.

A female, shot on March 4, had an egg in her oviduct ready to receive the shell.

175. *Pionus menstruus* (L.) — BLUE-HEADED PARROT. PERRUCHE À TÊTE BLEUE.

Psittacus menstruus LÉOTAUD, p. 329.

Common in pairs or small flocks of four to seven birds. They were generally seen passing over at a considerable height, and attracted attention by their notes.

176. *Urochroma cingulata* (Scop.). — SEVEN-COLORED PAROQUET. PERRUCHE À SEPT COULEURS.

Urochroma melanoptera TAYLOR, p. 94.

Psittacula batavica LÉOTAUD, p. 331.

Common in flocks of from three or four to thirty individuals. Their notes, which consist of a kind of squeaking twitter, were heard only when the birds were on the wing. When at rest or feeding they were silent. It was then exceedingly difficult to distinguish them from the leaves of the tree in which they were perching, and unless a bird moved it was practically invisible. Their favorite food seemed to consist of the fruit of the 'agalee' tree, with the sticky juices of which their bills were generally well covered.

I received from independent sources reliable information that these birds lay their eggs in the nests of the 'white ant,' 'ant-louse,' or termite. These nests are very numerous, and are generally placed thirty or more feet from the ground. They resemble in appearance enormous wasps' nests, and the Paroquets are said to deposit their eggs in holes which they make in the nest for this purpose. At the time of my visit the nesting season was presumably over, for I secured fully grown young of the year.

177. *Urochroma hueti* (Temm.). — RED-WINGED PAROQUET. PERRUCHE AUX AILES ROUGES.

Psittacula hueti LÉOTAUD, p. 332.

178. *Strix pratincola* Bp. — BARN OWL. CHOUETTE BLANCHE.

LÉOTAUD, p. 62.

The sudden, hissing scream of this Owl was occasionally heard at night.

179. *Syrnium virgatum* Cass. — TAWNY OWL. CHAT-HUANT.

LÉOTAUD, p. 60.

An Owl frequently heard calling at night in the forest I imagine from its notes to have been this species, but unfortunately I did not succeed in securing a specimen. Its cry consisted

of the four notes, *hōō*, *hōō*, *hōō*, *hōō*, the first three of equal length and on the same note, the last much lower.

180. *Megascops brasiliensis* (Gm.). — EARED OWL.
CHOUETTE À OREILLES.

Ephialtes portoricensis LÉOTAUD, p. 57.

Only one specimen was secured. I did not succeed in identifying the call of this species. An Owl heard nightly in the forest, and said by the natives to be this bird, had a call which may be given as *cook-er-re-coo*, sometimes running off into a series of *coos*. The call bears no resemblance to the trilling notes of our *Megascops*, but apparently is not unlike Hudson's description of that of *Megascops brasiliensis*, as found by him in the Argentine Republic (Arg. Orn., II, p. 51).

181. *Pulsatrix torquata* (Daud.). — COLLARED OWL.
CHOUETTE À COLLIER.

Athene torquata LÉOTAUD, p. 52.

182. *Glaucidium phalænoides* (Daud.). — PETITE
CHOUETTE.

Glaucidium ferrugineum TAYLOR, p. 80.

Athene phalænoides LÉOTAUD, p. 54.

An exceedingly common bird; from the rest-house veranda I have heard five calling at the same time. Their usual note is a softly whistled *coo*, resembling in tone that of the Cuban *Glaucidium*, but the last-named bird utters this note about once every five seconds, while in Trinidad these little Owls *coo* four or five times a second. Their call becomes therefore a series of rapidly repeated *coos* continued for fifteen or twenty seconds. At times this runs into a sharply whistled *whoit, whoit, whoit*, apparently analogous to but not resembling the high piercing notes of the Cuban species. This, as in *G. siju*, is sometimes accompanied by a twitching of the tail. The Trinidad bird, while frequently heard during the day, called in numbers only at night and was thus nocturnal rather than diurnal, contrary to the habit of the Cuban bird.

The negroes consider this species a bird of ill-omen, and translate its rapid cooing as an invitation from the Evil One to "*come, come, come,*" etc.

My specimens represent both extremes of the red and gray phases; in the former, with the exception of an indistinct blackish collar on the nape, the head, back and tail are rich reddish brown absolutely without spots or bars; while in the gray phase all the feathers of the head have a terminal and subterminal elongate, whitish spot; there is a nuchal collar; the feathers of the back and rump are more or less spotted with white, and the tail is banded with numerous broken white bars. These extremes are connected by other specimens intermediate both in color and pattern of marking.

183. *Sarcoramphus papa* (L.).—KING CORBEAU. ROI DES CORBEAUX.

LÉOTAUD, p. 1.

Gyparchus papa TAYLOR, p. 79.

184. *Cathartes aura* (L.).—CEDROS CORBEAU. CORBEAU À TÊTE ROUGE.

TAYLOR, p. 78; LÉOTAUD, p. 2.

Common about the rest-house.

185. *Catharista atrata* (Bartr.).—TOWN CORBEAU. CORBEAU.

Cathartes atratus TAYLOR, p. 77.

Cathartes fctens LÉOTAUD, p. 2.

This is the common Buzzard of the towns, and in Port-of-Spain is particularly abundant and tame. When a struggling flock were fighting in the main street over some savory morsel, it was almost necessary to kick them aside when passing through the street. Their usefulness as scavengers is unquestioned, but their habit of perching on the roofs of houses is a serious cause of annoyance to people owning cisterns used for rain-water. Many of them roost in the trees in Marine Square in the city, from which they sail forth on their day's exploring at about four A. M.

186. *Ictinia plumbea* (Gm.).—PLUMBEOUS KITE. GABILAN BLEU.

LÉOTAUD, p. 42.

Common, and for a Hawk remarkably tame. Their favorite perch was on the topmost branch of a dead or leafless tree, from

which point of vantage they would swoop down on the unwary birds below. Two birds selected perches near the rest-house, where they passed the day maintaining a constant outlook for a possible victim below. At sunset they retreated to the forest to pass the night. This species could always be approached without difficulty, and on two occasions I have had them swoop down to secure a bird which I had shot.

One newly occupied nest was found in March, and another in April. They were small, rather formless structures of sticks, placed in the main crotch of a tree about twenty feet from the ground.

187. *Elanoides forficatus* (L.).—SCISSOR-TAILED KITE.
QUEUE-EN-CISEAUX.

Nauclerus furcatus LÉOTAUD, p. 30.

Observed on two occasions.

188. *Rostrhamus sociabilis* (Vieill.).—HOOK-BILLED KITE.
GABILAN À BEC CROCHU.

Rostrhamus hamatus LÉOTAUD, p. 31.

189. *Circus maculosus* (Vieill.).—HARRIER. GABILAN À LONGUE QUEUE.

Circus macropterus LÉOTAUD, p. 49.

190. *Buteo abbreviatus* Cab.—SMALL BLACK BUZZARD.
PETIT GABILAN NOIR.

Buteo zonocercus LÉOTAUD, p. 9.

191. *Urubitinga urubitinga* (Gm.).—EAGLE-HAWK. GROS GABILAN NOIR.

Morphnus urubitinga LÉOTAUD, p. 14.

192. *Urubitinga anthracina* (Licht.).—BLACK HAWK.
GABILAN NOIR.

Astur unicinctus LÉOTAUD, p. 44.

193. *Urubitinga albicollis* (Lath.).—GABILAN À DOS NOIR.

Buteo albicollis TAYLOR, p. 79.

Buteo pacilinotus LÉOTAUD, p. 7.

194. *Asturina nitida* (Lath.).—SPECKLED HAWK. GABILAN GINGA.

TAYLOR, p. 80.

Astur nitidus LÉOTAUD, p. 46.

195. *Harpagus bidentatus* (Lath.).—TOOTHED FALCON. GABILAN À DEUX DENTS.

LÉOTAUD, p. 28.

196. *Gampsonyx swainsoni* Vig.—BROWN HAWK. GRI-GRI.

Gampsonix swainsonii LÉOTAUD, p. 41.

197. *Leptodon unicinctus* Temm.—GABILAN BLEUÂTRE.

Cymindis unicinctus LÉOTAUD, p. 36.

Cymindis pucherani, *ibid.* p. 40.

198. *Leptodon cayanensis* (Gm.).—GUIANA HAWK. GABILAN À TÊTE BLEUE.

Cymindis cayanensis LÉOTAUD, p. 34.

Several were observed and two secured. With the exception of *Ictinia plumbea*, Hawks were not common near the rest-house. I saw probably but two species in addition to those identified.

199. *Spizaëtus mauduyti* (Daud.).—CRESTED SPIZAËTUS. GABILAN À HUPPE.

Spizaëtus ornatus LÉOTAUD, p. 10.

200. *Spizaëtus tyrannus* (Wied.).—SPECKLED-LEG SPIZAËTUS. GABILAN À PATTES GINGA.

Spizaëtus braccata LÉOTAUD, p. 12.

201. *Falco peregrinus anatum* (Bon.).—DUCK HAWK. GABILAN RAYÉ.

Falco peregrinus TAYLOR, p. 80.

Falco anatum LÉOTAUD, p. 22.

202. *Falco fusco-cærulescens* (Vieill.).—BLACK-BELLIED FALCON. GABILAN À POITRINE NOIRE.

Hypotriorchis femoralis LÉOTAUD, p. 24.

While traveling by rail from Port-of-Spain to Princetown, I looked from the window of the carriage and saw a small *Falco*—

the species I could not determine—flying with the train and about sixty feet above it. For some time it maintained the same relative position, then suddenly, and with great swiftness, darted ahead and was lost to view. A few minutes later I observed a Hawk of the same species occupying the same position above the train as the one which had just disappeared. As I watched it this bird also darted ahead of the train. It was not long before a third Hawk was seen over the train, and, like its two predecessors, it suddenly shot forward. I then began to suspect that the three Hawks were in reality but one, whose object in following the train was to secure the small birds startled from near the track by our approach. The performance was repeated several times, and my surmise in part sustained by seeing the Hawk actually dive into a thicket just ahead of the engine. Indeed, it appeared that the train, like a spaniel, flushed the birds for the Hawk, which was ‘waiting-on’ overhead.

This explanation is further supported by a notice in the ‘Journal’ of the ‘Trinidad Field Naturalists’ Club (Vol. I, p. 133), where Mr. Caracciolo records the fact of a Hawk seen by Dr. Morton which “pounced upon” small birds frightened from a certain thicket by a passing train. The habit has been observed by Mr. Hudson in the Argentine Republic, where, he states, Duck Hawks follow horsemen in order to secure the small birds flushed from the grass by the horse.

203. *Falco deiroleucus* Temm.—WHITE-THROATED FALCON.
GABILAN À TÊTE NOIRE.
LÉOTAUD, p. 17.

204. *Falco rufigularis* Daud.—RED-THROATED FALCON.
GABILAN NOIR À GORGE ROUSSE.
Falco aurantius LÉOTAUD, p. 20.

205. *Falco columbarius* Linn.—PIGEON HAWK. GABILAN
À DOS BLEUÂTRE.
Hypotriorchis columbarius LÉOTAUD, p. 26.

206. *Falco sparverius* Linn.—SPARROW HAWK.
Tinnunculus sparverius TAYLOR, p. 80.

207. *Pandion haliaëtus carolinensis* (Gm.).—FISH-HAWK.
GABILAN PÊCHEUR.

Pandion haliaëtus TAYLOR, p. 79.

Pandion carolinensis LÉOTAUD, p. 15.

208. *Columba speciosa* Gm.—SPECKLED CUSHAT. RAMIER
GINGA.

LÉOTAUD, p. 361.

Columba, sp. ? TAYLOR, p. 94.

Not uncommon in the forest in pairs. During the early morning and late afternoon the male perches on the topmost branch of one of the taller trees and utters his loud, deep solemn call. This may be given as *cook-a-loo-coo*, *cook-a-loo*, and is preceded by a low, rumbling note heard only when one is quite near the bird.

209. *Columba rufina* Temm.—BLUE CUSHAT. RAMIER
MANGLE.

LÉOTAUD, p. 364.

210. *Engyptila rufaxilla* (Rich. & Bern.).—GROUND DOVE.
TOUTERELLE à PAUPIÈRES ROUGES.

Peristera rufaxilla TAYLOR, p. 94 ; LÉOTAUD, p. 371.

A common bird in the forests and second-growth. It resembles a *Geotrygon* in habits, but is more frequently seen on the wing. Their flight is noiseless, a fact the attenuation of the first primary would not lead one to expect. When on the wing the neck is not extended, but rather drawn in, the bill pointing towards the earth.

The notes of this species formed a background for all other bird music. They resemble the winding notes of a mellow-toned conch. So close is the resemblance that, when in the forest in the early morning, with the soft cooing of these Doves proceeding from all sides, it was not difficult to imagine oneself surrounded by a cordon of conch-blowers. The sound was so continuous that the air vibrated with Doves' notes, and in a short time one became so accustomed to the chorus, that, like the monotonous humming of many insects, it was unnoticed.

A nest found March 10 was a simple platform of sticks placed eight feet from the ground in the main crotch of a small tree at the border of the forest. It contained two young, one of which flew from the nest as I approached.

This species was apparently wanting on Monos Island.

211. *Engyptila verreauxi* (Bp.).—GROUND DOVE. TOURTERELLE À PAUPIÈRES BLEUES.

Engyptila verreauxi RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Peristera verreauxi LÉOTAUD, p. 369.

Apparently a rare bird at the rest-house, where I secured only two specimens. On Monos, however, they were very common. Their call is similar to that of *E. rufaxilla*, but not so loud.

212. *Peristera cinerea* (Temm.).—BLUE PARTRIDGE DOVE. ORTOLAN BLEU.

LÉOTAUD, p. 378.

213. *Columbigallina rufipennis* (Bon.).—RED ORTOLAN. ORTOLAN ROUGE.

Chamaepelia albivitta TAYLOR, p. 95.

Chamaepelia rufipennis LÉOTAUD, p. 366.

Not uncommon in the clearings near the rest-house. Its note is a low, rapid, *put-a-coo, put-a-coo, put-a-coo*.

214. *Geotrygon linearis* (Knip & Prév.).—MOUNTAIN GROUND DOVE. TOURTERELLE À CROISSANT.

Peristera linearis LÉOTAUD, p. 373.

215. *Geotrygon montana* (L.).—PARTRIDGE DOVE. PERDRIX.

Peristera montana ? LÉOTAUD, p. 375.

216. *Pipile pipile* (Jacq.).—PAOUL.

Crax pipile JACQ. Beytr. zur Gesch. 1784, p. 26.

? *Crax alector* TAYLOR, p. 95.

Penelope cumanensis LÉOTAUD, p. 383.

I observed only one individual, an adult male, with blue throat and cheeks, shot from a tree in the forest three miles from

the rest-house. The flesh of this species is deservedly esteemed, and through the persecution of hunters it is rapidly becoming a rare bird.

Comparison of my one example with specimens of *Pipile cumanensis* from the mainland shows at once well-marked differences. The Trinidad bird is dark brown with deep blue reflections and without the greenish tinge seen in the plumage of true *cumanensis*, while the lengthened feathers of the head are black with a narrow lateral margin of white. In *cumanensis* these feathers are entirely dirty white.

In fact, the Trinidad bird agrees very well with the plate and description of Jacquin's *Crax pipile*, a species which has been synonymized by subsequent writers with the same author's *Crax cumanensis*. There is one specimen of this bird in the Léotaud Collection. It agrees with my example, and is well described by Léotaud.

I could learn nothing of the occurrence of *Crax alector*, a species recorded from Trinidad by Mr. Taylor, who remarks that it is locally called "Wild Turkey." *Pipile pipile* is frequently called by this name. Is it possible that Mr. Taylor has confused the two species?

217. *Jacana jacana* (L.).—SPUR-WING. PAUL PERRUQUIER.
Parra jacana LÉOTAUD, p. 486.

218. *Hæmatopus palliatus* Temm. — OYSTER-CATCHER.
HUITRIER.
LÉOTAUD, p. 397.

219. *Arenaria interpres* (L.).—TURNSTONE. PLUVIER DE MER.
Cinclus interpres LÉOTAUD, p. 399.

220. *Ægialitis wilsonia* (Ord). — WILSON'S PLOVER.
GROS COLLIER.
Charadrius wilsonius LÉOTAUD, p. 391.

221. *Ægialitis semipalmata* Bonap. — RING-NECKED PLOVER. PETIT COLLIER.
Charadrius semipalmatus LÉOTAUD, p. 392.

Common at Moruga. I saw there also, but unfortunately failed to secure, a small Plover which apparently was *Ægialitis collaris*.

222. *Charadrius dominicus* (Müll.).—GOLDEN PLOVER.
PLUVIER DORÉ.

Charadrius virginicus LÉOTAUD, p. 394.

223. *Charadrius squatarola* (L.).—BLACK-BELLIED PLOVER.
GROS PLUVIER DORÉ.

Squatarola helvetica LÉOTAUD, p. 389.

224. *Numenius borealis* Lath.—ESKIMO CURLEW. PETIT
BEC CROCHU.

LÉOTAUD, p. 444.

225. *Numenius hudsonicus* Lath.—HUDSONIAN CURLEW.
BEC CROCHU.

LÉOTAUD, p. 442.

226. *Actitis macularia* (L.).—SPOTTED SANDPIPER.
RICUIT.

Tringoides macularius TAYLOR, p. 95.

Tringoides hypoleuca LÉOTAUD, p. 458. (Based on immature specimens.)

Tringoides macularia, *ibid.* p. 461.

Common on the Ciperó and at Moruga.

227. *Tryngites subruficollis* (Vieill.).—BUFF-BREASTED
SANDPIPER. PETIT PIEDS JAUNES.

Tringa rufescens LÉOTAUD, p. 470.

228. *Bartramia longicauda* (Bechst.).—BARTRAMIAN
SANDPIPER. PIEDS JAUNES À LONGUE QUEUE.

Tringoides bartramius LÉOTAUD, p. 463.

229. *Symphemia semipalmata* (Gm.).—WILLET. AILES
BLANCHES.

Totanus semipalmatus LÉOTAUD, p. 456.

230. Totanus solitarius (Wils.).—SOLITARY SANDPIPER.
GRANDES AILES.

Totanus chloropygius LÉOTAUD, p. 450.

231. Totanus flavipes (Gm.).—YELLOW-LEGS. PIEDS
JAUNES.

LÉOTAUD, p. 452.

232. Totanus melanoleucus (Gm.).—GREATER YELLOW-
LEGS. CLIN-CLIN.

LÉOTAUD, p. 454.

233. Limosa hæmastica (L.).—HUDSONIAN GODWIT.
BÉCARD AILES BLANCHES.

Limosa hudsonica LÉOTAUD, p. 447.

Limosa ægocephala, *ibid.* p. 448.

234. Limosa fedoa (L.).—MARBLED GODWIT. GRAND
BÉCARD.

LÉOTAUD, p. 445.

235. Calidris arenaria (L.).—SANDERLING. BÉCASSE
BLANCHE.

LÉOTAUD, p. 480.

236. Ereuntes occidentalis Lawr.—WESTERN SANDPIPER.
BÉCASSE À LONG BEC.

Heteropoda longirostris et *H. mauri* LÉOTAUD, p. 480.

There are four specimens of this bird in the Léotaud Collec-
tion.

237. Ereunetus pusillus (L.).—SEMIPALMATED SANDPIPER.
BÉCASSE ORDINAIRE.

Heteropoda semipalmata LÉOTAUD, p. 476.

Several were observed, and one taken on the coast of Moruga.

238. Tringa minutilla Vieill.—LEAST SANDPIPER. PETIT-
MAÎTRE.

LÉOTAUD, p. 476.

Not uncommon on the coast of Moruga.

239. *Tringa fuscicollis* Vieill.—WHITE-RUMPED SANDPIPER.
GROSSE BÉCASSE.

Tringa melanotus LÉOTAUD, p. 472.

240. *Tringa maculata* Vieill.—PECTORAL SANDPIPER.
COUCHANTE.

LÉOTAUD, p. 474.

241. *Tringa canutus* Linn.—KNOT. POULE COUCHANTE.
LÉOTAUD, p. 468.

242. *Micropalama himantopus* (Bon.).—STILT SANDPIPER.
CHEVALIER.

Hemipalama multistriata LÉOTAUD, p. 466.

243. *Macrorhamphus griseus* (Gm.).—DOWITCHER.
GRISE À LONG BEC.

LÉOTAUD, p. 482.

244. *Gallinago delicata* (Ord).—WILSON'S SNIPE. BÉCAS-
SINE.

Gallinago wilsonii LÉOTAUD, p. 484.

245. *Himantopus nigricollis* (Müll.).—BLACK-NECKED
STILT. BÉCASSE-LA-MORT.

LÉOTAUD, p. 464.

246. *Heliornis fulica* (Bodd.).—SURINAM HELIORNIS.
PLONGEON À QUEUE.

LÉOTAUD, p. 531.

247. *Fulica americana* Gmel.—AMERICAN COOT.
FOULQUE.

LÉOTAUD, p. 504.

248. *Gallinula galeata* (Licht.).—RED-SEAL COOT. POULE
D'EAU À CACHET ROUGE; COQ-LAGON.

LÉOTAUD, p. 503.

The specimen in the Léotaud Collection has the back without a brownish wash, and of the same color as the wings.

249. *Ionornis martinica* (L.).—BLUE-SEAL COOT. POULE D'EAU À CACHET BLUE.

Porphyrio martinica TAYLOR, p. 96; LÉOTAUD, p. 501.

250. *Porzana carolina* (L.).—SORA. POULE-SAVANNE À GORGE NOIRE.

Ortygometra carolina LÉOTAUD, p. 493.

251. *Porzana albicollis* (Vieill.).—CRAKE. GROSSE POULE-SAVANNE.

SCLATER, P. Z. S. 1868, p. 451.

Crex olivacea TAYLOR, p. 96.

Corethura olivacea LÉOTAUD, p. 499.

252. *Porzana cinerea* (Vieill.).—LITTLE CRAKE. PETITE POULE-SAVANNE.

Porzana cinerea SCL. P. Z. S. 1868, p. 456.

Ortygometra cinerea LÉOTAUD, p. 495.

253. *Rallus maculatus* (Bodd.).—SPOTTED RAIL. POULE D'EAU TACHETÉE.

LÉOTAUD, p. 559.

254. *Rallus longirostris* (Bodd.).—CLAPPER RAIL. POULE D'EAU GINGA.

LÉOTAUD, p. 491.

255. *Aramides axillaris* Lawr. — RED WATER-FOWL. POULE D'EAU ROUGE.

Aramides ruficollis LÉOTAUD, p. 498.

I secured one specimen of this bird feeding in the mangroves which border the Moruga River near its mouth.

256. *Aramides cayennensis* (Gm.).—GREAT WATER-FOWL. GROSSE POULE D'EAU.

Aramides chiricota LÉOTAUD, p. 496.

Apparently a common species in the forests near the rest-house. I did not, however, succeed in seeing it alive, and my four specimens were secured in traps set for small mammals. Its call, upon the identification of which the natives were all agreed, is a remarkable performance. Apparently two birds call together; one has one series of notes while the other has another and quite different series. The result suggests the combined notes of a Guinea-hen and a Turkey-hen, with occasionally the addition of others not unlike the yelping of a whipped puppy.

This singular concert was not given every day, and during my stay at the rest-house I heard it only half-a-dozen times. The birds call at sunset, and the cries of one pair seem to excite their neighbors, for, once started, the call is taken up and repeated by birds in different parts of the forest.

257. *Aramus scolopaceus* (Gm.).—CRAO.

Aramus guarauna LÉOTAUD, p. 489.

I saw, but failed to secure, one individual, presumably of this species, at the rest-house.

258. *Nycticorax violaceus* (L.). — YELLOW-CROWNED NIGHT HERON. CRABIER À CROISSANT.

TAYLOR, p. 95; LÉOTAUD, p. 433.

259. *Nycticorax nycticorax nævius* (Bodd.).—BLACK-CROWNED NIGHT HERON. CRABIER BATALI.

Nycticorax nævius LÉOTAUD, p. 431.

260. *Ardea cyanura* (Vieill.).—TCHOGUE. QUIOC.

Butorides virescens TAYLOR, p. 95.

Ardea grisea LÉOTAUD, p. 421.

Common. In habits this bird resembles *Ardea virescens*, but its notes are easily distinguishable from those of that species.

261. *Ardea cærulea* Linn. — LITTLE BLUE HERON. AIGRETTE BLEUE.

TAYLOR, p. 95; LÉOTAUD, p. 410.

Common at the mouth of the Caroni River.

262. *Ardea tricolor ruficollis* (Gosse). — LOUISIANA HERON. AIGRETTE À VENTRE BLANC.

Ardea leucogaster LÉOTAUD, p. 424.

263. *Ardea agami* Linn.—AGAMI. BLONGIOS.
LÉOTAUD, p. 412.

264. *Ardea candidissima* Gmel. — SNOWY HERON. AIGRETTE À PANACHE.
LÉOTAUD, p. 408.

265. *Ardea egretta* Gmel. — WHITE EGRET. GRANDE AIGRETTE.
LÉOTAUD, p. 406.

Common at the mouth of the Caroni River, where, while fishing, they marked the limit of shoal water.

266. *Ardea herodias* Linn. — GREAT BLUE HERON. AILERONNE À CALOTTE BLANCHE.
LÉOTAUD, p. 404.

Léotaud remarks that he had seen only one example of this bird, probably the one now preserved in the Victoria Institute. This is a nearly adult specimen of *A. herodias*, and measures: wing, 18.75; tarsus, 7.12; exposed culmen, 5.00 in.

267. *Ardea cocoi* Linn.—AILERONNE.
LÉOTAUD, p. 401.

268. *Ardetta involucris* (Vieill.)—QUIOC JAUNE RAYÉ.
Ardea variegata LÉOTAUD, p. 419.

269. *Ardetta exilis* (Gm.).—LEAST BITTERN. QUIOC JAUNE.
Ardea exilis LÉOTAUD, p. 415.

270. *Botaurus pinnatus* (Wagl.).—BITTERN. BUTOR.
LÉOTAUD, p. 429.
[April, 1894.]

271. *Tigrisoma brasiliensis* (L.).—RUSH CRABIER. CRABIER JONC.

LÉOTAUD, p. 426.

272. *Cancroma cochlearia* Linn.—BOAT-BILL. CRABIER BEC PLAT.

LÉOTAUD, p. 436.

273. *Tantalus loculator* Linn.—WOOD IBIS. SOLDAT. LÉOTAUD, p. 438.

274. *Guara rubra* (L.).—SCARLET IBIS. FLAMANT. *Ibis rubra* LÉOTAUD, p. 440.

275. *Ajaja ajaja* (L.).—ROSEATE SPOONBILL. SPATULE. *Platalea ajaja* LÉOTAUD, p. 438.

276. *Palamedea cornuta* Linn.—KAMICHI. HORNED SCREAMER. CODINNE-BOIS. LÉOTAUD, p. 488.

277. *Cairina moschata* (L.).—MUSCOVY DUCK. CANARD-PAYS. LÉOTAUD, p. 521.

278. *Dendrocygna discolor* Scf. & Salv.—WHISTLING DUCK. OUIKIKI AILES BLANCHES. *Dendrocygna autumnalis* LÉOTAUD, p. 507.

279. *Dendrocygna viduata* (L.).—TREE-DUCK. OUIKIKI BOURIKI. LÉOTAUD, p. 509.

280. *Dendrocygna fulva* (Gm.).—FULVOUS TREE-DUCK. OUIKIKI AILES ROUGES. *Anas bicolor* LÉOTAUD, p. 514.

281. *Erismatura dominica* (L.).—SQUAT-DUCK. VINGEON. LÉOTAUD, p. 525.

282. *Aythya affinis* (Eyt.).—LESSER SCAUP. CANARD FRANCE.

Fuligula marila LÉOTAUD, p. 522.

283. *Spatula clypeata* Linn.—SHOVELLER. CANARD SPATULE.

LÉOTAUD, p. 518.

284. *Anas discors* Linn.—BLUE-WINGED TEAL. SARCELLE À CROISSANTS.

Pterocyanea discors LÉOTAUD, p. 516.

285. *Anas americana* Gmel.—AMERICAN WIDGEON. VINGEON.

Mareca americana LÉOTAUD, p. 511.

286. *Fregata aquila* (L.).—MAN-'O-WAR BIRD. FRÉGATE. TAYLOR, p. 96; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173. *Atagen aquila* LÉOTAUD, p. 556.

Common in the Gulf of Paria. A small tree-grown rock at the entrance to the first Boca has for many years been famous as a roosting place for these birds. At the time of my visit about two hundred birds were perched upon the whitened trees. They were apparently all immature birds with white heads and breasts.

287. *Pelecanus fuscus* Linn.—BROWN PELICAN. GRAND-GOSIER.

TAYLOR, p. 96; LÉOTAUD, p. 552; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

A common bird in the Gulf of Paria.

288. *Phalacrocorax brasiliensis* (Gm.).—CORMORANT. PLONGEON À BEC CROCHU.

Graculus carbo? LÉOTAUD, p. 525.

289. *Anhinga anhinga* (L.).—ANHINGA. PLONGEON-SOIE. *Plotus anhinga* LÉOTAUD, p. 548.

290. *Sula leucogastra* (Bodd.).—BLACK - AND - WHITE BOOBY. FOU COMMUN.

RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Sula parva LÉOTAUD, p. 551.

291. *Sula piscator* (L.).—WHITE BOOBY. FOU À PATTES ROUGES.

LÉOTAUD, p. 551; RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

292. *Rhynchops nigra* Linn.—BLACK SKIMMER. BEC-EN-CISEAUX.

LÉOTAUD, p. 534.

293. *Anous stolidus* (L.).—NODDY. MAUVE NOIRE.

Anous melanogenys LÉOTAUD, p. 547.

294. *Sterna antillarum* (Less.).—LEAST TERN. PETITE MAUVE.

Sterna argentea LÉOTAUD, p. 545.

295. *Sterna dougalli* Montag.—ROSEATE TERN. MAUVE À BEC NOIR.

Sterna paradisæa LÉOTAUD, p. 539.

296. *Sterna eurygnatha* Saunders.—BLACK-LEGGED TERN. GRANDE MAUVE À PATTES NOIRES.

SAUNDERS P. Z. S. 1876, p. 655.

Sterna elegans LÉOTAUD, p. 542.

297. *Sterna maxima* Bodd.—ROYAL TERN. MAUVE À QUEUE BLANCHE.

RIDGW. Proc. U. S. N. M. VII, 1884, p. 173.

Sterna cayennensis LÉOTAUD, p. 535.

Sterna regia, *ibid*, p. 543.

Several were observed at La Brea.

298. *Phaethusa magnirostris* (Licht.).—YELLOW-FOOTED TERN. MAUVE À PATTE JAUNE SOUFRE.

Sterna chlorispoda LÉOTAUD, p. 537.

A bird of this species passed within gunshot of me at the mouth of the Caroni River, but was not secured.

299. *Geochelidon nilotica* (Hasseltg.).—MARSH TERN. MAUVE À DOS CENDRÉ.

Sterna aranea LÉOTAUD, p. 540.

300. *Larus atricilla* Linn.—LAUGHING GULL. PIGEON DE MER.

Larus ridibundus LÉOTAUD, p. 532.

301. *Podilymbus podiceps* (L.).—PIED-BILLED GREBE. PLONGEON.

Podilymbus carolinensis LÉOTAUD, 529.

302. *Colymbus dominicus* Linn.—SAN DOMINGO GREBE. PETIT PLONGEON.

Podiceps dominicus LÉOTAUD, p. 528.

303. *Crypturus pileatus* (Bodd.).—QUAIL. CAILLE.

Tinamus savi LÉOTAUD, p. 385.

A very common bird, frequenting the borders of the forests, and occasionally found far in the woods. It is preëminently a ground bird, and, like a Rail, seeks safety by running through the dense undergrowth. Only once did I startle one into flying—a short, whirring flight of a few yards.

Their call is a liquid, plaintive, trilling whistle of three to five seconds duration, and uttered at intervals of half a minute to a minute. Rarely, however, it is given more rapidly, and whistle succeeds whistle with increasing volume until the limit of the performer's vocal powers is reached. I did not observe the birds while uttering this latter call, due, perhaps, to some unusual excitement, but when whistling under ordinary conditions they did not assume an unusual position, but, stopping, raised their head and trilled their musical call.

They are rather curious, unsuspicious birds, and an imitation of their notes would sometimes bring them to within a few feet of me, where they would remain some minutes, evidently looking for the unseen caller. It was unusual, except in rainy or cloudy weather, to hear them calling during the day, but just before sunrise and just after sunset they could be heard in numbers.

The following species, given by Léotaud, I am unable to identify.

304. *Polytmus mellisugus*.—SAPHIR-SAVANNE.

LÉOTAUD, p. 138.

Specimen not in Léotaud's Collection.

305. *Columba caribæa* L.?

LÉOTAUD, p. 558.

306. *Nyroca leucothalma*.—CANARD ZIÉ-GRIS.

LÉOTAUD, p. 524.