

## NOTES ON THE BIRDS OF HISPANIOLA.

BY STUART T. DANFORTH.

DURING the summer of 1927 the author spent the period from June 14 to August 10 on the island of Hispaniola. From June 14 to July 27 he was accompanied by Mr. Frank P. Mathews of New York, and from July 2 to August 10 by Mr. John T. Emlen, Jr., of Philadelphia. We took an old Ford car over from Porto Rico, and most of our trips on the island were to places it was possible to visit by this method of transportation. Mathews and I landed at Santo Domingo City on June 14, and thanks to the prompt action and courtesy of the Dominican officials we were enabled to begin collecting the following day.

We stayed in the vicinity of Santo Domingo City until June 18, when we started across the island to Monte Cristi on the arid north coast, and worked in and near that town until June 28, with side trips to the irrigation project at Vázquez, and to Laguna del Salodillo, a large fresh water swamp near the Haitian border. June 29 and 30 we spent in the region of La Vega. Pine forests are found in the hills near that town. Then we had to return to Santo Domingo City, where on July 2 Emlen joined our party. From July 4 to 7 we collected at Higüey, Seybo and Hato Mayor in the eastern part of the island, and from July 9 to 11 in the vicinity of San Juan in the western part of the Dominican Republic. That region is fairly well wooded, and it was there that we found Parrots, Paroquets and many other interesting birds most abundant. On July 12 we crossed the border into Haiti at Comendador, going through Belladère and Las Cahobas to Port-au-Prince. On July 15 the U. S. Marine Corps furnished us free airplane transportation to Gonave Island, where we were the guests of Lieutenant Workus at Anse-à-galets until July 20. While on Gonave Island we collected only in the region between Anse-à-galets and Étroits, with the exception of a trip Mathews made to Boucan Legume. From July 22 to 24 the party split up for a few days, Mathews and Emlen paying a visit to the mountainous country at Kenscoff, while I made a trip to Lake Miragoane, the

coffee region known as Fond des Negres, Aquin, and Cayes, on the south peninsula. On July 27 Mathews embarked for New York. July 28 and 29 Emlen and I collected at some sloughs near the lower part of the Artibonite River northwest of St. Marc. We had previously visited the Étang Bois-Neuf, a brackish water lagoon south of St. Marc. July 30 we visited the Flamingo colony near Les Salines at the mouth of the Artibonite River. July 31 we proceeded to Cap Haïtien. August 2 and 3 we spent on Citadelle Hill near Milot, and on the 4th we recrossed the border (at Dajabón) back into the Dominican Republic, where we made a short second stay at Monte Cristi. August 7 we spent in the forested hills near Bonao, as guests of Dr. Ciferri, Director of the National Agricultural School, and his brother. Then we returned to Santo Domingo City, where on August 10 we embarked for Porto Rico.

Mathews and Emlen have most generously placed their field notes at my disposal, for which I wish to express to them my sincere thanks. These notes have been freely used in the preparation of this paper.

The birds collected by Mathews have been deposited in the American Museum of Natural History in New York. Those collected by Emlen have been presented to the Academy of Natural Sciences of Philadelphia, while mine are in my private collection, which is at present deposited at the College of Agriculture of the University of Porto Rico.

Dr. George N. Wolcott, formerly of the Service Technique in Port-au-Prince, Haiti, has examined the insect part of the contents of the bird stomachs, and all insect determinations were made by him. I wish to express my gratitude to him for this valuable service.

An annotated list of the birds observed and collected follows.

**Podilymbus podiceps antillarum** Bangs. WEST INDIAN PIED-BILLED GREBE.—About ten were noted at Laguna del Salodillo, and lesser numbers at some sinkhole ponds at Los Tres Ojos de Agua near Santo Domingo City, at a small lagoon at Haina, and at some sloughs near the Artibonite River in Haiti, where on July 28 and 29 some young about a third grown were seen.

**Oceanites oceanicus** Kuhl. WILSON'S PETREL.—Three followed the S. S. "Catherine" for about an hour off the southeast coast of the Dominican Republic on June 14.

**Puffinus lherminieri lherminieri** Lesson. AUDUBON'S SHEARWATER.—Emlen found this species common about fifty miles north of Puerto Plata on June 30.

**Phaëthon lepturus catesbyi** Brandt. YELLOW-BILLED TROPIC BIRD.—Emlen saw three at Puerto Plata on June 30.

**Pelecanus occidentalis occidentalis** Linné. BROWN PELICAN.—Observed at Boca Chica and San Pedro de Macoris, R. D., St. Marc and Les Salines, Haiti, and on Gonave Island.

**Sula leucogastra leucogastra** Boddaert. BOOBY.—A few seen off Saona Island on June 14 and Aug. 10. Mathews saw three at Boucan Legume, Gonave Island, on July 18.

**Sula piscator** Linné. RED-FOOTED BOOBY.—Mathews saw one near Saona Island on June 14.

**Fregata magnificens** Mathews. MAN-O-WAR BIRD.—A few seen off Saona Island June 14; in Santo Domingo Harbor June 14; San Pedro de Macoris July 1; Boca Chica July 4; Gonave Island July 17-20.

**Ardea herodias adoxa** Oberholser. WEST INDIAN GREAT BLUE HERON.—Recorded at Monte Cristi June 24-27 and Aug. 5; Aquin July 23; Les Salines July 30; and Gonave Island July 16.

**Casmerodius alba egretta** Gmelin. EGRET.—One seen at Laguna del Salodillo on June 26 and three at Les Salines on July 30 constituted our only records.

**Egretta thula thula** Molina.—Two seen at an irrigation pond at Vázquez on June 25; one in mangrove swamps at Monte Cristi on Aug. 5; and two by the river at Bonao on Aug. 7.

**Dichromanassa rufescens** Gmelin. REDDISH EGRET.—Two seen at Artibonite Sloughs on July 29.

**Hydranassa tricolor ruficollis** Gosse. LOUISIANA HERON.—Found practically everywhere in suitable localities. Recorded at Monte Cristi, Laguna del Salodillo, Vázquez, Port-au-Prince, Aquin, Lake Miragoane, Gonaïves marshes, Les Salines, Cap Haïtien and Anse-à-galets. Specimens were collected at Monte Cristi and Laguna del Salodillo. The stomach of one collected at Monte Cristi contained eight small fishes.

**Florida caerulea caerulescens** Latham. LITTLE BLUE HERON.—Fairly common and generally distributed, found at practically all points visited. Scarce on Gonave Island, where found only by Mathews.

**Butorides virescens maculatus** Boddaert. WEST INDIAN GREEN HERON.—Common, and found at practically all points visited, including Gonave Island.

**Nycticorax nycticorax naevius** Boddaert. BLACK CROWNED NIGHT HERON.—An adult seen at the Artibonite Sloughs on July 29, and six adults at Les Salines on July 30.

**Nyctanassa violacea violacea** Linné. YELLOW CROWNED NIGHT HERON.—Fairly common. Recorded at Monte Cristi, San Juan, Bonao, St. Marc, Les Salines and Cayes.

***Ixobrychus exilis exilis*** Gmelin. LEAST BITTERN.—Our only record was of one seen in some cattails at Laguna del Salodillo on June 26.

***Ajaia ajaja*** Linné. ROSEATE SPOONBILL.—Eight were seen at Laguna del Salodillo on June 26, and three in some marshes near the mouth of the Artibonite River on July 30.

***Plegadis falcinellus falcinellus*** Linné. GLOSSY IBIS.—A bird of this species frequented the Artibonite Sloughs, where Emlen and I observed it on July 28. It kept flying around over the marshes emitting a harsh grating sound, but always managed to keep just out of gunshot. The species has been recorded from the island by Verrill as a straggler.

***Phoenicopterus ruber***. FLAMINGO.—On July 30 Emlen and I visited a colony of Flamingos on some extensive flat salt marshes near the mouth of the Artibonite River in Haiti. About 150 birds frequented this region, but we could find no evidence of their nesting. The marshes extended for miles of barren mud with no vegetation. The birds that frequented these barren mudflats were shy and difficult of approach, but some birds fed near mangroves at the edge of the mudflats. By creeping stealthily through the mangroves we managed to get close enough to a flock of 92 for Emlen to photograph some of the birds. They walked sedately in phalanx formation, often stopping to grovel their bills in the mud. Their note was a low-pitched *ker-wonk*, with a somewhat metallic character suggestive of the note of a wild goose. We also heard of the recent occurrence of Flamingos at Les Étroites on Gonave Island, but did not succeed in finding them there.

***Dendrocygna arborea*** Linné. WEST INDIAN TREE DUCK.—Very abundant at Laguna del Salodillo, Les Salines, and the Gonaïves Marshes. Lesser numbers were seen in mangrove swamps near Grand Goave, and at Lake Miragoane and the Artibonite Sloughs. Twelve were shot at Laguna del Salodillo on June 26. Two stomachs contained nothing but small seeds, mostly of grasses.

***Dafila bahamensis bahamensis*** Linné. BAHAMA PINTAIL.—A pair was observed at Laguna del Salodillo on June 26; a flock of 30 at the Étang Bois-neuf on July 25; a few at the Artibonite Sloughs on July 28 and 29, where a male was collected on the 28th, and a dozen in the Gonaïves Marshes on July 30.

***Erismatura jamaicensis jamaicensis*** Gmelin. WEST INDIAN RUDDY DUCK.—Three males were noted at Laguna del Salodillo on June 26, and one of them was collected. Its testes were much enlarged, indicating that it was a breeding bird. It agrees well in color and measurements with Porto Rican specimens. It shows the following measurements (expressed in millimeters): Culmen 42.5; Wing 132; Tarsus 33; Tail 77.5; Breadth of bill at widest part 23. Its stomach contained mainly seeds of *Persicaria*, and some unidentifiable vegetable debris. In addition it contained white quartz gravel to the extent of 40 per cent of the total contents.

***Accipiter striatus striatus*** Vieillot. DOMINICAN SHARPSHINNED

HAWK.—Mathews saw one in the pine forest at La Vega on July 7, 1924 on a previous trip to the island.

**Buteo borealis jamaicensis** Gmelin. WEST INDIAN RED-TAILED HAWK.—Common at Petionville and Kenscoff July 23, and on the Citadelle Hill August 2; also seen at Monte Cristi June 27; San Pedro de Macoris July 7; Port-au-Prince July 14, and Gonave Island July 17.

**Coryornis ridgwayi** Cory. RIDGWAY'S HAWK.—Individuals seen east of Santo Domingo City on July 4 and 8, and at Haina on June 16. On July 18 on Gonave Island I observed three circling together over some lowland woods.

**Falco sparverius dominicensis** Gmelin. DOMINICAN SPARROW HAWK.—Common and generally distributed. Specimens collected at Haina, Monte Cristi, and on Gonave Island. A stomach from Haina contained nothing but grasshoppers.

**Colinus virginianus** Linné. BOB-WHITE.—Found to be quite common in the region west of Santo Domingo City. Also observed at Los Alcarrizos, Hato Mayor, Mirebelais, Grand Goave, and Fond des Negres. On June 30 at Los Alcarrizos a covey of five adults followed by a number of downy young was observed.

**Numida galeata** Pallas. GUINEA FOWL.—Common in the woods by the Yaquí River near Monte Cristi. They were usually seen in small flocks, at times on the ground, at others in the trees. They all took flight easily, though not excessively shy. A few were observed at La Vega, San Juan, L'Archahaie, St. Marc, and Les Salines.

**Aramus pictus elucus** Peters. LIMPKIN.—Limpkins were noted near mountain streams in the vicinity of Bonao and Villa Alta Gracia on August 7, where their loud, high-pitched, almost human-like note, which might be rendered *ca-wéw-oo*, was heard during the moonlight night and at early dawn. At that time we were unsuccessful in sneaking up on the birds, but later my friend, Mr. Ermanno Ciferri of Bonao, sent me a fine female collected near that town on December 14, 1927.

**Rallus longirostris vafer** Wetmore. HAITIAN CLAPPER RAIL.—Common in the mangroves at Monte Cristi, Les Salines, and on Gonave Island. The stomach of a female collected at Monte Cristi on June 24 contained nothing but one fiddler crab (*Uca*).

**Ionornis martinicus** Linné. PURPLE GALLINULE.—A male was collected at Vázquez on June 25, and two were seen at Laguna del Salodillo on June 26. The stomach of the bird collected was empty except for some finely comminuted vegetable matter and some white quartz gravel.

**Gallinula chloropus portoricensis** Danforth. ANTILLEAN GALLINULE.—Common at suitable localities throughout the island. A pair was collected at Laguna del Salodillo on June 26. On July 3 a pair with four downy young were noted at a sinkhole pond at Los Tres Ojos de Agua, near Santo Domingo City, and on July 29 a nest with one egg was discovered at the Artibonite Sloughs. The specimens agree very closely with Porto Rican specimens in color and length of tarsus.

**Fulica americana grenadensis** Riley. WEST INDIAN COOT.—A pair observed on a small pond at Haina on June 16 were probably of this subspecies, as Jamaican birds have proved to be referable to this form.

**Fulica caribaea** subsp. CARIBBEAN COOT.—Fairly common; recorded from Laguna del Salodillo, Haina, Lake Miragoane, Artibonite Slough, and Gonaïves marshes. A breeding female was collected June 26 at Laguna del Salodillo, and a male July 28 at the Artibonite Sloughs. The stomach of the former contained 40 per cent grass; 44 per cent *Persicaria* seeds, and 16 per cent white quartz gravel. The female is much smaller than any of my specimens from Porto Rico, and shows the following measurements: Wing 172 millimeters; Tail 52; Culmen with frontal shield 51; Depth of bill at base 14.5; Length of frontal plate 21; Width of frontal plate 14.

**Jacana spinosa violacea** Cory. WEST INDIAN JACANA.—A few seen in fresh water ponds and marshes at Haina, Laguna del Salodillo, Lake Miragoane, and Gonaïves. A breeding male was collected at Laguna del Salodillo on June 26. Its stomach contained many finely comminuted insects, also white quartz gravel to the extent of 45 per cent of the contents.

**Oedicnemus dominicensis** Cory. DOMINICAN THICK-KNEE.—Mathews and Emlen believe they heard this species calling at night at Kenscoff on July 22. In 1924 Mathews saw an individual at La Vega which had been recently captured, and reports that on July 14, 1926, his brother, R. S. Mathews, saw one at night near Gonaïves, blinded by the glare of automobile headlights.

**Charadrius semipalmatus** Bonaparte. SEMIPALMATED PLOVER.—A flock of ten was observed at Monte Cristi on August 5.

**Charadrius nivosus tenuirostris** Lawrence. CUBAN SNOWY PLOVER.—A pair was observed at the Étang Bois-Neuf and the female collected on July 25. The ovary was large, indicating proximity to the breeding season. The notes might be rendered *cur-ee, cur-ee*; very different from any other Plover notes I know. The stomach of the bird collected contained three large black ants (*Odontomachus haematodes*), and two Corixid bugs.

**Oethodromus wilsonius rufinuchus** Ridgway. RUFOUS-NAPE PLOVER.—Common along the sandy beaches and in the mangrove swamps at Monte Cristi, where four specimens were collected; also on the extensive salt flats at Les Salines, and on Gonave Island, where four were collected. Two stomachs contained only fragments of Crustaceans.

**Oxyechus vociferus rubidus** Riley. ANTILLEAN KILLDEER.—Common and generally distributed. Definitely recorded at Higley, Seybo, Hato Mayor, Haina, San Cristobal, Vázquez, Monte Cristi, Laguna del Salodillo, Dajabón, San Juan, Étang Bois-Neuf, Artibonite Sloughs, Les Salines, Gonaïves, Cayes, and Gonave Island. Collected at Haina and Vázquez.

**Squatarola squatarola cynosurae** Thayer and Bangs.—BLACK-BELLIED PLOVER.—A few observed at Monte Cristi June 24, 27, and

August 5; at St. Louis, Haiti, July 23, and Les Salines July 30; also at Anse-à-galets and Étroits, Gonave Island on July 17.

***Arenaria interpres morinella*** Linné. RUDDY TURNSTONE.—Our only records were of 15 seen at Les Salines on July 30 and 5 at Monte Cristi on August 5.

***Phaeopus hudsonicus*** Latham. HUDSONIAN CURLEW.—One was observed at Les Salines on July 30 by Emlen and myself.

***Actitis macularia*** Linné. SPOTTED SANDPIPER.—Recorded at L'Arcahaie July 25; Les Salines July 30; Monte Cristi August 4 and 5, and Bonao August 7.

***Tringa solitaria solitaria*** Wilson. SOLITARY SANDPIPER.—Two were seen at the Artibonite Sloughs on July 29.

***Catoptrophorus semipalmatus semipalmatus*** Gmelin. WILLET.—Two were observed at Les Salines on July 30, and a female was collected. Its stomach contained nothing but fragments of Fiddler Crabs (*Uca*).

***Totanus flavipes*** Gmelin. YELLOWLEGS.—About 100 were present at the Étang Bois-Neuf on July 25, and one was collected. Other records are: Artibonite Sloughs, July 28 and 29, six; Les Salines: July 30, 100; Monte Cristi, August 4 and 5, three.

***Totanus melanoleucus*** Gmelin. GREATER YELLOWLEGS.—Two were seen at Monte Cristi on June 24, 27 and August 5; six at Les Salines on July 30, one at Anse-à-galets on July 15, and twelve at Étroits on July 17.

***Pisobia minutilla*** Vieillot. LEAST SANDPIPER.—Many were observed at the Étang Bois-Neuf on July 25, and a female collected. Other records are: Artibonite Sloughs July 29; Les Salines July 30 (common); Monte Cristi August 4 and 5. The stomach of the bird collected contained many small dipterous larvae; also two pieces of gravel.

***Pisobia melanotos*** Vieillot. PECTORAL SANDPIPER.—Two were noted at Les Salines on July 30.

***Ereunetes pusillus*** Linné. SEMIPALMATED SANDPIPER.—Many were observed at the Étang Bois-Neuf on July 25, and two were collected. Several were seen at Les Salines on July 30 and at Monte Cristi on August 5. A stomach contained some small black seeds and a little sand.

***Himantopus mexicanus*** Müller. BLACK-NECKED STILT.—Very common at Laguna del Salodillo, Étang Bois-Neuf, the Artibonite Sloughs, Les Salines, and on Gonave Island. Pairs were found breeding at Haina and in the mangroves at Monte Cristi in June. One bird was noted at the medicinal sulphur springs near Port-au-Prince. Specimens were collected at Monte Cristi and Laguna del Salodillo. A stomach was nearly empty, but contained fragments of a moth and of a centipede, in addition to four pieces of white quartz gravel.

***Larus atricilla atricilla*** Linné. LAUGHING GULL.—One noted in Santo Domingo Harbor June 14; two at San Pedro de Macoris July 4; a few in Port-au-Prince Harbor July 27, and six at Les Salines July 30. Mathews also reports seeing many off Mole St. Nicholas on July 27.

**Gelochelidon nilotica aranea** Wilson. GULL-BILLED TERN.—I observed four at Lake Miragoane on July 22; 25 at Les Salines on July 30, and five at Monte Cristi on August 5, where I collected a male. The stomach of this bird contained two hairy-legged crabs. So far as I am aware this species has not been previously recorded from the island. Emlen saw two pairs at Étroits, Gonave Island on July 17.

**Sterna hirundo hirundo** Linné. COMMON TERN.—This Tern was common off Saona Island on June 14, and Emlen noted about fifty at the same place on July 1.

**Sterna albifrons antillarum** Lesson. LEAST TERN.—Mathews discovered a small nesting colony on the beach at the mouth of the Yaquf River at Monte Cristi on June 25. The species was also observed at Les Salines on July 30, and off Saona Island on August 10.

**Sterna fuscata fuscata** Linné. SOOTY TERN.—Observed by Emlen at Puerto Plata on June 30 and off the east coast of Santo Domingo on July 1; and by Mathews off Saona Island on June 14 and off Mole St. Nicholas on July 27.

**Thalasseus maximus maximus** Boddaert. ROYAL TERN.—Observed in Santo Domingo Harbor June 14 and August 9; at San Pedro de Macoris July 4; Monte Cristi June 24 and August 5; Puerto Plata July 1 (Emlen); Gonave Island July 17 (Emlen).

**Thalasseus sandvicensis acufavidus** Cabot. CABOT'S TERN.—Five observed at Monte Cristi on August 5. Mathews tells me that his brother, R. S. Mathews, saw six off Samaná Bay, with Royal Terns, on July 11, 1925.

**Hydroprogne caspia** Pallas. CASPIAN TERN.—Three noted at Les Salines on July 30.

**Columba inornata inornata** Vigors. HAITIAN BLUE PIGEON.—Five were observed in low woods near the mouth of the Artibonite River on July 29.

**Columba leucocephala** Linné. WHITE-CROWNED PIGEON.—Very common, in flocks, between Dajabón and Monte Cristi in June and August; also on Gonave Island, where specimens were collected. Many were seen at Seybo early in July, and lesser numbers at many other localities in both republics.

**Columba squamosa** Bonnaterre. SCALED PIGEON.—Very common on wooded hills near Bonao early in August. Our party shot ten, mostly immature birds with brown neck feathers. Mathews collected one at Laguna del Salodillo on June 26, and the species was observed at Seybo, La Vega, Citadelle Hill, Fond des Negres and on Gonave Island. Two stomachs contained palm nuts, and one had some small soft fleshy fruits with small seeds.

**Zenaidura macroura macroura** Linné. WEST INDIAN MOURNING DOVE.—Common. It was especially abundant in the vicinity of Monte Cristi, and along the road from Gonaïves to Cap Haïtien. Specimens were collected only at Monte Cristi.



**Zenaida aurita zenaida** Bonaparte. ZENAIIDA DOVE.—Very common, and quite generally distributed in both republics, also on Gonave Island. Specimens were collected at Vázquez, San Juan, and on Gonave Island. This Dove was especially abundant in the mountains west of Azua.

**Melopelia asiatica asiatica** Linné. WHITE-WINGED DOVE.—The only place that this dove was found to be abundant was in the arid country around Monte Cristi, though it was also quite common in the dry country between St. Marc and Gonaïves, and on Gonave Island. A few were seen near Santo Domingo City, San Juan, Belladère, Port-au-Prince, Lake Miragoane, Aquin and Cayes. Specimens were collected near Monte Cristi and on Gonave Island. Their stomachs contained the seeds and pulp of some fruit with a bright red juice.

**Chaemepelia passerina afflvida** Palmer and Riley. HAITIAN GROUND DOVE.—Common at practically all localities visited, including Gonave Island. Specimens were collected at Monte Cristi and on Gonave Island. Near San Isidro Emlen timed one flying parallel to the car and found that it attained a speed of thirty-four miles an hour. The stomachs all contained small seeds.

**Oreopeleia montana** Linné. RUDDY QUAIL DOVE.—One was collected in dense woods at San Juan on July 11, and on August 7 five were seen and two collected on wooded hills near Bonao. On this date we also found a nest. It was a crude affair placed on some matted brush about one foot above the ground and contained two buffy eggs. On July 17 Mathews collected a male at Anse-à-galets, Gonave Island. The stomachs were very muscular, and contained considerable gravel in addition to their contents of fleshy fruits and their seeds.

**Oreopeleia chrysia** Bonaparte.—KEY WEST QUAIL DOVE.—Five observed and a female collected in heavily wooded country near San Juan on July 10; one seen in a coffee estate at Fond des Negres on July 23, and one collected in the wooded hills near Bonao on August 7.

**Amazona ventralis** Müller. HAITIAN PARROT.—Not so abundant as the paroquet, but we found it more generally distributed. They were especially common in the wooded hills near Bonao, where we collected three on August 7. They were also common in the regions between Azua and San Juan; between Navarete and Monte Cristi, and near the Artibonite Sloughs, where I collected one on July 29. Lesser numbers were observed at Seibo, Comendador and between St. Marc and Gonaïves. They were much shyer than the Paroquets.

**Aratinga chloroptera chloroptera** Souancé. SANTO DOMINGO PAROQUET.—The Paroquet was abundant in the region from San Juan, R. D. to Mirebalais, Haiti early in July. Thousands were seen every day during the time spent in this region, mostly in flocks of from ten to a hundred or more. At San Juan many large flocks flew over the town to the east every morning, and at evening returned to the west, always calling shrilly as they flew. During the daytime many small flocks were found in the woods feeding on the fruits of the cupey (*Ficus* sp.). At

such times they were very tame and unsuspecting and permitted of close approach. Even when a bird was shot from a flock the rest either did not fly at all or just moved to a nearby tree. We collected nine specimens in this region. None appeared to be breeding. We also found Paroquets fairly common near Bonao on August 7, and observed four and collected two at Laguna del Salodillo on June 26. Other observations were a flock of 20 at Hato Mayor on July 7, eight at Vázquez on August 6, and a few at Petionville on July 23. They are more noisy and have higher pitched notes than the parrots.

**Coccyzus americanus americanus** Linné. YELLOW-BILLED CUCKOO.—Uncommon on the main island; much more abundant on Gonave Island. Apparently nesting. Recorded at the following localities: Monte Cristi, June 22; Dajabón June 23 (male collected); Laguna del Salodillo June 26; Santo Domingo July 1; Vázquez August 6; Bonao August 7; Artibonite Sloughs July 29. Six were collected on Gonave July 15–19. Three stomachs from Gonave contained entirely animal matter, Noctuid caterpillars comprising 98.3 per cent of the total. The only other item found was an Elaterid beetle (*Monocrepidus* sp.). One stomach contained forty-five caterpillars, another fifteen, and the third ten.

**Coccyzus minor teres** Peters. DOMINICAN MANGROVE CUCKOO.—Not very common. Observed at Seibo (a breeding male collected July 4, and another observed carrying nest material July 5); at Vázquez (one collected June 25); at Monte Cristi June 18–27; at Bonao August 7; on the Citadelle Hill August 2; and at Lake Miragoane (one collected July 22). A few were seen and collected on Gonave Island the middle of July. A stomach from Gonave contained ten caterpillars of three species, two of them Noctuids. A stomach from Lake Miragoane contained ten Nymphalid caterpillars, identified by Dr. Carl Heinrich, of the U. S. Bureau of Entomology as Nymphalidae, probably *Caligo* sp. In addition this stomach contained a katydid, a mantid (*Callimantis antillarum*), two weevils (*Lachnopus* sp.), two wasps, and a stinkbug (*Nezara viridula*).

**Saurothera longirostris longirostris** Hermann. DOMINICAN LIZARD CUCKOO.—Common at all points visited on the main island. Three were collected at Monte Cristi and one at San Juan. On June 22 near Monte Cristi I collected a juvenile bird scarcely able to fly. A stomach from Monte Cristi contained two cockroach nymphs and two Cicadas (*Odopoea cincta*). Another contained an Anolis lizard, two large cicadas, and a small grasshopper (*Schistocerca* sp.).

**Saurothera longirostris petersi** Richmond and Swales. GONAVE LIZARD CUCKOO. This bird was not as common on Gonave as typical *longirostris* is on the main island. Mathews collected a male and two females there July 15–20, and noted that their habitat, actions and notes were similar to those of their mainland ally. A stomach contained an Anolis lizard, two Sphingid caterpillars (one of them *Celerio lineata*); three Noctuid caterpillars, a butterfly emerging from a chrysalis, and the wings of a damsel fly.

**Hyetornis rufigularis** Württemberg. HAITIAN HYETORNIS.—The only example seen was a male collected by Mathews in the hills above Anse-à-Galets, Gonave Island, on July 19. It was in dense woods at an altitude of about 700 feet. Its stomach contained lizard remains (92 per cent), and insect fragments, including Coleoptera (8 per cent).

**Crotophaga ani** Linné. ANI.—Common everywhere in the lowlands on the main island and on Gonave. Specimens were collected at Seibo, Monte Cristi, and Anse-à-Galets.

**Temnotrogon roseigaster** Vieillot. HAITIAN TROGON.—Although we did not actually see the Trogon, in the hills near Bonao on August 7 we heard what competent men assured us was the note of this species. It was a *kruk, kruk*, repeated many times.

**Tyto glaucops** Kaup. HAITIAN BARN OWL.—One was flushed from a limestone cave at Los Tres Ojos de Agua, east of Santo Domingo City on July 3; and one was heard in a garden at Port-au-Prince on July 14.

**Speotyto floridana dominicensis** Cory. HAITIAN BURROWING OWL.—Common in the dry region between Navarete and Monte Cristi. A few were seen at Santiago, Túbano, San Juan, Port-au-Prince, and Cayes. At Monte Cristi in June these owls were nesting in holes in dry clay banks at the edge of a mangrove swamp. A male and two females were collected there on June 23. One stomach contained only a little mouse fur, and another had Coleopterous fragments (95 per cent), and the claws of a centipede. Mathews describes their note as a not very loud *coó-kuk, kuk, kuk*.

**Chordeiles minor gundlachii** Lawrence. WEST INDIAN NIGHT-HAWK.—Fairly common. Observed at Seibo, Hato Mayor, Santo Domingo, Los Alcarrizos, Bonao, Monte Cristi, San Juan and Cayes.

**Streptoprocne zonaris melanotis** Peters. HAITIAN COLLARED SWIFT.—Quite common at Bonao in June and August. Several were seen in the pine woods at La Vega on June 29 and 30. At San Juan on July 10 and 11 perhaps 200 were seen in a large mixed flock of Swifts. Several were seen at Comendador, R. D., and Las Cahobas, Haiti on July 12, and on the Citadelle Hill on August 2 and 3.

**Nephoecetes niger niger** Gmelin. WEST INDIAN BLACK SWIFT.—A few seen at Santo Domingo City in June and July, and many at Bonao in July and August. Common at San Juan July 10 and 11. A few seen at Haina and La Vega in June. Usually seen flying around after showers.

**Tachornis phoenicobia phoenicobia** Gosse. PALM SWIFT.—Locally common throughout the main island.

**Mellisuga catharinae** Sallé. HAITIAN BEE HUMMINGBIRD.—This diminutive Hummer was apparently rather scarce on the main island, where it was observed at Santo Domingo City, Bonao, La Vega, Cavailon, St. Marc, and Fond des Negres. On Gonave Island it was much commoner. One was collected at Santo Domingo, and four on Gonave. The note was a very loud, metallic *screek, screek*.

**Riccordia swainsonii** Lesson. SWAINSON'S HUMMER.—Common on

Citadelle Hill August 2 and 3. A few were seen at Hato Mayor, Bonao, Petionville (1 collected), and on Gonave Island (1 collected).

**Anthracothorax dominicus** Linné. DOMINICAN MANGO.—Common at practically all points visited, both on the main island and on Gonave. They fairly swarmed in the tree cactus country near Gonaïves. On July 19 on Gonave Island a nest was found, built twenty feet from the ground on a fairly large branch of a prickly leguminous tree. It contained two eggs. Specimens were collected at Santo Domingo, Monte Cristi, Laguna del Salodillo, La Vega, San Juan, Aquin, and on Gonave Island.

**Todus subulatus** Gray. HAITIAN TODY.—An abundant bird on the main island and on Gonave. A female collected at Santo Domingo on June 17 had an egg with the shell fully formed ready to deposit. On July 18 a nest was discovered on Gonave Island. It was in a low white clay bank not over 8 inches in height beside a much used footpath. The hole was a tunnel about 9 inches long with only a slight turn in its direction, so that with the aid of a flashlight the incubating bird could be observed. The note was a high-pitched *zeep, zeep*. Two specimens were collected at Santo Domingo, three at Seybo, four at Monte Cristi, one at San Juan, and five on Gonave. A stomach from San Juan contained an Attid spider, a small millipede, two ants (including *Cryptocerus haemorrhoidalis*), a Chrysomelid beetle (*Cryptocephalus*), and a Coreid bug (*Catorhintha guttata*). One from Monte Cristi contained fragments of moths and beetles, and one from Gonave three caterpillars and some small beetles.

**Todus angustirostris** Lafresnaye. NARROW-BILLED TODY.—The only example actually collected of this species was a male which I obtained in a coffee plantation at Fond des Negres on July 23. Its stomach contained a small green fly with red eyes, and a small brown beetle.

**Chryserpes striatus** Müller. HAITIAN WOODPECKER.—An abundant species on the mainland, but we saw none on Gonave Island. All that we collected were parasitized with roundworms. On June 20 one was observed feeding young in a nesthole in an organpipe cactus, and near Gonaïves on July 31 young were heard calling from a similarly situated nesthole. Specimens were collected at Seibo, Santo Domingo, and Monte Cristi.

**Nesocittes micromegas micromegas** Sundevall. HAITIAN PICULET.—Locally common in woods near the Yaqui River in the vicinity of Monte Cristi, and in the savanna woods near Seibo. A few were also observed at Bonao, Laguna del Salodillo, east of Azua, and on the Citadelle Hill. They were generally found in pairs, and were not very shy. On July 4 at Seibo a female was observed boring a hole in a partly rotted fence post, but on collecting her the ovary was found to be rather small. Two were collected at Monte Cristi and five at Seibo. A stomach from Monte Cristi contained entirely animal matter (a centipede, many ants, including a soldier of *Pheidole megacephala*, three earwigs, and the elytra of many small beetles). The call note is a rolling trill with a deep flycatcher-like

tone resembling somewhat that of *Tolmarchus taylori*. It might be rendered *tut, tut, tut, tut, tut wheár*.

**Nesocittes micromegas abbotti** Wetmore. GONAVE PICULET.—Much more common on Gonave than its very similar mainland ally is on the main island. It is almost abundant in the brushy woods, and its characteristic call note is heard on every side. We collected five specimens. The stomach contents of one consisted exclusively of the seeds and pulp of some fruit with a bright orange pulp.

**Tyrannus dominicensis dominicensis** Gmelin. GRAY KINGBIRD.—Common everywhere; collected at Seibo, Monte Cristi and Gonave Island. Nesting on Gonave the middle of July. A stomach from Gonave had 10 seeds of a fleshy fruit amounting to 60 per cent of the contents; also a cicada, a Membracid (*Orthobelus urus*), a fly, and a small beetle.

**Tolmarchus gabbii** Lawrence. HAITIAN PETCHARY.—Rather scarce and local in its distribution. Recorded near Santiago on June 18; at Vázquez (one collected June 25); at Monte Cristi (one collected June 20); Azua on July 9; San Juan (one collected July 10, and one seen the 11th); and at Fond des Negres (one collected in a coffee plantation July 23). A stomach from Vázquez contained five Coccinellid beetles (*Daulis ferruginea*), and a wasp (*Pachydymneurus nasidens*). One from Fond des Negres contained an Elaterid beetle (*Monocrepidius*), a Coccinellid (*Daulis ferruginea*), two Chrysomelids (*Colaspis chevrolati*), and a seed.

**Myiarchus dominicensis** Bryant. HAITIAN FLYCATCHER.—Common in the region from Santiago to Monte Cristi, and abundant near the mouth of the Artibonite River. Also observed at Seibo, Santo Domingo, San Juan and Lake Miragoane. Fairly common on Gonave Island. One collected at Seibo, one at Santo Domingo, five at Monte Cristi, and seven on Gonave. On June 23 west of Monte Cristi a juvenile bird just out of the nest was collected. The note of this species is a *whee* similar to that of *M. antillarum* but fainter and less vigorous. A stomach from Gonave contained ten weevils (*Lachnopus*) and a butterfly; another a seed, three caterpillars, and a small Chrysomelid beetle. A stomach from Monte Cristi contained only a few solanaceous seeds; another an *Erax rufitibia* and some beetle remains, and a third a small black Buprestid beetle, a weevil (*Lachnopus*), a grasshopper (*Schistocercus*), and an Asilid fly (*Erax rufitibia*) in addition to some unidentifiable animal matter.

**Blacus hispaniolensis** Bryant. HAITIAN PEWEE.—We found the Pewee rather scarce. Two were collected at Seibo July 4-6, and a few were seen at Santo Domingo and San Juan, where one was collected on July 11. On Gonave it was somewhat commoner, and we collected three. The note was quite similar to that of *B. blancoi* of Porto Rico. A stomach from Gonave contained a moth, a wasp (*Chalcis inserta*), and a small beetle.

**Lawrencina nana** Lawrence.—Fairly common on Gonave Island, but we found none on the mainland. Mathews collected a male at Anse-à-Galets on July 20. It was perched on top of a bush, calling with a fairly loud, unmusical trill.

**Progne dominicensis** Gmelin. CARIBBEAN MARTIN.—Quite generally distributed in small numbers. Observed at Higüey, Santo Domingo, Monte Cristi, Laguna del Salodillo, Comendador, Grand Goave, Aquin, Cayes, and Cap Haïtien.

**Petrochelidon fulva fulva** Vieillot. HAITIAN CLIFF SWALLOW.—Observed at most places visited. In June and July a colony of about twenty-five pairs was nesting in an inaccessible place on a ledge in an overhanging cliff over the sea at Santo Domingo. They had young the first week in July. On August 2 and 3 we observed large numbers nesting in the ruins of the Citadelle. Many were flying over the mangrove swamps on Gonave Island, where we collected five, all immature, on July 18-20. A stomach contained many comminuted small beetles, a bug, and part of a snail shell.

**Corvus palmarum** Württemberg. LESSER HAITIAN CROW.—Common in the dry brushy region between Monte Cristi and Navarete. They were not shy, and were very easy to collect. They occurred in flocks, and were molting badly the latter part of June. Their caw was much like that of *C. brachyrhynchus*, but higher pitched, not so loud, and with a sort of burring, nasal quality. They were also common in the rolling, hilly, rather sparsely vegetated country between Las Matas, R. D., and Mirebalais, Haiti; in the vicinity of St. Marc and the Artibonite river sloughs, and in the tree cactus country east of Gonaïves. There they were particularly tame and curious, and could easily be photographed with a hand camera. They were also fairly common in xerophytic forests near Port-au-Prince. Dr. Wolcott tells me he has seen them eating and flying away carrying Sphinx caterpillars (*Celerio lineata*) from the cotton and sisal plantation at Hatte Lathan. Three specimens were collected near Monte Cristi, and one at Vázquez. Three stomachs contained lizards (20 per cent); snails (5 per cent); Coleoptera (6 per cent; including *Prepodes*, *Calosoma* and others); miscellaneous insects (3 per cent; caterpillars, a cicada, and Hemipterous fragments); fruit pulp (17 per cent); seeds (23 per cent); grass (5 per cent); stones (21 per cent).

**Corvus leucognaphalus** Daudin. HAITIAN CROW.—A few seen at Bonao, in the pine woods at La Vega, between Port-au-Prince and St. Marc, and one on Gonave Island (July 15). At Las Cahobas we found a dozen in a river valley in the same trees with *C. palmarum*, and we collected two females. One had a bright red iris, the other a yellow one. Their notes were a most uncrowlike, guttural sound.

**Mimus polyglottos dominicus** Linné. DOMINICAN MOCKINGBIRD.—Abundant at all points visited on the main island and on Gonave. Observed feeding young in nest at Monte Cristi on June 22. On Gonave on July 16 a nest with two eggs and a new-hatched young was found, and on July 18 a nest with large young and another with four eggs. The eggs were blue with large brown spots. Most of the nests found were in acacia trees, though one was in a scrubby mangrove. Specimens were collected at Seibo, Monte Cristi, and on Gonave Island. Two stomachs from Gonave contained nothing but the pulp and seeds of fruits.

**Mimocichla ardosiacea ardosiacea** Vieillot. HAITIAN THRUSH.—Fairly common in wooded country on the main island, much scarcer on Gonave. Observed at Seibo, Santo Domingo, Los Alcarrizos, Bonao, La Vega, Monte Cristi, Fond des Negres, and Citadelle Hill. The Haitian natives call this bird the "*pi-pi-weel*." An adult accompanied by young on the wing was observed on Gonave on July 18. A stomach from San Juan contained a seed and two cockroaches, one of them being recognizable as *Epilampra sabulosa*. A stomach from Gonave contained four seeds, a snail, a Lamellicorn beetle (*Lachnosterna hogradi*), and a millipede.

**Dulus dominicus** Linné. PALM CHAT.—An abundant and gregarious species everywhere on the main island where there are Royal Palms, for them to nest in. Sometimes they nest in other palms, as at Le Trou. Their large nests form conspicuous objects. A flock of Palm Chats produce a sound not unsimilar to that of English Sparrows. Not observed on Gonave Island. Specimens collected only at Santo Domingo and Haina. A stomach contained only large seeded fruits, apparently palm berries.

**Vireo olivaceus olivaceus** Linné. JAMAICAN VIREO.—Abundant and generally distributed both on the main island and on Gonave, but the Gonave birds sang quite a different song. Mathews describes it as "a two or three phase vireo-like whistle, but with the accent on the beginning of each phrase, '*wheé-tu-lu, wheé-tulu, whéar*,'" instead of the ordinary *julian-chivi* or *whip-tom-kelly* of the main island bird. Numerous nests with from 1 to 3 eggs were found on Gonave July 15–20, at heights of from five to nine feet above the ground. The nests were very similar to those of the Red-eyed Vireo. Specimens were collected at Seibo, Haina, Bonao, San Juan and on Gonave. A stomach from Bonao contained entirely vegetable matter (fruit fibers and small seeds). Two from Gonave contained 72.5 per cent vegetable matter (small drupes and seeds) and 27.5 per cent animal matter, including two beetles (one of them *Lachnopus*), two caterpillars, and the pupa of a moth.

**Coereba bananivora** Gmelin. HAITIAN HONEY CREEPER.—Widely distributed, but nowhere abundant. Observed at Seibo, Hato Mayor, east of Santo Domingo City, Bonao, La Vega, Monte Cristi, Laguna del Salodillo, San Juan, Las Cahobas, Fond des Negres (quite common in coffee plantations), and on Citadelle Hill. They were somewhat commoner on Gonave, where a nest with one egg was found six feet from the ground in a shrubby tree on July 17. Specimens were collected at Hato Mayor, San Juan, and on Gonave.

**Dendroica petechia albicollis** Gmelin. DOMINICAN GOLDEN WARBLER.—Fairly common in the mangroves at Monte Cristi, and in a dry creekbed near the sea between Monte Cristi and Dajabón. A few seen at Port-au-Prince, and common in the mangroves at Les Salines, and on Gonave, where young were on the wing at the time of our visit. Three were collected at Monte Cristi and eight on Gonave. A stomach from Monte Cristi contained a Dolichopodid fly, a green fly, and a green wasp.

Five from Gonave contained entirely animal matter. Caterpillars, mostly Nymphalid, formed 32 per cent; Coleoptera 30 per cent (largely Chrysomelidae, among which *Epitrix cucumeris* was recognized); an ant-lion emerging from the cocoon 8 per cent; Diptera 14 per cent, including fragments of a large Syrophid fly, *Volucella obesa*; and Hymenoptera 4 per cent (a black wasp and an ant). Bits of lizard skin were found in two stomachs.

**Dendroica pinus chrysoleuca** Griscom. HAITIAN PINE WARBLER.—Observed in the pine woods near La Vega on June 29 and 30. One was shot, but could not be recovered in the thick undergrowth.

**Hyphantornis cucullatus** (Swainson). HOODED WEAVER.—This Weaver-bird seems to have become well established at many points in Haiti. On July 14 a nesting colony was observed and photographed in Royal Palms on the Brigade Hospital Grounds in Port-au-Prince. The nests were globular structures suspended from the undersides of the palm leaves. A small colony was also noted in a leguminous tree on the sisal plantation of the Service Technique, and five colonies on the road to St. Marc, in low trees over the edge of the sea. At the Artibonite Sloughs there was a nesting colony in some trees growing in the water, and the birds were quite common in that vicinity. A few were also seen south of Gonaïves, but no nests observed there. Their song was loud and wheezy. Specimens were collected south of St. Marc, and at the Artibonite Sloughs.

**Agelaius quisqueyensis** Danforth and Emlen. HAITIAN REDWING.—This bird we found only in the vicinity of the Artibonite Sloughs, where we saw about twenty on July 29. Some were feeding young on the wing. We collected two males and three females. Seeds could be distinguished in their stomach contents, but otherwise the food was too finely comminuted for making satisfactory determinations.

**Icterus dominicensis** Linné. DOMINICAN ORIOLE.—Fairly common and generally distributed on the main island. Two females were collected at Vázquez on June 25. A stomach contained only insects, mostly too much comminuted for identification, but a *Catorhintha guttula* and a *Cryptocephalus* were recognized.

**Holoquiscalus niger niger** Boddaert. HAITIAN GRACKLE.—Locally common on the main island, but absent on Gonave. Recorded at Seibo, Hato Mayor, San Pedro de Macorís, Santo Domingo (rare), Haina, Bonao (collected), La Vega, Vázquez, Monte Cristi (common along the beach east of the town; specimens collected); Laguna del Salodillo, San Juan, Port-au-Prince, Kenscoff, Lake Miragoane, Fond des Negres, Artibonite Sloughs, and Gonaïves. A colony of six pairs was found nesting in trees over the Artibonite Sloughs on July 29. One nest had two eggs, while the others contained young. A stomach from Bonao contained an Anolis lizard and four seeds. One from Monte Cristi contained a lizard, four Otiorhynchid beetles (*Lachnopus*), an Elaterid (*Monocrepidius*), and a cricket (*Gryllus assimilis*).

**Phaenicophilus palmarum** Linné.—This was one of the most abund-



ant birds on the main island, both in moist and dry regions, but we did not find it on Gonave. They make a great variety of harsh and metallic sounds, one of which sounds much like the call note of a Song Sparrow. Specimens were collected at Seibo, Santo Domingo, Haina, Monte Cristi, and San Juan. Five stomachs contained 69.4 per cent vegetable matter and 30.6 per cent animal matter. Three stomachs contained nothing but seeds and drupes, and these occurred in smaller quantities in the other two stomachs. The animal matter consisted of insects, among which a large brown tree cricket, a small green katydid, a Bibionid fly, a wasp, and a Coreid bug (*Catorhintha guttula*) were recognized.

**Phaenicophilus poliocephalus coryi** Richmond and Swales.—This form was common on Gonave Island, in thick underbrush near the ground. Adults were observed feeding young on July 17. We collected 13 specimens. The contents of five stomachs were examined, and found to contain 95 per cent animal and 5 per cent vegetable matter, the latter consisting of seeds in two stomachs. Orthoptera formed 12 per cent (a large cockroach nymph); Lepidopterous larvae 45 per cent, (mostly Noctuids, in 4 stomachs); Hemiptera 8 per cent (nymphs of Pentatomidae and Membracidae); and Coleoptera 28 per cent. These were mostly Tenebrionidae, among which a *Hymenorus* sp. was recognized. *Lachmopus* weevils were found in three stomachs and formed 11 per cent, and an Elaterid in one and Carabids in one, two snails in one stomach formed 2 per cent.

**Calypophilus frugivorus abbotti** Richmond and Swales.—Probably not uncommon on Gonave, but rather difficult to observe on account of the dense undergrowth in which they live, though they were not especially shy. Their song was a rather buzzy, whistled “wee-chee-chee-chee-chee.” I collected two males. Parasitic nematodes were found under the skin of the breast and belly of one of them. Their stomachs contained 10 per cent vegetable matter (two seeds in one stomach), and 90 per cent animal matter (a moth; an ant, *Pheidole megacephala*; two hairy spiders, a thrips, and the oötheca of a cockroach).

**Tiaris olivacea olivacea** Gmelin. YELLOW-FACED GRASSQUIT.—Abundant everywhere except in arid country on the main island. Not particularly abundant on Gonave. At Hato Mayor on July 7 we observed a nest a foot above the ground in a small bush. The five eggs were spotted with red, especially at the larger end. On July 17 on Gonave we found another nest four inches above the ground concealed in a small rounded shrub the leaves of which possessed hairs with decidedly poisonous qualities. This nest contained four eggs. Specimens of this bird were collected at Santo Domingo, Bonao, and on Gonave. Stomachs contained nothing but small seeds.

**Tiaris bicolor marchii** Baird. BLACK-FACED GRASSQUIT.—Decidedly less common than the Black-faced species. A few were observed at Santo Domingo City (collected), Haina, Bonao, Las Matas, St. Marc, Gonaïves, Cap Haitien, Citadelle Hill, and on Gonave (collected). Stomachs contained nothing but small seeds.

**Pyrrhulagra violacea affinis** Baird. HAITIAN GROSBEAK.—Fairly common in thick brush, close to the ground, both on the main island, and on Gonave. On July 17 at Étroits, Gonave Island, Emlen found and photographed a nest. It was a domed affair, placed three feet from the ground in an open bush, and contained four white eggs spotted with brown, especially at the larger end. Specimens of this bird were collected at Santo Domingo, Haina, and on Gonave.

**Ammodramus savannarum intricatus** Hartert. SANTO DOMINGO GRASSHOPPER SPARROW.—Common and singing in grassy field alternating with woodland patches at Hato Mayor on July 4-7. A few flew up as though they had nests, but these could not be located. We collected two females and a male on July 7. Two were seen between Belladère and Las Cahobas on July 12.

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