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BIRDS OF THE ISLE OF PINES.

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INTRODUCTION.

THE following account of the birds of the Isle of Pines is, for the most part, based on a large collection and field notes made by one of us (Zappey) in the spring and early summer of 1904. Zappey had, however, visited the island once before — in March, 1902 — and the few birds, mostly North American migrants, taken on that trip that were not observed on the later one, are included.¹ In addition to this material, William Palmer and J. H. Riley, who spent two weeks in July, 1900, near Nueva Gerona, have most kindly placed in our hands their notes and lists of birds observed and taken. And lastly, in order to make our list complete, we include such species as were recorded from the island by Poey, by Cory, and by Gundlach.

Mr. Riley has made many comparisons for us with the material in the United States National Museum, and has otherwise done everything in his power to help us, and we here express our most hearty thanks for all his kindness.

¹ This first collection, unfortunately, did not remain in this country but went to the Tring Museum, and thus far has not been reported upon.

LITERATURE.

While no very complete list of the birds of the Isle of Pines has been published, many references to the ornithology of the island can be found in the writings of Poey, Cory, and Gundlach,

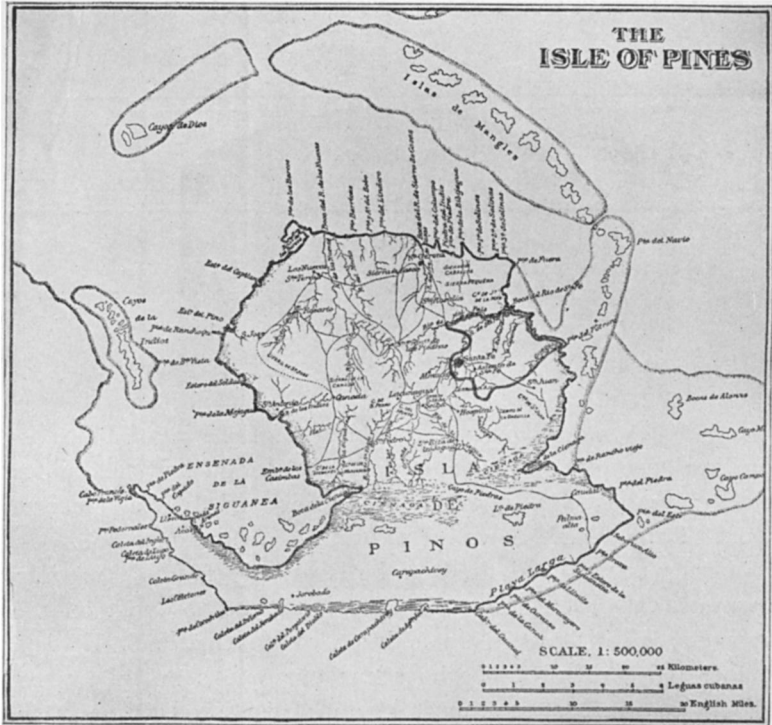


FIG. 1.—Map of the Isle of Pines.

and in the three parts that have already been issued of Ridgway's *Birds of North and Middle America*. The full references to these works are as follows:—

Felipe Poey, *Memorias sobre la Historia Natural de la Isla de Cuba*, 1854.

(Tomo 1, pp. 426–427; a nominal list of birds observed by Gundlach during a six days' stay at Nueva Gerona.)

C. B. Cory, *Catalogue of West Indian Birds*, 1892.

(Numerous references to the birds of the Isle of Pines, probably from MSS. furnished the author by Gundlach. The Isle of Pines appears in the distribution of the various species, usually as Greater Antilles, No. 2.)

Juan Gundlach, *Ornithologia Cubana*, 1895.

(The last work of this distinguished Cuban ornithologist, containing many references to the birds of the Isle of Pines.)

Robert Ridgway, *The Birds of North and Middle America*. Bulletin of the United States National Museum, No. 50. Part I, 1901; Part II, 1902; Part III, 1904.

(Each species known to the author to occur on the Isle of Pines, is recorded from there, and in one or two instances measurements are given for comparison and critical remarks made, as for example in the case of the Spindalis.)

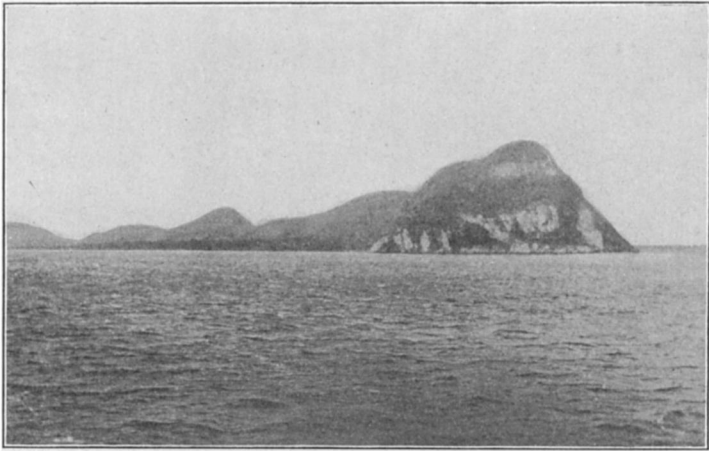


FIG. 2.— Isle of Pines, as seen from the northeast. The rocky islet in the foreground was the roosting place of hundreds of Cormorants and a few White Ibises.

PHYSICAL ASPECT OF THE ISLE OF PINES AND CLIMATE.

The Isle of Pines lies about 60 miles south of Cuba, and can be reached by rail from Havana to Batabano and thence by sailing vessel or steamer to the island.

The Isle of Pines is about 30 by 40 miles in extent, containing some 1240 square miles, or a trifle less than the State of Rhode Island. It is divided into two parts, the northern one

being the larger, by a fresh-water swamp, the "Cienaga," that runs across the island from east to west.

The land south of the Cienaga is of coral formation with a very shallow soil spread over the coral rock, and with deep holes or pits everywhere. A number of prints of fossil shells of various kinds were observed in the coral rock. Fires devastate this part of the island, burning up the soil and the very roots of the trees and leaving nothing behind but the bare coral rock, and the region is very sparsely inhabited. The trees of this region are mostly hard wood, there being no pine and very few royal palms.

North of the Cienaga, the country is of a very different char-

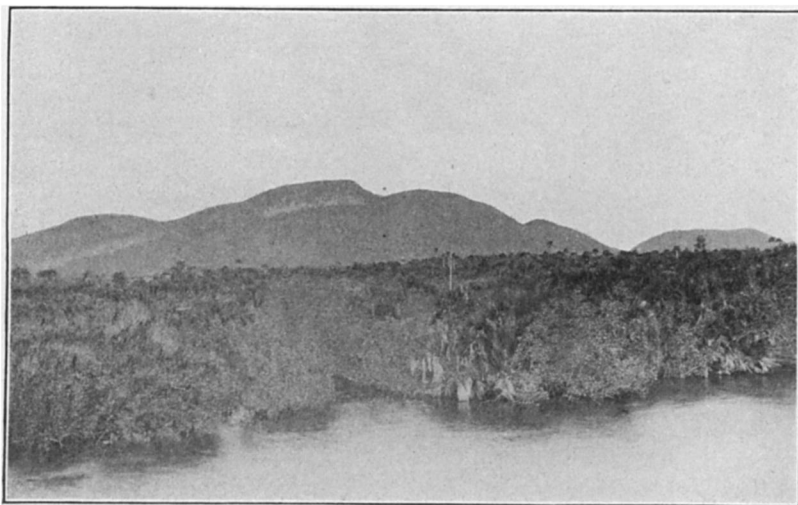


FIG. 3.—Casas River, Caballos Mountains in the distance. Mangrove bushes in the foreground along the river, and as the land rises, dense palmetto scrub.

acter. There are here a number of mountains rising abruptly from the plain, Pico de la Dacuilla, the highest, having an altitude of about 2000 feet. The flat country is diversified by pastures, cultivated fields, open pine woods, and groves of royal palms and palmettos and along the water courses there are dense tropical forests. The mountain sides are very rocky and are clothed chiefly with scrub and thorn bushes and, where there is soil enough, some good-sized trees. The banks of the rivers and

many parts of the shore of the island are fringed with mangroves which give way as the land rises, to a dense growth of palmetto.

In the Isle of Pines the rainy season begins in the early part of May, and rain falls continually until October. The character of the country is entirely changed. The Cienaga is covered by two or three feet of water and the rivers, which are nearly dry in the dry season, become torrents.

Great difficulty was experienced in taking photographs especially after the rain began, but the accompanying views selected from a great many, give some idea of the general character of the island.

BIRDS.

About eighty-three species of birds, most of them resident, breed in the Isle of Pines.¹ Besides these, a few northern species either winter there or make a short stop in spring or autumn, but the list of migrants thus far is not a long one.

Owing to its nearness to Cuba and to the fact that, geologically speaking, its separation from that island was recent, one would not look for any marked peculiarities in the birds of the Isle of Pines, and such do not exist. Nevertheless many of the birds of the island have already become slightly changed and although they strictly represent the Cuban species, it seems best to give some of them distinctive names. The changes that have thus far taken place are chiefly in size and proportions, colors in most of the species remaining the same or very similar. There is no rule in these changes in size,—some of the birds of the Isle of Pines are larger, others are smaller than their Cuban representatives.

All the birds of the island are well known by the natives, who have a name for nearly every species. In the following list we give these names. In some cases we may be slightly in error in the spelling of them as it is impossible to find a native who can write them correctly.

¹ This number includes some species probably now extinct and a few larger birds—such as the Frigate Bird and Flamingo—that may or may not actually breed in the island.

Some species that were seen and not taken by either Zappey or Palmer and Riley, but were probably correctly identified, we give with a question mark. It would be a pity to leave these out of a list of the birds of the island and yet there must ever be a doubt about such records, and this seems to us the best way to treat such cases. A few species, also included in the following list, rest solely on Poey's authority (based on a list furnished him by Gundlach).

Following is a list of the birds¹ of the Isle of Pines, with

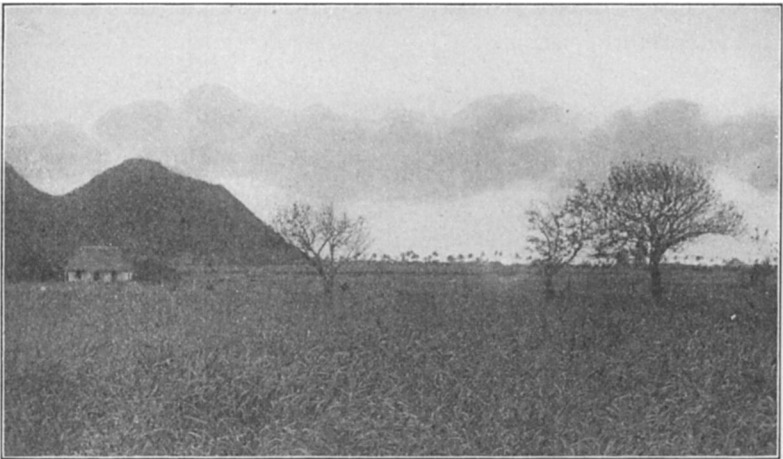


FIG. 4.—Country back of the town of Nueva Gerona. Casas Mountains in the distance.

notes on their habits, distribution, etc., and with critical remarks, and descriptions of a few new forms, drawn from the various sources enumerated above.

1. **Podilymbus podiceps** (Linn.).—An adult female and three downy young were found by Palmer and Riley in a small lake near Nueva Gerona. One of the young was taken but the old bird was very wary and could not be secured.

¹ The systematic sequence of this list is about the same as that followed by Ridgway in the *Birds of North and Middle America*, now appearing in parts, based principally upon Hans Gadow's *A Classification of Vertebrata, Recent and Extinct*, 1898, only turned about so as to bring the "lower" (less specialized) orders first. Colors are according to Ridgway's *Nomenclature*, and measurements are in millimeters.

Two were shot by Zappey, and one of them saved, in March, 1902, at Laguna Grande, but in the spring of 1904 no Pied-billed Grebes were observed anywhere in the island.

2. **Phalacrocorax dilophus floridanus** (Aud.). "CORNA" — Cormorants were common along the seacoasts of the island and among the outlying cays, and undoubtedly all birds inhabiting the salt water belong to this form, which has been recorded from Isle of Pines by Cory and by Gundlach. Specimens of the Florida Cormorant were secured by Palmer and Riley on the Cuban coasts, and many were observed at Batabano opposite the Isle of Pines.

3. **Phalacrocorax vigua mexicana** (Brandt). "CORNA." — One young adult female, was taken in the Cienaga at Pasadita in May. This was the only one observed.

This specimen is rather larger than usual for *mexicana*, but E. W. Nelson who has compared it for us with the large series collected by himself in Mexico, says that it is equalled and even exceeded by some Mexican individuals, and authors generally have considered the Cuban Fresh-water Cormorant to belong to this race rather than true *vigua*.

The skin, no. 13,236, measures: wing, 268; tail, 164; tarsus, 50; exposed culmen, 50.

4. **Anhinga anhinga** (Linn.). "CORNA REAL." — The Anhinga was found by Zappey in the Cienaga only, where it was fairly common and a number might be seen any day sitting on dead branches of trees in different parts of the swamp, with wings and tail extended to the rays of the sun. One was seen by Palmer and Riley at Nueva Gerona.

Two specimens — a fine pair of adults — taken by Zappey, May 28, 1904, do not differ in any way from Florida birds.

5. **Fregata aquila** Linn. "RABIHORCADO." — Occurs occasionally off the south coast of the island, and during a severe storm was seen high in air passing over the town of Santa Fé. Palmer and Riley also saw it at Managua.

6. **Pelecanus fuscus** Linn. "ALCATRAZ." — A few individuals were seen on the south, but none on the north coast.

7. **Pelecanus erythrorhynchos** Gmel. — The White Pelican has been recorded by Cory from Isle of Pines. None were

observed by Palmer and Riley nor by Zappey on either trip. It is probably a very irregular winter visitor to the island.

8. *Ardea repens* sp. nov.

Type from the Cienaga, Isle of Pines, adult ♀, no. 13,241, Coll. of E. A. and O. Bangs. Collected May 24, 1904, by W. R. Zappey.

Characters.—Similar to *Ardea occidentalis* Aud. of south Florida but very much smaller.

Color.—Entirely pure white; the bill yellow; legs and feet greenish yellow.

Measurements.—Type: wing, 440; tail, 156; tarsus, 172; exposed culmen, 144.

Since the ornithology of Cuba has first been known, up to the present time, references to *Ardea occidentalis* can be found in the literature, but specimens do not appear to have been taken. Birds from Cuba and the Isle of Pines are in all probability the same, and certainly cannot be referred to *A. occidentalis*, being far too small. This is all that can be said at present. Future research may prove this bird to be the white phase of the Great Blue Heron of Cuba, but here again there appear to be no specimens, and it is not known to what form that bird belongs. Under the circumstances we have thought it best to give the white bird a name as it certainly is not *A. occidentalis*.

Zappey saw this bird but once — the one taken. Palmer and Riley observed a few about the cays.

9. *Ardea herodias* Linn. (*sub. sp. ?*).—The Great Blue Heron was seen on several occasions in the Cienaga, but was very shy and none were secured. A few were also seen by Palmer and Riley about the cays.

As stated under the preceding species, it is still unknown to what form the Great Blue Heron of Cuba and the Isle of Pines belongs, and possibly it may be the colored phase of the bird we describe as *Ardea repens*.

10. *Herodias egretta* (Wilson). "GARCILATE."—A few Egrets were seen, in different parts of the island, both inland and on the seacoast, always singly, and they were very shy.

In former years it was abundant, but has been nearly extirpated for its plumes.

A fine adult female was taken at La Vega, May 22, 1904, and one was obtained by Palmer and Riley at Nueva Gerona.

11. *Florida cærulea cærulescens* (Latham). "GARGA AZUL." — Very common, being found both on the seacoasts and in the Cienaga.

Two specimens, ♂ and ♀, were taken respectively at Guanawana, May 15, and in the Cienaga, May 23.

12. *Leucophoyx candidissima* (Gmel.). "GARGA BLANCA."

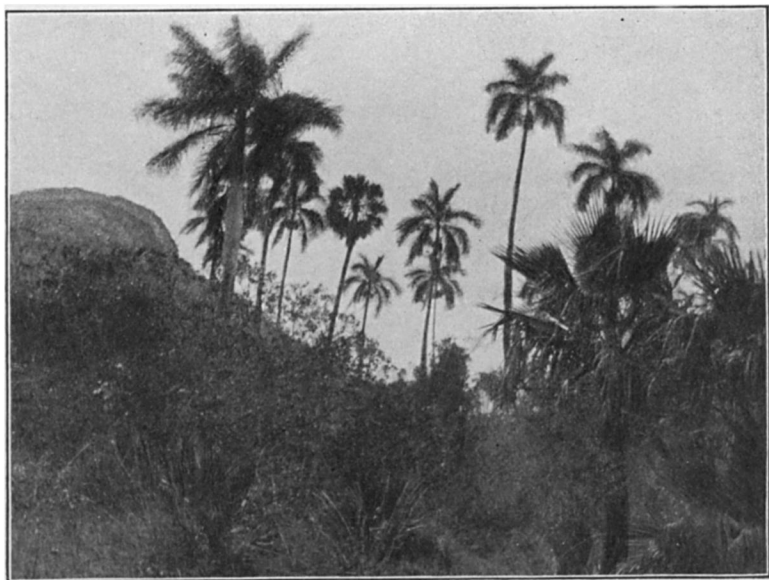


FIG. 5.— Palmetto and royal palms near the Casas Mountains.

— The Snowy Heron is now very rare in the Isle of Pines, having been killed off for its plumes. One was seen in the Cienaga, and at Jucaro a native had a wounded bird that was kept alive in confinement.

13. *Hydranassa tricolor ruficollis* (Gosse). "GARGA." — This species is not uncommon in the seacoast lagoons and the brackish water of the rivers, but was only once seen in the Cienaga.

One female was taken in the Cienaga, May 23, 1904.

14. *Nyctanassa violacea* (Linn.). "GUANABA."—Recorded from Isle of Pines by Poey, Cory, and Gundlach. None were seen by Zappey nor by Palmer and Riley.

15. *Nycticorax nycticorax nævius* (Bodd.).—In March, 1902, a flock of Black-crowned Night Herons was seen at a fresh-water lagoon in the northern part of the island and two others in a salt lagoon at Bibeyhagua. It is also recorded from the island by Poey.

16. *Butorides virescens maculata* (Bodd.). "AQUAITA."—The Green Heron occurs, in small numbers, wherever there is fresh water, and was also occasionally seen along the sea-coast.

As has been pointed out by Riley, all West Indian Green Herons are much alike, and must be called by Boddært's name. The form differs from true *virescens* of the mainland chiefly in being smaller.

Two males were taken: one at Bibeyhagua, May 15, the other at Santa Fé, April 20.

17. *Butorides brunescens* (Lembeye).—Two specimens of this dark-colored bird were taken by Palmer and Riley near Nueva Gerona.

We cannot avoid a strong impression, despite its peculiar coloration and the fact that young individuals are as different as adults from *B. virescens maculata*, that this supposed species is a color phase of the ordinary bird. This, however, can be proved by careful observation only, by ascertaining whether the two breed together or mate each with its own kind only.

18. *Ardetta exilis* (Gmel.).—The Least Bittern was abundant in the Cienaga in March, 1902. On the 1904 trip, made later in the spring, none were found anywhere, leading to the conclusion that those seen in March were winter residents and that the bird does not breed in the Isle of Pines.

19. *Botaurus lentiginosus* (Montag.).—Recorded by Cory and Gundlach from the Isle of Pines, but not observed by Zappey nor by Palmer and Riley.

20. *Eudocimus albus* (Linn.). "COCO."—One of the commonest and most characteristic birds of the Cienaga, flocks

of from forty to fifty being often seen. It also occurs though not in such large numbers in most parts of the island. It feeds on snails, frogs, and lizards. The natives often tame the White Ibis and it then runs about with the domestic fowl and eats table scraps and the like, which it always carries to the nearest water and soaks before swallowing. These tame birds were also very fond of the bodies of small birds that had been skinned, and would catch them when thrown to them, before they touched the ground.

One specimen was taken, a male, at Pasadita, May 8.

21. **Ajaia ajaia** (Linn.). "CERVEIA." — The natives claim that a few Roseate Spoonbills still occur in the Isle of Pines. The species is recorded by Poey and formerly was not uncommon. It was not seen by Zappey nor by Palmer and Riley.

22. **Tantalus loculator** Linn.— Recorded from the Isle of Pines by Cory. Its occurrence there is probably only casual as it was not found by Zappey nor by Palmer and Riley.

23. **Phœnicopterus ruber** Linn. "FLAMENCO."— A few Flamingoes inhabit Punta del Este and Bibeyhagua. None were seen alive, but one morning the tracks of about a dozen were found in the mud, and on another occasion three individuals that had just been shot by a native were examined.

24. **Chen hyperborea nivalis** (Forst.).— An occasional winter visitor, recorded from the island by Cory and by Gundlach.

25. **Dendrocygna arborea** (Linn.). "LLAGWASA." — The Whistling Duck occurs in considerable numbers in the Isle of Pines. During the day it keeps concealed in the Cienaga but in the evening, toward dusk, it leaves the swamp to feed in the royal palms, alighting on the trees and picking off the berries. One night a half a dozen or so alighted in the palms in the plaza at Santa Fé. The call note of this bird is much like that of the Wood Duck (*Aix sponsa*).

Six specimens, adults of both sexes, were taken in the Cienaga in May.

26. **Querquedula discors** (Linn.).— In March, 1902, the Blue-winged Teal was in the Cienaga in considerable numbers. On the second trip none were found, the species probably leaving for the north before the middle of April.

27. *Cathartes aura aura* (Linn.). "AURA."— The Turkey Buzzard is very common everywhere in the island. The bird of the Isle of Pines, and other West Indian Islands, is very much smaller than that occurring in the southern United States and



FIG. 6.— Palmetto growth bordering the pine lands. The highest tree in the center of the picture, is a species of pine that grows chiefly near the seacoast north of the Cienaga.

as Wied named the latter *septentrionalis*, Linné's name should be restricted to the small southern form, since he gave the distribution of his *Vultur aura* as North America, Jamaica, Mexico, etc. The Turkey Buzzard of the southern United States should be known as *Cathartes aura septentrionalis* (Wied).¹

¹ *Cathartes septentrionalis* Wied, *Journ. f. Orn.*, p. 119, 1856.

Two specimens, ♂ and ♀, were taken at Santa Fé and measure as follows:—

| No. | Sex. | Wing. | Tail. | Tarsus. | Culmen. |
|--------|------|-------|-------|---------|---------|
| 13,376 | ♀ | 483 | 236 | 69 | 38 |
| 13,377 | ♂ | 456 | 228 | 69 | 41 |

28. **Polyborus cheriway** (Jacq.). "CARAIRA."— This is not a common bird in the Isle of Pines and is extremely shy. Whenever there happens to be a dead animal anywhere, however, one or two Caracaras will always be found near by. They also feed on lizards and are said by the natives to kill small chickens.

One male was taken at Santa Fé, May 20. This specimen does not differ from skins from Florida and elsewhere on the continent.

29. **Urubitinga anthracina** (Licht.). "BATISTA."— The Cuban Crab-hawk is recorded from the Isle of Pines by Poey, as *Hypomorphus gundlachi* Cab.

There are no specimens available to us for comparison of the Cuban bird, and we are therefore forced to follow the general custom of placing it under true *U. anthracina*.

The species was not detected in the island by Zappey nor by Palmer and Riley.

30. **Rostrhamus sociabilis** (Vieill.). "CARBRETO."— Common in the Cienaga and also seen at Santa Rosalia lagoon. Its food consists of small snails, though the natives assert that it eats frogs and lizards also.

One male taken at the Cienaga, May 23, is in every way like specimens from Florida.

31. **Falco peregrinus anatum** (Bonap.). "HALCÓN."— One was examined in March, 1902, that had struck and killed a hen, and being either unable or unwilling to let go, was chopped to pieces by some natives with their machetes.

32. **Falco columbarius columbarius** Linn.— Recorded from the Isle of Pines by Cory and by Gundlach as an occasional winter visitor.

33. **Cerchneis sparveria dominicensis** (Gmel.). "CERNICALO."— Very common everywhere in the island. This form has the same habit as the Sparrow Hawk of Florida, of congre-

gating in numbers wherever the brush or grass has been set on fire and hovering just in front of the flames. In the Isle of Pines they appear to get small lizards only in this way, there being no small mammals.

Seven specimens were taken at Santa Fé, San Juan, Jucaro, Laguna Grande, and Almacigos, in April and May. Of the great number seen, one only was in the dark phase of plumage, and Palmer and Riley state that *all* observed by them were in the white-bellied plumage.

34. **Pandion haliaetus carolinensis** (Gmel.).—Recorded from the Isle of Pines by Cory; not observed by Zappey nor by Palmer and Riley.

35. **Colinus cubanensis** (Gould). “CODORUIZ.”—The Cuban Quail was common in the pastures and fields about Santa Fé and Nueva Gerona, where they were nesting in May.

Three males were taken at Santa Fé and Callebonita in May; these specimens do not differ in any way from Cuban examples.¹

36. ?**Rallus elegans** Aud. “GALLINUELA.”—In March, 1902, a large rail was rather common in the Cienaga, and several specimens were taken. None could be found on the later trip and the bird apparently does not breed in the island. (The skins taken on the first trip are in the Tring Museum, but Zappey is sure they were referable to the King Rail.)

37. **Gallinula galeata** Bonap. “GALLINETA.”—In March, 1902, a few individuals were found in Santa Rosalia lagoon. None were met with on the later trip and it is probable that the gallinule does not breed in the island. Recorded from the Isle of Pines by Cory.

38. **Ionornis martinica** (Linn.). “GALLINUELA.”—The Purple Gallinule breeds abundantly in the Cienaga but was not noted anywhere else in the island.

Four males were taken in the Cienaga at Pasadita, in May and June. These specimens are slightly larger than examples from the mainland of the southern United States, measuring as follows:—

¹The Guinea Fowl (*Numida meleagris* Linn.), and the Domestic Hen (*Gallus* sp.?), have both run wild in the Isle of Pines, and are occasionally found throughout the island, apparently perfectly naturalized.

| No. | Sex. | Wing. | Tail. | Tarsus. | Bill. ¹ |
|--------|-------|-------|-------|---------|--------------------|
| 13,232 | ♂ ad. | 182 | 70 | 59 | 31 |
| 13,233 | ♂ ad. | 183 | 79.5 | 63.5 | 30 |
| 13,234 | ♂ ad. | 190 | 75 | 59 | 30.5 |
| 13,235 | ♂ ad. | 179 | 69 | 61.5 | 31 |

39. *Fulica americana* Gmel.—Recorded from Isle of Pines by Cory and by Gundlach. Not noted by Zappey nor by Palmer and Riley. As with many other species that are winter residents in the Isle of Pines, the trips made by Zappey and by Palmer and Riley were too late in the season to find these birds still in the island.

40. *Grus nesiotus* sp. nov.²

“GRULLA.”

Type from La Vega, Isle of Pines, adult ♂, no. 13,238, Coll. of E. A. and O. Bangs. Collected May 8, 1904, by W. R. Zappey.

Characters.—Similar to the Sandhill Crane of Florida, (usually called *Grus mexicana* Müll.) in color, but slightly darker and not so clear a gray on back; smaller with shorter tarsus; beak somewhat stouter and heavier.

Measurements:³—

| No. | Sex. | Locality. | Wing. | Tail. | Tarsus. | Culmen. |
|--------|-------|-------------------------|-------|-------|---------|---------|
| 13,238 | ♂ ad. | Isle of Pines, La Vega | 474 | 187 | 209 | 125 |
| 13,239 | ♂ ad. | Isle of Pines, Pasadita | 460 | 171 | 204 | 123 |

¹ Measured from a point in line with eye and nostril to tip.

² This bird may or may not be considered different enough from the Sandhill Crane of North America to rank as a full species; we have given it a binomial because we fully agree with Dr. Sharpe that the bird called *Ardea (Grus) mexicana* by P. L. S. Müller is not the one to which the name is generally applied—the Sandhill Crane of North America. Until the synonymy of these birds is properly adjusted it is better not to give the Isle of Pines Crane as a subspecies.

³ For comparison with these, specimens from the United States measure as follows:—

| No. | Sex. | Locality. | Wing. | Tail. | Tarsus. | Culmen. |
|--------|----------|----------------------|-------|-------|---------|---------|
| 684 | ♂ ad. | Wisconsin | 508 | 202 | 230 | 135 |
| 691 | ♂ young. | N. Dak., Harrisburg | 518 | 187 | 224 | 124 |
| 10,717 | ♂ ad. | Fla., Micco | 514 | 192 | 238 | 125 |
| 10,718 | ♂ ad. | “ “ | 494 | 195 | 248 | 132 |
| 4107 | ♂ ad. | Fla., Henderson Camp | 470 | 170 | 223 | 128 |
| 4106 | ♀ ad. | “ “ “ | 444 | 159 | 217 | 122 |
| 10,716 | ♀ ad. | Fla., Haines City | 465 | 188 | 247 | 136 |

The Sandhill Crane is rare and of local distribution in the Isle of Pines, and was only met with in the high, open country just north of the Cienaga, where it usually occurred in pairs, though on one occasion a flock of six was seen. When disturbed, it utters a loud honking or gobbling call note not unlike some of the sounds produced by the Domestic Turkey. The birds seen were always exceedingly shy, and the two specimens were secured with a good deal of difficulty.

On May 20, a small downy young individual was found running about alone. It was exactly the color of the soil. It was kept alive for a day or two but would not eat anything given it. The skin is that of a young not long hatched. It is covered with down which is tawny along the back, tawny-ochraceous on sides, and whitish on throat and middle of belly.

After careful comparison of a large series of North American Sandhill Cranes, we feel fairly sure that the birds still breeding in Florida are not different from those that breed in North Dakota and other parts of the west. Probably in former years the breeding range was continuous or nearly so, and it is due to the interference of man that the Florida bird is now isolated.

In the breeding season the Sandhill Crane is much browner, — losing most of the pearly gray of the back and neck, — than in fresh autumn plumage, and this is true of birds both from the west and from Florida. Unfortunately, however, we have seen *only* breeding birds and birds killed in early spring from Florida, and therefore no gray ones, but we have no doubt that fresh autumnal specimens from Florida would be quite as gray as those from the west. In measurements there is no difference.

The bird of the Isle of Pines, and almost certainly Cuba also, differs from that of the continent in its decidedly shorter tarsus, heavier bill, and slightly smaller size. In color the difference is slight, but still our two Isle of Pines skins are rather darker and browner than any breeding Florida birds with which we have been able to compare them.

41. *Aramus giganteus holostictus* (Cab.).¹ "GUARACAO."

¹ *Notherodius holostictus* Cabanis, *Journ. f. Orn.*, p. 426, 1856, based on Cuban specimens.

—The Limpkin was found in the Cienaga only, where it was far from common, and where one adult male was taken in May.

This specimen is smaller, with shorter tarsus, and much shorter and smaller bill, than any in a large series of Florida birds with which we have compared it. It is also paler in general coloration; the tail is lustrous olive brown (dark, lustrous purple in true *A. giganteus*) and the white markings on wings, wing-coverts and scapulars are smaller. The skin, no. 13,237, ♂ ad., measures: wing, 308; tail, 138; tarsus, 114; exposed culmen, 110.

We have therefore thought it best to recognize the Cuban and Isle of Pines birds as a subspecies.

42. ? *Ochthodromus wilsonius rufinucha* (Ridg.). "FRILECILLO." — A few birds, undoubtedly belonging to this form, were seen along the shore at Plaza Larga, but none were secured.

43. *Oxyechus vociferus torquatus* (Linn.).¹ "FRILECILLO." — A few pairs of Killdeer breed in the Isle of Pines. They were seen on several occasions, and a young in the down was caught, but let go again at the beach at Bibeyhagua.

One adult male was taken April 21, at Laguna Grande, and Palmer and Riley took specimens at Nueva Gerona.

The breeding Killdeer of the Greater Antilles is a good deal smaller than the bird of continental North America and should be recognized as a subspecies.

Our specimen, ♂ ad., no. 13,335, measures: wing, 146; tail, 82.5; tarsus, 34; exposed culmen, 21.

The larger Killdeer of the north winters in many of the islands, and this fact must be borne in mind in identifying specimens, else confusion is sure to ensue. There is no trouble in distinguishing the two forms, however, when breeding birds are compared.

44. *Himantopus mexicanus* (Müll.). "ZARAPICO REAL." — Two Black-necked Stilts, one of which, an adult female, was taken, were found in the Salina at Bibeyhagua, May 15. The

¹ *Charadrius torquatus* Linn., *Syst. Nat.*, vol. 1, p. 255, 1766, based on *Pluvialis dominicensis torquata* Briss., *Aves*, vol. 5, p. 70, pl. VI, fig. 2, from Santo Domingo.

species is probably of very casual occurrence anywhere in the West Indies.

45. *Catoptrophorus*¹ *semipalmata semipalmata* (Gmel.). "ZARAPICO REÁL."—No Willets were met with by Zappey nor by Palmer and Riley. It is recorded from the Isle of Pines by Poey.

46. *Totanus melanoleucus* (Gmel.). "ZARAPICO REÁL."—One specimen, an adult female, was taken at the Salina at Bibeyhagua, May 15.

47. *Totanus flavipes* (Gmel.).—In March, 1902, specimens of the Summer Yellowlegs were taken, but none were observed on the last trip to the island.

48. *Helodromas solitarius solitarius* (Wils.). "ZARAPICO."—One adult female was taken May 11, at Jucaro; it was in a little puddle at the roadside left by a heavy shower.

49. *Actitis macularia* (Linn.).—Spotted Sandpipers were not uncommon about the shores of the island in March, 1902. None were seen on the last trip.

50. *Asarcia spinosa* (Linn.). "GALLITO."—The Jaçana occurs in every fresh-water lagoon, but is most abundant in Santa Rosalia lagoon and the Cienaga.

When disturbed it stretches up its wings and runs along over the lily-pads and weeds for a short distance before taking flight, at the same time uttering a loud alarm note that sets all others in the vicinity to flying.

Three specimens were taken at Laguna Grande and Pasadita, in April and May.

51. *Sterna maxima* Bodd. "GAVIOTA."—The Royal Tern was common along the seacoasts of the island and on the mangrove cays. Several were shot, but fell into the ocean and before they could be retrieved, were gobbled up by sharks.

52. *Columba inornata* Vig. "PALONEA BABO," "TORCAZA."—One specimen of this pigeon was taken in March, 1902. It was not met with at all on the second trip and is said by the natives to be very rare in the Isle of Pines. It is among the species given from the island by Poey.

¹ Cf. Richmond, *Proc. Biol. Soc. Washington*, vol. 18, p. 75, Feb. 21, 1905.

53. *Columba leucocephala* Linn. "TORCAZA CABEZABLANCA."—The White-crowned Pigeon is not uncommon along the river courses, especially where there are royal palms, upon the fruit of which it feeds.

Two specimens, both males, were taken at La Vega in April.

54. *Columba squamosa* Bonn.—Palmer and Riley inform us that this species occurs in the vicinity of Nueva Gerona but is rare there.

55. *Zenaidura macroura bella* Palmer and Riley. "PALOMA."—Throughout the island in the open pine woods, palmetto groves, and especially in old fields grown up to weeds, the Cuban Mourning Dove is an abundant bird. Several nests were found in low trees five or six feet from the ground.

Three specimens, two males and a female, were taken at Rio Santiago and Hospital in May. These are similar in every way to Cuban examples.

56. *Zenaida zenaida zenaida* (Bonap.). "PALOMA."—The Zenaida Dove inhabits the same sort of country as the last species, the two being found together, but it is not so abundant.

Two specimens, both males, were taken at Almacigos, April 19.

57. *Columbigallina passerina aflavida* Palmer and Riley. "TOJOSITA."—Common everywhere in the island except in the denser woods. Several nests were found placed on the ground, containing two eggs each.

Seven specimens, of both sexes, were secured at Callebonita, Hospital, Jucaro, and San Juan, in May. These do not differ at all from Cuban specimens.

58. *Geotrygon montana* (Linn.). "BOVERO."—The Ruddy Quail-dove occurs in the Isle of Pines in the denser woods only, usually in rather moist places, where the ground is often flooded after heavy rains. It is nowhere abundant. When flushed from the ground it flies but a short distance and on alighting again runs along for a few feet and conceals itself among the vegetation much after the manner of the American Woodcock (*Philohela minor*), which it curiously resembles when started in the deep woods.

Six specimens, including both sexes, were taken at La Vega, Pasadita, and Callebonita in May and June.

These skins are not to be distinguished in any way from skins from Jamaica, the type locality of the species.

59. *Geotrygon chrysia* (Bonap.). "CANIÁO."—The Key



FIG. 7.—Callebonita River before the rainy season when the water was very low. "Guana blanco" palms in the foreground.

West Quail-dove is very rare in the Isle of Pines occurring only on one or two of the mountains and in the dense forest south of the Cienaga.

Only two individuals were seen. These were both secured, at Pasadita, one in May the other in June.

60. *Starnœnas cyanocephala* (Linn.). "PERDIZ."—This bird has not been actually seen by any naturalist in the Isle of Pines. We include it because the natives who know it well positively assert that a few inhabit the Caballos Mountains and some point near the south coast.

61. *Saurothera merlini decolor* subsp. nov.

"ARRIERO."

Type from La Vega, Isle of Pines, adult ♂, no. 13,246, Coll. of E. A. and O. Bangs. Collected April 24, 1904, by W. R. Zappey.

Characters.—Somewhat similar to true *S. merlini* d'Orb. of Cuba, but smaller, with decidedly shorter bill; much paler in color, wholly lacking the hazel or pale chestnut suffusion of back, head, and rump, these parts being, in the new form, uniform dull hair-brown; the ferruginous color of the lower underparts also much paler and duller and more restricted, never reaching the lower breast. In general coloration the Isle of Pines bird—except for the chestnut patch in the wing—more nearly resembles *S. bahamensis* than *S. merlini merlini*.

The young is like the adult except that it lacks the black sub-terminal band to the rectrices.

Iris brown, bare skin around eye scarlet, legs slate blue (from fresh specimen just killed).

Measurements:—

| No. | Sex. | Wing. | Tail. | Tarsus. | Culmen. |
|--------|-------|-------|-------|---------|---------|
| 13,246 | ♂ ad. | 163 | 267 | 42.5 | 52.5 |
| 13,247 | ♂ ad. | 161 | 262 | 43 | 55 |
| 13,243 | ♂ ad. | 164 | 235 | 43 | 52 |
| 13,242 | ♂ ad. | 158 | 255 | 41.5 | 51.5 |
| 13,244 | ♀ ad. | 149 | 226 | 39.5 | 50 |
| 13,245 | ♀ ad. | 161 | 252 | 40.5 | 54 |

The Lizard Cuckoo of the Isle of Pines is a common bird in rough, rocky country wherever there is a thick growth of scrub and bushes, and is very tame. It has a habit of hopping from one branch to another till it reaches the top of a bush and then sailing down to the ground or the lower branches of another

bush. Its usual call note is a sort of laugh that begins low and slowly, and rapidly ascending, ends in a loud chuckle. When two individuals are within sight of each other they often go through a curious performance, which consists in lowering the head and dropping the feathers of the throat which then looks like a large pouch, at the same time spreading the wings and tail to their fullest extent and repeating the loud chuckling notes that end the usual call. The stomachs of those taken contained the remains of small lizards, beetles, caterpillars, and large moths.

Seven specimens were taken, adults of both sexes and one young, at La Vega, Callebónita, and Hospital, in April, May, and June.

The Isle of Pines *Saurothera* is a very well marked form differing much from true *S. merlini* of Cuba in size and proportions as well as in its paler and plainer coloration, and perhaps should be considered a distinct species. We, however, prefer to treat representative island forms as subspecies, unless they present even more strongly marked characters than do these two cuckoos. By so doing, the affinities of a bird are seen at a glance by its name, whereas, by the use of binomials they are lost.

62. *Crotophaga ani* Linn. "JUDIO." — The Ani is a common bird in the Isle of Pines, occurring in all pastures, in brushy regions, and along the river courses. It was often seen on the backs of horses, cattle, and hogs picking off ticks.

Five specimens were taken at Callebónita, Santa Fé, and Jucaro, in April and May.

63. *Ara tricolor* (Bechst.). "GUAEMÁYO." — It has been supposed that perhaps the Cuban Macaw still lingered in the Isle of Pines. Unfortunately this is not so. The last pair known in the island was shot at La Vega, near the Ciénaga, about the year 1864, and none have been seen since. This information was furnished by the man on whose plantation they were shot.

64. *Conurus euops* (Wagler). "PERIQUITO." — Formerly abundant in the Isle of Pines, the paraquet has been nearly if not quite exterminated in very recent years. Nothing was seen of it and the natives all said that none now occur in the island.

65. *Amazona leucocephala* (Linn.). "COTORRA." — The parrot is still common in the central part of the island, but is rare south of the Cienaga — a few pairs only being seen in some royal palms at Pasadita.

In May, the parrots were breeding. The nests usually contained young though several were examined in which there were eggs, four in number, of a whitish color. The nesting site is invariably an old woodpecker's hole in the trunk of a species of palm that has a large swelling about midway up. The parrot feeds largely in the pines, eating the ends of the new shoots that are soft and green.

Hundreds of young birds are taken annually by the natives and sent alive to the United States. The exporting of live parrots being the chief industry of the island, nearly every nest on the island is found and robbed every year, and although the natives do not kill the old birds and dislike very much to have them shot, nevertheless the parrot is steadily decreasing in numbers year by year, and must inevitably go the way of the macaw and the paraquet unless some steps are taken to protect it.

One adult male was taken at Hospital, May 12. This does not appear to differ in any way from Cuban examples.

66. *Todus multicolor* Gould. "PODORERA." — Along the river courses and dry gulches, where there is a thick growth of brush, the little Tody is frequently met with sitting upright on a branch from which it occasionally darts to catch some insect on the wing, its wings as it does so making a loud whirring sound.

Its call note is a curious sound much like that produced by hitting two small stones together.

Eleven specimens, adults of both sexes, were taken at Santa Fé and Callebonita in April and May, and are quite the same as Cuban examples.

67. *Ceryle alcyon* (Linn.). "MARTIN ZAMBULLIDOR." — The Belted Kingfisher is a regular winter visitor to the Isle of Pines. In March, 1902, it was not uncommon, but on the last trip none were seen, all having probably left for the north.

68. *Nyctalops stygius siguapa* (d'Orb.).¹ "SIGUAPA." —

¹ *Otus siguapa* d'Orb., in Ramon de la Sagra's *Histoire de l'Isle de Cuba, Oiseaux*, p. 40, pl. 2, 1839. Based on Cuban specimens.

The Cuban Eared Owl inhabits in the Isle of Pines the heaviest and densest forests only. It is very rare, and being wholly nocturnal is extremely hard to obtain.

One fine adult male was taken at La Vega, May 25. This specimen compared with three continental examples,—one each from Brazil, Mexico, and Guatemala—differs in being less buffy both above and below, the under parts are much whiter, and the facial disk is white. It is probable that the Cuban bird is the same, and the island race named by d'Orbigny seems a perfectly valid one.

69. *Gymnasio lawrencei* (Scl. and Salv.). "COTUNTO."—This queer, long-legged little owl, with much the general appearance of a Burrowing Owl is strictly nocturnal, spending the day in hollow trees. A pair taken at Santa Seville, May 31, had with them a brood of three half-grown young in a hole in a tree. These young birds were kept alive for a time and were then given to a native, who like so many of his countrymen was very fond of taming and keeping birds in confinement.

Three specimens, two adult males and an adult female, were taken at Pasadita and Santa Seville, in May. These skins compared with a series of six from Cuba show a slight difference in color, being paler with less of a brownish or rufous cast than the Cuban specimens. In measurements they do not differ, and the slight color difference may or may not hold in larger series from the two islands.

70. *Glaucidium siju* (d'Orb.). "SIJU."—One of the characteristic bird-sounds of the island, with which one soon becomes very familiar, is the cry of this little owl. Though the bird is diurnal, its call is often heard at night as well as by day. It is generally distributed throughout the island and is very common.

The stomachs of those taken contained nothing but insects, beetles of various kinds forming the greater part of the contents.

Six specimens, adults of both sexes, were taken at Santa Fé and Callebonita in April, May, and June. These are indistinguishable from Cuban specimens.

71. *Strix pratincola furcata* (Temm.). "LECHUZA."—The Barn Owl is not at all common in the Isle of Pines. But two were seen and two others heard at night.

One adult female was taken at Santa Seville. It had been eating a Ruddy Quail-dove (*Geotrygon montana*).

72. *Chordeiles virginianus virginianus* (Gmel.).—Probably an irregular migrant, though it is recorded from Cuba by Cory.

On May 10, a male was flushed from the ground and alighted in a pine, at Santa Fé, where it was shot. This specimen measures: wing, 200; tail, 105; tarsus, 14; culmen, 8. It is in every way like birds that breed in New England.

73. *Chordeiles virginianus minor* (Cab.). "CERICADAY."—Common everywhere in the island in the more open country and among the pines. In rainy weather it was often seen flying during the day, and at other times roosting lengthwise on a pine limb.

Five specimens were taken at Almacigos, Santa Fé, and Hospital, in April and May.

Chordeiles virginianus minor like many other species of birds of somewhat similar general coloration, appears to be dichromatic, having a rusty and a gray phase of plumage, regardless of sex, age, or season. In the present series all are in the rusty phase of plumage except one female that is very gray. In a series from Cuba we find both phases—one male from Holquin, May 31, being quite the color of Florida specimens of *C. virginianus chapmani*. That it is not that form can of course be told by its smaller dimensions.

74. ? *Antrostomus vociferus* (Wilson).—Recorded from the Isle of Pines with a query by Poey. We consider this an extremely doubtful record probably applying to the next species.

75. *Antrostomus cubanensis* LAW. "GUARAIBA."—A bird of this species was started from the ground in the dense woods south of the Cienaga in June, and was shot, but was so mangled that it could not be saved. It was the only one seen.

76. ? *Hemiprocna zonaris pallidifrons* (Hartert).—Palmer and Riley saw about the crest of the mountain at Nueva Gerona some large swifts, that they felt confident belonged to this form.

77. *Riccordia riccordii* (Gerv.). "ZUNG ZUNG."—The hummingbird is rather generally distributed throughout the island,

though nowhere abundant. Several nests were found containing two eggs each. It is a noisy little bird and its mouse-like, squeaking note is uttered at frequent intervals, especially when anything attracts its attention.

Four specimens, adults of both sexes, were taken at Almacigos and Santa Fé, in April, May, and June.

78. *Prionotelus temnurus vescus* subsp. nov.

“TOCORORO.”

Type from Almacigos, Isle of Pines, adult ♂, no. 13,250, Coll. of E. A. and O. Bangs. Collected April 19, 1904, by W. R. Zappey.

Characters. — Similar to true *P. temnurus* (Temm.), of Cuba in color-pattern and probably in color also. (The Isle of Pines series was taken in spring and early summer, and all Cuban specimens with which we have been able to compare them, in winter, except one. The red belly-patch in the Isle of Pines specimens is much paler and more pinkish — less geranium red — than in the Cuban skins, but the one summer specimen from Cuba is like them in this respect and this difference in the color of the belly-patch is probably due to fading). Much smaller with much shorter tail; in the new form the wing averages 114.11, the tail 107.55; in true *P. temnurus* the wing averages, 123.41, the tail 119.41.

Iris bright carmine, lower mandible red (from fresh specimens before skinning).

Measurements : —

| No. | Sex. | Wing. | Tail. ¹ | Tarsus. | Culmen. |
|--------|-------|-------|--------------------|---------|---------|
| 13,250 | ♂ ad. | 113.5 | 104 | 18 | 19.5 |
| 13,251 | ♂ ad. | 115 | 104 | 18 | 19 |
| 13,254 | ♂ ad. | 114 | 106 | 17.5 | 19.5 |
| 13,255 | ♂ ad. | 113 | 110 | 18.5 | 18.5 |
| 13,258 | ♂ ad. | 114 | 108 | 18.5 | 18.5 |
| 13,252 | ♀ ad. | 115 | 107 | 18 | 19 |
| 13,253 | ♀ ad. | 113 | 108 | 17.5 | 18.5 |
| 13,256 | ♀ ad. | 115.5 | 113 | 17.5 | 18 |
| 13,257 | ♀ ad. | 114 | 108 | 17 | 18.5 |

¹ In every instance the tail is measured to the end of the longest *shaft*, not the end of the projecting webs.

For comparison with these a series from Cuba measures as follows :—

| No. | Sex. | Locality. | Wing. | Tail. | Tarsus. | Culmen. |
|--------|-------|------------------------------|-------|-------|---------|---------|
| 14,927 | ♂ ad. | Cuba, Halquin | 124 | 118 | 19 | 19 |
| 14,928 | ♂ ad. | “ “ | 123 | 118 | 18.5 | 17.5 |
| 14,925 | ♂ ad. | “ “ | 123.5 | 120.5 | 18 | 18.5 |
| 14,926 | ♀ ad. | “ “ | 121 | 117 | 18 | 18 |
| 11,976 | ♂ ad. | Cuba, El Guama | 124 | 120 | 18 | 20 |
| 11,975 | ♀ ad. | Cuba, San Diego de los Baños | 125 | 123 | 19 | 18.5 |

The Trogon is rather common in the dense woods and along



FIG 8.—Cienaga, at Pasadita, a short time after the rains had begun. (The birds held up are Sandhill Crane and the White Ibis.)

the river courses. It is a stupid sluggish bird and very tame. Its food consists of fruits of various kinds.

Nine specimens, adults of both sexes, were taken at Puebla Nuevo, Almacigos, Pasadita, and Callebonita, in April and May. These are so very much smaller than Cuban examples that we have thought it best to separate the Isle of Pines bird as a sub-

species, though its smaller size seems to be the only character by which it can be distinguished.

79. *Melanerpes superciliaris* (Temm.). "CARPINTERO." — An extremely abundant and very noisy bird, found over nearly all the island.

Eight specimens, adults of both sexes and two young, were taken at San Juan, Jucaro, Nueva Gerona, and Almacigos, in April, May, and June. These skins run slightly smaller than Cuban ones and have less of the olivaceous tinge below and slightly less red on the belly. All of these characters, however, are rather inconstant and the form though slightly different is not enough so to be regarded as a subspecies.

The young — a male and a female taken June 4 — differ from the adults in having the feathers of the breast, belly, and back tipped with dull scarlet; the scarlet of head duller, more orange; the female has scarlet tips to the feathers of the middle of the crown and differs from the male, only in having the frontal band wider and dull gray instead of white.

The skins measure as follows: —

| No. | Sex. | Wing. | Tail. | Tarsus. | Culmen. | |
|--------|-------|-------|-------|-----------|---------|------|
| 13,262 | ♂ ad. | 134 | 90 | 27.5 | 37.5 | |
| 13,261 | ♂ ad. | 140 | 92 | 28 | 40 | |
| 13,259 | ♂ ad. | 134 | 91 | 26 | 38.5 | |
| 13,260 | ♂ ad. | 134.5 | 91.5 | 26.5 | 36.5 | |
| 13,263 | ♀ ad. | 133 | 95 | 26 | 36 | |
| 13,264 | ♀ ad. | 130 | 85 | much worn | 26 | 35.5 |

80. *Sphyrapicus varius varius* (Linn.). — A migrant or winter visitor in the Isle of Pines, first recorded by Poey. In March, 1902, several individuals were seen, but none were noted on the last trip, as it was too late in the season.

81. *Xiphidiopicus percussus* (Temm.). "CARPINTERO REAL." — The Green Woodpecker is common in the Isle of Pines and generally distributed, and its low grating croak soon becomes a familiar sound.

Eight specimens, adults of both sexes, were taken at Santa Fé, Callebonita, and Jucaro, in April and May. These are not to be distinguished from Cuban specimens.

82. *Pitangus caudifasciatus* (d'Orb.). "PITIRRE." — A

not uncommon species along the river courses but always found near water. One nest was found in a palmetto close to the trunk about eight feet from the ground.

Nine specimens were taken at Santa Fé, Hospital, Jucaro, and Callebónita River, in April, May, and June.

83. *Blaticus caribæus* (d'Orb.). "BOBITO."—This little flycatcher was found in low trees and among the thinner brush, always near the ground.

Six specimens, adults of both sexes, were taken at San Juan and Santa Fé, in April and May.

84. *Myiarchus sagræ* (Gundl.). "BOBITO."—Common in the pine woods, but not observed elsewhere in the island.

Seven specimens were taken at Santa Fé, Callebónita, and Jucaro, in April, May, and June.

85. *Tyrannus dominicensis dominicensis* (Gmel.). "PITIRRE."—The Gray Kingbird is abundant in the pine woods and scattered palmettos, but avoids the denser forest.

Seven specimens were taken at Santa Fé, Hospital, Callebónita, and Jucaro, in May.

86. *Tyrannus cubensis* Richmond. "PITIRRE DE AGUA."—The huge Cuban Kingbird is rare in the Isle of Pines. Only six were seen, of which five were shot. They were always near water. The natives say that this tyrant-bird catches small fish in the streams after the manner of a kingfisher; the stomachs of those taken, however, contained only remains of insects and a few berries.

Five specimens were taken at Santa Fé, La Vega, Almacigos, and Mal Pais, in May.

None of the Isle of Pines tyrant-birds differ in any way from those of Cuba.

87. *Galeoscoptes carolinensis* (Linn.). "ZORZAL GATO."—A regular migrant or winter resident, often seen during March, 1902, and once observed in April, 1904. Recorded from the island by Poey, Cory, and Gundlach.

88. *Mimus orpheus* (Linn.).—Given as occurring in the Isle of Pines by Cory, the mockingbird is said by the natives to inhabit the south coast in small numbers. None were seen on either trip.

89. *Myadestes elizabeth retrusus* subsp. nov.

"REISENOR."

Type and only specimen from Pasadita, Isle of Pines, adult male, no. 13,435, Coll. of E. A. and O. Bangs. Collected May 25, 1904, by W. R. Zappey.

Characters.—Similar to true *M. elizabeth* (Lembeye) of Cuba in size and proportions, but much paler in color; general color above hair-brown (olive brown in true *M. elizabeth*); ear coverts much paler, wholly lacking the tawny tinge of these parts in true *M. elizabeth*; the ochraceous line running from eye to frontal apex much paler and less conspicuous; eye-ring much paler.

Measurements.—Type, adult male: wing, 88.5; tail, 82; culmen, 12.

The Isle of Pines Solitaire is very rare and occurs in the densest forests only, where, on account of its retiring habits and dull coloration, it is very hard to shoot. Its loud, ringing song can be heard a great distance, and is almost startling in the still forests in which the bird lives. The stomach of the only specimen taken contained a few berries and the remains of insects.

The form can be told at a glance from Cuban specimens on account of its very much paler coloration, and is a strongly marked subspecies.

90. *Mimocichla rubripes rubripes* (Temm.). "ZORZAL."
—A common species, found throughout the island. It keeps rather more to the brush and the woods than does *Merula migratoria*, which it otherwise much resembles in habits. It is a very conspicuous bird as it runs along the ground or hops about in the brush, with wings lowered and tail thrown upward.

Seven specimens, adults of both sexes, were taken at Santa Fé, San Juan, Hospital, and Callebonita in April and May. These seem wholly referable to true *M. rubripes*, differing only in that the rufous tinge of the belly is slightly paler and less extensive.

91. *Poliophtila cærulea* (Linn.).—The Blue-gray Gnatcatcher was found in the island in March, 1902, though none were seen

on the last trip. It is also recorded from the Isle of Pines by Poey.

92. *Vireosylva calidris barbatula* (Cab.). "PREDICADOR."—A rather common bird in the Isle of Pines, frequenting trees of medium height. The iris is red-brown.

Ten specimens, adults of both sexes, were taken at Jucaro, Callebónita, and Santa Fé, in April and May.

93. *Vireo gundlachi* Lembeye. "JUAN CHIVI."—Gundlach's Vireo is very rare in the Isle of Pines. One pair was found in some brush and small trees at Callebónita, and secured May 3. These were all that were seen. The natives knew the bird, but said it was an uncommon species.

The two specimens secured differ somewhat from Cuban skins and more material might or might not bear out these differences. If it did, the form from the Isle of Pines would be worth recognizing as a subspecies. The male differs from Cuban males in being paler on the cheeks with much more of a buffy tinge there; the female is paler throughout than in Cuban examples, and considerably lighter in color below. The iris in this form is light brown.

94. *Corvus nasicus* Temm. "CAO."—The Crow was found sparingly, usually in pairs, near the Ciénaga. It is a restless bird and has a habit, when one comes within sight, of hovering over one's head high in air screeching and scolding continuously. The natives sometimes tame the Crow and teach it to say a few words. The iris is dark red.

Five specimens, adults of both sexes, were taken at La Vega and Pasadita in April and May.

95. *Progne cryptoleuca* Baird. "GOLONDRINA."—Not common in the Isle of Pines. It was seen several times, but no nesting place was found. Palmer and Riley found small colonies in the pines at Managua.

96. *Petrochelidon fulva fulva* (Vieill.). "GOLONDRINA."—Like the Martin, the Cliff Swallow was not found nesting in any region visited by Zappey. It was seen flying several times. Palmer and Riley found it abundant in the lowlands near Nueva Gerona.

97. *Mniotilta varia* (Linn.).—Recorded from the island by Poey, and seen on the March, 1902, trip.

98. *Compsothlypis americana* (Linn.).—Recorded from the island by Poey, and also seen in March, 1902. Without specimens it is of course impossible to tell to which subspecies, as now recognized, this record applies.

99. *Chrysocantor petechia gundlachi* (Baird).—The Mangrove Warbler was not observed in the Isle of Pines on either trip, though it was common at the opposite coast of Cuba at Batabano where a series of specimens was taken while waiting for a vessel to sail for the island.

It is recorded from the island by Poey and by Cory.

100. *Dendroica cærulescens* (Gmel.).—Recorded from Isle of Pines by Poey and by Cory and not uncommon in March, 1902. None were seen in 1904.

101. *Dendroica virens* (Gmel.).—First recorded from the island by Poey, and later Gundlach says that he took his first specimen of this species in the Isle of Pines in January, 1855.

102. *Dendroica dominica dominica* (Linn.).—This is another species recorded by Poey and found in March, 1902, but not seen in 1904.

103. *Dendroica discolor* (Vieill.).—Given by Poey from Isle of Pines, but not observed on either of the trips made to the island by Zappey.

104. *Dendroica palmarum palmarum* (Gmel.).—Recorded from Isle of Pines by Cory and found there in March, 1902, but not on the second trip.

105. *Seiurus noveboracensis* (Gmel.).—Recorded by Poey and seen in March, 1902.

106. *Teretistris fernandinæ* (Lembeye). "CHINCHILETA."—This beautiful little ground warbler inhabits the thick, dense woods and is probably commoner than it appears to be. It was not often seen, however.

Three specimens, two males and a female, were taken at Pasadita and Callebonita, in May and June. These are precisely like Cuban ones.

107. *Geothlypis trichas* (Linn.).—Recorded by Poey from Isle of Pines. The subspecies to which this record applies is of course somewhat uncertain. Ridgway identified a series of birds taken in western Cuba by Palmer and Riley as *ignota*, and all

birds from eastern Cuba as *brachidactyla*. Judging from this the form wintering in the Isle of Pines should be *ignota*.

108. *Setophaga ruticilla* (Linn.). — Recorded by Poey, and found quite commonly in March, 1902. None were observed in April, 1904.

109. *Holoquiscalus gundlachii* (Cassin). "CHICHINGUACO." — Common in more open country, pastures, and ploughed fields. When the natives are ploughing, the grackle, often in great numbers, follows the plough to pick up grubs and the like that are turned up. It also, like the Ani, alights on the backs of horses and cattle to pick off ticks. The male, owing to the vertically placed feathers in the tail, presents a curious appearance when on the wing.

Nine specimens, both sexes, were taken, all at Santa Fé in April and May.

These skins average a little smaller with smaller bills than Cuban ones, and are, perhaps, a trifle duller in coloration, but in all these points Cuban birds vary, and there does not appear to be any real character by which the Isle of Pines grackle can be distinguished.

The series measures as follows: —

| No. | Sex. | Wing. | Tail. | Tarsus. | Exposed culmen. |
|--------|-------------|-------|-------|---------|-----------------|
| 13,274 | ♂ ad. | 137 | 120 | 36 | 33 |
| 13,275 | ♂ ad. | 139 | 122 | 37 | 33.5 |
| 13,276 | ♂ ad. | 140 | 128 | 36 | 33.5 |
| 13,277 | ♂ young ad. | 135 | 115 | 35.5 | 34 |
| 13,278 | ♂ young ad. | 131 | 107 | 34.5 | 33 |
| 13,279 | ♂ young ad. | 136 | 110 | 37 | 33 |
| 13,281 | ♀ ad. | 135 | 107 | 35 | 31.5 |
| 13,282 | ♀ ad. | 123 | 102 | 32 | 28 |

110. *Ptiloxena atrovioacea* (d'Orb.). "TOTI." — Probably a rare bird in the Isle of Pines as none were observed. The natives, however, know the "Toti" from the "Chichinguaco." It is recorded from the island by Poey and by Gundlach.

111. *Icterus hypomelas* (Bonap.). "SOLIBIA." — Common, especially among the pines. The oriole feeds a good deal among the flowers of various shrubs and trees, and its head is often daubed with juice and pollen from these.

Fourteen specimens, adults of both sexes and young including nestlings, were taken at Jucaro, Hospital, Callebonita, and Santa Fé in April, May and June. In birds from the Isle of Pines the yellow color of rump, thighs, and wing-coverts is a little paler than in Cuban examples, as is also the brownish yellow of under tail-coverts and anal region, with less of this color and rather more black than in Cuban specimens; but these differences are not very tangible and the Isle of Pines bird is not different enough to be formally separated as a subspecies.

112. *Agelaius assimilis* Lembeye.¹ "TOTI LA CIENAGA." — During the period spent near the Cienaga — April and May — all the birds of this species, that probably at some time of year scatter through the swamp to breed, were congregated in one flock that kept to some large trees at the edge of the Cienaga. The breeding season was not near at hand as the testes of the males were not enlarged, neither had it just passed as no very young birds were seen.

The notes of this species resemble those of the common Red-wing (*Agelaius phoeniceus*) but are lower and more wheezy, sounding, when a number are calling together, much like the chirping of insects.

In the adult male the wing is colored like that of *A. phoeniceus floridanus*, but younger males have the shoulder black, as in the adult female, except that some of the feathers are irregularly tipped and spotted with red and tawny, the amount of these colors varying much, from individuals with scarcely any to those that begin to show the characteristic markings of the adult.

Of all the Icteridæ this is probably one of the rarest and most local species, being known only from the Zapata Swamp in Cuba and the Cienaga in the Isle of Pines.

Seven specimens, both sexes, were taken, all at the edge of the Cienaga in April.

113. *Sturnella hippocrepis* (Wagler). "SABANERO." — The Meadowlark is common in pastures and fields and in the edge of the pine woods, and is very tame and unsuspecting.

Six specimens, adults of both sexes, were taken at Santa Fé,

¹ *Ex* Gundlach, MSS.

Jucaro, and Callebonita in April and May. These are similar to Cuban specimens, although they average more yellow on the thighs. Some Cuban skins, however, have the thighs nearly as yellow as Isle of Pines birds.

114. *Dolichonyx oryzivorus* (Linn.).—A casual migrant to the Isle of Pines, recorded by Cory and by Gundlach, but not observed on either trip.

115. *Spindalis pretrei pinus* subsp. nov.

“CABRERO.”

Type from Santa Fé, Isle of Pines, adult male, no. 13,317, Coll. of E. A. and O. Bangs. Collected April 18, 1904, by W. R. Zappey.

Characters.—Similar to true *Spindalis pretrei* (Lesson) of Cuba, but considerably larger with a larger bill. There is also a slight average difference in color, the male of the new species being rather paler and more purely yellow, less rufous-orange and tawny-orange, on nuchal collar, lower rump, and chest, than in Cuban examples; and the black cap extends rather farther backward, encroaching more upon the yellow of the nape band. The female appears not to differ in color, though our specimens are slightly paler and grayer than Cuban ones, but they were all taken in spring and early summer, whereas the Cuban examples we have compared them with were shot in December. The difference therefore is probably seasonal.

Measurements:—

| No. | Sex. | Wing. | Tail. | Tarsus. | Exposed culmen. |
|--------|-------|-------|-------|---------|-----------------|
| 13,311 | ♂ ad. | 75 | 57.5 | 18.5 | 12.5 |
| 13,312 | ♂ ad. | 74.5 | 57 | 18 | 12.5 |
| 13,323 | ♂ ad. | 76.5 | 59 | 18.5 | 13 |
| 13,314 | ♂ ad. | 77 | 57.5 | 18 | 12 |
| 13,315 | ♂ ad. | 71 | 54 | 19 | 12 |
| 13,316 | ♂ ad. | 73.5 | 56.5 | 19 | 12 |
| 13,317 | ♂ ad. | 75 | 59 | 19.5 | 12 |
| 13,318 | ♂ ad. | 75.5 | 60 | 18.5 | 12.5 |
| 13,319 | ♂ ad. | 72.5 | 55 | 18 | 12 |
| 13,320 | ♂ ad. | 73 | 57 | 19 | 11.5 |
| 13,321 | ♂ ad. | 72.5 | 57 | 18 | 12 |

| No. | Sex. | Wing. | Tail. | Tarsus. | Exposed culmen. |
|--------|-------|-------|-------|---------|-----------------|
| 13,322 | ♂ ad. | 75 | 57.5 | 18 | 12 |
| 13,310 | ♀ ad. | 69 | 54 | 17.5 | 12 |
| 13,313 | ♀ ad. | 68 | 52 | 17 | 12 |
| 13,324 | ♀ ad. | 69 | 50 | 17.5 | 12 |
| 13,325 | ♀ ad. | 71 | 55.5 | 18 | 12 |
| 13,326 | ♀ ad. | 68 | 53 | 17.5 | 12 |
| 13,327 | ♀ ad. | 67 | 53.5 | 18 | 11 |
| 13,328 | ♀ ad. | 69 | 52 | 18 | 12.5 |
| 13,329 | ♀ ad. | 67 | 50 | 17 | 12 |
| 13,330 | ♀ ad. | 72 | 52 | 18.5 | 11.5 |

The *Spindalis* is a conspicuous and rather common bird in the Isle of Pines, frequenting the pines and a tree (name not known) that bears a pink blossom. Both the males and females sing, the song being a low, weak warble.

Twenty-one specimens, adults of both sexes, were taken at Santa Fé, Jucaro, Callebónita, Pasadita, and San Juan, in April, May, and June. These differ from Cuban examples, as has been pointed out by Ridgway in *Birds of North and Middle America*, in larger size and bigger bills, and in addition show a slight average difference in color.

116. *Tiaris olivacea olivacea* (Linn.). "TOMEQUIN DE LA TIERRA." — A rather common bird in the Isle of Pines, in the brushy country, and particularly fond of thorn bushes, and one species of palm upon the berries of which it feeds.

Nine specimens, adults of both sexes, were taken at Santa Fé and Callebónita in April, May, and June.

Ridgway in *Birds of North and Middle America* (Part I, p. 531, footnote) speaks of the slightly larger size and duller colors of the male Grassquits from Cuba, Grand Cayman, and Little Cayman as compared with those from Haiti and Jamaica. The series from the Isle of Pines bears out both peculiarities — larger size of the males and duller colors — but the differences are very slight and hardly sufficient to base a new form upon. The specimens measure as follows: —

| No. | Sex. | Wing. | Tail. | Tarsus. | Exposed culmen. |
|--------|-------|-------|-------|---------|-----------------|
| 13,301 | ♂ ad. | 49 | 37.5 | 15.5 | 9 |
| 13,303 | ♂ ad. | 47.5 | 37.5 | 16 | 9 |
| 13,304 | ♂ ad. | 49.5 | 38 | 15.5 | 9.5 |

| No. | Sex. | Wing. | Tail. | Tarsus. | Exposed culmen. |
|--------|-------|-------|-------|---------|-----------------|
| 13,306 | ♂ ad. | 51.5 | 40 | 16 | 9 |
| 13,307 | ♂ ad. | 50.5 | 39 | 15.5 | 9 |
| 13,308 | ♂ ad. | 50.5 | 38.5 | 15.5 | 9 |
| 13,309 | ♂ ad. | 52 | 41 | 15.5 | 9.5 |
| 13,302 | ♀ ad. | 47 | 37.5 | 15 | 9 |
| 13,305 | ♀ ad. | 47 | 36 | 15.5 | 8.5 |

117. ? *Tiaris canora* (Gmel.). "TOMEQUIN DEL PINAR."—Under the name *Passerina collaris* Vig., a synonym of the Melodious Grassquit, Poey recorded this bird from the Isle of Pines. Cory also gives the species from the island, but may have taken it directly from Poey. Poey does not include the common Yellow-faced Grassquit in his list, and we consider this a very doubtful record probably due to confusion of names.

At all events, it must be very rare, as nothing was seen or heard of it in the Isle of Pines by Palmer and Riley or by Zappey.

118. *Melopyrrha nigra* (Linn.). "NEGRITO."—The Cuban Bullfinch appears to be restricted in the Isle of Pines to the dry, brushy country south of the Cienaga and even there is not at all common.

One male was taken at Puerta del Este, on April 29.

119. *Passerculus sandwichensis savanna* (Wilson).—The Savanna Sparrow was taken in March, 1902, but on the second trip to the island, beginning in April, none were seen.

120. *Coturniculus savannarum passerinus* (Wilson).—The Yellow-winged Sparrow was also found in March, 1902, and was not observed during the 1904 trip. None appear, therefore, to breed in the Isle of Pines, and those seen in March, 1902, undoubtedly were northern birds. There is, however, a resident breeding race in Cuba, as well as northern birds that pass the winter there.