

## A COLLECTION OF BIRDS FROM THE CARIBBEAN LOWLANDS OF GUATEMALA

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In the course of a survey of the avifauna of the Sierra de las Minas of Guatemala, the largest range in the eastern part of that country, many specimens were taken in the humid lowlands north and east of the mountains. Participating in this field study with me were my wife Margaret, Larry L. Wolf, and Dr. and Mrs. Richard R. Graber. From September 22, 1958, to March 25, 1959, over half of our effort was expended in observing and collecting in the Caribbean lowlands, where we recorded 299 species representing 54 families. Five of these species were new to the country (Land and Wolf, 1961).

### THE STUDY AREA

The Polochic Valley north of the Sierra de las Minas, the region about Lake Izabál, and the lower Motagua Valley east of Quirigua constituted the study area. Included also were a few elevated river valleys extending up to 4500 feet, the biotas of which are similar to that of the lowlands.

The upper Polochic Valley is a geologically young gorge beginning near Tactic at 5000 feet and dropping rapidly to below 1000 feet at Pancajché. Facing east, the valley intercepts the moist Caribbean winds. Rainfall is frequent and heavy. Fog or clouds perpetually shade the forest and the coffee plantations. In this humid environment we found birds that are normally limited to lower elevations.

The nearly level floor of the lower Polochic Valley is triangular, with Pancajché at the apex. The temperature and humidity are high. Rain falls throughout the year, but with greater frequency in summer. The heaviest precipitation occurs at the lower end of the valley and on the south edge at the foot of the Sierra de las Minas. The densest forest is near Lake Izabál.

The lowlands of the lower Motagua Valley are vegetatively similar to the lower Polochic, with the addition of a few patches of grassland. However, the effects of civilization are more pronounced in the Motagua Valley.

Lake Izabál, less than 50 feet above sea level, is 28 miles long and 12 miles wide. Its shores are sparsely populated and the vegetation along them is predominantly rain forest. Many of the plant species in these humid forests range from Veracruz, México, to Colombia. Most of the genera of trees occur also in the Brazilian jungles (Steyermark, 1950:370).

### COLLECTING LOCALITIES

The following ten villages served as collecting stations, although the major part of the work took place at Panzós, Izabál, and Zarco:

(1) Panzós, Alta Vera Paz, 200 to 2000 feet. Observations were made over much of the hectareage of two fincas where several major habitats were found: moist woodland, the nearest approach to the dense rain forests common to the east (200 feet elevation); dense cane and brush, in some cases originating through farming (200 to 300 feet); meadows and corn fields (200 feet); relatively inaccessible marshes, sloughs, and oxbow lakes near the river (200 feet); palm forest, the major habitat on the north slope of the Polochic Valley (300 to 2000 feet); and cafetal, a rich habitat consisting of a canopy of shade trees 40 to 100 feet tall, banana trees 10 to 15 feet tall, and coffee bushes 3 to 6 feet tall (1300 to 1800 feet). Oct. 2-26; Jan. 2-29, Feb. 4-12; Mar. 17-19, 22-25.

(2) Tamahú, Alta Vera Paz, 2100 to 4500 feet. This village is located in the humid gorge of the upper Polochic River. Habitats include brush and cafetal. Oct. 1-Nov. 13.

(3) Tukurú, Alta Vera Paz, 1500 to 2000 feet. This locality is in the center of the coffee producing area of the upper Polochic. Oct. 1 and 26.

(4) Pancajché, Alta Vera Paz, 2000 to 3000 feet. Our work here centered at a coffee finca, West-falia, located five miles southeast of Pancajché. The annual rainfall is less than in other parts of the Polochic Valley. Habitats include brushy rain forest and cafetal. Oct. 27–Nov. 10.

(5) La Tinta, Alta Vera Paz, 400 feet. Here in the dry west end of the valley the terrain is dominated by farmland. Oct. 1, 2, and 27.

(6) Senahú, Alta Vera Paz, 1500 feet. This village is located in the hills northeast of La Tinta in the brushy subtropical woodland that covers much of the Vera Paz high country. Feb. 10.

(7) Zarco, Izabál, 150 to 1400 feet. This station is a remote finca at the lush southern edge of the valley. Rain forest was the dominant growth, but it has been cut into for the growing of cacao, corn, bananas of several varieties, and other fruits. Habitats include the banks of the clear, cool Río Zarco, orchards and crop lands, rain forest, and extensive areas of brush. Feb. 13–22.

(8) El Estór, Izabál, 50 to 200 feet. The largest village on Lake Izabál, El Estór is located at the northwest corner of the lake at the east end of the road down the Polochic Valley. We found dense rain forest west of the town and dry oak woodland to the north. The lake shore with its marshes and swamps provided unique habitats accessible only by boat. Oct. 25; Jan. 29–Feb. 2; Mar. 20–22.

(9) Izabál, Izabál, 1000 to 1100 feet. Once an important departmental capital, this village can now be reached only over a winding dirt road or by water. The low crest of the Sierra de las Minas south of town is vegetated with rain forest, which provided some of the richest collecting of our expedition. Sept. 22–25; Dec. 29–Jan. 5; Mar. 12–15.

(10) Quirigua, Izabál, 200 feet. At this station we made our only contact with the humid lower Motagua Valley. The habitats given attention were brushy areas along the road and a large meadow, knee-deep with grass and over a mile in extent. Jan. 6–Mar. 16.

#### ANNOTATED LIST

This list covers all of the forms collected or recorded in the Caribbean lowlands of Guatemala by the present expedition. Localities followed by an asterisk are those at which specimens were collected.

*Tinamus major robustus*. Great Tinamou. Izabál;\* 1000 feet. Uncommon in dense rain forest. 1 male (March 12; enlarged testes).

*Crypturellus soui meserythrus*. Little Tinamou. Panzós,\* El Estór, Pancajché; up to 2400 feet. Fairly common in open rain forest, cafetal, and brushy second-growth vegetation. The tremulous call was heard throughout the winter. 1 female (October 18; ovary somewhat enlarged).

*Podilymbus podiceps podiceps*. Pied-billed Grebe. El Estór;\* 50 feet. A specimen was taken on February 1 from a group of four. 1 male (wing length, 129 mm.).

*Phalacrocorax olivaceus mexicanus*. Olivaceous Cormorant. Panzós,\* El Estór; up to 200 feet. Fairly common along the lower Polochic River and on Lake Izabál. 1 immature male (October 2; rectrices in molt).

*Anhinga anhinga leucogaster*. Anhinga. El Estór,\* Panzós; up to 200 feet. Fairly common along the marshy edges of the lake and on small, slow-flowing tributaries. 1 male (February 1).

*Ardea herodias*. Great Blue Heron. Panzós; 200 feet. One was seen flying above the Polochic River on October 5.

*Butorides virescens*. Green Heron. El Estór,\* Panzós;\* up to 5000 feet. The commonest of the herons in winter. Two specimens, a male (wing, 176 mm.; tail, 66; culmen, 65; tarsus, 47) taken January 31 and a female (wing, 169; tail, 66; culmen, 56; tarsus, 46) taken October 4, represent, respectively, the nominate race and *B. v. maculatus*.

*Florida caerulea*. Little Blue Heron. Panzós,\* Zarco,\* El Estór,\* Tukurú; up to 800 feet. Fairly common in wet fields and marshes and on larger bodies of water. An adult male taken on March 20 had enlarged testes. 5 males.

*Casmerodius albus egretta*. Common Egret. El Estór;\* 50 feet. Recorded on January 31 and February 1 at Lake Izabál. 1 male.

*Leucophoyx thula*. Snowy Egret. Panzós,\* El Estór; up to 200 feet. Seen occasionally from October 5 to February 1. The single specimen (tarsus, 97.5 mm.) could not be identified to race because the sex was not determined. Bailey (1928) gives a tarsal average of 97.3 mm. for females of *L. t. brewsteri* and of 97.1 mm. for males of the nominate race.

*Bubulcus ibis ibis*. Cattle Egret. Panzós;\* 200 feet. From October 15 to March 18 a flock of up to fifty birds fed regularly in and about a small herd of cattle in an extensive meadow. The specimens are the first of this species taken in Guatemala (Smithe and Land, 1960). 1 female, 1 ?.

*Cochlearius cochlearius zeledoni*. Boat-billed Heron. El Estór,\* Panzós; up to 200 feet. Uncommon along the waterways and lakefront in the lower Polochic Valley. 1 male (March 21; testes somewhat enlarged).

*Mycteria americana*. Wood Stork. Panzós; up to 800 feet. Fairly common in swampy situations. Often seen circling over the valley in flocks of up to 25 birds.

*Cairina moschata*. Muscovy. Panzós, El Estór; up to 200 feet. Recorded on February 8 and March 24.

*Sarcoramphus papa*. King Vulture. El Estór,\* Panzós, Zarco, Izabál; up to 8300 feet. Fairly common in the lower Polochic Valley. 1 male (February 1).

*Coragyps atratus*. Black Vulture. Quirigua,\* Panzós, El Estór, Pancajché, Zarco; up to 5900 feet. Fairly numerous; more common than *Cathartes aura* in the humid lowlands. 1 male (January 6, enlarged testes).

*Cathartes aura*. Turkey Vulture. Panzós, Pancajché, Zarco, Izabál; up to 8000 feet. Fairly common.

*Elanoides forficatus*. Swallow-tailed Kite. Panzós; 2000 feet. On January 26 a single bird was seen circling over cafetal.

*Ictinia plumbea*. Plumbeous Kite. Panzós,\* Zarco; up to 1200 feet. A few birds were seen in February and March circling over the rain forest 200 to 500 feet above the ground. 1 female (March 18, egg with shell in oviduct).

*Rostrhamus sociabilis major*. Everglade Kite. Panzós;\* 200 feet. An immature male (wing, 365 mm.; tail, 191) was taken on October 24 in a swampy meadow.

*Buteo platypterus platypterus*. Broad-winged Hawk. El Estór,\* Panzós, Izabál; up to 1700 feet. On March 14 at Izabál several loose flocks totaling 150 birds circled over moving northward. On the following day a group of 75 birds was seen in the same area. On March 25 a group of 20 birds moved northwest over the Panzós area. Skutch (1945) reported similar movements involving larger numbers of birds in Costa Rica. 1 female (February 2).

*Buteo magnirostris direptor*. Roadside Hawk. Panzós,\* Zarco,\* El Estór;\* up to 800 feet. Fairly common resident in open and cultivated areas. A male taken on February 2 had enlarged testes. 2 males, 2 females.

*Buteo nitidus micrus*. Gray Hawk. El Estór,\* Panzós;\* up to 800 feet. Fairly common. Copulation was observed near El Estór on February 2. 2 males.

*Leucopternis albicollis ghiesbreghtii*. White Hawk. Panzós,\* Izabál; up to 1700 feet. Uncommon resident; usually seen circling high above the valley. A male and a female were taken in rain forest and cafetal.

*Busarellus nigricollis nigricollis*. Black-collared Hawk. Panzós;\* up to 200 feet. Recorded in January and early February at marshes. 1 male, 1 female.

*Buteogallus anthracinus*. Common Black Hawk. Panzós,\* El Estór; up to 800 feet. Uncommon resident. 1 female.

*Spizastur melanoleucus*. Black-and-white Hawk-Eagle. El Estór; 100 feet. Recorded on March 22 in rain forest.

*Spizaetus ornatus*. Ornate Hawk-Eagle. Izabál; 1100 feet. Seen on January 3 and March 15 in heavy rain forest. The call resembles the gobbling of a young turkey.

*Spizaetus tyrannus*. Black Hawk-Eagle. Panzós; 1500 feet. Recorded in cafetal on March 19.

*Pandion haliaetus*. Osprey. El Estór, Panzós; up to 200 feet. Seen occasionally on Lake Izabál and the Polochic River.

*Herpetotheres cachinnans chapmani*. Laughing Falcon. El Estór,\* Panzós, Zarco; up to 800 feet. Resident; possibly the most conspicuous hawk in the region. 1 male.

*Falco deiroleucus*. Orange-breasted Falcon. Panzós;\* 1700 feet. 1 male (January 14; enlarged testes; taken in cafetal).

*Falco albigularis albigularis*. Bat Falcon. El Estór,\* Zarco,\* Panzós,\* Quirigua; up to 400 feet. Fairly common in rain forest and over the meadows. A female collected on March 17 had very worn

breast and abdominal plumage, the pattern suggesting that three eggs were being incubated; the ovary of this specimen was quite large. 2 males, 2 females.

*Falco sparverius sparverius*. Sparrow Hawk. Panzós,\* Pancajché,\* El Estór, Zarco; up to 4800 feet (including the race *F. s. tropicalis*). Common wintering hawk. 1 male, 2 females.

*Crax rubra*. Great Curassow. El Estór; 100 feet. Although we did not see this species in the wild, we were given a mounted head from a kill made in October by a native in the rain forests of the lower Polochic Valley. We also saw an adult male that had been raised from a chick by Indians 13 miles west of El Estór.

*Penelope purpurascens*. Crested Guan. El Estór; 200 feet. A group of four or five was seen moving through the tree tops in an open rain forest on January 30.

*Ortalis vetula plumbiceps*. Plain Chachalaca. Panzós,\* El Estór; up to 5000 feet. Fairly common in heavy brush, cane stands, brushy woodland, and thickets. On October 16 a nest located 15 feet above the ground was found in a brushy woodland at 1800 feet elevation. The two eggs hatched the following day. 1 male.

*Aramus guarana*. Limpkin. Panzós; 200 feet. A single bird was seen in moist second-growth vegetation on March 18.

*Aramides cajanea*. Gray-necked Wood-Rail. Panzós; 200 feet. Recorded in moist woodland on January 17.

*Laterallus ruber ruber*. Ruddy Crake. Panzós;\* up to 5000 feet. Fairly common in wet fields and canes. A gray-brown immature female was taken on October 24. 2 females.

*Heliornis fulica*. Sungrebe. Panzós,\* El Estór; up to 200 feet. Uncommon on quiet streams and marshes; heard calling in February. A male taken on October 17 was molting rectrices. 1 male, 1 female.

*Jacana spinosa spinosa*. American Jacana. Panzós,\* El Estór;\* up to 200 feet. Fairly common on marshes and waterways. 2 males, 1 female.

*Charadrius vociferus vociferus*. Killdeer. Panzós,\* La Tinta, Zarco; up to 400 feet. Fairly common in winter. The earliest autumn record was on October 25. 2 females, 1 ?.

*Tringa solitaria solitaria*. Solitary Sandpiper. Panzós,\* La Tinta;\* up to 800 feet. Recorded from October 7 to November 10. 2 females (wing, 125, 131 mm.; tail, 50, 55).

*Actitis macularia*. Spotted Sandpiper. Panzós,\* El Estór,\* Zarco, Tamahú, La Tinta; up to 800 feet. The most common shorebird throughout the winter. 1 female, 1 ?.

*Erolia melanotos*. Pectoral Sandpiper. Panzós;\* 200 feet. 1 male (October 8).

*Sterna hirundo hirundo*. Common Tern. Panzós;\* 200 feet. 1 male (January 24).

*Columba cayennensis pallidicrissa*. Pale-vented Pigeon. Panzós,\* El Estór;\* up to 200 feet. Uncommon resident in second-growth woodland and cane along streams and larger bodies of water. A female taken on October 2 had an ovary with two enlarged ova. A male collected on February 5 had enlarged testes. 2 males, 2 females.

*Columba fasciata*. Band-tailed Pigeon. Pancajché; 2400 to 8500 feet. A flock of 20 birds was seen flying rapidly over the cafetal on November 25.

*Columba speciosa*. Scaled Pigeon. El Estór;\* 50 feet. Recorded on the shore of Lake Izabál on January 31 and February 1. 1 male, 1 female.

*Columba nigrirostris*. Short-billed Pigeon. Izabál,\* Panzós;\* 1000 to 1800 feet. Uncommon resident in the denser woodland and cafetal. Males taken on February 7 and March 13 had enlarged testes. 3 males, 1 female.

*Zenaida asiatica asiatica*. White-winged Dove. Panzós;\* up to 5100 feet. Recorded only on October 27. 1 male.

*Columbigallina minuta interrupta*. Plain-breasted Ground-Dove. Panzós,\* Quirigua;\* up to 400 feet. Fairly common in areas from which the forest has been cleared. The primaries of a female taken on October 14 were molting. Another female collected two days later was in fresh plumage. 3 males, 3 females.

*Columbigallina talpacoti rufipennis*. Ruddy Ground-Dove. Panzós,\* Zarco,\* La Tinta, El Estór; up to 300 feet. Common resident. Adults collected in October and February had enlarged gonads. 5 males, 5 females.

*Claravis pretiosa*. Blue Ground-Dove. Izabál,\* Zarco,\* El Estór,\* Panzós; up to 1100 feet. Fairly common in the brushy edges of the rain forest. 5 males, 1 female.

*Leptotila plumbeiceps plumbeiceps*. Gray-headed Dove. Panzós;\* 200 feet. Collected on February 8 in brushy rain forest. 1 male.

*Leptotila cassinii cerviniventris*. Gray-chested Dove. Panzós,\* Zarco;\* up to 600 feet. Uncommon resident in swampy woodland and cane. The gonads of specimens taken in February were in breeding condition. Birds collected in October were molting, although a male collected on October 10 had enlarged testes. 3 males, 2 females.

*Geotrygon montana montana*. Ruddy Quail-Dove. Panzós,\* Izabál; 200 to 1700 feet. Uncommon in moist woodland and cafetál. The remiges were molting on a female collected on October 18. A juvenile was taken on October 17. 2 males, 3 females, 1 ?.

*Ara macao*. Scarlet Macaw. Zarco; 200 feet. On February 12 we saw two birds in flight and heard several others in open rain forest.

*Aratinga astec astec*. Olive-throated Parakeet. Panzós,\* Izabál,\* Pancajché,\* Zarco;\* up to 2400 feet. Common in cultivated areas, cafetál, and open rain forest. Two specimens taken on September 23 were molting the remiges. 6 males, 4 females.

*Pionopsitta haematotis haematotis*. Brown-hooded Parrot. Izabál,\* Panzós;\* up to 1000 feet. Common resident in open woodland, rain forest, and cafetál. 3 males, 2 females.

*Pionus senilis senilis*. White-crowned Parrot. Panzós,\* Pancajché,\* El Estór; up to 7500 feet. Widespread but not common; flocks of up to 25 (usually 2 to 8) were seen occasionally in brushy woodland, cutover rain forest, cafetál, and open pine forest. A female collected on January 1 had an enlarged ovary. 2 males, 5 females, 1 ?.

*Amazona autumnalis autumnalis*. Red-lore Parrot. Panzós,\* El Estór,\* Zarco;\* up to 200 feet. Uncommon resident in second-growth woodland and rain forest. A pair collected on March 19 had enlarged gonads (one ovum fully formed). 2 males, 1 female.

*Amazona fariosa*. Mealy Parrot. Izabál, Panzós, El Estór, Zarco; up to 1100 feet. Fairly common and conspicuous in dense forest. On September 22 south of Izabál at 5 p.m., a tremendous din attracted us to a section of rain forest in which about 200 parrots of this species were going to roost. Several flocks of up to 20 birds were seen circling into the area. The group roosted in the same place the following night but was not there when we returned three months later.

*Coccyzus americanus americanus*. Yellow-billed Cuckoo. Panzós;\* up to 1000 feet. Recorded on October 26. 1 male.

*Piaya cayana thermophila*. Squirrel Cuckoo. Izabál,\* Panzós,\* Pancajché,\* Zarco;\* up to 6300 feet. Fairly common in all types of woodand. A female collected on February 21 was in breeding condition. 2 males, 3 females.

*Crotophaga sulcirostris sulcirostris*. Groove-billed Ani. Panzós,\* Zarco,\* Pancajché, El Estór, Tamahú; up to 5000 feet. Abundant except in rain forest. 3 males, 3 females.

*Tapera naevia excellens*. Striped Cuckoo. Panzós;\* 200 feet. Uncommon resident in second growth and in cultivated areas. 1 female (February 5).

*Dromococcyx phasianellus*. Pheasant Cuckoo. Panzós; 200 feet. A single bird was flushed in a brushy area on January 12.

*Otus guatemalae guatemalae*. Vermiculated Screech-Owl. Pancajché,\* Panzós,\* Izabál; 1000 to 2400 feet. Fairly common on the heavily forested slopes of the Polochic Valley. A male and female collected on March 25 were in breeding condition. 1 male, 2 females.

*Glaucidium brasilianum ridgwayi*. Ferruginous Pygmy-Owl. Panzós,\* Zarco,\* Pancajché, Izabál; up to 3500 feet. Common in habitats ranging from scrubby woodland to rain forest. A male taken on February 17 had enlarged testes. 2 males.

*Ciccaba virgata centralis*. Mottled Owl. Panzós,\* Izabál, La Tinta; up to 5700 feet. Fairly common in moist woodland, moving at night into more open areas. A female obtained on March 19 was in breeding condition. 1 male, 3 females.

*Ciccaba nigrolineata*. Black-and-White Owl. Panzós;\* 200 feet. One of two birds seen in a swamp on October 14 was collected. 1 male.

*Nyctibius grandis*. Great Potoo. Panzós;\* 200 feet. Recorded only in humid cultivated areas at night. A female taken on January 21 is the first collected in Guatemala (Land and Wolf, 1961).

*Nyctibius griseus mexicanus*. Common Potoo. Panzós,\* 200 feet. Recorded in January and February in cultivated areas and farm yards. A female collected on February 4 had an enlarged ovary (one ovum  $10 \times 12$  mm.). 1 male, 1 female.

*Nyctidromus albicollis*. Pauraque. Panzós,\* El Estór,\* Zarco,\* Izabál, Pancajché; up to 5700 feet. Common; heard calling throughout the year. Molting was noted in four specimens taken from September 23 to November 23. A female taken on February 16 and a male collected on March 21 were in breeding condition.

In measurements my series is intermediate between the nominate race and *N. a. yucatenensis*. Three males: wing, 156 to 164 mm. (average, 160.2); tail, 134 to 157 (average, 149); four females: wing, 154 to 163 (average, 158); tail, 138 to 141 (average, 139.5).

*Caprimulgus carolinensis*. Chuck-will's-widow. Panzós,\* 200 feet. 1 male (January 21).

*Caprimulgus vociferus vociferus*. Whip-poor-will. Izabál,\* 1000 to 8000 feet (including *C. v. chiapensis*). 1 female (March 13).

*Streptoprocne zonaris mexicanus*. White-collared Swift. Panzós,\* El Estór, Zarco, Izabál; up to 6100 feet. Abundant in winter. Wheeling flocks of up to 400 birds were often seen. 1 male.

*Phaethornis superciliosus longirostris*. Long-tailed Hermit. Izabál,\* Panzós,\* Zarco,\* El Estór; up to 1000 feet. Common resident in rain forest; often heard calling (a single *chip*) at midday. A male taken on February 20 had slightly enlarged testes. On March 14 an adult was seen feeding two fledged young. 3 males, 2 females, 1 ?.

*Phaethornis longuemareus saturatus*. Little Hermit. Izabál,\* Zarco,\* Panzós, El Estór; up to 1100 feet. Common resident in open rain forest and brushy edges; occurs in more open situations than *P. superciliosus*. 1 male (February 16; testes somewhat enlarged), 1 female, 2 ?.

*Phaeochroa cuvieri roberti*. Scaly-breasted Hummingbird. Panzós,\* Zarco,\* up to 200 feet. Seen only in February. The specimens were taken 25 feet above the ground in edge situations. 1 male (February 11; testes enlarged), 2 females.

*Campylopterus hemileucurus hemileucurus*. Violet Sabrewing. Zarco,\* 150 feet. Recorded only in mid-February in brushy rain forest. 1 male, 1 female.

*Florisuga mellivora mellivora*. White-necked Jacobin. Izabál,\* Zarco; up to 1000 feet. Seen in February and March in open rain forest, usually quite high in the trees. 1 male (March 15; testes enlarged).

*Anthracothorax prevostii prevostii*. Green-breasted Mango. Panzós,\* Zarco,\* El Estór,\* up to 200 feet. Fairly common in open woodland and brush, usually 25 to 30 feet above the ground. The testes of males taken on February 15 and 17 were enlarged. 3 males, 1 female.

*Paphosia helenae*. Black-crested Coquette. Panzós,\* 1800 to 2000 feet. Uncommon; observed only in the cafetal at Finca Miramar. A male collected on January 26 had enlarged testes. 2 males, 1 female.

*Chlorostilbon canivetii osberti*. Fork-tailed Emerald. Zarco,\* El Estór,\* Panzós; up to 800 feet. Recorded in February and March in shrubby woodland. 3 males, 3 females.

*Thalurania colombica townsendi*. Blue-crowned Woodnymph. Izabál,\* Panzós,\* Zarco,\* Pancajché,\* up to 2400 feet. Fairly common in and along the brushy edges of open rain forest. The remiges of a male taken on October 30 were molting. Males collected on January 26 and February 14 and a female taken on March 14 had enlarged gonads. 4 males, 2 females, 1 ?.

*Amazilia candida candida*. White-bellied Emerald. Panzós,\* Pancajché,\* Zarco,\* Izabál,\* El Estór; up to 2600 feet. Common in cafetal, cacao groves, and moist woodland. Molting birds were collected on October 12 and November 10. A female taken on March 13 was almost in breeding condition. 9 males, 1 female, 2 ?.

*Amazilia cyanocephala guatemalensis*. Red-billed Azurecrown. Pancajché,\* Izabál,\* 1000 to 6500 feet. Recorded in the lowlands only on November 1 and March 14; common in the highlands. 2 males.

*Amazilia tzacatl tzacatl*. Rufous-tailed Hummingbird. Panzós,\* Tamahú,\* Izabál,\* Zarco,\* La Tinta, El Estór; up to 2100 feet. The most common hummingbird in the Polochic Valley; found in rain forest, open woodland, second growth, and brushy edges. A female was observed building a nest at Zarco. On February 17 it was a shallow cup of twigs; by February 22 it was complete. Three specimens collected in late January had enlarged gonads. 4 males, 5 females, 3 ?.

*Tilmatura dupontii dupontii*. Sparkling-tailed Hummingbird. Panzós;\* 1800 feet. 1 male (January 26).

*Archilochus colubris*. Ruby-throated Hummingbird. Panzós,\* El Estór,\* Zarco;\* up to 7300 feet. Uncommon in winter. A specimen taken on January 26 was molting the remiges. 1 male, 2 ?.

*Trogon massena massena*. Slaty-tailed Trogon. Panzós,\* Izabál,\* El Estór,\* Zarco;\* up to 1700 feet. Fairly common in rain forest and cafetál. 2 males, 2 females.

*Trogon citreolus melanocephala*. Citreoline Trogon. Panzós,\* Zarco,\* El Estór,\* La Tinta; up to 1800 feet. Common in moist woodland and open rain forest. Two specimens taken in early October were molting. A female collected on February 17 had an enlarged ovary. 4 males, 5 females.

*Trogon collaris puella*. Bar-tailed Trogon. Izabál,\* Panzós, Pancajché; 1000 to 6500 feet. Uncommon in moist forest. 1 female.

*Trogon violaceus braccatus*. Violaceous Trogon. Izabál,\* Panzós,\* Zarco;\* up to 1800 feet. Fairly common in open rain forest and cafetál. The primaries were molting on a male collected on October 6. A male taken on February 20 had enlarged testes. 5 males.

*Ceryle torquata torquata*. Ringed Kingfisher. Panzós,\* Zarco,\* El Estór; up to 200 feet. Fairly common. 2 males, 1 female (January 22; ovary enlarged).

*Ceryle alcyon alcyon*. Belted Kingfisher. El Estór,\* Panzós; up to 5000 feet. Fairly common in winter. 1 male.

*Chloroceryle amazona mexicanus*. Amazon Kingfisher. Panzós,\* Zarco,\* El Estór; up to 200 feet. Fairly common. On February 20 a pair were observed making alternate trips to a nesting hole five feet up in a seven-foot dirt bank overhanging the Zarco River. Three birds taken in early October were molting. 3 males, 1 female.

*Chloroceryle americana septentrionalis*. Green Kingfisher. Panzós,\* El Estór,\* Izabál,\* Zarco, Tamahú; up to 5000 feet. Common along small streams. A male collected on February 2 had enlarged testes. The specimens have the large size and light coloration of *C. a. septentrionalis*, but approach *C. a. isthmica* in having an obvious submalar stripe. My specimens measure: three males, wing, 82 to 86 mm. (83.7); tail, 57 to 59 (58); six females, wing, 82 to 88 (84.5); tail, 53 to 61 (57).

*Chloroceryle aenea stictoptera*. Pygmy Kingfisher. Panzós,\* El Estór; 200 feet. Fairly common in swampy woodland and along small wooded streams. One bird was seen with a fish two and one-half inches long in its bill. A male taken on October 13 was molting its remiges. 3 males, 2 females.

*Hylomanes momotula momotula*. Tody Motmot. Panzós;\* 1000 feet. Recorded on March 23 in brushy rain forest. 1 female (ovary slightly enlarged).

*Momotus momota goldmani*. Blue-crowned Motmot. Panzós,\* Izabál,\* Zarco,\* Pancajché, El Estór; up to 2600 feet. Fairly common in open rain forest, cacao, and cafetál. A female collected on January 14 had an enlarged ovary. The specimens are too large for *M. m. lessoni* but a trifle small for *M. m. goldmani*. The males measure: wing, 138 to 149 mm. (143); tail, 229 to 258 (241.3); culmen, 41 to 45 (42.6); the females: wing, 130 to 137 (134.7); tail, 219 to 227 (223); culmen, 39 to 44 (42). I agree with Griscom (1932:182-183) that the differences between these two races are very slight. 5 males, 3 females, 1 ?.

*Galbula ruficauda melanogenia*. Rufous-tailed Jacamar. Panzós,\* Zarco,\* Izabál, El Estór; up to 1000 feet. Fairly common in open rain forest and moist woodland along streams; usually seen in pairs throughout the winter. On March 14, at Izabál, two birds were flushed from a nesting hole in the side of a road cut. Two males taken in early October were molting the remiges. 6 males, 2 females.

*Notharchus macrorhynchus hyperrhynchus*. White-necked Puffbird. Zarco;\* 150 feet. Recorded in open rain forest. 1 male (February 13).

*Malacoptila panamensis inornata*. White-whiskered Puffbird. Izabál,\* El Estór,\* Zarco; up to 1000 feet. Fairly common in dense rain forest. A male taken on December 30 and a female collected on January 3 were molting their rectrices. 4 males, 3 females.

*Aulacorhynchus prasinus prasinus*. Emerald Toucanet. Izabál,\* Panzós; 1000 to 8000 feet. Recorded in March in rain forest. 1 female (March 12; ovary somewhat enlarged).

*Pteroglossus torquatus torquatus*. Collared Araçari. Panzós,\* El Estór,\* Westfalia, Izabál, Zarco; up to 2600 feet. Fairly common in rain forest, cafetál, and second growth. 2 females.

*Ramphastos sulfuratus sulfuratus*. Keel-billed Toucan. Panzós,\* El Estór,\* Izabál, Zarco; up to

2000 feet. Fairly common in dense rain forest. The remiges were molting in a specimen taken on October 18. 1 male (culmen, 154 mm.), 1 ?.

*Picumnus olivaceus dimotus*. Olivaceous Piculet. Panzós,\* Zarco;\* up to 200 feet. Fairly common in moist woodland. This species is new to Guatemala (Land and Wolf, 1961). 6 males, 5 females.

*Piculus rubiginosus yucatanensis*. Golden-olive Woodpecker. Zarco;\* up to 6400 feet. Uncommon in brushy woodland. 1 male (testes enlarged).

*Celeus castaneus*. Chestnut-colored Woodpecker. Panzós,\* El Estór,\* Zarco,\* Izabál; up to 1800 feet. Fairly common in open rain forest and cafetal. The remiges of a female taken on October 18 were molting. The ovary of a female collected on February 21 was enlarged. 4 males, 2 females.

*Dryocopus lineatus similis*. Lined Woodpecker. Izabál,\* Panzós,\* Zarco;\* up to 3200 feet. Fairly common in open rain forest, moist woodland, and scrubby woodland. A female collected on February 21 was in breeding condition. 1 male, 2 females.

*Melanerpes formicivorus*. Acorn Woodpecker. Pancajché; up to 9000 feet. Recorded in the lowlands on March 17 at 1000 feet.

*Centurus aurifrons pauper*. Golden-fronted Woodpecker. Tamahú,\* Panzós,\* Pancajché,\* Izabál,\* Zarco;\* up to 3300 feet. Abundant in second growth and open woodland. Seven males measure: wing, 123 to 130 (125.8); tail, 69 to 76 (73.2); five females: wing, 116 to 122 (119.4); tail, 61 to 69 (66.2). They are red-orange to red on the abdomen and postnasal region. Twenty miles to the south in the arid Motagua Valley, the race *C. a. santicruzi* occurs. Seven males taken here averaged: wing, 134.8 mm.; tail, 77.3. They are yellow to yellow-orange on the abdomen and postnasal region.

*Centurus pucherani perileucus*. Black-cheeked Woodpecker. Izabál,\* Panzós; 1000 to 1700 feet. Uncommon in rain forest edge. 3 males, 1 female.

*Sphyrapicus varius varius*. Yellow-bellied Sapsucker. Zarco;\* 1100 to 8500 feet. 1 female (February 18).

*Veniliornis fumigatus sanguinolentus*. Smoky-brown Woodpecker. Izabál,\* Panzós,\* Zarco;\* up to 1000 feet. Uncommon in dense woodland and rain forest. The flight feathers were molting on a male taken on September 24. 4 males, 3 females.

*Phloeocastes guatemalensis guatemalensis*. Pale-billed Woodpecker. Izabál,\* Panzós,\* Zarco, El Estór; up to 6700 feet. Fairly common in heavy forest. A male taken on February 8 had somewhat enlarged testes. 2 males, 2 females.

*Dendrocincla anabatina anabatina*. Tawny-winged Woodcreeper. Izabál,\* El Estór,\* Zarco,\* Panzós; up to 1100 feet. Fairly common in rain forest. A male collected on March 12 had enlarged testes. 4 males, 3 females, 1 ?.

*Dendrocincla homochroa homochroa*. Ruddy Woodcreeper. Izabál;\* 1000 feet. Rare in rain forest. A female taken on March 12 had an enlarged ovary. 1 male, 1 female.

*Sittasomus griseicapillus sylvioides*. Oliveaceous Woodpecker. Izabál,\* El Estór;\* up to 1100 feet. Uncommon in rain forest. 1 male, 4 females.

*Glyphorhynchus spirurus pectoralis*. Wedge-billed Woodcreeper. Izabál,\* Panzós,\* El Estór;\* up to 1700 feet. Fairly common in open rain forest, cafetal, and moist woodland. A female collected on January 14 was undergoing a general molt. 6 males, 4 females.

*Xiphocolaptes promeropirhynchus emigrans*. Strong-billed Woodcreeper. Izabál;\* 1000 to 7200 feet. Two were seen and one male was collected on March 14 in rain forest.

*Dendrocolaptes certhia sancti-thomae*. Barred Woodcreeper. Izabál,\* Panzós,\* El Estór;\* up to 1000 feet. Uncommon resident in rain forest. A female collected on February 14 had a moderately enlarged ovary. 2 males, 3 females.

*Xiphorhynchus flavigaster eburneirostris*. Ivory-billed Woodcreeper. Panzós,\* Izabál,\* El Estór,\* Zarco;\* up to 1100 feet. Common in swampy woodland and rain forest. 8 males, 4 females.

*Lepidocolaptes souleyetii insignis*. Streak-headed Woodcreeper. Panzós,\* Izabál,\* Zarco;\* up to 1000 feet. Uncommon in second growth, moist woodland, and rain forest. Two females collected in October and a male taken in February were molting. 3 males, 6 females.

*Synallaxis erythrothorax erythrothorax*. Rufous-breasted Spinetail. Panzós,\* Zarco,\* Quirigua; up to 400 feet. Because of its persistent song, this species was conspicuous in second growth and brush. A molting specimen was taken on October 8. 4 males, 1 female, 3 ?.

*Anabacerthia variegaticeps*. Scaly-throated Foliage-gleaner. Pancajché;\* 2400 to 6500 feet. 1 ? (October 31).

*Automolus ochrolaemus amusus*. Buff-throated Foliage-gleaner. Izabál,\* Panzós; 1000 to 1800 feet. Fairly common in rain forest. The remiges of a specimen taken on September 24 were molting. A female collected on March 18 had slightly enlarged gonads. 2 males, 3 females, 2 ?.

*Xenops minutus mexicanus*. Plain Xenops. Panzós,\* Izabál,\* El Estór; up to 100 feet. Fairly common in moist woodland and rain forest. A pair was seen feeding young out of the nest on March 22 at El Estór. A male taken on January 22 had enlarged testes. 5 males, 4 females.

*Sclerurus guatemalensis guatemalensis*. Scaly-throated Leafscraper. Izabál;\* 1000 to 1100 feet. Three specimens were netted in dense rain forest on March 14 and 15. 3 females.

*Taraba major melanocrissus*. Great Antshrike. Panzós;\* 200 feet. Fairly common in brush and second growth. Two birds taken in October were molting. 5 males, 2 females.

*Thamnophilus dolíatus intermedius*. Barred Antshrike. Panzós,\* Zarco,\* El Estór, Quirigua; up to 6300 feet. Common in brush and thickets; heard more often than seen. Molting specimens were taken on October 20 and February 9. 4 males, 5 females.

*Thamnophilus punctatus atrinucha*. Slaty Antshrike. Zarco,\* El Estór,\* Izabál; up to 1000 feet. Fairly common in February and March in and near the rain forest. Specimens taken in late February had enlarged gonads. 4 males, 3 females.

*Thamnistes anabatinus anabatinus*. Russet Antshrike. Izabál;\* 1000 feet. Recorded in dense rain forest on December 31. 1 male.

*Myrmotherula schisticolor*. Slaty Antwren. Izabál;\* 1000 feet. Rare in rain forest. A female collected on March 14 was in breeding condition. 2 males, 2 females.

*Microrhopias quixensis boucardi*. Dot-winged Antwren. Izabál,\* El Estór,\* Zarco,\* up to 1100 feet. Common in rain forest. On March 24 a female was seen chasing a male and displaying the white on her back. 6 males, 5 females.

*Cercomacra tyrannina crepera*. Dusky Antbird. Panzós,\* Zarco,\* up to 1700 feet. Fairly common in dense undergrowth in rain forest edges and openings. Four specimens taken in October were molting. A female collected on February 15 had a somewhat enlarged ovary. 12 males, 8 females.

*Gymnocichla nudiceps chiroleuca*. Bare-crowned Antbird. Zarco,\* Panzós,\* up to 200 feet. Recorded twice in late February and once in late March in brushy rain forest. A male collected on March 22 had enlarged gonads. 1 male, 2 females.

*Formicarius analis moniliger*. Black-faced Antthrush. Panzós;\* up to 1900 feet. 1 male (March 23; enlarged testes).

*Piprites griseiceps*. Gray-headed Manakin. Izabál;\* 1100 feet. Recorded on January 2 in dense rain forest, a new species for Guatemala (Land and Wolf, 1961). 1 male.

*Pipra mentalis mentalis*. Red-capped Manakin. Panzós,\* Izabál,\* Zarco,\* El Estór; up to 1700 feet. Common in various woodland habitats. 6 males, 9 females.

*Manacus candei*. White-collared Manakin. Panzós,\* Zarco,\* El Estór;\* up to 1800 feet. Common in dense undergrowth of open rain forest. Courtship activity was noted in mid-February. A male with enlarged testes was taken on February 18. Males in postjuvenile plumage were secured on October 11 and 12. 10 males, 1 female, 1 ?.

*Schiffornis turdinus verae-pácis*. Thrush-like Manakin. Izabál,\* El Estór;\* up to 1100 feet. Uncommon in rain forest understory. A female collected on March 13 and a male taken on March 15 had enlarged gonads. 2 males, 2 females, 1 ?.

*Cotinga amabilis*. Lovely Cotinga. Panzós;\* up to 1800 feet. A large flock appeared in the open woodland and cafetal in mid-winter; by March most of the birds had departed, although two females were seen as late as March 23. Three specimens taken in January and February were molting. 6 males, 2 females, 1 ?.

*Attila spadiceus flammulatus*. Bright-rumped Attila. Izabál,\* Panzós,\* Zarco,\* up to 1400 feet. Uncommon in cutover rain forest and cacao. The testes of a male taken on February 13 were somewhat enlarged. 3 males, 1 ?.

*Rhytipterna holerythra holerythra*. Rufous Mourner. Izabál,\* El Estór,\* Zarco,\* up to 1100 feet. Uncommon in dense rain forest. The flight feathers were molting on a male taken on September 25. 5 males, 3 females, 1 ?.

*Lipaugus unirufus unirufus*. Rufous Piha. Izabál;\* 1000 feet. 1 female (January 3; rain forest).

*Pachyramphus cinnamomeus fulvidior*. Cinnamon Becard. Izabál;\* 1000 feet. Recorded in September and March in rain forest. 1 male.

*Pachyramphus polychopterus cinereiventris*. White-winged Becard. Panzós,\* Zarco;\* up to 200 feet. Fairly common in orchards, brushy woodland, and edges of pastures. A male taken on October 13 was molting into the gray adult plumage. 4 males, 5 females.

*Platypsaris aglaiae hypophaeus*. Rose-throated Becard. Izabál;\* 1000 to 1100 feet. Rare in the rain forest. A male taken on September 23 was molting. 2 males, 1 female.

*Tityra semifasciata personata*. Masked Tityra. Izabál,\* Panzós,\* Pancajché, Zarco; up to 6400 feet. Common in many types of woodland. 4 males, 2 females.

*Tityra inquisitor fraserii*. Black-crowned Tityra. Panzós,\* El Estór,\* Zarco;\* up to 1800 feet. Uncommon in rain forest, cafetal, and open woods. 1 male, 2 females.

*Sayornis nigricans aquatica*. Black Phoebe. Zarco,\* Tamahú, Panzós; up to 4900 feet. Fairly common along the rapid streams of the Polochic drainage. 1 male, 1 female.

*Muscivora forficata*. Scissor-tailed Flycatcher. Panzós;\* up to 800 feet. Uncommon transient; rare in winter. 1 male (October 26).

*Tyrannus tyrannus*. Eastern Kingbird. Panzós;\* 200 feet. An immature male and female were collected on October 25.

*Tyrannus verticalis*. Western Kingbird. Pancajché;\* up to 2400 feet. 1 male (October 29).

*Tyrannus melancholicus chloronotus*. Tropical Kingbird. Panzós,\* El Estór,\* Zarco,\* Izabál; up to 5000 feet. Fairly common. A female collected on February 18 and a male taken on March 17 had enlarged gonads. 3 males, 3 females.

*Myiodynastes luteiventris luteiventris*. Sulphur-bellied Flycatcher. Panzós;\* up to 800 feet. 1 male (March 23; enlarged testes).

*Megarynchus pitangua mexicanus*. Boat-billed Flycatcher. Izabál,\* Tamahú,\* Panzós,\* Zarco;\* up to 2400 feet. Fairly common. 3 males, 2 females.

*Myiozetetes similis texensis*. Social Flycatcher. Panzós,\* Zarco,\* El Estór; up to 5000 feet. Fairly common in dense brush, second growth, and cafetal. The remiges were molting on a specimen taken in early October. 4 males, 5 females, 1 ?.

*Pitangus sulphuratus guatemalensis*. Great Kiskadee. Panzós,\* El Estór, Zarco; up to 2000 feet. Common and conspicuous in second growth, farm land, and swampy woodland. 5 males, 2 females.

*Myiarchus crinitus boreus*. Great-crested Flycatcher. Panzós,\* El Estór,\* Izabál; up to 1300 feet. Transient and winter visitor in all sorts of woodland. 2 males.

*Myiarchus tyrannulus cooperi*. Brown-crested Flycatcher. Panzós,\* Zarco;\* up to 800 feet. Recorded in November and February. A male taken on February 15 had enlarged testes. 3 males.

*Myiarchus tuberculifer connectens*. Dusky-capped Flycatcher. Panzós,\* El Estór,\* Zarco;\* up to 6300 feet (including *M. t. lawrencei*). Common in rain forest, moist woodland, second growth, and cafetal. 17 males, 6 females, 3 ?.

*Nuttallornis borealis*. Olive-sided Flycatcher. Izabál; 1000 to 8200 feet. Recorded on March 14.

*Contopus virens*. Eastern Wood-Pewee. Izabál,\* Panzós;\* up to 1000 feet. Collected on September 24 and October 9. 2 females.

*Contopus richardsonii richardsonii*. Western Wood-Pewee. Panzós,\* Pancajché;\* up to 8700 feet. Fairly common transient; recorded up to October 30. 5 males.

*Contopus cinereus brachytarsus*. Tropical Pewee. Panzós;\* 1700 feet. 1 ? (January 19).

*Empidonax flaviventris*. Yellow-bellied Flycatcher. Panzós,\* Pancajché,\* Izabál,\* El Estór,\* Senahú,\* Zarco;\* up to 8000 feet. Abundant in winter. 18 males, 16 females, 4 ?.

*Empidonax traillii traillii*. Traill Flycatcher. Panzós;\* 200 feet. Recorded from February 6 to 9 in moist woodland and brushy second growth. 2 males, 2 ?.

*Empidonax minimus*. Least Flycatcher. Panzós,\* Pancajché,\* Zarco;\* up to 2400 feet. Abundant in winter. 14 males, 6 females, 9 ?.

*Empidonax albicularis axillaris*. White-throated Flycatcher. Panzós;\* up to 5900 feet. Uncommon in second growth. Molting birds were collected on September 12 and February 9. 1 male, 2 females.

*Terenotriccus erythrurus fulvicularis*. Ruddy-tailed Flycatcher. Izabál,\* El Estór,\* Zarco;\* up to 1000 feet. Rare in or near the rain forest. 1 male, 1 female, 2 ?.

*Myiobius sulphureipygius sulphureipygius*. Sulphur-rumped Flycatcher. Izabál,\* 1000 to 1100 feet. Uncommon in the rain forest. A male taken on March 15 had enlarged testes. 4 males, 1 ?.

*Onychorhynchus mexicanus mexicanus*. Northern Royal Flycatcher. Panzós,\* Pancajché,\* Izabál,\* Zarco,\* El Estór,\* up to 2400 feet. Uncommon in cafetal and brushy rain forest. The ovary of a female taken on March 14 was somewhat enlarged. 4 males, 2 females.

*Platyrinchus mystaceus cancrominus*. White-throated Spadebill. Izabál,\* El Estór,\* Panzós; up to 1300 feet. Uncommon in rain forest understory. A male taken on March 14 had enlarged testes. 2 males, 1 female, 1 ?.

*Tolmomyias sulphurescens cinereiceps*. Yellow-olive Flycatcher. Panzós,\* Tamahú,\* Zarco,\* up to 3600 feet. Fairly common in cafetal and moist woodland. A specimen taken on October 9 was molting. A male collected on March 23 had enlarged testes. 10 males, 4 females, 3 ?.

*Rhynchocyclus brevirostris brevirostris*. Eye-ringed Flatbill. Izabál,\* El Estór,\* Zarco,\* up to 1000 feet. Uncommon in rain forest. A female collected on March 14 was in breeding condition. 3 males, 2 females, 1 ?.

*Todirostrum cinereum finitimum*. Common Tody-Flycatcher. Panzós,\* Zarco,\* up to 200 feet. Uncommon in dense second growth and heavy brush. 5 males, 1 female, 2 ?.

*Todirostrum sylvia schistaceiceps*. Slate-headed Tody-Flycatcher. Panzós,\* 200 feet. Recorded in dense cane on October 10 and in moist woodland on February 11. 1 female, 1 ?.

*Oncostoma cinereigulare cinereigulare*. Northern Bentbill. Izabál,\* Panzós,\* Westfalia,\* Zarco,\* up to 2000 feet. Common in rain forest, moist woodland, and cafetal. 5 males, 7 females, 4 ?.

*Elaenia flavogaster subpagana*. Yellow-bellied Elaenia. Panzós,\* 200 feet. Two males taken in mid-October in a cultivated area had slightly enlarged testes. The remiges of one of the specimens were molting. 2 males.

*Myiopagis viridicata placens*. Greenish Elaenia. Izabál,\* El Estór,\* Zarco; up to 1000 feet. Rare in brushy woodland. 2 males, 1 female.

*Tyranniscus vilissimus vilissimus*. Paltry Tyrannulet. Panzós,\* Zarco,\* El Estór; up to 8000 feet. Fairly common in brushy woodland and cafetal. 5 males, 5 females.

*Leptopogon amaurocephalus pileatus*. Sepia-capped Flycatcher. Panzós,\* Izabál,\* Zarco,\* up to 1000 feet. Uncommon in open rain forest. A male collected on February 21 had enlarged testes. 4 males, 1 ?.

*Pipromorpha oleaginea assimilis*. Ochre-bellied Flycatcher. Izabál,\* Panzós,\* Pancajché,\* El Estór,\* Zarco,\* up to 2400 feet. Common in rain forest, cafetal, and brushy woodland. The ovary of a female collected on February 15 was enlarged. 11 males, 3 females.

*Progne chalybea chalybea*. Gray-breasted Martin. Panzós,\* 200 feet. 1 female (March 18).

*Petrochelidon pyrrhonota*. Cliff Swallow. Panzós; up to 1200 feet. Recorded on October 19.

*Hirundo rustica erythrogaster*. Barn Swallow. Panzós,\* up to 1000 feet. A transient recorded from October 2 to 24. 2 males.

*Stelgidopteryx rufigollis*. Rough-winged Swallow. Panzós,\* up to 5000 feet. Both the race *S. r. serripennis* and the race *S. r. fulvipennis* are represented by the specimens taken here and in the adjacent highlands. 2 males, 1 female.

*Iridoprocne albilinea albilinea*. Mangrove Swallow. El Estór,\* Panzós; up to 200 feet. Fairly common along the shores of Lake Izabál and up the lower Polochic River. A male collected on February 1 had enlarged testes. 3 males, 1 female.

*Psilorhinus morio cyanogenys*. White-tipped Brown Jay. El Estór,\* Tamahú,\* Panzós,\* Pancajché, Quirigua; up to 2400 feet. Common in open rain forest, cafetal, and cultivated areas. The ovary of a female taken on January 13 was somewhat enlarged. The remiges were molting in two females taken in October. 3 males, 3 females.

*Cyanocorax yncas centralis*. Green Jay. Zarco,\* Pancajché,\* Izabál,\* Panzós,\* up to 2600 feet. Fairly common on the slopes of the valley in brushy rain forest and cafetal; recorded only once on the floor of the valley. A juvenal male was taken on October 29. 3 males, 3 females.

*Cinclus mexicanus anthonyi*. American Dipper. Tamahú,\* 2300 to 3900 feet. Seen regularly in the steep canyons of the upper Polochic River. 2 males.

*Campylorhynchus zonatus restrictus*. Band-backed Wren. Panzós,\* Zarco,\* Izabál; up to 8300 feet (including *C. z. vulcanius* in the highlands). Fairly common in brushy woodland and second growth. 1 male, 4 females.

*Thryothorus modestus pullus*. Plain Wren. Panzós,\* Zarco;\* up to 6400 feet. Fairly common in the less humid parts of the Polochic Valley. Males taken on February 17 and 18 had enlarged testes. 5 males, 5 females, 2 ?.

*Thryothorus maculipectus umbrinus*. Spot-breasted Wren. Izabál,\* Zarco,\* Panzós,\* Pancajché, El Estór; up to 2400 feet. Fairly common in the brushy edges of the rain forest. On March 12 a nest containing two eggs was found in a clump of saw grass. The following day the nest contained three eggs. Birds collected in January showed gonadal enlargement. 4 males, 6 females, 1 ?.

*Troglodytes musculus*. Southern House Wren. Zarco, Izabál; up to 9300 feet. Recorded in the lowlands only in late February and March.

*Henicorhina leucosticta prosthaleuca*. White-breasted Wood-Wren. Izabál,\* Pancajché,\* Zarco,\* Panzós, El Estór; up to 1200 feet. Fairly common in rain forest undergrowth. The remiges were molting in a female collected on September 24. 5 males, 3 females.

*Dumetella carolinensis*. Common Catbird. Panzós,\* Izabál,\* El Estór,\* Zarco,\* Pancajché; up to 5900 feet. Common in winter. 4 males, 8 females, 3 ?.

*Turdus assimilis leucauchen*. White-throated Robin. Pancajché,\* Izabál,\* El Estór; up to 2400 feet. Common in the foothills of the Sierra de las Minas on the north side; uncommon on the floor of the Polochic Valley. The habitat utilized was the brushy edges of the rain forest. The rectrices of a male taken on October 29 were molting. 6 males, 1 female.

*Turdus grayi grayi*. Clay-colored Robin. Panzós,\* Pancajché,\* El Estór, Zarco, Izabál; up to 3000 feet. Common in cafetal, moist woodland and rain forest edge. A spotted juvenile was taken on October 11. 7 males, 1 female.

*Hylocichla mustelina*. Wood Thrush. Pancajché,\* Izabál,\* Panzós,\* Zarco,\* El Estór; up to 7300 feet. Common in winter in cafetal and brushy rain forest. The first spring song was heard on February 17. 3 males, 4 females.

*Hylocichla ustulata swainsoni*. Swainson Thrush. Zarco,\* Pancajché,\* Izabál;\* up to 2400 feet. Uncommon in winter in brushy rain forest and cafetal. The earliest autumn record was on September 25. 2 males, 2 females, 1 ?.

*Polióptila caerulea caerulea*. Blue-gray Gnatcatcher. Panzós,\* Pancajché,\* Zarco;\* up to 2400 feet. Fairly common winter resident in cafetal and open rain forest. Three specimens taken in October were molting. 5 males, 5 females, 1 ?.

*Polióptila plumbea superciliiaris*. Tropical Gnatcatcher. Izabál,\* El Estór,\* Zarco,\* Panzós;\* up to 1700 feet. Fairly common in rain forest and moist woodland. 3 males, 2 females.

*Ramphocaenus rufiventris rufiventris*. Long-billed Gnatwren. Izabál,\* Zarco,\* Panzós; up to 1900 feet. Uncommon in the rain forest understory on the slopes of the Polochic Valley; not recorded on the valley floor. 2 males, 2 females.

*Smaragdolanus pulchellus pulchellus*. Green Shrike-Vireo. Izabál;\* 1000 to 1100 feet. Rarely seen but often heard in the rain forest. A female taken on March 15 was nearly in breeding condition. 1 male, 1 female.

*Vireo griseus noveboracensis*. White-eyed Vireo. El Estór,\* Panzós; up to 200 feet. Rare winter visitor in moist situations. 1 female.

*Vireo pallens semiflavus*. Mangrove Vireo. El Estór;\* 50 feet. A female was taken on January 31 in a swamp.

*Vireo flavifrons*. Yellow-throated Vireo. Pancajché,\* Panzós,\* Zarco;\* up to 2400 feet. Uncommon winter visitor in cafetal and open woodland. 2 males, 1 ?.

*Vireo solitarius solitarius*. Solitary Vireo. Panzós,\* Pancajché;\* up to 7000 feet. Fairly common in winter. 2 males, 1 female, 2 ?.

*Vireo philadelphicus*. Philadelphia Vireo. Pancajché,\* Panzós,\* Zarco;\* up to 2400 feet. Fairly common in winter in cafetal. A male taken on January 19 was molting on the throat. 3 males, 3 females, 1 ?.

*Vireo gilvus*. Warbling Vireo. El Estór; up to 7300 feet. Recorded in March.

*Hylophilus ochraceiceps ochraceiceps*. Tawny-crowned Greenlet. Izabál,\* El Estór;\* up to 1000 feet. Fairly common in the tree tops in dense rain forest. A pair taken in mid-March was in breeding condition. A female collected on September 25 was undergoing a general molt. 6 males, 6 females.

*Hylophilus decurtatus decurtatus*. Gray-headed Greenlet. Izabál,\* El Estór,\* Panzós,\* Zarco;\* up to 1800 feet. Common in moist woodland, cafetal, and rain forest. A male collected on March 25

had somewhat enlarged testes. A female collected on September 25 was molting its remiges. 6 males, 8 females, 2 ?.

*Chlorophanes spiza guatemalensis*. Green Honeycreeper. Panzós,\* Zarco;\* up to 1700 feet. Uncommon in cafetal and moist woodland, primarily on the slopes of the Polochic Valley but not on the valley floor. 3 males, 4 females.

*Cyanerpes cyaneus carneipes*. Red-legged Honeycreeper. Izabál,\* Panzós,\* Zarco, Pancajché; up to 6300 feet. Fairly common on the slopes of the Polochic Valley. A female taken on September 25 was molting. 6 males, 5 females.

*Cyanerpes lucidus lucidus*. Shining Honeycreeper. Zarco;\* 800 feet. An immature male was taken on February 21 in moist woodland.

*Coereba flaveola mexicana*. Bananaquit. Panzós,\* Zarco;\* up to 200 feet. Fairly common on the floor of the Polochic Valley. A nest containing two young was found on October 9. Three males collected from February 6 to 19 had enlarged testes. 4 males, 2 females, 2 ?.

*Mniotilta varia*. Black-and-white Warbler. Panzós,\* Pancajché,\* Izabál,\* El Estór, Zarco; up to 7300 feet. Abundant in winter in most types of woodland. 3 males, 9 females, 4 ?.

*Protonotaria citrea*. Prothonotary Warbler. Panzós;\* 200 feet. Two specimens of indeterminate sex, the first for Guatemala (Land and Wolf, 1961), were taken on October 17.

*Helmitheros vermivorus*. Worm-eating Warbler. Panzós,\* Zarco;\* up to 1700 feet. Uncommon in winter in rain forest and cafetal. 1 male, 2 females, 1 ?.

*Vermivora chrysoptera*. Golden-winged Warbler. Panzós,\* Izabál; up to 1300 feet. Rare in winter in moist woodland and cafetal. 1 male, 2 females.

*Vermivora pinus*. Blue-winged Warbler. Panzós;\* up to 6500 feet. Uncommon in winter in moist woodland and second growth. 1 male, 1 female, 2 ?.

*Vermivora peregrina*. Tennessee Warbler. Panzós,\* La Tinta,\* Zarco;\* up to 6300 feet. Fairly common in winter in second growth and cacao. 6 males, 3 females.

*Vermivora ruficapilla ridgwayi*. Nashville Warbler. Panzós;\* up to 6300 feet. Rare in winter in heavy brush. 1 male.

*Dendroica aestiva*. Yellow Warbler. Panzós,\* Pancajché,\* Zarco,\* El Estór; up to 3000 feet. Common in winter. The specimens could not be identified to race with certainty. 7 males, 4 females, 1 ?.

*Dendroica magnolia*. Magnolia Warbler. Panzós,\* Pancajché,\* Izabál,\* Zarco,\* El Estór; up to 4600 feet. Abundant in winter. 11 males, 8 females, 7 ?.

*Dendroica virens virens*. Black-throated Green Warbler. Panzós,\* Pancajché,\* Tamahú,\* Zarco,\* Izabál; up to 7000 feet. Common in winter in open woodland, cafetal, and rain forest. 7 males, 7 females, 3 ?.

*Dendroica fusca*. Blackburnian Warbler. Panzós;\* 1300 to 1400 feet. Specimens were taken on October 18 and 20 from transient groups of warblers moving through the cafetal. 1 female, 2 ?.

*Dendroica dominica*. Yellow-throated Warbler. Panzós; 400 to 500 feet. Wolf saw one bird in open rain forest on January 12 and another on January 25.

*Dendroica pensylvanica*. Chestnut-sided Warbler. Panzós,\* Zarco,\* Izabál;\* up to 1700 feet. Common in winter in many habitats; first recorded on October 16. 8 males, 4 females, 4 ?.

*Dendroica castanea*. Bay-breasted Warbler. Panzós;\* 1300 feet. A specimen of indeterminate sex was taken on October 20 from a group of migrating warblers in the cafetal.

*Seiurus aurocapillus*. Ovenbird. Panzós,\* El Estór,\* Zarco,\* Tamahú;\* up to 6300 feet. Fairly common in winter in brushy parts of the forest. One of the males, which has a brownish back, I identify as *S. a. turvior*. The remainder have the greenish upperparts of the nominate form. 4 males, 2 ?.

*Seiurus noveboracensis noveboracensis*. Northern Waterthrush. Panzós,\* El Estór,\* Zarco;\* up to 600 feet. Common in winter along small streams through rain forest and second growth. 5 males, 4 females, 3 ?.

*Seiurus motacilla*. Louisiana Waterthrush. Panzós,\* Izabál,\* Zarco; up to 6000 feet. Uncommon in winter. 1 male, 1 female.

*Oporornis formosus*. Kentucky Warbler. Panzós,\* El Estór,\* Zarco,\* Izabál; up to 1100 feet. Uncommon in winter in open rain forest and heavy brush. 2 females, 2 ?.

*Oporornis tolmiei monticola*. MacGillivray Warbler. Tamahú;\* 2000 to 8000 feet. 1 ? (November 13).

*Geothlypis trichas*. Common Yellowthroat. Panzós,\* El Estór,\* Quirigua;\* up to 5000 feet. Common in winter. Most of my specimens, which represent the nominate race, are whitish on the abdomen and have a gray postfacial area. Two males are more yellowish on the abdomen and possibly belong to the race *G. t. brachidactyla*. I cannot place the adult females and birds in first-winter plumage with certainty. 9 males, 6 females, 3 ?.

*Chamaethlypis poliocephala caninucha*. Gray-crowned Yellowthroat. Quirigua;\* up to 2300 feet. 1 male (March 16).

*Icteria virens virens*. Yellow-breasted Chat. Panzós,\* Zarco,\* Izabál, El Estór; up to 1800 feet. Common in winter in brushy rain forest. 6 females, 3 ?.

*Wilsonia citrina*. Hooded Warbler. Izabál,\* Panzós,\* Zarco,\* El Estór; up to 7300 feet. Common in winter in rain forest, cafetal, and brushy areas. 4 males, 3 females, 4 ?.

*Wilsonia pusilla*. Wilson Warbler. Pancajché,\* Panzós,\* Tamahú,\* Zarco,\* Izabál,\* El Estór; up to 8300 feet. Abundant in winter. Both the nominate race and *W. p. pileolata* were recorded. 7 males, 4 females, 3 ?.

*Wilsonia canadensis*. Canada Warbler. Izabál,\* Panzós;\* up to 1000 feet. We took two specimens in rain forest undergrowth, one on September 25, the other October 12.

*Setophaga ruticilla*. American Redstart. Panzós,\* Zarco,\* Izabál,\* El Estór, Pancajché; up to 2400 feet. Common in winter. Both the nominate race and *S. r. tricolora* were taken. 5 males, 5 females, 2 ?.

*Myioborus miniatus intermedius*. Slate-throated Redstart. Pancajché;\* 2400 to 7900 feet. 1 male (November 2).

*Basileuterus rufifrons*. Rufous-capped Warbler. Panzós; 2000 to 6600 feet. Recorded on March 23.

*Zarhynchus wagleri wagleri*. Chestnut-headed Oropendola. Izabál,\* Panzós,\* Pancajché,\* Tamahú, El Estór; up to 2600 feet. Abundant in rain forest and cafetal; seen in flocks of up to 75 individuals. Several nest trees were found in cafetal. Molting specimens were secured from September 24 to November 7. 4 males, 4 females.

*Gymnostinops montezuma*. Montezuma Oropendola. Panzós,\* El Estór,\* Zarco,\* Quirigua; up to 1700 feet. Fairly common in moist woodland, cafetal, and open woods. Nest trees were usually in the open standing above second growth and brush. Giant Cowbirds (*Psomocolax oryzivorus*) were seen in the nesting colonies. Molting specimens were taken as late as January 30. 4 males, 4 females.

*Amblycercus holosericeus holosericeus*. Yellow-billed Caciue. Panzós,\* Zarco; up to 1900 feet. Fairly common in dense undergrowth and cane. A molting specimen was obtained on October 8. 3 males, 7 females, 1 ?.

*Psomocolax oryzivorus impacifus*. Giant Cowbird. Zarco,\* Panzós,\* El Estór; up to 200 feet. Recorded only in the spring. Two males taken in mid-February were in breeding condition. 4 males, 1 female.

*Tangavius aeneus aeneus*. Bronzed Cowbird. Panzós;\* up to 800 feet. Seen occasionally in flocks of a dozen or more individuals. 7 females.

*Cassidix mexicanus mexicanus*. Boat-tailed Grackle. El Estór,\* Panzós, La Tinta; up to 4800 feet. Fairly common in villages and cultivated areas. 1 female.

*Dives dives dives*. Melodious Blackbird. Panzós,\* Pancajché,\* Izabál,\* El Estór,\* Zarco,\* Tamahú; up to 6100 feet. Common in second growth, cafetal, and rain forest. 3 males, 5 females.

*Icterus spurius*. Orchard Oriole. Panzós,\* La Tinta,\* Izabál,\* Zarco;\* up to 1100 feet. Common in winter in brushy fields. Several molting specimens were taken in October. 8 males, 4 females, 1 ?.

*Icterus prothemelas prothemelas*. Black-cowled Oriole. Panzós,\* Izabál; up to 1200 feet. Uncommon in brushy rain forest. A male taken on March 19 had enlarged testes. Two molting specimens were obtained in October. 3 males, 3 females.

*Icterus mesomelas mesomelas*. Yellow-tailed Oriole. Panzós,\* Tamahú;\* up to 2100 feet. Uncommon in second growth and edges of pastures. 2 males, 2 females.

*Icterus chrysater chrysater*. Yellow-backed Oriole. Pancajché;\* 2600 to 6100 feet. 1 male (October 31; molting heavily).

*Icterus galbula*. Baltimore Oriole. Panzós,\* Izabál,\* El Estór,\* Zarco;\* up to 8700 feet. Common in winter in many habitats. 5 males, 3 females, 2 ?.

*Icterus galbula* x *Icterus bullockii*. Baltimore Oriole-Bullock Oriole hybrid. Pancajché;\* 2400

feet. An adult male resembling *I. galbula* but with orange on the sides of the neck and in a line over the eye was taken on October 30.

*Agelaius phoeniceus richmondi*. Redwinged Blackbird. Panzós;\* up to 200 feet. Rare and local; a male and female were taken in February.

*Chlorophonia occipitalis occipitalis*. Blue-crowned Chlorophonia. Panzós;\* 1800 feet. Recorded only once, in cafetal on January 26. 1 male, 4 females.

*Tanagra affinis affinis*. Scrub Euphonia. Panzós;\* 200 feet. Fairly common in cultivated areas. 2 males, 1 ?.

*Tanagra laeta laeta*. Yellow-throated Euphonia. Panzós,\* El Estór;\* up to 1700 feet. Fairly common in brushy rain forest and swampy woodland. 4 males, 1 female, 1 ?.

*Tanagra gouldi gouldi*. Olive-backed Euphonia. Izabál,\* El Estór,\* Zarco;\* up to 1100 feet. Uncommon in rain forest. 3 males, 1 female.

*Tangara larvata*. Golden-masked Tanager. Izabál,\* Zarco;\* up to 1000 feet. Uncommon in rain forest. A male collected on March 12 was in breeding condition. Two specimens taken in September were molting. 3 males, 2 females.

*Thraupis episcopus diaconus*. Blue-gray Tanager. Panzós;\* 200 feet. Seen occasionally in brushy pastures and second growth. A molting female was taken on October 11. 3 males, 4 females.

*Thraupis abbas*. Yellow-winged Tanager. Panzós,\* Pancajché,\* El Estór,\* Izabál,\* Zarco;\* up to 2400 feet. Fairly common in second growth, cafetal, and open rain forest. Specimens taken in October and February had enlarged gonads. Three molting birds were obtained in October. 5 males, 6 females.

*Ramphocelus passerinii passerinii*. Scarlet-rumped Tanager. Panzós,\* Zarco;\* up to 400 feet. Fairly common in brush and second growth. Males taken on February 9 and 20 had enlarged testes. Two October specimens were molting. 10 males, 3 females.

*Phlogothraupis sanguinolenta sanguinolenta*. Crimson-collared Tanager. Tucurú,\* Panzós,\* Zarco,\* Pancajché; up to 1700 feet. Uncommon in second growth, cane, and brushy woodland. A bird collected on October 1 was molting. 1 male, 3 ?.

*Piranga rubra rubra*. Summer Tanager. Panzós,\* La Tinta,\* El Estór,\* Pancajché,\* Izabál,\* Zarco;\* up to 6300 feet. Abundant in winter. Specimens taken in October and March had partly enlarged gonads. 4 males, 8 females.

*Piranga olivacea*. Scarlet Tanager. Panzós;\* 1500 feet. Two males in full winter plumage were obtained on October 18 in cafetal.

*Piranga ludoviciana*. Western Tanager. Panzós;\* 1300 feet. 1 male (March 23; cafetal).

*Habia rubica confinis*. Red-crowned Ant-Tanager. Izabál;\* 1000 to 1100 feet. Uncommon in rain forest. Specimens taken in early January had partly enlarged gonads. 3 males, 3 females.

*Habia gutturalis salvini*. Red-throated Ant-Tanager. Panzós,\* Pancajché,\* Izabál,\* El Estór,\* Zarco;\* up to 2400 feet. Common in rain forest edge and brushy woodland. Females taken on February 2 and 13 had enlarged ovaries. 7 males, 6 females, 2 ?.

*Lanio aurantius aurantius*. Black-throated Shrike-Tanager. Izabál,\* El Estór,\* Zarco;\* up to 1100 feet. Uncommon in rain forest. Females collected in early February had partly enlarged ovaries. A molting female was taken on September 25. 1 male, 6 females.

*Eucometis penicillata*. Gray-headed Tanager. Panzós,\* El Estór;\* up to 200 feet. Uncommon in rain forest and moist woodland. My specimens probably represent the race *E. p. pallida*, but the larger of the two males approaches *E. p. spodocephala* in size (wing 89 mm., tail 74). 2 males, 1 female.

*Saltator atriceps atriceps*. Black-headed Saltator. Panzós,\* Pancajché,\* Tamahú,\* El Estór,\* Izabál,\* Zarco; up to 4300 feet. Common in cafetal, second growth, and brush. Specimens taken in late October and early November were molting. 5 males, 1 female, 1 ?.

*Saltator maximus magnoides*. Buff-throated Saltator. Panzós,\* Izabál,\* El Estór,\* Zarco;\* up to 1800 feet. Fairly common in brush, second growth, and moist woodland. An immature male was taken on October 24. Other specimens taken in October were molting. 7 males, 4 females.

*Saltator coerulescens grandis*. Grayish Saltator. Panzós;\* 200 feet. Rare in brush and second growth. 1 female (October 13; molting).

*Caryothraustes poliogaster poliogaster*. Black-faced Grosbeak. Izabál;\* 1000 to 1100 feet. Fairly common in rain forest, usually in large active flocks. 4 males, 2 females, 1 ?.

*Pneucticus ludovicianus*. Rose-breasted Grosbeak. Panzós,\* Izabál; up to 7000 feet. Fairly common in winter. 2 males, 1 female.

*Guiraca caerulea*. Blue Grosbeak. Panzós,\* El Estór; up to 3000 feet. Recorded in October. 1 male; the skin is too badly damaged to permit subspecific identification.

*Cyanocompsa cyanooides concreta*. Blue-black Grosbeak. Izabál,\* Panzós,\* Zarco, El Estór; up to 1800 feet. Uncommon in brush and at rain forest edge. 2 males, 2 females.

*Passerina cyanea*. Indigo Bunting. Izabál,\* Panzós,\* Zarco,\* El Estór;\* up to 6000 feet. Abundant in winter in brushy meadows and second growth. Three specimens taken in late November were molting. Males taken up to February 15 were at least partly in winter plumage. 4 males, 1 female, 1 ?.

*Passerina ciris pallidior*. Painted Bunting. Panzós,\* Zarco,\* Izabál; up to 1000 feet. Uncommon in winter in second growth and brush. A male was taken on March 19 in dull female-like plumage. 4 males.

*Sporophila torqueola moreletii*. White-collared Seedeater. Panzós,\* Zarco,\* Izabál,\* Quirigua, El Estór; up to 5900 feet. Abundant in brushy meadows. A stub-tailed juvenile was taken on October 18. 8 males, 2 females, 1 ?.

*Sporophila aurita corvina*. Variable Seedeater. Panzós,\* Zarco;\* up to 200 feet. Uncommon in brush and forest edge. A heavily molting individual was taken on October 11. We took a male in breeding condition on March 18. 4 males, 3 females.

*Oryzoborus funereus*. Thick-billed Seed-Finch. Panzós,\* El Estór; up to 200 feet. Uncommon in pasture and brush. The testes of a male taken on October 10 were partly enlarged. 2 males, 2 females.

*Volatinia jacarina splendens*. Blue-black Grassquit. Panzós,\* Quirigua,\* La Tinta; up to 6000 feet. Common in meadows and brush. 5 males, 4 females.

*Arremon aurantirostris saturatus*. Orange-billed Sparrow. Panzós,\* Zarco;\* up to 1800 feet. Uncommon at rain forest edge. A nest containing two eggs was found in dense cane on October 13. 4 males, 2 females.

*Arremonops conirostris chloronotus*. Green-backed Sparrow. Panzós,\* Zarco;\* up to 200 feet. Uncommon in thickets and brushy woodland. A male with enlarged testes was collected on February 14. 5 males, 2 ?.

*Melospiza biarcuatum biarcuatum*. Prevost Ground-Sparrow. Tamahú;\* 2100 to 5800 feet. An immature bird of indeterminate sex that was being fed by an adult was collected on October 1.

*Ammodramus savannarum cracens*. Grasshopper Sparrow. Quirigua;\* 400 feet. An extremely dark specimen was taken from a group of Grasshopper Sparrows seen in an extensive meadow on March 16. 1 female.

*Aimophila rufescens discolor*. Rusty Sparrow. Quirigua;\* 400 to 8500 feet (including *A. r. pyrgitoides*). A female (wing 71 mm., tail 65) was taken on March 16 in an extensive grassland.

## DISCUSSION

In this expedition 299 species were recorded in the Caribbean lowlands of which 271 were collected. The resident birds numbered 228 and the transient and wintering birds, predominantly forms that nest in eastern North America, numbered 71. Twenty-six migratory wood warblers (Parulidae) were recorded in the lowlands while only one resident warbler was found below 2000 feet elevation.

TABLE 1  
SPECIES INCREASING IN ABUNDANCE

Species	Status in Griscom (1932)	Specimens taken on this expedition
<i>Picumnus olivaceus</i>	Not recorded (former northern limit, Honduras)	11
<i>Myrmotherula schisticolor</i>	Exceedingly rare north of Nicaragua	4
<i>Gymnocichla nudiceps</i>	Has been collected three times north of Nicaragua	3

The origin of the majority of the resident bird species we found in the lowlands appears to be in the tropics of South America. These species apparently moved north with the warming trend following the last glacial period. There is some evidence, presented in table 1, that this northward invasion may still be in progress today. Because the statements of range for birds of Guatemala given by Griscom (1932) are based upon the voluminous collections of Salvin and Godman and the more recent work of Anthony and others, it is improbable that our lesser efforts could produce the numbers of typically southern forms (table 1) unless these species are increasing in abundance.

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#### SUMMARY

In a field study in the humid lowlands of eastern Guatemala 228 resident and 71 migratory species of birds were recorded. Ten stations were utilized, nine of them in the Polochic Valley, the other in the lower Motagua Valley. In terms of number of species, the avifauna of the moist Caribbean lowlands is the richest in Guatemala.

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