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## ON A COLLECTION OF BIRDS FROM NICARAGUA.

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Edited by R. Ridgway.\*

In the early part of 1883, the writer visited Nicaragua for the purpose of making a collection of birds for the Smithsonian Institution.

In order to procure as large a representation of Nicaragua birds as possible, four regions were visited. The first of these, San Juan del Sur, is situated on the Pacific coast; the second, Suenyá, on the west shore of Lake Nicaragua; the third, Ometepe,† is an island in the lake; and the fourth, Los Sábalo, is on the river San Juan del Norte, about 30 miles from the east shore of the lake.

It will be seen that these four stations form a chain across the greater part of Nicaragua, reaching from west to east. In order to present more forcibly the difference in the avifauna of these regions, induced by the marked difference in the physical characteristics of the four stations, a separate list of species will be given for each region visited.

## I.—SAN JUAN DEL SUR.

On the 4th of January, 1883, the writer landed in San Juan del Sur, on the Pacific coast of Nicaragua, a few miles north of the Costa Rican boundary.

The port is situated in a beautiful harbor surrounded by low mountains and is said to be the healthiest port on the Pacific coast of Central America. A small river empties into the bay, and the banks of this stream are the favorite resort of numerous species of water birds.

A dense growth of small, thorny trees situated between the river and the town of San Juan affords a good field for collecting many kinds of small birds, while in a dense marshy forest beyond the river many larger and more wary species are to be found.

The avifauna is not nearly so rich here as in the other localities which I visited, the water birds being the only ones found in unusual abundance. Several species of this class were observed, but not secured, the writer deeming it best to devote his time to families more likely to produce novelties.

All species marked with an asterisk are for the first time recorded from Nicaragua.

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\*The editor of this paper is responsible for the nomenclature adopted and all critical remarks.

†I have adopted this spelling of the word *Ometepe*, from the fact that it is the one used by the natives of the country. I have in my possession an official paper in which the word occurs several times and is spelled in this way. I notice also that Captain J. M. Dow, of Panama, and Dr. Earl Flint, of Rivas, both use the same spelling. While the original Indian name was doubtless *Ometepe*, I prefer to spell it in accordance with the usage of the country.—C. N.

FAM. SYLVIIDÆ.

\*1. *Polioptila albiloris* Salv.

Common, especially in the thicket south of the river. These diminutive birds are extremely familiar and fearless, approaching within two or three feet of the collector, without seeming to notice his presence, in their busy search for the various insects which constitute their food. In their manner of climbing about trees and bushes they remind one of our Black-capped Titmouse (*Parus atricapillus*).

Five specimens secured.

FAM. TROGLODYTIDÆ.

\*2. *Campylorhynchus capistratus* (Less.).

Common, but not so abundant as I found it on the Gulf of Nicoya, Costa Rica. Found generally in the more open country, especially along the "piñuella" hedges, in which they often construct their nests.

Song very voluble, both male and female often joining in a lively duet, which fills the air with melody. Two specimens.

3. *Thryophilus pleurostictus* Schl.

Abundant. Four specimens.

FAM. MNIOTILTIDÆ.

4. *Siurus naevius* (Bodd.).

Apparently not common. The single specimen secured was shot in the deep, swampy forest across the river. A diligent search on several occasions failed to discover other specimens.

5. *Dendroica æstiva* (Gm.).

Common. For some reason, inexplicable to me, this warbler was exceedingly shy and difficult to approach, much more so than in Costa Rica, or the other localities visited in Nicaragua. Two specimens secured.

\*6. *Myiodiocetes pusillus* (Wils.).

Seen, but not secured.

FAM. TANAGRIDÆ.

\*7. *Euphonia humilis* (Cab.).

Not common. The single specimen secured was shot out of the top of a large tree. Song exceedingly voluble and melodious, perhaps the most pleasing that I heard in this region.

FAM. FRINGILLIDÆ.

\*8. *Cyanospiza cyanea* (Linn.).

One specimen shot in open field up the river.

## FAM. CORVIDÆ.

\*9. *Calocitta formosa* (Sw.).

This elegant jay is quite common around San Juan. I noticed that the natives here, as in Costa Rica, ascribe to it the power of speaking, although I never saw one which had acquired that accomplishment.

## FAM. TYRANNIDÆ.

10. *Myiozetetes texensis* (Giraud).

Abundant. Apparently gregarious, being almost always found in small flocks. A lively and interesting bird, sure to attract the attention of the collector by its bright color, activity, and peculiar cries. The latter I can compare to nothing but the cry of a little chicken in distress. It is found both in the woods and more open country, seeming to prefer isolated trees in the vicinity of water.

Three specimens secured.

\*11. *Rhynchocyclus cinereiceps* Sel.

Iris white. Only one specimen.

\*12. *Pitangus derbianus* Kaup.

Abundant. One of the most conspicuous birds of the region. It is most frequently seen on the margin of the water perching on some low branch awaiting its insect prey. Its cry is extremely harsh and monotonous, proving an annoyance to one listening for the notes of other birds. It is, moreover, of a decidedly quarrelsome disposition, even more so than the rest of its family. Two specimens.

13. *Megarhynchus pitangua* (Linn.).

Not so common as the last. Habits much the same, but it does not show such a marked preference for the vicinity of the water.

Two specimens secured.

\*14. *Myiarchus nuttingi* Ridgw.

Common, but rather solitary in its habits. It is usually seen sitting quietly on a low limb in the thick woods. It is quieter than many of its kind.

Three specimens.

15. *Tyrannus melancholicus satrapa* (Licht.).

Apparently rare. One specimen secured.

16. *Milvulus forficatus* (Gm.).

This graceful Flycatcher is more abundant in the vicinity of San Juan than in any other region in which I have collected.

It is gregarious in its habits, being usually found in flocks of from six to ten. It is much more silent than is usual among the Flycatchers, and more timid and difficult to approach than any that I can think of.

I had ample opportunity to observe this bird, and was struck with

the fact that it never seemed to associate with any other member of its family, although all the other common species seemed to mix indiscriminately. This latter fact may, however, be due to a community of interests.

The peculiar scissor-like motion of the long tail-feathers, from which this bird derives its vernacular name, is always seen during a flight of any length.

All the specimens obtained were shot from trees bordering the shore of the bay, and they do not seem to penetrate into the forest to any great extent. Five specimens.

17. *Milvulus tyrannus* (Linn.).

One day while collecting up the river a bird flew over which I took to be this species, principally from the fact that there was no motion of the tail-feathers.

FAM. DENDROCOLAPTIDÆ.

\*18. *Dendroornis eburneirostris* (Less.).

One specimen shot near the river. Noticed a marked absence of birds of this family, although the woods in many places seemed well suited to their pursuits.

FAM. TROCHILIDÆ.

\*19. *Chlorostilbon osberti* Gould.

One specimen.

FAM. CAPRIMULGIDÆ.

\*20. *Antrostomus carolinensis* (Gm.).

Common. Two specimens secured.

\*21. *Nyctidromus albicollis* (Gm.).

Seen, but not secured.

FAM. PICIDÆ.

\*22. *Centurus aurifrons hoffmanni* (Cab.).

Abundant. The common Woodpecker of the region.

23. *Ceryle torquata* (Linn.).

Common, especially in the swampy country across the river. Noisy and active, like all its American relatives. One specimen.

\*24. *Ceryle alcyon* (Linn.).

Not common. The only one that I saw was shot in the swamp mentioned above.

25. *Ceryle americana cabanisi* (Tschudi).

Common along the river.

## FAM. TROGONIDÆ.

26. *Trogon melanocephalus* Gould.

Probably common, although I secured only one specimen. The difference of avifaunæ of regions only a few miles apart is a fact continually forcing itself upon the notice of the explorer in the tropics. San Juan del Sur, for example, is not more than 40 or 50 miles from "La Palma," Costa Rica, and they are both on the Pacific coast. At the latter point I found three species of *Trogon* very abundant, *i. e.*, *T. melanocephalus*, *T. massena*, and *T. caligatus*. At San Juan del Sur a diligent search failed to discover a single specimen of the last two species, and only one of the first was taken.

Iris brown. Bare orbital region sky-blue.

## FAM. CUCULIDÆ.

27. *Crotophaga sulcirostris* Sw.

Abundant. Delights in hedge-rows and feeds largely upon the worst enemy of the collector, the "garrapata" or tick. One specimen.

\*28. *Diplopterus navius* (Gm.).

One specimen shot out of a hedge in an open field. Appears to be terrestrial in its habits.

29. *Piaya cayana mehleri* (Bp.).

Common. The loud mournful cry of this bird is frequently heard around San Juan.

It is graceful in its movements and is conspicuous both for its cry and the peculiar and constant flirting of its long tail. Strictly arboreal. Iris deep red. Skin exceedingly tender. Three specimens.

\*30. *Coccyzus seniculus* (Lath.).

Not rare. Is less shy than any other member of its family with which I am acquainted. Arboreal. Never heard its note.

## FAM. PSITTACIDÆ.

\*31. *Ara macao* (Linn.).

Common, but not nearly so abundant as in other parts of the country. None secured.

\*32. *Chrysotis albifrons* (Sparm.).

Abundant. Iris very pale yellow. Bill lemon yellow.

This beautiful parrot is much sought after by the natives on account of its bright plumage, and has been made quite shy by continual persecution. So much is this the case that I found it difficult, at first, to secure specimens, and finally succeeded by a method almost inexcusable from its cruelty.

Having succeeded in wounding one, I took advantage of its piercing screams of distress, not dispatching it at once, as humanity dictated,

but allowing it to continue its cries and attract its numerous companions. They came fairly swarming around the spot, and I secured all I needed.

\*33. *Chrysotis auripalliat*a (Less.).

Saw a pair of these domesticated at San Juan del Sur. They are remarkably good talkers.

\*34. *Brotogerys tovi* (Gm.).

Exceedingly abundant.

FAM. FALCONIDÆ.

✓\*35. *Pandion haliaetus carolinensis* (Gm.).

Seen, but not secured.

✓\*36. *Asturina plagiata* (Schl.).

Common. Quite fearless. Has a loud, clear cry.

Two specimens. Cere and legs yellow. Iris brown.

✓\*37. *Rupornis ruficauda* (Sel. & Salv.).

Abundant.

✓\*38. *Buteo borealis costaricensis* Ridgw.

I was informed by an English resident that this bird is not uncommon in the region.

✓39. *Urubitinga anthracina* (Nitzsch.).

Common and fearless.

✓\*40. *Microaster melanoleucus* (Vieill.).

Rather rare. One specimen. Iris brown, legs lemon yellow.

✓41. *Tinnunculus sparverius* (Linn.).

Common.

✓\*42. *Harpagus fasciatus* Lawr.

Not common. The single specimen secured was brought to me alive by the natives. I put him in a cage with the intention of trying to tame him, but he absolutely refused to eat or drink, and savagely attacked my hand whenever I tried to feed him. The color of the iris is different from any other that I know of and lends a peculiar beauty to the bird in life. Iris brownish pink. Cere and eyelids greenish. Legs brownish.

✓\*43. *Polyborus cheriway* (Jacq.).

Very abundant. Associates with the buzzards and is fully as offensive to the smell. In encounters between the buzzards and the Caracara the latter is generally worsted.

None secured.

FAM. CATHARTIDÆ.

\*44. *Carthartes aura* (Linn.).

Extremely abundant.

- \*45. *Catharista atrata* (Bartr.).

Not so common as the last.

- \*46. *Gyparchus papa* (Linn.).

Rare. Only one seen.

FAM. COLUMBIDÆ.

- \*47. *Melopelia leucoptera* (Linn.).

Common. The note of this bird is uncommonly musical and varied for one of its family. Circumorbital region sky-blue. Three specimens.

- \*48. *Chamæpelia passerina* (Linn.).

Abundant.

- \*49. *Engyptila verreauxi* (Bp.).

Iris yellow. Circumorbital region sky-blue.

FAM. TACHYPETIDÆ.

- \*50. *Tachypetes aquila* (Linn.).

Native name "*Tijereta*." One of the specimens shot ejected twenty-three small fishes from its pouch. These birds seem to be almost always on the wing and are exceedingly graceful in their evolutions, moving their long outer rectrices exactly in the same manner as *Milvulus forficatus*. They never appear to dive for their food, but skillfully pick up the fish from near the surface of the water, or pounce upon those left ashore by the receding waves. Two specimens. Iris brown. Gular pouch light red.

FAM. PELECANIDÆ.

- ✓ \*51. *Pelecanus fuscus* Linn.

Abundant. Always to be seen diving for fish along the sea-coast.

FAM. SULARIDÆ.

- ✓ \*52. *Sula leucogastra* (Bodd.).

Abundant along the entire Pacific coast.

FAM. PHALACROCORACIDÆ.

- \*53. *Phalacrocorax brasilianus* (Gm.).

Common. One specimen.

FAM. PLOTIDÆ.

- \*54. *Piotus anhinga* Linn.

Not common. Only one seen.

FAM. ARDEIDÆ.

- \*55. *Ardea herodias* Linn.

Common. One specimen.

- \*56. *Herodias egretta* (Gmel.).

Common. None secured.

57. *Garzetta candidissima* (Gmel.).

Common. Iris yellow. Tarsi black in front, greenish yellow behind. One specimen.

- \*58. *Hydranassa tricolor ludoviciana* (Wils.).

Abundant. One specimen.

59. *Florida cærulea* (Linn.).

Abundant. Iris light yellow. Tarsi light green in young specimens. Two specimens.

60. *Butorides virescens* (Linn.).

Abundant. One specimen.

61. *Nyctherodius violaceus* (Linn.).

Common. Young specimen. Iris orange and legs greenish.

62. *Tigrisoma cabanisi* Heine.

Not common. Seen, but not secured.

FAM. CICONIIDÆ.

- \*63. *Tantalus loculator* (Linn.).

Rather rare. One specimen.

FAM. IBIDIDÆ.

- \*64. *Eudocimus albus* (Linn.).

Common. One specimen. Iris light blue. Bill red.

FAM. PLATALEIDÆ.

- \*65. *Ajaja rosea* Reich.

Common along the muddy banks of the river. Moves its bill from side to side while feeding, like a duck.

Two specimens secured.

FAM. CHARADRIIDÆ.

- ✓\*66. *Oxyechus vociferus* (Linn.).

Common. One specimen.

FAM. SCOLOPACIDÆ.

- ✓\*67. *Totanus melanoleucus* (Gmel.) Vieill.

Common. One specimen.

- \*68. *Tringoides macularius* (Linn.).

Abundant. One specimen.



## FAM. ANATIDÆ.

\*69. *Dendrocycna autumnalis* (Linn.).

Saw a flock of these birds flying over, and knew them by their peculiar cry, which is different from that of any other bird with which I am acquainted.

\*70. *Querquedula discors* (Linn.).

Examined one which a native had killed. Said to be abundant at certain seasons.

## II.—SUCUYÁ.

The hacienda "Sucuyá," is about 22 miles northwest of San Juan del Sur, and about 4 miles north of Rivas, a town of considerable size. This hacienda is quite extensive and stretches for several miles along the west shore of Lake Nicaragua, or rather along a great lagoon which is an arm of the lake. The surrounding country is low, and to the east and north exceedingly thickly wooded and swampy. This shore of the lake might fitly be called the garden spot of Nicaragua, and, perhaps, of Central America. It supports an exceedingly dense population, and agriculture, together with stock-raising, is the main, almost the sole, support of the people.

The avifauna of this region is much richer than in San Juan del Sur. Families not at all, or very meagerly, represented in San Juan, become quite abundant at Sucuyá. As the most prominent examples of this fact, I would mention the *Tanagridæ*, *Colingidæ*, *Dendrocolaptidæ*, *Formicariidæ*, and *Momotidæ*. The forest in Sucuyá is denser and more tropical in appearance than at San Juan, and insect life is much more varied and troublesome to the collector. Scorpions, ants, mosquitoes, and "garapatas" are unrelaxing in their efforts to turn the attention of the naturalist from other and pleasanter pursuits.

"Sucuyá" is owned by a company consisting of Sr. Don JUAQUIN ZAVALA, ex-President of Nicaragua, Sr. Don ADAN CARDENAS, President of Nicaragua, and Sr. Don NARCISO FERIA, prefect of Rivas. I am thus particular in mentioning their names, from the fact that it is to them I owe a pleasant home in an excellent collecting ground for a month. I am also under great obligation to Sr. Don ALEJANDRO CHAMBERLAIN, "administrador" of Sucuyá, a gentleman who spared no effort to make my stay at the hacienda both pleasant and profitable. Science has no truer well-wishers than the gentlemen above mentioned.

## FAM. TURDIDÆ.

1. *Merula grayi* (Bp.).

Common. Three specimens.

## FAM. SYLVIIDÆ.

\*2. *Polioptila bilineata* (Bp.).

Abundant. Seems to replace *P. albiloris* in this region, at least I did

not see any of the latter. Found principally on the edge of a large clearing near the swamp.

Their nests were apparently built among the branches of fallen trees, and they appeared to be living in much the same manner as wrens.

### FAM. TROGLODYTIDÆ.

#### \*3. *Campylorhynchus capistratus* (Less.).

Common. This species seems to be confined to the west side of the lake. At least I failed to find a single specimen either on the island Ometepe or the river San Juan del Norte. I consider it one of the most pleasing songsters I have met in Central America. A more jolly, rollicking melody would be hard to imagine, and is in perfect keeping with the familiar, almost audacious, manner of the bird.

Three specimens.

[NOTE.—The differences between Costa Rican specimens of this species, and others from Guatemala and Honduras, alluded to on page 389 of volume 5 of these Proceedings, are well borne out in five specimens (two from San Juan del Sur and three from Suenyá) collected by Mr. Nutting, the Nicaraguan bird agreeing with those from Costa Rica in the more variegated back, which in two examples from the above-named countries (No. 39654, Savana Grande, Guatemala, O. Salvin, and No. 42588, Spanish Honduras, Ilges and Sauter) have the entire back an unbroken rusty chestnut color. The two specimens from San Juan del Sur are decidedly larger than the three from Suenyá, and have light buff rather than white lower parts; but these differences may not be constant in a larger series.—R. R.]

#### 4. *Thryophilus rufalbus* (Lafr.).

Common, more especially in thick forests. This bird presents a marked contrast to the preceding, both in habits and song. Thus, while *C. capistratus* is conspicuous, fearless, and self-asserting, and prefers the hedge-rows and edges of the woods, *T. rufalbus* is retiring, timid, and modest in disposition, and is almost invariably found in the deep forests. While the note of the former is loud, voluble, and merry, that of the latter is low, hesitating, and sad, but wonderfully sweet and expressive.

#### \*5. *Thryophilus pleurostictus* Sel.

Abundant. Found principally in the very densest forest. Song sweet, but less demonstrative than that of *Campylorhynchus capistratus*.

Three specimens.

### FAM. MNIOTILTIDÆ.

#### \*6. *Siurus auricapillus* (Linn.).

Not common. Contrary to its usual choice of locality, the specimen obtained was shot in a dense swampy forest where *S. navius* is abundant.

\*7. *Siurus nævius* (Bodd.).

Abundant in the swampy forest above mentioned. Lives mostly on, or near, the ground. Three specimens.

8. *Dendroeca æstiva* (Gm.).

Abundant. Not nearly so shy as in San Juan del Sur. One specimen.

\*9. *Geothlypis trichas* (Linn.).

Abundant, especially along edges of marsh. Three specimens.

## FAM. CEREVIDÆ.

10. *Cereba cyanea* (Linn.).

Rare. Only one specimen secured. Legs red.

## FAM. TANAGRIDÆ.

\*11. *Phenicotherapis rubicoides* (Lafr.).

Abundant. Habits very similar to those of the *Dendrocolaptidæ*. Gregarious. Usually silent.

Curiously enough, although a Tanager, this bird is usually seen clinging to the tree-trunks, like the *Dendrocolaptidæ*, and hops about the ground like the *Formicariidæ*. Indeed it seemed to be living almost entirely upon ants. There were many places where the ground was actually swarming with these insects, and there *P. rubicoides* would congregate in large numbers, either picking up the ants from the ground, or climbing about the trunks of trees in pursuit of the same insect.

This latter fact is so peculiar for a bird of this family that I would not state it, had I not had ample opportunity to convince myself that it was not an accidental or rare position for these birds to take, but that it was *habitual* with them while feeding, a fact proven to me by scores of instances.

Found always in the thickest parts of the forest. Four specimens.

12. *Eucometis spoëocephala* (Bp.).

Very abundant. Like the last, it was found feeding largely upon ants, and lived near the ground. But it did not cling to the tree-trunks like *P. rubicoides*, and was generally found near the edges of the forest. I do not remember its note distinctly, but think it was little more than a chirp. Gregarious. Nine specimens.

\*13. *Saltator atriceps* Less.

Common. Gregarious. Note loud and rather harsh. Usually found along the edge of the forest. Does not seem to feed largely upon ants, and spends very little of its time upon the ground. Six specimens.

\*14. *Saltator grandis* Lafr.

Common. Habits similar to preceding. Three specimens.

FAM. FRINGILLIDÆ.

15. *Volatinia jacarina* (Linn.).

Common. Lives in open fields. Nests on or near the ground. Gregarious.

16. *Cyanospiza cyanea* (Linn.).

Common. Habits similar to preceding species. Four specimens.

\*17. *Cyanospiza ciris* (Linn.).

Abundant. It is a curious fact that, while I saw hundreds of these birds every time I went out collecting, and had ample opportunity to observe them at close quarters, I did not see a single male *C. ciris* at Suenya. There were many large flocks composed, apparently, entirely of females. I would certainly have seen the gaudily-colored males, had there been any considerable number in the region. Six specimens.

\*18. *Hæmophila ruficauda* (Bp.).

Rather common along the hedges. Three specimens.

FAM. ICTERIDÆ.

19. *Ostinops montezumæ* (Less.).

Abundant. Iris brown. Basal half of bill black, terminal half red. Wattles white. Bare spot under eyes light blue.

The "*Oropendola*," as this bird is called by the natives, is one of the most familiar and conspicuous birds of the region.

It feeds largely on plantains, bananas, mangoes, and other cultivated fruits, thus making itself obnoxious to the inhabitants.

The "*Oropendola*" lives in colonies which, in this region, are generally located in cocoanut palms. The nests are long and purse-like, and are generally composed of fine grasses, the entrance being near the top. There are often fifty or more of these nests in a single tree. The birds have a curious way of getting into the nests and shaking them violently, producing a rattling noise. It would be almost impossible to describe the note of this bird, as it is so totally different from any other with which I am acquainted. I have sometimes heard a similar noise produced by a cart-wheel that needed greasing, but a cart-wheel makes so many different noises that the comparison is almost a useless one. Seven specimens.

I am told that forty or fifty years ago there were no *Oropendolas* in this region.

20. *Cassicus prevosti* (Less.).

Not common. Seems to be gregarious. Three specimens. Iris light yellow. Bill light yellowish green.

21. *Quiscalus macrurus* (Swain.)

Iris white. Common.

FAM. CORVIDÆ.

\*22. *Calocitta formosa* (Sw.).

Very abundant and audacious. Four specimens.

FAM. TYRANNIDÆ.

\*23. *Platyrhynchus cancrorninus* Sel. et Salv.

One specimen shot in the deep woods. Wren-like in its movements.

24. *Todirostrum cinereum* (Linn.).

Not very common; habits like the last. Two specimens.

25. *Myiozetetes granadensis* Lawr.

Abundant. One specimen.

26. *Myiozetetes texensis* (Giraud).

Two specimens.

\*27. *Rhynchocyclus cinereiceps* Sel.

Abundant. Iris white. A rather silent bird, fond of the deep woods. Five specimens.

\*28. *Pitangus derbianus* (Kaup).

Common. Noisy. One specimen.

\*29. *Empidonax pusillus* (Sw.).

Rare. One specimen.

\*30. *Empidonax flaviventris* Baird.

Apparently rare. One specimen.

31. *Myiarchus lawrencei nigricapillus* (Cab.).

Rather common. Two specimens.

32. *Tyrannus melancholicus satrapa* (Cab.).

Common. Two specimens.

33. *Milvulus forficatus* (Gm.).

Abundant. Associated more with others of its family than it did in San Juan del Sur. Three specimens secured.

FAM. PIPRIDÆ.

34. *Chiroziphia linearis* Bp.

Abundant. Spanish name "Tolédo" (pronounced "Tolay'do") on account of a fancied likeness to their whistling note. The natives also call this bird "Bailador" or "Dancer." It was not until I had been in the region for some time that I understood why it was given this name. One day, while hunting through the dense forest, the profound silence was suddenly broken by the regularly repeated note of "El Bailador," and softly making my way toward the spot whence the sound proceeded, I witnessed one of the most remarkable performances it has ever been my lot to see.

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Upon a bare twig which overhung the trail at a distance of about four feet from the ground, two male "Bailadors" were engaged in a "song and dance" act that simply astounded me. The two birds were about a foot and a half apart, and were alternately jumping about two feet into the air and alighting exactly upon the spot whence they jumped. The time was as regular as clock-work, one bird jumping up the instant the other alighted, each bird accompanying himself to the tune of "to-lé-do—to-lé-do—to-lé-do," sounding the syllable "to" as he crouched to spring, "lé" while in the air, and "do" as he alighted.

This performance was kept up without intermission for more than a minute, when the birds suddenly discovered that they had an audience, and made off.

With a little practice one can learn to call the birds very readily. I could have secured a very large number in this manner, had I been so disposed.

Twelve specimens.

FAM. COTINGIDÆ.

\*35. *Pachyrhamphus cinereiventris* Sel.

Not common. Iris brown. Found in deep woods. Silent. Two specimens.

\*36. *Attila citreopygia* (Bp.).

Rather common. Iris pink. Two specimens.

FAM. DENDROCOLAPTIDÆ.

\*37. *Sittasomus olivaceus* (Max.).

Abundant. Silent. Found in deep woods. Two specimens.

\*38. *Dendrocinclos homochroa* Sel.

Abundant. All birds of this family that I have collected habitually climb like woodpeckers, but do not seem to tap with their bills. Three specimens.

39. *Dendrocolaptes sancti-thomæ* (Laf.).

Rare. Only one specimen shot, and that was engaged in eating ants in company with a flock of *Eucometis spodocephala*.

\*40. *Dendroornis eburneostriis* (Less.).

Abundant. Habits like preceding. Three specimens.

FAM. FORMICARIIDÆ.

41. *Thamnophilus doliatus* (Linn.).

Abundant. Iris white. Habits wren-like. This bird has a chattering note almost exactly like that of *Trogon melanocephalus*, which has often misled me. It also has a scolding note precisely like many of the wrens. The female seems to be shyer and more retiring in her manner than the male. The nest is often placed in a brush heap, or, rather, in

a dense mass of fallen timber. Although many are often found in the same locality, I do not believe that this bird is truly gregarious. Six specimens.

\*42. *Cercomacra tyrannina* Sel.

Rare. Only one specimen shot in the dense forest.

\*43. *Rhamphocænus rufiventris* Bp.

Common. Prefers dense woods. Climbs around trees like our nut-hatches. Three specimens.

### FAM. TROCHILIDÆ.

\*44. *Chrysuronia eliciæ* (Bourc. & Muls.)?

Rare. Only one specimen.

[NOTE.—An adult male of this species from Sucuyá, is so decidedly different from another from Guatemala (No. 33655, Masagua, Pacific coast; O. SALVIN) that should the differences observable prove constant the birds from the two countries would undoubtedly prove distinct races. The differences may be tabulated as follows:

*Guatemalan specimen*: Above dark grass-green, becoming bronzy only on upper tail-coverts, which are bronze-green, tinged with coppery bronze; tail bright bronze-green, with more or less of a green cast in all lights. Throat and jugulum rich violet, changing to bluish, but never to greenish. Wing 2.05, tail 1.25, culmen .72.

*Nicaraguan specimen*: Above bronzy green, the whole back and wing-coverts changing to golden bronze, in certain lights; upper tail-coverts rich copper-bronze, not changing to greenish; tail very brilliant golden bronze, with only a very faint green tinge, in certain lights. Throat and jugulum rich violet-blue, changing to greenish. Wing 2, tail 1.15, culmen .70.

An adult female from Costa Rica (No. 91308, A. R. ENDRES) is exactly like the Nicaraguan specimen, except that the throat and jugulum are without the blue.

The locality of the type specimen of *C. eliciæ* is unfortunately unknown, and upon referring to the original description (in Ann. Soc. Agr. Lyons, vol. ix, 1846, p. 314), I am unable to decide which form it agrees with best. I therefore hesitate to formally institute a new race by giving a name to the one not already provided.—R. R.]

\*45. *Amazilia cinnamomea* (Less).

Common. Two specimens shot in dense forest.

### FAM. CAPRIMULGIDÆ.

\*46. *Nyctidromus albicollis* (Gm.).

Exceedingly abundant. On bright moonlight nights these birds keep up their weird cry from night until morning.

The day is spent on the ground in the dense forests, where they seem to prefer the almost impenetrable growth of cane which, in some instances, is very extensive. Six specimens.

FAM. PICIDÆ.

- \*47. *Campephilus guatemalensis* Hartl.

Common. Two specimens.

- \*48. *Hylotomus scapularis* (Vig.).

Apparently rare. Iris white. One specimen.

- \*49. *Centurus aurifrons hoffmanni* (Cab.).

The common Woodpecker of the region, called "Carpintero" (Carpenter) by the natives. Two specimens.

FAM. MOMOTIDÆ.

50. *Momotus lessoni* (Less.).

Rare in this region. One specimen.

51. *Eumomota supercilialis* (Sw.).

Common. Native names "Dragon" and "Guarda Barranca." Usually seen sitting silently upon some branch not more than 10 or 12 feet from the ground, where it seems to be lost in profound meditation. Upon being disturbed it flies only a short distance, alights again and indicates its uneasiness only by repeated jerks of its peculiar spatulate tail-feathers.

Although I have observed many of these birds, I never heard it emit a sound of any kind. Four specimens.

FAM. ALCEDINIDÆ.

52. *Ceryle torquata* (Linn.).

Many specimens seen.

53. *Ceryle americana cabanisi* (Tsch.)

Seen, but not secured.

FAM. TROGONIDÆ.

54. *Trogon melanocephalus* (Gould).

Abundant. Prefers the edge of the forest. Circumorbital region sky blue. Eight specimens.

55. *Trogon* — ?

I saw one specimen of a small species of *Trogon*, possibly *T. caligatus*.

FAM. CUCULIDÆ.

56. *Crotophaga sulcirostris* Sw.

Abundant. Native name "Tinta." Gregarious. Two specimens.

- \*57. *Diplopterus nœvius* Gm.

Uncommon. One specimen.



58. *Piaya cayana mehleri* (Bp.).

Abundant. Two specimens.

\*59. *Morococcyx erythropygia* (Less.).

Abundant. Native name "Bobo" or "Stupid." Bare space around eye, blue. Lives on, or near, the ground in open country. Nests in the grass: The natives claim that it "strikes the hours" by singing a song at the end of each hour. Three specimens.

\*60. *Coccyzus seniculus* (Lath.).

Not common. Only one specimen.

FAM. RHAMPHASTIDÆ.

61. *Pteroglossus torquatus* (Gm.).

Not common. Iris clear yellow. Bill yellow, red, and black. The single specimen secured was shot out of a solitary tree in an open field.

The natives apply the name "Féliz" (happy) to all toucans, though I fail to see the application.

FAM. PSITTACIDÆ.

\*62. *Ara macao* (Linn.).

Abundant. Iris very pale yellow, nearly white. One specimen.

\*63. *Chrysotis albifrons* (Sparrm.).

Very abundant and noisy. Native name "Chocoyo."

64. *Chrysotis autumnalis* (Linn.).

I saw several parrots which I refer, with some doubt, to this species.

FAM. STRIGIDÆ.

\*65. *Pulsatrix torquata* (Daud.).

Not common. Saw two of this species, and killed one, but could not save the skin. Iris yellow.

FAM. FALCONIDÆ.

✓ 66. *Asturina plagiata* (Schl.).

Rather common. Iris brown. Cere and legs yellow. Hunts in pairs. Four specimens.

✓ 67. *Urubitinga zonura* (Shaw).

Not common. One specimen.

✓ 68. *Rupornis ruficauda* (Scf. & Salv.).

Very abundant. Two specimens.

✓ 69. *Tinnunculus sparverius* (Linn.).

Abundant in open country. One specimen.

✓ 70. *Harpagus fasciatus* (Lawr.).

Rare. The specimen obtained was shot out of a tree in a sparsely wooded tract of land.

✓ 71. *Herpetotheres cachinnans* (Vieill.).

Not common. Iris brown. Cere yellow. One specimen shot in swampy country.

✓ 72. *Polyborus cheriway* (Jacq.).

Abundant.

FAM. COLUMBIDÆ.

\* 73. *Zenaidura carolinensis* (Linn.).

Common. Two specimens.

\* 74. *Engyptila verreauxi* (Bp.).

Abundant. One specimen.

\* 75. *Melopelia leucoptera* (L.).

Common. None secured.

\* 76. *Scardafella inca* (Less.).

Rare. One specimen.

\* 77. *Chamæpelis passerina* (L.).

Very abundant. Two specimens.

FAM. ARAMIDÆ.

✓ 78. *Aramus pictus* (Bartr.).

Abundant. Native name "Coréo." The flesh of this bird is excellent eating.

Note loud, harsh, and unpleasant. One specimen secured.

The water birds in this region are fully as abundant as in San Juan del Sur, but I only secured those species which I could not identify at sight or those which were specially interesting. All those mentioned in this list were positively identified.

FAM. CICONIIDÆ.

\* 79. *Mycteria americana* Linn.

Not very common; three specimens seen. They are well known to the natives by their Costa Rican name "Galan sin ventura."

FAM. IBIDIDÆ.

\* 80. *Eudocimus albus* (Linn.).

Common. One specimen.

FAM. CEDIENIDÆ.

\* 81. *Cedienis bistriatus* (Wagl.).

Abundant. Iris yellow; legs greenish yellow. This curious bird is gregarious, and lives in the pastures surrounding the haciendas, where it makes itself useful in eating the various insects that annoy and in-

jure the cattle. On this account it is protected by the inhabitants of the country, and it was only as a particular favor that I could persuade "Don Alejandro" to allow me to shoot a couple of specimens. The bird is exactly like a gigantic plover in appearance and motions, and is frequently seen in a state of domestication in the little flower gardens which occupy the inner courts of the houses of the aristocracy, and here it works for its living by keeping the garden clear of insects, worms, reptiles, &c.

Contrary to its appearance, this bird is remarkably difficult to skin, especially around the breast and shoulders, where the skin is so firmly attached that a constant use of the knife is necessary.

Native name "Caraván," in imitation of its note. Two specimens.

#### FAM. PARRIDÆ.

- ✓ 82. *Jacana spinosa*  
✓ 82. *Parra gymnostoma* Wagl.

Abundant. Called by the natives "Oropendolita" or "Little Oropendola," on account of a resemblance in color. One specimen.

I was told by several parties in this region that there is another species which differs from *P. gymnostoma* in having the frontal leaf bright blue instead of yellow. It is described as being about the same size and color as *P. gymnostoma*.

#### FAM. ANATIDÆ.

- \*83. *Dendrocygna autumnalis* (Linn.).

Abundant. No specimens.

- \*84. *Caraina moschata* (Linn.).

Abundant. Not so shy as they seemed to be in Costa Rica. No specimens.

- \*85. *Querquedula discors* (Linn.).

Common. No specimens.

- \*86. *Dasila acuta* (Linn.).

Common. No specimens.

#### FAM. PERDICIDÆ.

- ✓ \*87. *Oxytyx leyandi* Moore?

Seen, but with insufficient distinctness for certain identification.

#### FAM. CHARADRIIDÆ.

- ✓ \*88. *Oxyechus vociferus* (Linn.).

Abundant.

### III.—THE ISLAND OF OMETÉPE.

The island of Ometépe is situated in Lake Nicaragua, about ten miles from the western shore, opposite the cities of Rivas and San Jorge.

As its name signifies, its most prominent features are two bold and

lofty volcanic peaks, which cover the greater portion of the island. One of these peaks, "El Volcan de Ometépe," although there is no history of its being in eruption previous to my visit to the island, commenced to show signs of activity while I was there. At the request of the alcalde of Moyogalpa, I made the ascent to the crater, but the absence of water rendering it impossible to remain on the peak, I was unable to accomplish anything in the way of collecting.

The island is an extremely fertile one, and is inhabited mostly by a race of the pure Indian or Aztec stock. Agriculture is the principal occupation of the people.

The main products are cacao, plantains, mangoes, watermelons, marañons, cocoanuts, corn, beans, and in fact all the fruits, natural or introduced, which thrive in the tropics, besides valuable woods of various kinds.

The climate is simply delightful, a fact to which General Walker testified by constituting Ometépe the sanitarium of his expedition.

The avifauna of the island is not nearly so rich and varied as on the mainland. Numerically, birds are abundant, but the number of species is more restricted than elsewhere in the republic. Water birds are abundant, especially in a large lagoon about a mile north of the village of Moyogalpa. The Parrots, Kingfishers, and Jays are the most numerous and conspicuous birds on the island.

An apparently entire absence of the *Turdida*, *Tanagridæ*, *Dendrocolaptida*, *Formicariida*, and *Rhamphastida*, families well represented in other portions of Nicaragua, is noticeable.

The deer is, so far as I have been able to learn, the only large mammal found on the island.

#### FAM. TROGLODYTIDÆ.

##### \* 1. *Thryophilus pleurostictus* Sel.

Abundant. This Wren seems to replace *C. capistratus* of the adjacent mainland. After a diligent search I was unable to find any other species of Wren on the island.

Song very melodious, clear, and sprightly, although not so loud as that of many of its family. Six specimens.

#### FAM. MNIOTILTIDÆ.

##### \* 2. *Parula inornata* Baird.

Common. Habits similar to our Warblers. Two specimens.

##### 3. *Dendroeca æstiva* (Gm.).

The most abundant species of its family on the island. Nine specimens.

##### \* 4. *Dendroeca maculosa* (Gm.).

Apparently rare. One specimen.

\* 5. *Euthlypis lacrymosa* (Bp.).

Common, although by an unfortunate combination of circumstances I was able to secure only one specimen. This Warbler is gregarious, and spends most of its time on or near the ground in the densest portions of the forest, curiously resembling, in its feeding habits, *Eucometis spodocephala*. The only note I ever heard it utter was a kind of chirp.

## FAM. VIREONIDÆ.

\* 6. *Lanivireo flavifrons* (Vieill.).

Not common. Two specimens.

## FAM. HIRUNDINIDÆ.

\* 7. *Tachycineta albilinea* (Lawr.).

Abundant. Generally seen along the shore of the lake, sitting on the dead trees overhanging the water, whence it makes short excursions after insects in much the manner of Flycatchers. Two specimens.

## FAM. FRINGILLIDÆ.

8. *Guiraca cærulea* (Linn.).

Not very common. The single specimen secured was shot from a hedge-row in the open country.

9. *Cyanospiza cyanea* (Linn.).

Apparently rare. One specimen.

\* 10. *Cyanospiza ciris* (Linn.).

Common. Gregarious. The preponderance of females, although not so striking as in *Sucuyá*, is still quite noticeable. Four specimens.

## FAM. ICTERIDÆ.

11. *Icterus galbula* (Linn.).

Apparently rare. One specimen.

12. *Icterus spurius* (Linn.).

Rare. One specimen.

18. *Quiscalus macrurus* Sw.

Abundant, especially along the shore. Gregarious. Iris yellow (?). The long tail of this bird seems to cause it considerable inconvenience in a strong wind, and it frequently has to shape its course to accommodate this unruly member. Six specimens.

## FAM. CORVIDÆ.

\* 14. *Calocitta formosa* (Sw.).

Extremely abundant. Probably the most familiar and conspicuous bird on the island, where it renders itself quite obnoxious to the natives by its incessant depredations among the oranges and mangoes.

It is one of the most audacious and impudent of all the members of its impudent family with which I am acquainted.

It has an exceedingly jaunty, dandified appearance, and, in flight, has the habit of slowly sailing over any suspicious object, especially a human being, uttering a curious, querulous note, and opening and shutting its long graceful tail-feathers in a manner very similar to the Scissor-Tail Flycatcher (*Mitralus forficatus*).

The vocal powers of this Jay are indeed remarkable. I am not acquainted with any other bird which has so many distinct cries and notes, not even excepting the Parrots in their native state.

I am almost certain that it imitates other birds, and it has often lured me into useless excursions into the dense, thorny forest, only to find that the supposed rarity was nothing but a rascally Jay, after all. The natives call it "Urráca," and insist that it can be taught to talk like a Parrot. Four specimens.

### FAM. TYRANNIDÆ.

\* 15. *Elaina frantzii* Lawr.

Rather common. Found generally in dense woods. Three specimens.

16. *Megarhynchus pitangua* (Linn.).

Not very common. Has an unusually harsh, disagreeable note. Two specimens.

17. *Myiarchus lawrencei nigricapillus* (Cab.).

Abundant. Seems to prefer sparsely wooded country. Five specimens.

\* 18. *Myiarchus nuttingi* Ridgw.

Very abundant. Six specimens.

19. *Tyrannus melancholicus satrapa* (Caban.).

Apparently rare. One specimen shot on the shore of the lake.

### FAM. COTINGIDÆ.

20. *Tityra personata* Jard. et Selb.

Common. Gregarious. It is generally seen in the tops of the tallest trees, where it usually congregates in small flocks of six or eight. Its manner of obtaining its food is much like that of the Flycatchers, being insectivorous and catching its prey on the wing. Its note, although perfectly familiar to me, is entirely beyond my powers of description, being neither a whistle or cry.

Iris brown. Bill and bare orbital region dark red. Eight specimens.

\* 21. *Hydrostomus "latirostris"* (Sel.).

Not common. Habits similar to last. Did not hear the note. Three specimens.

[NOTE.—Two adult males from Ometépe agree pretty well with Mr. Selater's *Pachyrhamphus latirostris* (cf. P. Z. S., 1857, p 74), one of them having no trace whatever of rose-color on the throat, which, like the other lower parts, is uniform ash-gray. The

other, however, has a very faint rose tinge on the jugulum. Both have the pileum glossy slate-black, and the back slaty plumbeous. The single female collected has the back clear ochraceous-rufous and the pileum slate-color, and, except that the pileum is not quite so dark colored, agrees exactly with the La Palma (Costa Rica) specimen referred by me (see these Proceedings, vol. 5, p. 307), with doubt, to *H. homochrous* Sci. (P. Z. S., 1859, p. 142).

In examining the National Museum collection of these birds, which includes 16 adult males and 13 females and young males (which seem to be much alike), I note great variations in plumage, affecting chiefly the color of the back, which varies from clear plumbeous-gray, in marked contrast with the glossy black of the pileum, to glossy black; and that of the lower parts, which varies from deep slaty gray, through intermediate shades, to nearly pure white. These variations do not seem to coincide with any definite geographical areas, however, and, remarkable though they appear, I cannot, from this material, formulate characters by which two or more races may be trenchantly defined.—R. R.]

#### FAM. TROCHILIDÆ.

\* 22. *Trochilus colubris* (Linn.).

Apparently not common. One specimen.

\* 23. *Chlorostilbon osberti* Gould.

Abundant. Especially along an isolated row of trees by the roadside, about one mile northeast of Moyogalpa. Two specimens.

#### FAM. CAPRIMULGIDÆ.

\* 24. *Nyctidromus albicollis* (Gm.).

Abundant. Two specimens.

#### FAM. PICIDÆ.

\* 25. *Centurus aurifrons hoffmanni* (Cab.).

Abundant. Three specimens.

#### FAM. ALCEDINIDÆ.

26. *Ceryle torquata* (Linn.).

Abundant. Four specimens

\* 27. *Ceryle alcyon* (Linn.).

Common. No specimens.

29. *Ceryle amazona* (Lath.).

Abundant. This elegant Kingfisher is by far the most numerous or of any on the island.

The natives call it "El Pescador" ("The Fisherman"), although this name is also applied to the other members of the family. Seven specimens.

30. *Ceryle americana cabanisi* (Tschudi).

Common. No specimens.

FAM. TROGONIDÆ.

32. *Trogon melanocephalus* Gould.

Common. I saw no other Trogon on the island. One specimen.

FAM. CUCULIDÆ.

33. *Crotophaga sulcirostris* Sw.

Abundant. One specimen.

FAM. PSITTACIDÆ.

\*34. *Ara macao* (Linn.).

Common. No specimens.

\*35. *Conurus holochlorus* Sel.

Extremely abundant. The number of these parrots to be seen around the lagoon is something almost incredible, and the air seems to fairly tremble with their cries. I do not remember seeing any other species of birds swarming in such numbers. Eight specimens.

\*36. *Brotagerys tovi* (Gm.).

Abundant. Four specimens.

\*37. *Chrysotis guatemalæ* Sel.

Common, more especially around the base of the volcano, where the dense, unbroken forests afford a quiet retreat. It is considered a good talker, and is frequently seen tame in the huts of the natives. Iris yellow. Cere black. Five specimens.

FAM. FALCONIDÆ.

\*38. *Rupornis ruficauda* (Sel. et Salv.).

Abundant. Three specimens.

\*39. *Rosthramus sociabilis* (Vieill.).

Not common. Found on the lake shore, where it is usually seen hunting for the small univalve shell which constitutes a large proportion of its food. Iris dark red. One specimen.

\*40. *Busarellus nigricollis* (Lath.).

Rather common. Seems to prefer low, swampy country. Very easily approached.

One specimen. Iris brown.

FAM. COLUMBIDÆ.

\*41. *Columba erythrina* Licht.

Common. Especially along lake shore.

Three specimens. Iris yellow. Bill dull red. Legs and feet clearer red.

\*42. *Melopelia leucoptera* (L.).

Not common. One specimen



\*43. *Chamaepelia passerina* (L.).

Very abundant along the sandy beach. Two specimens.

\*44. *Engyptila verreauxi* (Bp.).

Abundant. Iris yellow. Orbital region sky blue. Legs red. Two specimens.

FAM. ARDEIDÆ.

45. *Garzetta candidissima* (Gmel.).

Abundant. Two specimens.

46. *Butorides virescens* (Linn.).

Abundant. One specimen.

FAM. CANCROMIDÆ.

\*47. *Cancroma cochlearia* Linn.

A bird was described to me by the natives as being common on the island during certain seasons, which I can refer to no other species.

FAM. PARRIDÆ.

✓ 48. *Parra gymnostoma* Wagl.

Abundant. The downy young of this bird has, I believe, never been described, and, although I saw a great number, I was unable to secure a single specimen. The parent birds seemed to take particular care to keep their broods out on the lily pads in the swamp, quite a distance from firm ground, where it was impossible to go either on foot or in a boat. I knew it to be useless to shoot them under these circumstances, as they would have been devoured by alligators. I can only say that the downy young of *P. gymnostoma* is of a grayish color, and looks, at a distance, like a little chicken with remarkably long legs.

Iris brown. Basal portion of frontal leaf bright red, and the rest bright yellow. Wing-spur yellow. Seven specimens.

FAM. ARAMIDÆ.

✓ 49. *Aramus pictus* (Bartr.).

Abundant. Good eating. One specimen.

FAM. PHALACROCORACIDÆ.

\*50. *Phalacrocorax mexicanus* (Brandt).

Abundant. Three specimens.

IV.—LOS SÁBALOS.

"Los Sábalos" is the name of a hacienda owned by a German-American gentleman, and is situated about thirty miles from Lake Nicaragua, on the river San Juan Del Norte.

Mr. F. W. A. Lange, the courteous owner of "Los Sábalos," and a

man of unusual intelligence and enterprise, is conducting what might be called an experimental farm, and has made a veritable oasis in the gloomy wilds of the dense, virgin forests which cover the entire basin of the San Juan Del Norte.

"Los Sábalos" contains about the only cultivated ground between San Carlos, on the lake, and "El Castillo," on the river, a distance of about forty miles. It is situated at the junction of the San Juan and a large tributary stream. Here Mr. Lange is raising rubber, cacao, plantains, bananas, oranges, cocoanuts, bread fruit, "marañons," corn, beans, and potatoes, besides a number of other vegetables, the names of which I do not know.

I am thus particular in speaking of his work because the experiment of raising all these fruits, many of them entirely new to the region, is a matter of practical and scientific interest to the world at large.

Here Mr. Lange, a veritable "Robinson Crusoe," is absolutely "monarch of all he surveys," and almost entirely independent of the outside world, for, besides the fruits and vegetables mentioned, the river yields an abundance of excellent fish (principally shad) and lobsters, and the surrounding forests afford plenty of meat in the shape of deer, peccary, gnatousa, curassow, tinamou, and many other edible mammals and birds. There are also hot springs on his land to which medicinal virtues are ascribed.

As a field for the ornithologist "Los Sábalos" surpasses by far any region the writer has ever visited. Three weeks' collecting at this point resulted in the securing of six entirely new and distinct species of birds. That is, one new species for every thirty skins secured! Such a collecting ground should certainly receive more attention.

The most prominent characteristics of the avifauna of this region may be briefly summarized as follows; but it must be borne in mind that a more thorough exploration may modify or even reverse conclusions, which are little more than speculations based upon imperfect explorations.

The *Troglodytidae*, *Tanagridae*, *Fringillidae*, *Dendrocolaptidae*, *Formicariidae*, and *Trochilidae* are the families most abundantly represented. The *Sylviidae*, *Icteridae*, *Tyrannidae*, *Cotingidae*, *Momotidae*, *Alcedinidae*, *Rhamphastidae*, *Psittacidae*, *Falconidae*, *Columbidae*, and *Uracidae* are ordinarily well represented. The remaining families are poorly represented, and in some cases seem to be entirely wanting.

On account of my time in this region being very limited, little attention was given to the various water birds, which seem to be abundant.

#### FAM. TURDIDÆ.

1. *Merula grayi* (Bp.).

Common. One specimen.

## FAM. TROGLODYTIDÆ.

\*2. *Cyphorinus lawrencii* Sel.

Apparently not common. While taking an evening walk through the thick forest I was suddenly startled by a number of these Wrens which I had disturbed in their nest, for it was quite dusk. They seemed to be on every side of me, uttering a shrill chirping protest against my intrusion. I could barely discern their dusky forms as they flitted through the bushes. I fired almost at random, and succeeded in securing one specimen.

They seemed to be gregarious, as I do not think there were less than ten or a dozen roosting together when I disturbed them.

\*3. *Henicorhina leucosticta* (Cab.).

Rare. Only one specimen secured in the dense forest.

\*4. *Thryophilus zeledoni* Lawr.

Apparently rare. The single specimen secured was shot from a little bush in open ground.

\*5. *Thryophilus castaneus* (Lawr.).

Rather common; especially in the deep woods. Two specimens.

6. *Thryophilus thoracicus* Salvin.

Apparently rare. One specimen killed at the edge of the forest.

## FAM. MNIOTILTIDÆ.

7. *Geothlypis trichas* (Linn.).

Abundant. Three specimens.

\*8. *Geothlypis bairdi* Nutting, sp. nov.

*Adult* ♂: Entire forehead and fore part of crown, lores, orbits, auriculars, and malar region deep black. Upper parts rather dark but bright olive-green (much as in *G. velata*), including whole of occiput and hinder portion of crown; lower parts bright yellow (much as in *G. velata*), the entire sides, however, yellowish olive-green. Bill brownish black, the gonys sometimes paler; legs and feet horn-brown. Wing, 2.30-2.35; tail, 2-2.10; culmen, .60; depth of bill at base, .20; tarsus, .85; middle toe, .60.

*Adult* ♀: Similar to the ♂, but lacking the black on the head, which is olive-green, the forehead and superciliaries distinctly, but not abruptly more yellowish. Wing, 2.20; tail, 1.90; culmen, .55; depth of bill, .18; tarsus, .85; middle toe, .55.

*Hab.* Los Sábales Nicaragua (NUTTING).

This species is apparently not very closely related to any other hitherto described. In coloration it most resembles *G. speciosa*, with which it agrees in the extent and distribution of the black mask; but this in *G. speciosa* is not clearly defined on the crown, as in the present species, but fades insensibly into the olive of the occiput. *G. speciosa*

is likewise much browner above, of a much duller yellow beneath, and the proportions are totally different. While *G. speciosa* has much the slenderest bill of any member of the genus (with the possible exception of *G. semiflora*, which I have not seen), *G. bairdi* has this member much larger than any of its congeners except *G. rostrata*. In the latter the bill is longer but less robust, a striking character of the present species consisting in the distinctly curved culmen, with the basal portion prominently ridged and unusually elevated, thus calling strongly to mind a characteristic feature of *Helonias sacainsoni* Aud.

The species is based on three examples, two males and a female, as follows:

No. 91150, ♂ ad., Los Sábalos, Nicaragua, May 15, 1883; C. C. Nutting.

No. 91151, ♂ ad., Los Sábalos, Nicaragua, May 2, 1883; C. C. Nutting.

No. 91152, ♀ ad., Los Sábalos, Nicaragua, May 14, 1883; C. C. Nutting.

NOTE.—Since the above was written specimens have been sent to Mr. Osbert Salvin, who writes thus respecting them: "*Geothlypis bairdi* is very close indeed to *G. semiflora* of Ecuador. The colors are slightly more olivaceous." It is not likely, however, that they are identical, geographical considerations decidedly favoring their distinctness.—R. R.

Common. The three specimens secured were all shot in an open, marshy piece of ground near the river. This ground is covered with water in the rainy season, and a luxuriant growth of tall, coarse grass and weeds in the dry season. It is in these weeds that *G. bairdi* prefers to make its home. Song, loud, clear, and sprightly. Habits very similar to those of *G. trichas*.

\*9. *Basileuterus leucopygius* Sel. & Salv.

Common. Always seen near running water, where they flit along the bed of the stream in the same manner as do our *Cinclidæ*. One specimen.

FAM. CÆREBIDÆ.

10. *Cœreba cyanea* (Linn.).

Apparently not common. Only one specimen secured.

FAM. TANAGRIDÆ.

11. *Tanagra cana diaconus* (Less.).

Apparently not very common. One specimen seen but not secured.

12. *Ramphocœlus passerinii* Bp.

Very abundant. This richly colored Tanager is one of the most conspicuous birds at "Los Sábalos." It seems to be gregarious, and evidently prefers marshy ground. There are large tracts of land near the river which are covered by a luxuriant growth of a large-leaved plant (probably a *Caladium*), and *R. passerinii* can almost always be seen apparently feeding on the species of insects peculiar to these plants.

I have never heard these birds utter any note other than a short chirp.

Thirteen specimens. Iris brown. Bill light blue.

13. *Phenicothera fuscicauda* Cab.

Abundant. Apparently gregarious. Prefers the most impenetrable recesses of the dense forest.

It is a very silent and rather timid bird as a rule, and the females seemed to greatly exceed the males in numbers, both at Sucuyá and Los Sábalos. Seven specimens secured.

14. *Phlogothraupis sanguinolenta* (Less.).

Although I only secured one specimen of this bird, Mr. Lange informed me that it is abundant at Los Sábalos at certain times, when it feeds largely on bananas. Iris red.

14. *Arremon aurantiostris* Lafr.

Rather common. Lives on or near the ground in tangled thickets and brush heaps. Three specimens.

\* 15. *Saltator atriceps* Less.

Abundant. Habits the same as at Sucuyá. One specimen.

16. *Saltator magnoides* (Lafr.).

Apparently rare. One specimen.

\* 17. *Saltator grandis* Lafr.

Abundant. Four specimens.

18. *Pitylus polioaster* Du Bus.

Abundant. Gregarious. Generally seen in small flocks of eight or ten in the edge of the forest. Their note is a short whistle rather than chirp. It does not seem so timid as many other Tanagers, being more noisy and sociable. Three specimens.

## FAM. FRINGILLIDÆ.

19. *Guiraca concreta* (Du Bus).

Abundant. These birds seemed to be especially partial to the vicinity of Mr. Lange's plantain patch, and also a patch of high marsh grass, with occasional brush heaps. Five specimens.

\* 20. *Oryzoborus funereus* Sel.?

Apparently common. Habits similar to preceding species. Two specimens.

\* Adult ♀ (No. 91193, Los Sábalos, Nicaragua, May 16, 1883, C. C. Nutting): Above uniform dark umber-brown; beneath deep cinnamon-brown, shaded with umber anteriorly. Axillars and entire lining of wing white. Bill uniform brownish black; feet dusky. Wing, 2.10; tail, 2.05; culmen, .55; depth of bill at base, .50; width of mandible, .42; tarsus, .70; middle toe, .48.

Young ♀ (No. 91194, same locality and collector, April 20, 1883): Similar to the adult, but rather darker above, with the tertials and wing-coverts very indistinctly edged with dull rusty; fulvous of anterior lower parts more obscured by brown, and white of under wing-coverts tinged with ochreous-buff. Bill blackish, but gonyes varied with yellowish white. Wing, 2.20; tail, 2.10; culmen, .52; depth of bill, .50; width of mandible, .42; tarsus, .65; middle toe, .47.

These specimens are referred with some doubt to *O. funereus*, the female of which

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**\*21. *Oryzoborus nuttingi* sp. nov.\***

Rather common. Found in the patch of marsh grass referred to under *G. conereta*. They seem to be rather stupid birds, as they remained on a little bush on which they were perched until I had loaded and fired three times, securing three specimens.

Apparently gregarious. Four specimens.

**22. *Spermophila corvina* Sci.**

Common. Prefers open ground covered with grass and weeds. Four specimens.

**23. *Embernagra striaticeps* (Lafr.).**

Abundant. Found in brush heaps at the edge of the forest. Six specimens.

**FAM. ICTERIDÆ.**

**24. *Ostinops montezumæ* (Less.).**

Not nearly so abundant as on the other side of the lake. One specimen.

appears to be hitherto undescribed. As they agree very well, however, with the males of that species in dimensions and white under wing-coverts, I have thought best to so name them provisionally, or until males may be obtained.—R. R.

NOTE.—Mr. Salvin, to whom these specimens have been sent for comparison, says that they "are probably the female of *O. æthiops* of Western Ecuador, but the male is wanted to make certain. Anyhow, the two birds are closely allied." Should the species prove to be distinct from *O. æthiops*, as will most likely be the case, I propose for it the name of *O. salvini*.—R. R.

**\*ORYZOBORUS NUTTINGI Ridgw. MS.**

Sp. CH.—Adult ♂: Uniform black, without white on underside of wing or base of primaries; under surface of primaries dull dark grayish, paler (but not inclining to white) basally. Bill pale brown. Wing, 2.70-2.75; tail, 2.70-2.75; culmen, .70; depth of bill at base, .65; width of mandible, .55; tarsus, .70-.75; middle toe, .55. (Types 91195 and 91196, Los Sábales, Nicaragua, C. C. NUTTING.)

Adult ♀: Above uniform dark umber-brown; beneath uniform, rather dark, cinnamon-brown; lining of wings rather light fulvous. Bill brownish black; "iris brown," feet dusky. Wing, 2.70; tail, 2.70; culmen, .70; depth of bill at base, .60; tarsus, .70; middle toe, .65. (Type 91198, Los Sábales, Nicaragua, May 10, 1883; C. C. NUTTING.)

Young ♀: Similar to the adult ♀, but tertials bordered with light rusty, and lower parts much less reddish. Bill uniform black. Wing, 2.60; tail, 2.60; culmen, .65; depth of bill at base, .60; tarsus, .70; middle toe, .60. (Type 91197, same locality, etc., as the above specimens.)

This fine *Oryzoborus* is very distinct not only from *O. funereus*, but also from all other species of which I have been able to find descriptions. The adult male is characterized by its entirely black plumage, with no white whatever on wings or tail, the inner webs of the primaries grayish black, becoming paler grayish basally. It is one of the largest species of the genus, and has the bill remarkably robust, the base of the culmen much arched, and dividing the frontal feathers for .25 of an inch.—R. R.

25. *Cassicus prevosti* (Less.):

Abundant. Apparently gregarious. Iris yellow. Bill light green. Four specimens.

26. *Icterus mesomelas* Wagl.

Common. Feeds largely on plantains. An exceedingly brilliant songster, and altogether one of the most attractive birds in the region. Three specimens.

27. *Quiscalus macrurus* (Sw.)

Apparently not common. One specimen.

FAM. TYRANNIDÆ.

28. *Copurus leuconotus* Lafr.

Rather common. Breeding. This pretty little Flycatcher builds its nest in a hole in a dry tree, after the manner of woodpeckers—perhaps the abandoned nests of the latter.

Note weak and rather "squeaky." Three specimens.

29. *Todirostrum cinereum* (Linn.).

Common. Habits somewhat wren-like.

30. *Todirostrum schistaceiceps* Sel.

Common. Habits similar to preceding species. Two specimens.

31. *Mionectes oleagineus* Cab.

One specimen, shot in deep woods.

32. *Myiozetetes granadensis* Lawr.

Abundant. There is a very remarkable fact in connection with this bird at Los Sábales.

Fully half the specimens seen, as well as those secured, have the tail feathers cut off at a point about one-half the distance from insertion to terminus. This is true of adult specimens. This is so noticeable that I thought the birds thus mutilated to be a wonderful new species of "bob-tailed" Flycatcher.

So far as I have been able to learn, this is a fact unique in ornithology.

In all other respects the specimens with the tails cut are exactly like those whose tails are entire. Four specimens.

32. *Myiozetetes texensis* (Giraud).

[NOTE.—The foregoing remarks refer to this species also, which had been overlooked until after the list had been written.—R. R.]

33. *Muscivora mexicana* Sel.

Not very common. Found always, so far as my experience goes, near running water. Two specimens.

34. *Myiobius sulphureipygius* Sel.

Apparently rare. One specimen.

\*35. *Myiobius capitalis* Salvin.\*

Apparently rare; one specimen, shot in a dense forest.

\*37. *Contopus depressirostris* Ridgway, sp. nov.†

Not common. Two specimens shot in scrub timber and edge of forest.

FAM. PIPRIDÆ.

\*38. *Chiromachæris candæi* (Parz.).

Rare. Only one specimen secured in dense forest on the other side of the tributary river which enters the San Juan del Norte at Los Sábalos.

\*This species seems to me to be quite as properly referable to *Mitrephæves* (cf. COUES, Bull. Nutt. Orn. Club, January, 1882, p. 55) as to *Myiobius*. In fact, I would prefer placing it in that genus. It is true that it differs from the type species (*M. phæocercus*) in certain details of structure, but at the same time it differs more from the typical *Myiobii*. Of the two hitherto known species of the genus, *M. phæocercus* and *M. aurantiiventris*, it approaches most nearly to the latter, both in form and coloration. It differs from both, however, in the less developed crest and in the more rounded wing, the primaries exceeding the secondaries by only about .40 of an inch, instead of .60-.70, as in the above-named species. The bill is also longer in proportion to its breadth, but is otherwise of similar form; and the tail, instead of being decidedly emarginate, is distinctly, though slightly, rounded.

Its coloration at once suggests that of *M. aurantiiventris*, the back, breast, and crissum being almost exactly the same color; but *M. aurantiiventris* has the throat fulvous, instead of white; the pileum dark olive, instead of slate, and the posterior lower parts much duller yellow, and also much less abruptly of this color; besides, the white supraloral line and orbital ring of *M. capitalis* are totally absent.

Mr. Nutting's specimen, which appears to be the second on record, may be described as follows:

SR. CH.—*Adult* ♂ (No. 91,233, Los Sábalos, Nicaragua, May 4, 1883; C. C. Nutting). Entire pileum uniform brownish slate, this color extending over the auriculars, which, however, have whitish shaft-streaks; lores slate-gray, bordered above by a distinct white line extending back to and involving the eyelids; back, scapulars, and rump bright greenish-olive, in abrupt and very marked contrast with the slate-color of the head; lesser wing-coverts olive, but rest of wings dusky, the middle and greater coverts tipped with bright ochraceous (forming two distinct bands), and tertials broadly edged with the same; other remiges narrowly and rather indistinctly edged with light brownish. Tail light grayish-brown, the feathers edged with a more fulvous tint. Chin and throat dull white; jugulum and breast bright ochraceous, tinged with olive laterally; abdomen and sides bright primrose yellow; crissum buff; axillars and lining of wing yellowish ochraceous. Inner webs of remiges broadly edged with buffy ochraceous. Bill black, the base of the mandible pale colored; feet dark brownish.

Wing, 2.40; tail, 2.30; culmen, .50; width of bill at base, .30; tarsus, .60; middle toe, .32.

†CONTOPUS DEPRESSIROSTRIS Ridgw. MS.

SR. CH.—*Adult*: Above grayish hair-brown, the pileum decidedly darker; middle and greater wing-coverts tipped with pale brownish-gray, forming two rather distinct bands across the wing; tertials edged with the same. Tail slightly but decidedly emarginate, uniform grayish hair-brown. Chin and throat grayish-white; sides of head, jugulum, breast, and sides, brownish-gray; middle of belly, anal region, and



## FAM. COTINGIDÆ.

\*39. *Lathria unirufa* (Sch.).

Rare. One specimen.

40. *Attila sclateri* Lawr.

Rare. One specimen.

## FAM. DENDROCOLAPTIDÆ.

41. *Synallaxis pudica* Sel.

Abundant. This bird has habits remarkably similar to those of wrens. It is generally found hopping about in thick bushes or brush heaps.

Its song also is like that of a wren, being loud, varied, and melodious, while the other members of its family, so far as I have been able to ascertain, are very silent birds, having no musical notes at all.

Iris reddish.

\*42. *Automolus pallidigularis* Lawr.

Not common. One specimen shot in thick forest.

43. *Glyphorhynchus cuneatus* (Licht.).

Common. A silent bird, always found in the deepest parts of the woods, where it climbs on the tree trunks like a woodpecker. Four specimens.

\*44. *Dendrocinclla anabatina* Sel.

One specimen killed in dense forest.

## FAM. FORMICARIIDÆ.

\*45. *Cymbilanius lineatus fasciatus* Ridgway, subsp. nov.\*

Not common. Iris red. Note clear, but with little variation. Two specimens.

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crissum, dull yellowish white. Maxilla brownish-black, mandible dull pale yellowish, with dusky tip; feet dusty brown.

♂ (No. 91235, Los Sábales, Nicaragua, May 8, 1883; C. C. Nutting). Wing, 2.95, tail, 2.55, culmen, .70, width of bill at base, .35, depth, .17; tarsus, .55; middle toe, .30.

♀ (No. 91234, same locality and collector, May 2, 1883). Wing, 2.80; tail, 2.45; culmen, .67; width of bill, .35; depth, .17; tarsus, .50; middle toe, .30.

In coloration this species comes nearest to *C. schotti*, but has the throat and ventral region much more nearly white and the pectoral region less olivaceous. The dimensions are nearly the same, except that the bill is larger and more depressed. In the character of the bill there is a close resemblance to the several West Indian forms of this species, especially *C. bahamensis*, and to *C. panensis* of Western Ecuador, but the species is clearly distinct.

\* Judging from the material in the National Museum collection, there is a very marked difference between specimens of *Cymbilanius* from Central America, as far south, at least, as Panama, and those from Eastern South America. The Museum unfortunately possesses but a single skin from South America, an adult ♀ (No. 32523) from Cayenne; but this is decidedly different from four northern females. The chief difference consists in the much narrower light bars on the upper parts, these being also much paler in color, or fulvous-white (nearly pure white on the tail), in-

46. *Thamnophilus melanocirissus* Sel.

Rather common. Found in a portion of forest which had been burned through by Mr. Lange for the purpose of clearing. Here *T. melanocirissus* was feasting on the various insects which had been scorched by the fire and were lying ready cooked upon the ground. Did not hear its note.

Two specimens. Iris red.

47. *Thamnophilus doliatus* (Linn.).

Abundant. Iris white. One specimen.

48. *Formicivora boucardi* Sel.

This diminutive ant-thrush seems to be truly gregarious, and is usually seen in flocks of ten or a dozen. In marked contrast to all the others of its family which I have been able to observe in their natural state these birds seem to keep in the trees at a considerable distance from the ground, while the *Formicariidae* in general are almost never seen at any considerable distance from mother earth. Only one specimen secured.

49. *Rhamphocœnus rufiventris* Bp.

Not common. One specimen killed in dense forest near a running stream.

\*50. *Cercomacra tyrannina* Sel.

Apparently rare. One specimen.

\*51. *Myrmeciza immaculata* Sel.

Common. Lives almost entirely on the ground in the dense forest. Rather shy and silent.

\*52. *Formicarius hoffmani* (Cab.).

Rather common. Exceedingly shy. I have frequently watched with astonishment the curious maneuvers of this bird when suddenly approached. Instead of at once resorting to flight like most birds, it spreads its wings, lowers its head, and sneaks silently and quickly along, taking advantage of every inequality of the ground and bunch of dried leaves, until at a safe distance from the intruder, when it takes flight. There is something inexpressibly cunning and knowing in the whole pose and action of the bird on such occasions that is quite laughable.

The note is a loud, clear whistle, followed at a considerable interval by two or more lower and less accentuated ones, and has a very remarkable ventriloquial quality. So pronounced is this latter quality

stead of deep ochreous or fulvous. The dark bars on the lower parts are likewise much more distinct, as well as closer together, and the size considerably less. The measurements, however, are not smaller than those of a specimen from Panama, which, nevertheless, agrees strictly in coloration with examples from Costa Rica, Veragua, and Nicaragua.

It being probable that the South American bird is the true *Thamnophilus lineatus* of Vieillot, I propose to separate the Central American form as *C. lineatus fasciatus*.—R. R.

that, when the bird is quite near, the note seems to issue from the trees instead of from the ground, whence it really proceeds.

The note is easily imitated, and I found that the bird could be secured by calling it. But it is necessary for the collector to be well concealed, as the bird has remarkably keen eyes and will not approach a suspicious object.

Two specimens.

53. *Grallaria dives* Salv.\*

Apparently rare. Only one specimen secured, and that was shot while running along the ground in the thick woods.

FAM. TROCHILIDÆ.

\* 54. *Phæochroa roberti* Salvin.

Abundant. Two specimens.

55. *Chalybura melanorrhoa* Salvin.

Rather common. One specimen.

56. *Amazilia fuscicaudata* (Fraser).

Common. One specimen.

FAM. CAPRIMULGIDÆ.

\* 57. *Nyctidromus albicollis* (Gm.).

Very abundant. One specimen.

FAM. PICIDÆ.

\* 58. *Campephilus guatemalensis* (Hartl.).

Not common. One specimen.

59. *Melanerpes pulcherani* (Malh.).

Rather common. Two specimens.

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\* Costa Rican specimens in the National Museum collection, labeled *G. dives*, are evidently distinct and apparently unnamed. They clearly represent a distinct form, somewhat intermediate between *G. dives* and *G. perspicillata*; but since it possesses some peculiar features, I propose to characterize it as a distinct species, for which the name *intermedia* is proposed.

The three allied species may be distinguished as follows:

a. Wing-coverts very distinctly spotted with ochraceous; breast pale buff, or buffy white, very broadly and distinctly streaked with black; a very distinct black rictal stripe, or "bridle."

1. *G. PERSPICILLATA*. Flanks white, narrowly striped with black or dusky; back olive-brown, marked with distinct guttate streaks of buff. *Hab.* Panama and Veragua (specimens from the former locality only examined by me.)

2. *G. INTERMEDIA*. Flanks bright ochraceous, wholly unstreaked; back slaty (but slightly tinged with olive), with few or no streaks. *Hab.* Costa Rica (Angostura and Talamanca; Tucurrique specimens not seen).

b. Wing-coverts without trace of ochraceous spots; breast bright "foxy" ochraceous, narrowly and indistinctly streaked with black; no trace of black rictal stripe.

3. *G. DIVES*. Flanks bright "foxy" ochraceous, immaculate; back dusky brownish slate, the feathers with fulvous shafts. *Hab.* Nicaragua (Greytown and Los Sábalo).—R. R.

FAM. ALCEDINIDÆ.

60. *Ceryle americana cabanisi* (Tsch.).

Common. One specimen.

FAM. TROGONIDÆ.

61. *Trogon massena* Gould.

Common. Usually seen in small flocks of six or eight. Bare circum-orbital space sky blue. Two specimens.

FAM. GALBULIDÆ.

62. *Galbula melanogenia* Schl.

Not common. One specimen.

FAM. RHAMPHASTIDÆ.

63. *Rhamphastos carinatus* Sw.

Not common. Only two specimens seen, and one secured. Entire terminal portion of upper mandible dark cherry red; remaining portions of the same, with the exception of a large light red space near lower edge, "Nile" green. Lower mandible, with the exception of the light blue point, "Nile" green. Band at junction of bill and head black. Iris brown. Feet light blue.

64. *Ramphastos tocard* Vieill.

Common. Nests in trunks of trees. Note a loud clear whistle, followed by two or more softer and lower ones. While flying it utters a harsh cry. Upper mandible above a line drawn from base of culmen to lower edge of same, ending at a point about one-fifth the distance from terminus to base, corn yellow. Remaining part of upper mandible, black. Lower mandible very dark maroon. Iris green. Feet bronze blue.

Three specimens secured.

65. *Pteroglossus torquatus* (Gm.).

Abundant. One specimen killed had a large beetle in its bill. Secured a whole family—♂, ♀ and *juv.*

Four specimens. Iris orange-yellow.

FAM. PSITTACIDÆ.

- \* 66. *Ara militaris* (Linn.).

Abundant. One specimen.

- \* 67. *Ara macao* (Linn.).

68. *Conurus aztec* (Souancé).

Abundant. Three specimens. Iris yellow. Cere and orbital region white.

- \* 69 *Chrysotis diademata* (Spix).

Common. Iris orange. One specimen.

## FAM. FALCONIDÆ.

✓ 70. *Urubitinga anthracina* (Nitzsch).

Apparently not common. One specimen. Iris brown. Legs and cere yellow.

✓ 71. *Spizaetus ornatus* (Daud.).

Mr. Lange described a hawk which evidently belonged to this genus, and, from his description, I judge that it was *S. ornatus*.

✓ 72. *Rostrhamus sociabilis* (Vieill.).

Common. Always found near the water. Two specimens. Iris red. Cere and legs yellow.

✓ 73. *Ibycter americanus* (Bodd.).

Not common. One specimen. Iris red. Bill in front of cere greenish yellow; basal half, clear light blue. Bare parts of head deep red. Feet coral red.

## FAM. COLUMBIDÆ.

\* 74. *Peristera cinerea* (Temm.).

Apparently not common. Two specimens. Iris yellow. Feet flesh color.

## FAM. CRACIDÆ.

✓ 75. *Craz globicera* (Linn.).

Native name, "Pavo Real." This magnificent bird is the largest game bird of the region. The flesh is excellent eating, fully equal, in my opinion, to that of the domestic turkey. It is often domesticated, and thrives under domestication. Two specimens. Iris red. Tumid portion of cere bright yellow.

✓ 76. *Penelope cristata* (Linn.).

Abundant. A hunter brought me one, but I could not save the skin. Excellent eating. Iris orange yellow. Bare place on neck; front and back scutellæ on legs red. Bill black.

✓ 77. *Ortalida cinereiceps* Gray.

Native name, "Chachalaca." Common. Its cry is exceedingly harsh, and the din it occasionally raises is surprising, and sometimes alarming. Two specimens.

## FAM. RALLIDÆ.

✓ 78. *Porzana leucogastra* sp. nov. \*

\* PORZANA LEUCOGASTRA Ridgw., MS.

SP. CH.—Adult ♂ (No. 91302, Los Sábalos, Nicaragua, May 10, 1883; C. C. NUTTING): Forehead, with fore part and sides of crown, dull gray; occiput and extreme upper part of back umber-brown, separated by an indistinct chestnut-rufous nuchal collar; remaining upper parts uniform dark sepia-brown, darkest (inclining to brownish-black) on tertials, rump, and tail. Side of head light brownish-gray; chin and throat white; jugulum and upper part of breast light cinnamon-rufous, deepening on sides of neck and breast into rich chestnut-rufous, but fading to pure white on lower breast; sides and flanks dull black, narrowly barred with white, these white bars averaging

The single specimen secured was knocked over by a stick in the hands of one of Mr. Lange's men.

✓79. *Gallinula galeata* (Licht.).

Seen, but not secured.

FAM. RHYNCHOPIDÆ.

\*80. *Rhynchops nigra* Linn.

I found the bill and portions of the skull of this bird near the river, and Mr. Lange informs me that they are common during part of the year.

In closing this list it is fitting that I acknowledge my deep sense of obligation to the following persons:

Sr. Don ADAN CARDENAS, president of Nicaragua, for a permit to take my effects from the custom-house free of all duties, and for other favors.

Sr. Don JUSTO CARDENAS, for kind assistance in many matters.

Sr. Don ALIJANDRO CHAMBERLAIN, for his genuine hospitality and courteous aid.

M. GREEN, esq., for valuable aid and information.

Dr. EARL FLINT and DAVID MURRY, esq., for courtesies too numerous to mention.

Mrs. ELIZABETH WALSH, for oft-repeated hospitalities.

Don JOSÉ ANGEL LUNA and sister, and Donna CAROLINA CANTON, for valuable aid and information on the island of Ometepe.

Sr. N. MARTINEZ, for kind hospitality at San Carlos.

Mr. F. W. A. LANGE, for hospitality at Los Sabalos.

about .05 of an inch wide, and .10-.15 of an inch apart; crissum black, very narrowly barred with white, and tinged with light rufous. Lining of wing white, the basal half of the feathers abruptly grayish. Tibia, uniform, deep smoky-gray. Bill olive-greenish, more horn-gray terminally; "iris red," legs and feet dusky; wing, 2.50; ail, 1.10; culmen, .68; tarsus, 1.20; middle toe, 1.25.

This apparently new species is related to both *P. albigularis* Lawr. and *P. cinereiceps* Lawr., but is evidently distinct. It agrees with the former in the white throat, and with the latter in the grayish head; but it differs from both in a number of characters. The three are so nearly allied, however, that comparative diagnoses may best show the differences, which are as follows:

A. Head without any gray; wing-coverts with lighter bars.

1. *P. ALBIGULARIS*. Chin and throat distinctly white; pileum russet-brown, and side of head rufous. Wing, 3.05-3.10; tail, 1.25-1.30; culmen, .68; tarsus, 1.18-1.20; middle toe, 1.15-1.25. *Hab.* Panama.

B. Head mostly gray; wing-coverts without lighter bars.

2. *P. LEUCOGASTRA*. Chin and throat distinctly white; jugulum pale cinnamon, fading to white on lower breast; white bars on sides and flanks, very narrow. Wing, 2.80; tail, 1.10; culmen, .68; tarsus, 1.20; middle toe, 1.25. *Hab.* Eastern Nicaragua (Los Sábalos).

3. *P. CINEREICEPS*. Chin and throat pale cinnamon, the former inclining to whitish; jugulum and whole breast rich chestnut-rufous; white bars on sides and flanks, very broad. Wing, 2.90; tail, —; culmen, .60; tarsus, 1.15; middle toe, 1.20. *Hab.* Eastern Costa Rica (Talamanca).—R. R.

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Any attempt on my part to express my gratitude to Capt. J. M. Dow, of the Pacific Mail Steamship Company, would fall pitifully short of the mark. He has both the ability and the will to render more aid to the naturalist in Central America than any one else in that part of the world.

C. C. N.

ON SOME COSTA RICAN BIRDS, WITH DESCRIPTIONS OF SEVERAL  
SUPPOSED NEW SPECIES.

By ROBERT RIDGWAY.

The following interesting species are included in a small collection of birds lately received by the National Museum from Sr. Don José C. Zeledon, of San José, Costa Rica.

1. *Carpodectes antoniae*, Zeledon, MS., RIDG. Ibis, Jan. 1884, 27, pl. ii.

SP. CH.—Adult ♂ (No. 91832, Pirris, May, 1883; Juan Zeledon, collector). Similar to *C. nitidus*, but rather smaller, the bill mostly bright yellow, the wings wholly pure white, and the pileum much paler pearl-blue. Plumage, pure white, except the forehead and crown, which are pale pearl-blue, or glaucous, and back, scapular, rump, upper tail-coverts, and tail, which are a more delicate shade of the same. Bill, clear lemon-yellow ("wax-yellow" in fresh specimen) with distinctly marked black stripe along the culmen; "iris, dark; feet, black." Wing 5.40, tail 2.60, culmen .70, tarsus .90, middle toe .80.

This lovely species much resembles *C. nitidus*, except as pointed out above, and is clearly distinct.

Mr. Zeledon's notes respecting this species are as follows:

"You will be agreeably surprised to learn that I have made a most unexpected discovery in the shape of a new *Carpodectes*. The bird is snowy white, except on the back and top of the head, where a faint wash of gray is to be seen, all the back of the neck being pure white, like the rest of the body. No traces of the gray tinge are present on any other part of the plumage. The bill is somewhat smaller, less swollen, and more curved than in *C. nitidus*, and of a yellow color, with a black line along the culmen to the very tip; the feet are black, not plumbeous, as in the latter species; the dimensions are pretty much the same, excepting that the tail is rather shorter than in *C. nitidus*.

"There is but one specimen in my possession, which was obtained by my brother Juan, at Pirris, southwestern side of Costa Rica. It is a fine adult male, and was obtained in May last.

"The *C. nitidus* has been obtained only on the eastern side of the country. I am inclined, therefore, to believe that the present species is the western representative of the genus.