

UNIVERSITY OF MICHIGAN
MUSEUM OF ZOOLOGY
MISCELLANEOUS PUBLICATIONS NO. 27

THE BIRDS OF NORTHERN PETÉN, GUATEMALA

BY
JOSSELYN VAN TYNE

ANN ARBOR, MICHIGAN
UNIVERSITY OF MICHIGAN PRESS
August 1, 1935

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FREDERICK M. GAIGE
Director of the Museum of Zoology





YOUNG *NYCTIBIUS GRISEUS*, SHOWING THE CHARACTERISTIC UPRIGHT POSTURE
UAXACTUN, MAY 5, 1931

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THE BIRDS OF NORTHERN PETÉN, GUATEMALA

The Department of Petén constitutes approximately the northern third of Guatemala, but because of the isolation and the unhealthful nature of the country it has long been neglected by ornithological collectors. It is a lowland region covered with a tropical forest which is, however, broken by sharply marked areas of poor soil characterized by savannas and open pine forests. The rainfall, which is heavy at the northern edge of Alta Vera Paz, apparently decreases steadily to the northward through the Petén. At Uaxactun there is, during the spring months, a well marked dry season. Nearly all of the Petén is below the thousand foot contour line. Further remarks on the district may be found in Ludlow Griscom's report¹ (especially pp. 17-18 and 51), but too little exploration has been recorded as yet to permit any adequate account of the physiography or climate.

The following account of the birds of northern Petén was begun as a report on my ornithological work at Uaxactun between March 26 and May 15, 1931. In addition, the Chief of the United States Bureau of Biological Survey kindly gave me permission to identify and include in this report the large unworked collection of birds made for the Survey in the Petén by Harry Malleis in 1923. With these were included several birds collected by P. W. Shufeldt near Lake Petén in 1917 and presented to the Survey. I have also been permitted by Mr. W. E. Clyde Todd to use four records of birds collected in the same area for the Carnegie Museum by Ernest G. Holt in 1926. This includes, I believe, virtually all of the material taken in the region since Leyland, Salvin, and the other early explorers collected a few birds in passing, more than seventy years ago.

Most of my own collection and some of the other material I identified at the Museum of Comparative Zoölogy, where I received much valuable aid from my friends, Outram Bangs and James L. Peters. The latter stages of my work have been tremendously facilitated by the publication of the splendid book on the birds of Guatemala by Ludlow Griscom, with whom I also had the privilege of discussing many of the problems which arose during my work at the Harvard Museum. I am much indebted to the authorities of the Museum of Comparative Zoölogy, the American Museum of Natural History, the National Museum, and to Mr. A. J. van Rossem, of the California Institute of Technology, for the loan of valuable comparative material. The greater part of the Malleis collection I worked over at the National Museum, where I received the very generous assistance of Dr. Alexander Wetmore, Dr. Harry C. Oberholser, and Dr. Herbert Friedmann.

¹ "The Distribution of Bird-Life in Guatemala," *Bull. Amer. Mus. Nat. Hist.*, 64, 1932: 1-439, 2 maps. (With an ornithological bibliography of twenty-nine titles.)

My companions on the expedition to Uaxactun were Professor Harley H. Bartlett, botanist, and Dr. Adolph Murie, mammalogist, both of whom not only helped me in countless ways in the field but have since identified for me plants and mammals for use in this report. In our preparations in Belize we were all assisted immeasurably by Mr. P. W. Shufeldt, who had acquired an unequaled knowledge of the Petén while engaged there for some years in the chicle business. While at Uaxactun we had the privilege of using the quarters and facilities of the Carnegie Institution's archaeological base, and to its director, Mr. A. Ledyard Smith, we are indebted for the most generous coöperation in every possible way. Finally, I wish to express my deep gratitude to Monroe Amsden, of the Carnegie Institution, for his valiant help when ill-luck overtook me at Uaxactun.

A feature of this report which perhaps calls for a word of explanation is the inclusion of the weights of birds. These have not been recorded in the past, but it should hardly be necessary to defend the policy. Not only taxonomic but general biological problems are frequently concerned with questions of size, and in some respects weight is the best possible criterion of size. It is quite true that linear measurement of the extremities of birds is our present method of determining and comparing sizes, and that method has certain advantages; but it seems equally certain that the recording of body weight is also of very real value and that such data will be increasingly used in the future. I have been systematically recording weights of birds for seven years, and the now rather considerable number of such specimens with recorded weights at the University of Michigan Museum is beginning to prove of value in many ways.

Color names used in the report are, when possible, those of R. Ridgway² and are then capitalized.

Many of my most interesting Uaxactun records were of birds secured in an Italian bird (trammel) net loaned to me for the purpose by my friend, Dr. Oliver L. Austin, Jr., of the United States Biological Survey. This is the first time, I believe, that such a net has been used for scientific collecting in a tropical forest, and it proved remarkably successful. I also used a small Annamese net of my own. This net, also a trammel net, was only some five feet square, but, set in a natural flyway between two big trees in the jungle, it secured several unique records. The nets were especially effective in catching certain sparrows and grosbeaks, woodhewers, antbirds, warblers, hummingbirds, thrushes, manakins, tanagers, flycatchers, and motmots. A number of species taken in the net were rarely or never seen otherwise.

The Petén localities mentioned in this report will be found on the accompanying map,³ which has also recently been published by Murie.⁴ A brief

² *Color Standards and Color Nomenclature*. Washington: published by the author, 1912. Pp. 1-44, 53 color plates.

³ The Malleis' collecting stations which have not been located exactly are Pacomón

illustrated narrative of the 1931 University of Michigan expedition to Uaxactun has been published.⁵ Additional information on the itinerary of our party and the character of the country may be found in Dr. Murie's report on the mammals of the region.⁶ Dr. L. C. Stuart has also contributed much of interest on Harry Malleis' work and on the identification of his collecting stations in a report on the herpetology of the Petén.⁷

This list of Petén birds enumerates two hundred and twenty-three forms. Twenty-one of these are here for the first time definitely recorded from Guatemala, bringing the total list for the country to seven hundred and fifty-seven.

Griscom has discussed the geographical distribution of the species included in his list of birds of Guatemala. I therefore append only a summary of the additions to his list with a brief indication of the geographical distribution. It will be apparent that there is a strong Yucatan element in the Petén.

Tinamus major percautus.—New, "pallid" subspecies, probably ranging across the base of the Yucatan Peninsula.

Crypturellus cinnamomeus goldmani.—Yucatan.

Ortalis vetula intermedia.—Base of Yucatan Peninsula.

Colinus nigrogularis segoviensis.—A dark Honduras and British Honduras subspecies of a paler Yucatan species.

Laterallus ruber tamaulipensis.—Tamaulipas.

Aramus pictus dolosus.—Both coasts, central Mexico to Panama.

Tyto alba pratincola.—A North American form, here at its southern limit.

Nyctagreuus yucatanicus.—A genus of the Yucatan Peninsula.

Pteroglossus torquatus erythrozonus.—A Yucatan Peninsula subspecies.

Aulacorhynchus prasinus virescens.—Honduras and northern Nicaragua.

Centurus aurifrons dubius.—Campeche, Yucatan Peninsula, and British Honduras.

(undoubtedly Bocamonte between Flores and La Libertad) and Macambie (either near or synonymous with Macanché). Guyo, according to Mr. Shufeldt, is probably equivalent to El Gallo, near Yaxha. Mr. Shufeldt's locality Sabin is equivalent to Subín on the map. There is some question as to the location of Ixtinta, as two localities bear this name; one, on the map, located near Yaxha, and another north and east of Remate (=Ramate). Since Malleis collected material during June at both Ixtinta and Flores on the same days, it is not improbable that the locality in question is the one near Remate. It is possible that Malleis employed a native collector who worked at the better-known Ixtinta near Yaxha.

⁴ Adolph Murie, "Mammals from Guatemala and British Honduras," *Univ. Mich. Mus. Zool., Misc. Publications*, 26, 1935: 1-30, 1 pl., 1 map.

⁵ Josselyn Van Tyne, "The 1931 Expedition to British Honduras and Guatemala," *Annual Report, Dir. Mus. Zool., Univ. Mich., 1930-1931* (1932): 18-22. The ornithological results secured by this expedition in British Honduras will be included in a report on the birds of that country which I am preparing jointly with Mr. W. E. Clyde Todd.

⁶ *Op. cit.*

⁷ "A Contribution to a Knowledge of the Herpetological Fauna of El Petén, Guatemala," *Occ. Papers Mus. Zool., Univ. Mich.*, 292, 1934: 2-3.

Thamnophilus dobiatus yucatanensis.—Yucatan and Campeche.

Formicarius analis pallidus.—Yucatan.

Thryothorus rutilus cano-brunneus.—Yucatan, Campeche, and northern British Honduras.

Turdus assimilis parcolor.—Western British Honduras.

Turdus grayi tamaulipensis.—Arid coast plain, southern Tamaulipas to Yucatan.

Melanoptila glabrirostris.—Coast of Yucatan and British Honduras.

Ammodramus savannarum cracens.—British Honduras pine ridges.

Habia salvini peninsularis.—Yucatan Peninsula.

Piranga roseo-gularis roseo-gularis.—Yucatan Peninsula.

Eucometis spodocephala pallida.—Yucatan Peninsula.

For the sake of convenience I have followed in this paper the same sequence of species as used in Griscom's report of the birds of Guatemala.

Tinamus major percautus subsp. nov.

TYPE.—No. 70011, University of Michigan Museum of Zoology, adult male, from Uaxactun, Petén, Guatemala, collected March 27, 1931, by Josselyn Van Tyne (original number 2501).

CHARACTERS.—Like *Tinamus major robustus* Selater and Salvin but much greyer above, especially on the neck and upper back. Paler below. White of throat more extensive. Breast much paler, and belly practically white in extreme examples. Crissum paler, less rufous. As *T. m. robustus* was the palest and greyest of all of the previously known Central American forms of the species, the new subspecies here described need not be compared with the other still darker subspecies to the southeast.

MATERIAL EXAMINED.—*Tinamus major percautus*, five males, three females, March 27 to May 6, 1931, Uaxactun, Guatemala (Univ. of Mich.).

Tinamus major robustus, nine, in Museum of Comparative Zoology and United States Biological Survey (Vera Cruz, 1, Tabasco, 3, Guatemala, 1, British Honduras, 2, Honduras, 2).

Tinamus major fuscipennis, *castaneiceps*, and *saturatus*, series of eleven to seventeen each.

RANGE.—Presumably through the drier forests across the base of the Yucatan Peninsula. The only specimens I have examined are those taken at Uaxactun. Three specimens in the United States Biological Survey collection from Teapa, Tabasco, I refer to *robustus*, but they show an approach to *percautus* in the paleness of the underparts.

REMARKS.—For summaries of the hitherto known Central American forms of *Tinamus major*, see Ludlow Griscom⁸ and J. L. Peters.⁹

⁸ "A Collection of Birds from Cana, Darien," *Bull. Mus. Comp. Zool.*, 69, 1929: 150-152.

The type locality of *Tinamus m. robustus*, as Peters¹⁰ first remarked, is Choctum, Guatemala, a region well to the south of Uaxactun and one having very much greater rainfall. There appear to be no accurately labeled specimens in this country from the region of Choctum. I have therefore sent one of my Uaxactun specimens and a "Guatemala" trade skin of *robustus* to the British Museum to be compared with the type. Mr. N. B. Kinneear, who has kindly compared them for me, writes: "Your trade skin agrees with the type of *robustus* and our series but . . . we have no specimens of the grey bird which is paler and light below."

The color of the back is the most variable character of my series of *percautus*, but the darkest Uaxactun specimen is less olive than the lightest specimen of *robustus* I have seen.

This fine tinamou was rather common in the heavy forest at Uaxactun but was wary and hard to collect. In general its scarcity in museum collections is due, not to actual rarity, but to its large size and to the difficulty of skinning and putting it up successfully. One is tempted also to hand it over to the cook without more ado, for it is, all things considered, perhaps the most perfect of birds for culinary purposes.

The males weighed 1093 (type), 1032, 929, and 875 grams; the females 1136, 1122, and 1106 grams. None of them showed any trace of fat, and all were in breeding condition except the light-weight male, which, however, showed no other signs of immaturity.

Malleis took a set of five fresh eggs on April 24, 1923, "three miles from Sacchich on the way to Chuntuqui." They were Deep Bluish Glaucous in color and had the highly glossy surface characteristic of the eggs of this genus.

The fruits of the "breadnut" (*Brosimum alicastrum* Sw.) and of *Pseudolmedia spuria* (Sw.) Griseb. had been eaten in quantity by all of the big tinamous examined.

The Mayan name for this tinamou is *ix mancolol*.

Crypturellus soui meserythrus (P. L. Selater)

Chuntuqui, one ♀, May 6; Sacchich, one ♂, May 26; Remate, one ♀, August 6, 1923 (Biol. Surv.)

The specimen taken in August is a young bird with some down still left on the head and hind neck. Its plumage differs from that of the adult in having the breast grey instead of brown and the belly and under tail coverts barred with black. The wing coverts, tertials, and lower back are variously marked with pale buff and black instead of being uniformly colored as in the adult.

⁹ *Check-List of the Birds of the World*, Cambridge: Harvard Univ. Press, 1931. 1: 13.

¹⁰ "An Ornithological Survey in the Caribbean Lowlands of Honduras," *Bull. Mus. Comp. Zool.*, 69, 1929: 401-402.

Crypturellus boucardi boucardi (P. L. Sclater)Mayan name, *balih*

Uaxactun, two ♂, three ♀, March 31 to May 6, 1931.

Four of the five specimens are immature, that is, they have the lower back, belly, and wing coverts barred with pale buff and black. Some of these immature birds were breeding. Males weighed 439 and 388 grams and females 431 and 453 grams. In life the legs are Carrot Red.

Crypturellus cinnamoneus goldmani (Nelson)

Uaxactun, two breeding ♀, April 30 and May 6, 1931 (U. of M.); Chuntiqui, one ♂, May 10, 1923 (Biol. Surv.).

This subspecies was to be expected in the Petén but has not actually been recorded before from Guatemala.

The fresh colors of the Uaxactun specimens were: iris, Tawny Olive; legs, Peach Red. They weighed 424 and 414 grams.

Crax rubra rubra LinnaeusCurassow. Mayan name, *kambul*

Uaxactun, six ♂, five ♀, April 8 to May 2, 1931 (U. of M.); one ♂, April 25, 1926 (Carnegie Museum).

In life the male curassows clearly show their degree of maturity by the brightness of color and the size of the frontal knob. The females show it by their plumage. Immature females have the remiges strongly barred with white, the central tail feathers curiously scrawled with narrow lines of white, and the lower breast and thighs barred with pale buff and black.

Males weighed 3.6, 3.9, 4, 4, 4.2, and 4.3 kilos and females weighed 3.1, 3.3, 3.4, and 3.4 kilos.

Curassows were usually surprised on the ground in the big forest, but when alarmed they always flew into the tops of the trees.

Penelope purpurascens purpurascens WaglerGuan. Mayan name, *ah cox*

Uaxactun, one ♂, March 30, 1931 (U. of M.); Sacchich, one juvenile ♂, April 23, 1923 (Biol. Surv.).

The young bird from Sacchich is entirely in the down except for well developed wings and a short tail. Compared with a young *P. p. aequatorialis* from the Canal Zone in the University of Michigan collection (a bird of exactly the same stage of development), it is very much paler in color.

The Uaxactun male and a female taken the same day but not preserved both weighed two kilos. Guans were less common at Uaxactun than the curassows, but they were perfectly well known to the natives, who called them "Quams."

Ortalis vetula intermedia PetersChachalaca. Mayan name, *ixbach*

Uaxactun, five ♂, four ♀, March 26 to May 8, 1931 (U. of M.); Chuntuqui, one ♂, one ♀, one not sexed, April 27 to May 5, 1923 (Biol. Surv.).

The specimens are colored like the type series of *intermedia* except that they have a somewhat paler crissum. This Petén series is quite uniform in coloration except that some have the crown much darker than others. The extraordinary color variation in the large series from Cobán described by Griscom¹¹ was probably due largely to their central geographical position. After examining the type series of *intermedia*, my series from Uaxactun, and part of the Dwight series of Guatemalan specimens of *jalapensis*, I conclude that there is no valid size character for the race *intermedia*. This form, described from Quintana Roo, has not been recorded before from Guatemala.

The weights of the Uaxactun series were: males, 463, 474, 479, 486, and 511 grams; females, 376, 398, 404, and 427 grams.

Harry Malleis collected five sets of eggs between April 30 and May 9, 1923, within a radius of eight miles of Chuntuqui. The eggs are glossy white and the sets range from two to three in number. The nests were shallow structures, made of sticks, and sometimes lined with a few leaves. They were placed only two to six feet from the ground, usually in dense underbrush in heavy forest.

An important food of the chachalaca at Uaxactun was the fruit of *Rivina humilis* L.

Agriocharis ocellata (Cuvier)Ocellated Turkey. Mayan name, *ucutz il chican*

Uaxactun, three ♂, three ♀, April 4 to 21, 1931 (U. of M.); one ♀, April 25, 1926 (Carnegie Museum); Pacomón, one juvenile ♀, June 7, 1923 (Biol. Surv.); Dos Arroyos, one ♂, April 28, 1926 (Carnegie Museum).

Females differ strikingly from the males not only in their smaller size (wing of Uaxactun females, 330 to 355 mm., as compared with 440 to 445 mm. in the males), but also in having the bare portion of the neck relatively shorter and in having a border of white feathers at the base of the bare neck. The iridescent feathers of the females are also more green and less bronze in color. The spur of the male ocellated turkey is longer (up to 40 mm.) and more attenuated than that of *Meleagris*.

The following colors were noted on the freshly killed males at Uaxactun: iris, about Walnut Brown (periphery paler); bill tip, Deep Olive Buff; base of bill, Vinaceous Brown and black; skin above eye, Vinaceous Rufous; rest of head and neck, Light Forget-me-not Blue; nodules, ranging from Cadmium Orange on the head to Brazil Red on the neck; legs, about Corinthian

¹¹ *Op. cit.* (1932): 102.

Red. My observations differ from P. L. Selater's¹² colored plate as follows: the plate shows the whole head too dark blue, the nodules too dull in color, the skin over the eye red rather than brown, the bare neck much too short.

Uaxactun males weighed 3.4, 4.7, and 5.3 kilos; females 2.6 and 3.1 kilos. All were very fat.

Harry Malleis found a nest with eight fresh eggs at Chuntuqui on May 8, 1923. The nest was in a small depression of ground in the forest near the edge of a clearing. The eggs were Cartridge Buff in color, speckled and blotched with Wood Brown. They range in size from 60 by 44 mm. to 62 by 45 mm., almost exactly the dimensions of the eggs of *Meleagris gallopavo*.

Colinus nigrogularis segoviensis Ridgway

Pacomón, one ♀, June 7; La Libertad, two ♂, three ♀, nine juveniles, September 8 to 10, 1923 (Biol. Surv.).

Another interesting addition made by Malleis to the fauna of Guatemala is this fine quail of which he collected a series in the Lake Petén district. E. W. Nelson¹³ has made the series the basis of a proposed new subspecies, *coffini*, which he describes as being "smaller and darker, more brownish in general color, than typical *nigrogularis* from Yucatan." As these are exactly the characters of *segoviensis* Ridgway¹⁴ of Honduras, I have looked in Dr. Nelson's diagnosis of *coffini* for a comparison with Ridgway's form and find only the surprising statement that *coffini* "is like *segoviensis* in its dark coloration, although geographically it is much nearer the home of the pale colored typical *nigrogularis*." There is, then, nothing in Dr. Nelson's paper to indicate anything more than the addition of Petén to the range of *segoviensis*. In comparing this series with the type series of *segoviensis*, I found the Petén specimens but very slightly paler than the Honduras birds, a shade of difference which would doubtless fail to hold when an adequate series of either becomes available.

Odontophorus guttatus (Gould)

Mayan name, *ah bolon chaco* or *coban chaco*

Uaxactun, eight ♂, one downy young, April 1 to May 5, 1931 (U. of M.).

The adult males weighed 261, 270, 274, 278, 300, 302, 323, and 358 grams. A downy young taken May 5 was apparently less than a week old.

Columba speciosa Gmelin

Scaled Pigeon

Chuntuqui, one ♀, May 10, 1923 (Biol. Surv.).

¹² "Note on the Ocellated Turkey of Honduras," *P. Z. S. London*, 1861: 402.

¹³ "A New Subspecies of *Colinus nigrogularis* (Gould)," *Proc. Biol. Soc. Washington*, 45, 1932: 169-172. (*C. n. coffini*, subsp. nov. from La Libertad, Petén).

¹⁴ "Catalogue of a Collection of Birds made by Mr. Chas. H. Townsend, on Islands in the Caribbean Sea and in Honduras," *Proc. U. S. Nat. Mus.*, 10, 1888: 593.

Columba rufina pallidicrissa Chubb

Remate, one immature ♀, August 5, 1923 (Biol. Surv.).

Columba nigrirostris Selater

Macanché, one ♀, June 28; Remate, one ♂, August 11, 1923 (Biol. Surv.).

Columbigallina rufipennis rufipennis (Bonaparte)

Rufous Ground Dove

Flores, one ♂, two ♀, April 9 and 10; Pacomón, two ♀, one immature ♂, one immature ♀, June 2, 1923 (Biol. Surv.).

Claravis pretiosa pretiosa (Ferrari-Perez)

Blue Ground Dove

Uaxactun, one ♂, one ♀, April 12 to 26, 1931 (U. of M.).

These beautiful little ground doves came regularly to the mule corral to feed on whole corn.

Leptotila verreauxi fulviventris Lawrence

Flores, one ♀, April 14; Pacomón, one ♂, June 4, 1923 (Biol. Surv.).

Leptotila plumbeiceps plumbeiceps Selater and Salvin

Chuntuqui, one ♂, April 25; Sacchich, one ♂, May 26, 1923 (Biol. Surv.).

Oreopeleia montana (Linnaeus)

Ruddy Quail-Dove

Uaxactun, one ♀, April 4, 1931 (U. of M.).

Aramides albiventris albiventris Lawrence

Wood Rail

Uaxactun, one ♂, four ♀, April 5 to 30, 1931 (U. of M.); Chuntuqui, one ♂, one ♀, May 4, 1923 (Biol. Surv.).

The separation of *Aramides vanrossemi* Dickey¹⁵ from *Aramides albiventris* was based by the describer largely on the colors of the bill and eye. His authorities for the colors of the soft parts of *albiventris* were Miller and Griscom, who had quoted the field notations of a collector on the label of an American Museum specimen. I suspect that the collector in question made a mistake, for my field record of the colors of *albiventris* (as given below) is identical with my own notes on *A. c. cajanea* of the Canal Zone and differs but slightly from A. Wetmore's¹⁶ description of *Aramides cajanea chiricote* in Paraguay. Probably all of the small wood rails have the soft parts col-

¹⁵ "A New Wood Rail from El Salvador," *Condor*, 31, 1929: 33.

¹⁶ "Observations on the Birds of Argentina, Paraguay, Uruguay, and Chile," *Bull. U. S. Nat. Mus.*, 133, 1926: 125.

ored essentially alike. *Aramides albiventris vanrossemi* may then be considered a slightly larger and paler form of *Aramides a. albiventris*.

The Uaxactun series measured as follows: male, culmen, 69 mm., weight, 598 grams; females, culmen, 62-63 mm., weight, 466, 469, 473, and 480 grams. The colors of a female collected April 5 were: iris, Dragon's Blood Red; legs and bare skin of eyelid and gape, Old Rose; bill, Absinthe Green at tip to Yellow Ocher at base.

At Uaxactun wood rails were sometimes surprised at the small ponds in the forest, but at the first alarm they always ran off quickly into the jungle.

*Laterallus*¹⁷ *ruber tamaulipensis* (Nelson)

Pacomón, two ♂, June 2, 1923; Laguna del Zotz, one ♂, one ♀, December 31, 1917, and January 1, 1918 (Biol. Surv.).

As already stated by E. W. Nelson,¹⁸ the two specimens from Pacomón are intermediate between typical *ruber* and *tamaulipensis*. The male collected by P. W. Shufeldt at Laguna del Zotz is clearly referable to *tamaulipensis*, but the female is not distinguishable from typical *ruber*. Perhaps the sub-specific characters described for the male do not hold for the female.

Ionornis martinica (Linnaeus)

Purple Gallinule

Uaxactun, one immature ♀, April 6, 1931 (U. of M.); Flores, one ♀, June 26, 1923 (Biol. Surv.).

Charadrius semipalmatus Bonaparte

Semipalmated Plover

Remate, one ♀, August 7, 1923 (Biol. Surv.).

Totanus flavipes (Gmelin)

Lesser Yellow-legs

La Libertad, one ♂, September 20, 1923 (Biol. Surv.).

Tringa solitaria solitaria Wilson

Solitary Sandpiper

Uaxactun, one ♂, one ♀, April 20 and May 5, 1931 (U. of M.); La Libertad, one ♀, September 20, 1923 (Biol. Surv.).

Actitis macularia (Linnaeus)

Spotted Sandpiper

Remate, one ♂, four ♀, April 15, July 27 and 29, 1923 (Biol. Surv.). I saw one at Yaloch on May 23, 1931.

¹⁷ For the use of *Laterallus* instead of *Creciscus*, see J. L. Peters, "Laterallus Gray Antedates Creciscus Cabanis," *Proc. Biol. Soc. Washington*, 45, 1932: 119-120.

¹⁸ "Two New Birds from Mexico," *Proc. Biol. Soc. Washington*, 39, 1926: 106. (Two *Creciscus ruber* from Pacomón, Petén, discussed.)

Jacana spinosa spinosa (Linnaeus)

Jacana

Flores, two ♂, four ♀, June 2 to 19, 1923 (Biol. Surv.).

Aramus pictus dolosus Peters

Limpkin

Uaxactun, one ♂, March 28, 1931 (U. of M.).

It is remarkable that the limpkin, so widely distributed through Central America, has not been recorded before from Guatemala. My specimen, an adult male, has well developed the peculiar white markings of the secondaries which distinguish the form. This individual was the only one seen there during my six weeks at Uaxactun.

Florida caerulea (Linnaeus)

Little Blue Heron

Uaxactun, one adult ♂, May 5, 1931 (U. of M.).

On April 15 one was captured at the main Uaxactun *aguada* by a large hawk-eagle (*Spizaëtus ornatus*).

Cochlearius cochlearius zeledoni (Ridgway)

Boat-billed Heron

Dos Arroyos, one ♂, May 22, 1931 (U. of M.).

Butorides virescens maculatus (Boddaert)

Green Heron

Pacomón, one ♂, June 6, 1923 (Biol. Surv.).

Heterocnus cabanisi (Heine)

Tiger Bittern

Uaxactun, one ♀, April 11, 1931 (U. of M.).

This bird, an adult female, weighed 1.1 kilo, and proved to be very good eating.

Sarcorhampus papa (Linnaeus)

King Vulture

Several times a king vulture appeared among the other vultures about the Uaxactun clearing.

Coragyps atratus (Meyer)

Black Vulture

Two or three black vultures were seen at times with the turkey vultures at Uaxactun.

Cathartes aura aura (Linnaeus)

Turkey Vulture

This was the common vulture at Uaxactun. Ten apparently comprised the normal population of the clearing but more appeared when we increased the food supply.

Accipiter bicolor bicolor (Vieillot)

Uaxactun, two ♂, one ♀, April 11 to May 5, 1931 (U. of M.).

The males weighed 233 grams (immature) and 250 grams. The female, which was fat, weighed 467 grams. The colors of the latter were: iris, Cadmium Yellow; legs and feet, Apricot Yellow.

Asturina nitida micrus Miller and Griscom

Chuntuqui, one ♀, one not sexed, April 25 to May 5, 1923 (Biol. Surv.).

These two specimens clearly belong to the small southern race. They measure: wing, 263 and 260 mm.; tail, 169 and 167 mm.

Buteo magnirostris direptor (Peters and Griscom)

Chuntuqui, one ♂, May 14; Pacomón, three ♂, four ♀, June 2 to 6; Flores, one ♀, June 14, 1923 (Biol. Surv.).

The wings of these specimens measure: males, 225, 233, 228, 220 mm.; females, 223, 232, 237, 228, 235 mm.

Hypomorphnus urubitinga ridgwayi (Gurney)

Uaxactun, one not sexed, May 12, 1931 (U. of M.).

Leucopternis albicollis ghiesbreghti (DuBus)

Uaxactun, one ♀, April 1, 1931 (U. of M.); Chuntuqui, one ♂, May 7, 1923 (Biol. Surv.).

Spizaëtus ornatus (Daudin)

Hawk-eagle

Uaxactun, one ♀, April 15, 1931 (U. of M.).

At noon on April 15, some natives reported to me that they had just seen an eagle catch a heron at the main *aguada*. Hurrying there I found a magnificent hawk-eagle perched on a large horizontal limb forty feet above the edge of the pond, eating an adult little blue heron (*Florida caerulea*). The eagle had started eating at the head and had not proceeded far when I came up. The bird was very tame, and I easily collected it, but the heron remained balanced on the branch. The eagle, which was adult, weighed 1.4 kilo. The following colors were noted: iris, Cadmium Yellow; face, Light Yellowish Olive; cere, Reed Yellow; feet, Colonial Buff.

Herpetotheres cachinnans (Linnaeus)

Laughing Hawk

One seen at close range in the Uaxactun clearing, April 27, 1931.

Elanoides forficatus yetapa Bonnaterre and Vieillot

Swallow-tailed Kite

Uaxactun, one ♀, April 3, 1931 (U. of M.).

Swallow-tailed kites were seen over the clearing on several occasions. The single female collected contained an egg ready to be laid. This, the first egg of the species collected in Guatemala, measures 46 by 37 mm. The egg weighed 35.3 grams and the bird, 500 grams. Its food consisted of beetles and a large lizard.

Rostrhamus sociabilis plumbeus Ridgway

Everglade Kite

Flores, two immature ♂, June 18, 1923 (Biol. Surv.).

Wing measurement, 352, 357 mm.

Chondrohierax uncinatus (Temminck)

Uaxactun, two ♂, one ♀, April 28 to May 15, 1931 (U. of M.).

The male taken May 15 is a very strangely colored bird. It is completely black except a single broad white band across the tail and very narrow white tips to the same feathers. The upper tail coverts also have white tips and have concealed white bases as do the feathers of the nape, but otherwise the bird is pure slaty black. The white tail band is three to four centimeters broad and is placed somewhat nearer the base than the tip of the tail. This plumage seems to be undescribed and differs from the ordinary melanistic adult in the totally different *pattern* of the tail and in lacking any trace of white barring under the wing.

A study of the specimens of this rare kite in various museums led to the discovery of one similar bird (from Costa Rica) in the National Museum and three (from Guatemala, Nicaragua, and Ecuador) in the American Museum. Two of these differed slightly in having the concealed base of the tail feathers white. The study of nearly all of the specimens in the museums of this country, a total of over sixty, pointed to several generalizations which may be outlined as follows: Adults regularly have two white or grey tail bars (beside the white tip and concealed white base), while immature birds have more bars. Adult males have no collar and little or no red or brown on them anywhere but are barred with white below (unless melanistic). Non-melanistic females always have a rufous collar and are barred below with brown and white.

If there is a discrepancy in size between the two sexes, it did not happen to show in the weights of the Uaxactun specimens. A male weighed 252

grams and the females 258 grams. In adults the iris is white and the feet are Deep Chrome.

All three of the kites had eaten nothing but snails. Their stomachs contained a great many opercula of small or young *Pomacea* (*Ampularia*).

Ictinia plumbea (Gmelin)

Pacomón, one ♂, June 6; Flores, one ♂, three ♀, June 13-19; Ixtinta, one ♂, one ♀, June 27, 1923 (Biol. Surv.).

Falco albigularis Daudin

Bat Falcon. Mayan name, *ah chu'uy*

Uaxactun, one ♂, one ♀, May 8 and April 14, 1931 (U. of M.).

One had eaten insects, the other a small bird. The male weighed 140 and the female 195 grams.

Falco sparverius sparverius Linnaeus

Sparrow Hawk

Remate, one ♂, November 19, 1923 (Biol. Surv.).

Pulsatrix perspicillata saturata Ridgway

Spectacled Owl

Yaloch, one ♂, May 24, 1931 (U. of M.).

This owl had eaten a small opossum (*Metachirops opossum*).

Otus guatemalae guatemalae (Sharpe)

Chuntuqui, one ♂, April 28; La Libertad, one ♂, November 8, 1923 (Biol. Surv.).

Ciccaba virgata centralis Griscom

Uaxactun, one ♂, April 7, 1931 (U. of M.); La Libertad, two ♂, November 8 and 10, 1923 (Biol. Surv.).

The Uaxactun specimen had eaten insects only. It weighed 236 grams.

Tyto alba pratincola (Bonaparte)

Barn Owl

Flores, one ♂, June 22, 1923 (Biol. Surv.).

This is the first record for the northern form of barn owl in Guatemala.

Aratinga astec astec (Souancé)

Flores, one ♂, one ♀, June 20; La Libertad, one ♀, November 7, 1923 (Biol. Surv.).

Amazona autumnalis autumnalis (Linnaeus)

Uaxactun, one ♂, April 25, 1931 (U. of M.); Remate, one ♀, August 5, 1923 (Biol. Surv.).

Weight: male, 404 grams. Fairly common at Uaxactun.

Amazona farinosa guatemalae (Selater)

Uaxactun, one ♂, March 31, 1931 (U. of M.).

Weight: 535 grams.

Amazona albifrons nana Miller

Uaxactun, one ♂, one ♀, April 3, 1931 (U. of M.); Chuntuqui, one ♂, May 15, 1923 (Biol. Surv.).

The Uaxactun pair were breeding.

Pionus senilis senilis (Spix)

Remate, one ♂, July 28, 1923 (Biol. Surv.).

Megaceryle torquata torquata (Linnaeus)

Remate, one ♀, April 15, 1923 (Biol. Surv.).

Chloroceryle americana isthmica (Goldman)

Remate, two ♀, April 5, and July 30, 1923 (Biol. Surv.).

Chloroceryle aenea stictoptera (Ridgway)

Uaxactun, one ♀, April 30, 1931 (U. of M.).

A specimen collected by my companion, Adolph Murie, was the only individual seen of this rare northern form of *C. aenea*.

Momotus momota lessonii Lesson

Mayan name, *bulepic*

Uaxactun, four ♂, April 8 to May 8, 1931 (U. of M.); Remate, one not sexed, August 8, 1923 (Biol. Surv.).

The Uaxactun specimens have wing lengths of 131, 133, 142, and 140 mm., and their weights are 108, 113.5, 118, and 119.5 grams. Griseom,¹⁹ after examining a large Guatemalan series of this motmot, has shown the very tenuous characters on which depend the recognition of the proposed subspecies *goldmani*. Feeling that nothing is to be gained by retaining subspecies based on only slight average tendencies, I propose to drop the name *goldmani*.

Hylomanes momotula momotula Lichtenstein

Tody Motmot

Uaxactun, five ♂, two ♀, April 7 to May 3, 1931 (U. of M.); Sacchich, one ♂, May 26, 1923 (Biol. Surv.).

¹⁹ *Op. cit.*, (1932): 182-183.

The little tody motmots are so very quiet and inconspicuous that their numbers are probably greatly underestimated. A forty-foot trammel net left at one spot in the big forest snared five in eighteen days, although in many hours of hunting in the same piece of jungle I did not see a single one. Two seen elsewhere were silent and so tame that they allowed close approach and then flew but a few feet. They were in the heavy jungle and kept within two to four feet of the ground. The Uaxactun series weighed: males, 27.5, 28, 28, 27, 28.5 (fat) grams; females, 27.5, 26.5 grams.

Nyctibius griseus mexicanus Nelson

Uaxactun, one juvenile ♂, May 5, 1931 (U. of M.).

Adolph Murie found this young one sitting alone on the leafy floor of the big forest. It is in the amazing white juvenal plumage and looked very like a young owl. Most of the contour feathers are pure white with only a narrow shaft stripe of dark brown. The feathers of the wings and tail, which are just beginning to show, are more like the adult plumage. Its wings were still quite useless, but the powerful feet and long claws enabled it to cling with surprising strength to a stump on which I placed it to be photographed. (See Frontispiece and Plate I.)

Nyctidromus albicollis yucatanensis Nelson

Parauque

Uaxactun, six ♂, April 17 to May 8, 1931 (U. of M.); Chuntuqui, two ♂, two ♀, two juvenile ♀, April 28 to May 11; Remate, two ♂, two ♀, July 28 to August 8, 1923 (Biol. Surv.).

The parauques taken at Uaxactun were breeding, and young taken May 10 at Chuntuqui were about half grown. Some specimens have the tail in perfect condition, while in others, for some unknown reason, it is excessively worn.

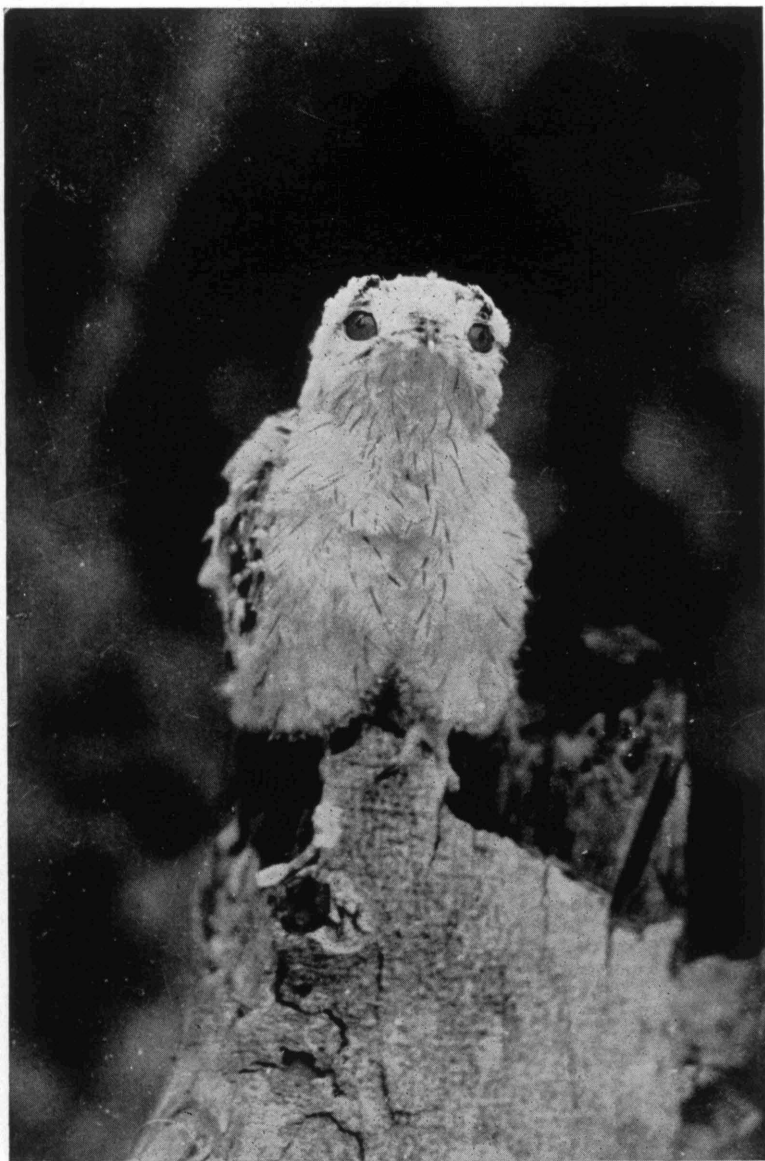
Nyctagreus yucatanicus (Hartert)

Yucatan Poorwill

Chuntuqui, one ♀, one not sexed, April 27 to May 10; Remate, one ♀, August 7, 1923 (Biol. Surv.).

Harry Malleis not only added this peculiar poorwill to the known fauna of Guatemala but also took the first known set of eggs. He found the nest on May 10 a mile southwest of Chuntuqui. In his notes with the eggs he states that the nest was "about ten yards from the edge of a clearing in a dense growth of large timber." There was no real nest. The eggs were "merely laid in a little hollow under a large tree." He adds:

I noticed this bird fluttering around me only about six feet away. It kept fluttering around me several times but I could see no nest and wondered why it made such a fuss. I happened to kick some leaves away in front of me and saw the eggs.



NYCTIBIUS GRISEUS IN THE JUVENAL PLUMAGE. UAXACTUN, MAY 5, 1931

The bird would not leave, so he had to back off to shoot it and even then damaged it too much to determine the sex. The eggs are Tilleul-Buff, speckled, especially about the blunt end, with Eceru Drab. They are glossy, ovate in shape, and measure 25.5 by 19.5 mm. and 25.5 by 19 mm. They were "well incubated." It is also marked on the label of the female taken April 27 that she "had a nest with two young."

Chaetura vauxii richmondi Ridgway

Richmond's Swift

Uaxactun, one ♂, two ♀, April 12 and 13, 1931 (U. of M.).

On the evenings of April 12 and 13 a flock of nearly two hundred of these little swifts suddenly appeared in the clearing about sunset, circling and darting back and forth overhead, apparently feeding.

Phoethornis superciliosus longirostris (Delattre)

Uaxactun, one ♂, May 1, 1931 (U. of M.). Weight: 5 grams.

Phoethornis adolphi adolphi Gould

Uaxactun, one ♀, April 19, 1931 (U. of M.). Weight: 3 grams.

Common at Uaxactun. Several times I saw one of these tiny hermits bathing in an *aguada* in the big forest. Flying out over the deep water of the pond, it would hover for a moment and then dip repeatedly before retreating to some convenient perch to preen itself thoroughly.

Pampa pampa pampa (Lesson)

Uaxactun, one ♀, April 7, 1931 (U. of M.); Yaxha, one ♂, June 30, 1923 (Biol. Surv.).

Florisuga mellivora mellivora (Linnaeus)

Sabin, one ♀, December 5, 1917 (Biol. Surv.).

Agyrtria candida candida (Bourcier and Mulsant)

Uaxactun, one ♀, April 7, 1931 (U. of M.); San Andrés, one ♂, April 20; Macanché, one ♂, June 28; Macambie, one ♂, June 28; Remate, one ♂, five ♀, July 28 to August 4, 1923 (Biol. Surv.).

Amizilis tzacatl tzacatl (De la Llave)

Uaxactun, one ♀, April 11, 1931 (U. of M.); La Libertad, two ♂, June 8 and August 26; Flores, one ♂, June 12; Nueva Aguada, one ♂, June 29; Remate, one ♀, July 28, 1923 (Biol. Surv.).

Chlorostilbon canivetii canivetii (Lesson)

San Andrés, one ♂, April 20, 1923 (Biol. Surv.).

Anthracothorax prevostii prevostii (Lesson)

Chuntuqui, one not sexed, April 26, 1923 (Biol. Surv.).

Heliothryx barroti (Bourcier and Mulsant)

Uaxactun, one breeding ♀, April 20, 1931 (U. of M.).

Trogon melanocephala melanocephala Gould

Uaxactun, one ♂, April 10, 1931 (U. of M.); Chuntuqui, two ♂, April 25 and May 16; Ixtinta, one ♂, June 27; Macanché, one ♂, June 28; La Libertad, one ♂, September 16, 1923 (Biol. Surv.).

The Uaxactun specimen weighed 69.5 grams. The colors noted were: eye ring, Pale Russian Blue; bill, Greenish Glauous.

Trogon violaceus braccatus (Cabanis and Heine)

Nueva Aguada, one ♂, June 29, 1923 (Biol. Surv.).

Trogon massena massena Gould

Uaxactun (ten miles east of), one ♂, March 26, 1931 (U. of M.); Sacchich, one ♂, May 26, 1923 (Biol. Surv.).

The Uaxactun specimen weighed 159.5 grams.

Piaya cayana thermophila Sclater

Squirrel Cuckoo

Uaxactun, one ♂, April 29, 1931 (U. of M.); Chuntuqui, one ♀, April 30; Nueva Aguada, one ♂, June 29, 1923 (Biol. Surv.).

The squirrel cuckoo was fairly common at Uaxactun. The male collected in 1931 weighed 97 grams.

Dromococcyx phasianellus (Spix)

Pheasant Cuckoo

Uaxactun, one ♂, May 10, 1931 (U. of M.).

Weight: 98 grams.

Crotophaga sulcirostris sulcirostris Swainson

Groove-billed Ani

Uaxactun, one ♂, March 30, 1931 (U. of M.); Chuntuqui, one ♂, April 29; Pacomón, one ♂, June 2; Ixtinta, one ♂, June 27, 1923 (Biol. Surv.).

A flock of about eight anis lived in the Uaxactun clearing.

Ramphastos sulfuratus sulfuratus Lesson

Mayan name, *ah pun*

Uaxactun, seven ♂, five ♀, March 28 to May 10 (U. of M.); Chuntuqui, one ♀, April 26, 1923 (Biol. Surv.); Yaloch, one ♀, April 21, 1926 (Carnegie Mus.).

The Uaxactun series measure as follows: adult male, wing, 191–208 mm. (average, 199.1); tail, 138–163 mm. (149); culmen, 135–155 mm. (140.5). Weight: 362–449.5 grams (401.3). Adult female, wing, 188–197 mm. (193.7); tail, 144–155 mm. (148.2); culmen, 122–129 mm. (126.5). Weight: 363.5–410 grams (384.5). Thus they are but slightly larger than the specimens of *brevicarinatus*, which I have elsewhere listed from Panama.²⁰ In color they are quite different from *brevicarinatus* and are precisely like specimens I have examined of typical *sulfuratus* from Mexico (Vera Cruz, Tabasco, and Puebla).

Griscom²¹ restricts typical *sulfuratus* to Mexico, and considers his Guatemalan specimens to be *brevicarinatus*. After examining the three specimens he lists from the Dwight collection and the fourteen Petén specimens listed above, I disagree entirely with him on this identification.

Guatemalan specimens average somewhat smaller than Mexican specimens, but in color they are practically the same. The best single character for separating skins of the two forms is the red border of the yellow throat. In typical *sulfuratus* the border is lacking or very narrow, while in *brevicarinatus* it is always broad and conspicuous. On this one character alone every Guatemalan specimen I have seen (seventeen in number) can be easily distinguished from any specimen of *brevicarinatus*. The color of the throat, while not a consistently diagnostic character, does definitely average richer and more orange in *brevicarinatus*. The red terminal area of the bill is regularly much more extensive in the northern form. This is more obvious in life and is partially obscured by museum fading. The northern form also differs in the colors of the soft parts. An adult female taken April 24 at Uaxactun was colored as follows: iris, Parrot Green to Cosse Green (on the periphery); bare orbital skin, Lemon Chrome, duller and greener about the eye; bill, terminal fourth, Garnet Brown; wedge-shaped lateral area on tomial half of maxilla, orange; culmen, Lemon Yellow (almost Empire Yellow); rest of bill, Yellow Green except a small area of the mandible immediately behind the terminal red zone. That area, Light Cendre Green; legs and feet, Glaucous Blue (more green proximally); soles, near Old Gold. None of the other specimens collected or the large number examined through field glasses seemed to vary appreciably from this. Compared with *R. s. brevicarinatus*, the northern form differs most in the color of the central portion of the mandible, which is Yellow Green instead of Pale Cerulean Blue. This was very noticeable in the field to one familiar with the Panama form in life and was verified on scores of Uaxactun birds studied with field glasses. The two sexes are exactly alike in color.

²⁰ "The Life History of the Toucan, *Ramphastos brevicarinatus*," *Univ. Mich. Mus. Zool., Misc. Publications*, 19, 1929: 9.

²¹ *Op. cit.* (1932): 220.

The big *Ramphastos* toucans were very abundant at Uaxactun, especially about the edge of the forest. They also frequently visited isolated trees in the clearing, hundreds of yards from the forest edge. As many as twenty-two were noted in a single loose flock. The fencing habit I noted in *brevicarinatus* of Panama was of common occurrence in Petén, but I still have no satisfactory explanation for it.

Although the period of collecting at Uaxactun included most of the dry season, none of the toucans taken seemed to be actually breeding.

Fruit only was found in their stomachs. The following fruit-bearing trees were important to this species at Uaxactun: *Trichilia minutiflora* Standl., *Trichilia moschata* Sw., *Exothea paniculata* (Juss.) Radlk., and *Malmea depressa* (Baill.).

The nest robbing habits of toucans are difficult to observe, but I saw an interesting example of how important they may be in the lives of smaller birds. On the morning of April 15, I was watching a small flock of the toucans feeding in a tree at the edge of the jungle. Suddenly one toucan noticed a small pendant nest hanging from the drooping tip of one of the lower branches of the same tree. The toucan's interest was immediately aroused and, hopping quickly down from the branch, he reached far down with his long bill and poked into the side of the nest. Then he shook it, tore a couple of pieces out of the side, peered at it from every angle, tore at it again, and when he finally left it, two others from the flock went successively through the same performance. The nest, apparently an old abandoned one, survived this strenuous test without sustaining much damage, and on May 3, I *again* saw it attacked by one of the toucans in exactly the same manner. The effectiveness of the toucan's tremendously long beak in reaching an object, out of reach to any other bird of its size, was thus vividly impressed upon my mind. It appears that length, as such, is the significant feature of its bill.

The natives called this toucan "bill-bird" or *Pito real*.

Two Hippoboscid flies collected March 28 on an adult male were identified for me by Dr. J. Bequaert as *Lynchia angustifrons* and *Ornithoica confluenta*.

Pteroglossus torquatus erythrozonus Ridgway

Yucatan Aracari

Uaxactun, one ♂, three ♀, March 28 to May 8, 1931 (U. of M.); La Libertad, one ♂, August 22, 1923 (Biol. Surv.).

These five Petén specimens are unquestionably typical *erythrozonus*. This is the first record for Guatemala and extends considerably the range of the Yucatan Peninsula form. Ridgway's²² original description of *erythro-*

²² "Descriptions of some new species and subspecies of birds from Tropical America," *Proc. Biol. Soc. Washington*, 25, 1912: 88.

zonus was much too brief and was partially incorrect. He augmented that description somewhat in a footnote to his later treatment of the subspecies,²³ but the total published characterization of the form leaves much to be desired. This is largely due to the scarcity of museum material, for the subspecies is actually a very well marked one. Its characters are as follows: size very small, breast strongly suffused with red, black spot on breast reduced or entirely lacking, black band across the breast reduced. Ridgway's statement that the under tail coverts are "dull cinnamon-rufous" was simply a slip on his part. In the type series of *erythrozonus*, as in all other specimens of *Pteroglossus torquatus*, the under tail coverts are yellow, or red and yellow, like the rest of the under parts. Throughout the range of the species the shade of the chestnut nape (and to a less degree the thighs) varies tremendously and is apparently of no use whatever for taxonomic purposes.

Petén specimens measure as follows:

	wing	tail	culmen	weight	
♂	137 mm.	140 mm.	86 mm.	177 grams	Uaxactun
♂	143 "	165 "	88 "	La Libertad
♀	132 "	145 "	81 "	175 "	Uaxactun
♀	130 "	140 "	78 "	147 "	Uaxactun
♀	130 "	150 "	81 "	172.5 "	Uaxactun

The greatest size difference is in the weight and the culmen length. Eight adult males of typical *torquatus* from the Panama Canal Zone in the University of Michigan collection measure: culmen, 100–111 mm. (105.5); weight, 221–240 grams (229.4); one breeding female, culmen, 99 mm.; weight, 230 grams.

The Uaxactun specimens had eaten fruit only.

On May 20 my companion, Adolph Murie, found a nest of this species in a tree at the edge of the Uaxactun clearing. He has kindly given me the following account of it. The nest was about forty-five feet from the ground in a nearly perpendicular limb about a foot thick. The *chiclero* who climbed to the nest found the entrance hole only about two and a half inches in diameter. Chopping it open, he found the nest cavity "four or five inches wide and twenty-two inches deep." The nest in the bottom consisted of a mass of fruit pits and contained three plain white eggs. The eggs were about to hatch and could not be saved, but they measured 30 by 24 mm., 29.5 by 23 mm., 28 by 22.5 mm.

Aulacorhynchus prasinus virescens Ridgway

Mayan name for this species and for *Pteroglossus, ah pichic*

Uaxactun, three ♂, one ♀, April 14 to May 3, 1931 (U. of M.).

²³ "Birds of North and Middle America," *Bull. U. S. Nat. Mus.*, 50, Pt. 6, 1914: 345.

This extends northward considerably the range of *virescens* and is an addition to the list of Guatemalan birds. The series was identified by A. J. van Rossem who has recently published a revision of the species. The Uaxactun specimens measure as follows:

	wing	tail	culmen	weight
♂	116 mm.	102 mm.	70 mm.	164 grams
♂	111 "	67 "	137 "
♂	120 "	105 "	71 "	156 "
♀	116 "	102 "	61 "	138 "

The female, taken May 3, was a breeding bird.

The colors of an adult male were: bill, Lemon Yellow at the base to Oil Yellow a third from the tip; tip of bill, about Lemon Yellow; anterior edge of black area on the base of the culmen, Mars Brown; legs and feet, Russian Green; soles, Chamois.

Two of these little green toucans, when collected, were feeding on the fruit of a small tree, *Malmea depressa* (Baill.).

Galbula melanogenia Sclater

Jacamar

Uaxactun, one ♂, one ♀, April 21 to 28, 1931 (U. of M.); Santa Rita, two ♂, May 27; Macanché, one ♂, June 28; Remate, one ♂, June 31, 1923 (Biol. Surv.).

The Uaxactun pair had been eating small beetles.

Malacoptila panamensis inornata (DuBus)

Puffbird

Uaxactun, one ♂, April 3, 1931 (U. of M.).

Weight: 37.5 grams.

Piculus rubiginosus yucatanensis (Cabot)

Pacomón, one ♀, June 7, 1923 (Biol. Surv.).

Centurus aurifrons dubius Cabot

Uaxactun, one ♀, one ♂, April 4 and 24, 1931 (U. of M.); Remate, one ♂, one ♀, April 18 to July 29; Chuntuqui, one ♂, April 26; Pacomón, one ♀, June 4; Flores, two ♂, June 12 to 24; Macanché, one ♂, June 28; La Libertad, one ♂, September 20, 1923 (Biol. Surv.).

Common in the Uaxactun clearing. Griscom²⁴ has shown that this is a form of an extraordinary polymorphic species, *Centurus aurifrons*. The race *dubius* had not been taken before in Guatemala, where it is apparently restricted to the Petén.

²⁴ *Op. cit.* (1932): 227-229.

Tripsurus pucherani perileucus (Todd)

Flores, one ♂, April 14, 1923 (Biol. Surv.).

Venilornis oleaginus sanguinolentus (Selater)

Pacomón, one ♀, June 4; Nueva Aguada, one ♀, June 29, 1923 (Biol. Surv.).

Celeus castaneus (Wagler)

Mayan name, *uchichil chemach*

Uaxactun, one ♂, two ♀, April 1 to May 2, 1931 (U. of M.); Remate, one ♂, one ♀, July 29 to August 3, 1923 (Biol. Surv.).

Weight: male, 73 grams; females, 88 and 91.4 grams.

Phloeocastes guatemalensis guatemalensis (Hartlaub)

Guatemalan Ivory-billed Woodpecker

Uaxactun, four ♂, one ♀, March 28 to April 26, 1931 (U. of M.); Gavilán, one ♀, July 1, 1923 (Biol. Surv.).

These measures: males (wing), 175, 174, 187, 186 mm.; females, 177, 173 mm. Weight: males, 199, 221, 242, 228 grams; female, 220.5 grams.

Ceophloeus lineatus similis (Lesson)

Uaxactun, one ♀, April 25, 1931 (U. of M.).

Wing, 173 mm. Weight, 156 grams.

Thamnophilus doliatus yucatanensis Ridgway

Chuntuqui, one ♂, April 26; Remate, one ♂, August 8, 1923 (Biol. Surv.).

The specimen from Chuntuqui is marked exactly like the type of *yucatanensis*. The subspecies has not been taken before in Guatemala.

Dysithamnus mentalis septentrionalis Ridgway

Uaxactun, two ♂, two ♀, April 10 to May 8, 1931 (U. of M.); Macanché, one ♀, June 28, 1923; Laguna del Zotz, one ♂, December 24, 1917 (Biol. Surv.).

The collecting of this antbird at Uaxactun extends somewhat the northern limit of its known range. The bird is considered rare in northern Central America, and we took but one individual with the gun, but three more were snared in the bird net.

Microrhoptias boucardi boucardi (Selater)

Uaxactun, one ♂, two ♀, March 31 to April 22, 1931 (U. of M.); Chuntuqui, one ♂, April 29; Remate, one ♂, July 27, 1923 (Biol. Surv.).

Weight: male, 7.5 grams; females, 8.3 and 7.3 grams.

Cercomacra tyrannina crepera Bangs

Uaxactun, one ♀, May 4, 1931 (U. of M.); Pacomón, one ♂, June 4, 1923 (Biol. Surv.).

Weight: female, 16.5 grams.

Formicarius analis pallidus (Lawrence)

Uaxactun, four ♂, one ♀, April 13 to 27, 1931 (U. of M.); Santa Rita, one ♂, one ♀, May 27; Pacomon, one ♂, June 4, 1923; Setin (near Laguna del Zotz), one ♂, December 17, 1917 (Biol. Surv.).

Weight: males, 55.7, 63.5, 62, 61.5 grams; female, 58 grams.

These antbirds I assign tentatively to *pallidus*. They are paler than specimens (*intermedius*) from British Honduras and match well the extremely scanty material of *pallidus* available in museums. Much more material will be necessary, however, before the distribution of the races of *Formicarius analis* in the Petén and Yucatan Peninsula can be settled.

The Uaxactun specimens were breeding birds. Their food was snails and a few beetles. The snails Mr. Calvin Goodrich has identified for me as *Poteria dysoni*, *Helicina oweniana*, and *Choanapoma* sp.

Automolus ochrolaemus cervinigularis (Sclater)

Uaxactun, one ♂, one ♀, March 31 and April 15, 1931 (U. of M.).

Weight: 46 and 39 grams.

Xenops minutus mexicanus Sclater

Uaxactun, two ♀, two nestlings, April 17 to May 4, 1931 (U. of M.); Flores, one not sexed, June 21; Remate, one ♂, August 5, 1923 (Biol. Surv.).

Weight: (Uaxactun females) 10.3, 9.7 grams.

On May 4, I found a female feeding two half-grown young in a nest twelve feet from the ground in a tree overhanging a dry stream bed in the big forest. The nest, which was built in a hole in a short perpendicular dead stub, was made of fine strips of some sort of plant fiber. The hole had been excavated somewhat like a woodpecker hole and was 90 mm. deep with an entrance about 35 mm. in diameter.

Sclerurus guatemalensis guatemalensis (Hartlaub)

Uaxactun, two ♂, one ♀, April 13 to 18, 1931 (U. of M.).

Weight: males, 32.7 and 33 grams; female, 35.2 grams.

According to Griscom²⁵ but three specimens had previously been taken in Guatemala.

²⁵ *Op. cit.* (1932): 241.

Xiphorhynchus flavigaster flavigaster Swainson

Uaxactun, two ♀, April 2 to 10, 1931 (U. of M.); Flores, one ♂, April 13; Remate, one ♀, August 6, 1923 (Biol. Surv.).

Weight: (Uaxactun females) 36.4 and 35.3 grams.

Lepidocolaptes souleyetii insignis (Nelson)

Uaxactun, one ♂, March 28, 1931 (U. of M.).

Weight: 27.8 grams.

As Griscom²⁶ has shown, Austin's subspecies *decoloris* (which Griscom by a curious slip of the pen refers to as *parcolor*) is based only on specimens in the worn adult plumage such as may be taken in any part of the range of *insignis*.

Sittasomus griseicapillus sylvioides Lafresnaye

Uaxactun, one ♂, March 31, 1931 (U. of M.); Remate, one ♀, August 9, 1923 (Biol. Surv.).

Weight: male, 10.4 grams.

Dendrocincla homochroa homochroa (Selater)

Uaxactun, one ♂, three ♀, April 12 to May 1, 1931 (U. of M.); San Andrés, one ♂, one ♀, April 20, 1923 (Biol. Surv.).

Weight: male, 39.3 grams; females, 31.4, 30.5, 35 grams.

Dendrocincla anabatina anabatina Selater

Uaxactun, six ♂, March 28 to April 24, 1931 (U. of M.).

Weight: 35 to 40.8 grams.

Pyrocephalus rubinus blatteus Bangs

Vermilion Flycatcher

Pacomón, three ♂, one ♀, June 3; Flores, three ♂, eight ♀, June 12-13; Remate, one ♂, August 7; La Libertad, one ♂, September 20, 1923 (Biol. Surv.).

As Griscom²⁷ surmised, the vermilion flycatcher of the Petén proves to belong to this well marked form.

Muscivora tyrannus (Linnaeus)

Fork-tailed Flycatcher

Ixtinta, one ♂, one ♀, June 27, 1923 (Biol. Surv.).

Tyrannus melancholicus chloronotus Berlepsch

Uaxactun, one ♂, one ♀, April 4 to May 2, 1931 (U. of M.); Chuntuqui, four ♂, two ♀, April 27 to May 25; Pacomón, two ♀, June 2; Flores, one ♂,

²⁶ *Op. cit.* (1932): 244.

²⁷ *Op. cit.* (1932): 247.

one ♀, June 12-13; Ixtinta, one ♂, June 27; Gavilán, one ♂, July 1, 1923 (Biol. Surv.).

Fairly common in the Uaxactun clearing. Breeding.

Myiodynastes luteiventris luteiventris Sclater

Uaxactun, one ♂, April 25, 1931 (U. of M.); Remate, one ♂, one ♀, April 18 to August 5; Chuntuqui, one ♀, April 26; Flores, one ♂, June 22, 1923 (Biol. Surv.).

Weight: (Uaxactun male), 42.5 grams.

Myiodynastes maculatus insolens Ridgway

Nueva Aguada, two ♂, June 29, 1923 (Biol. Surv.).

Megarhynchus pitangua mexicanus (Lafresnaye)

Uaxactun, one ♂, March 30, 1931 (U. of M.); Chuntuqui, one ♂, May 12; Flores, one ♀, June 13; Remate, one ♂, August 6, 1923 (Biol. Surv.).

Weight: (Uaxactun male), 64 grams.

Miozetetes similis superciliosus Bonaparte²⁸

Uaxactun, two breeding ♂, April 28 and May 6, 1931 (U. of M.); Flores, three ♂, three ♀, April 9 to June 24; San Andrés, one ♂, April 20; Chuntuqui, one ♂, two ♀, April 27 to May 21; San Miguel, one ♂, May 28; Pacomón, one ♂, June 3, 1923 (Biol. Surv.).

Weight: (Uaxactun males), 32 and 33 grams.

Myiarchus cinerascens cinerascens (Lawrence)

Chuntuqui, two ♂, May 16 and 24; Pacomón, one ♂, one ♀, June 5 and 7; Flores, one ♂, one ♀, June 12 to 20, 1923 (Biol. Surv.).

Myiarchus tyrannulus nelsoni Ridgway

Uaxactun, one ♀, April 23, 1931 (U. of M.).

Weight: 39 grams.

One of a pair seen a number of times in the clearing.

Myiarchus tuberculifer connectens Miller and Griscom

San Andrés, one ♀, April 20; Chuntuqui, one ♂, April 30; Sacchich, one ♀, May 26; Plancha de Piedra, one ♂, July 2; La Libertad, one ♂, August 18, 1923 (Biol. Surv.).

Myiochanes virens (Linnaeus)

Wood Pewee

Uaxactun, two ♂, April 21 and May 7, 1931 (U. of M.); Chuntuqui, one ♀, May 6, 1923 (Biol. Surv.).

²⁸ For the use of *superciliosus* in place of *texensis* see Peters, *op. cit.*, (1929): 447.

Myiochanes cinereus brachytarsus (Selater)

Flores, one ♂, April 14; Pacomón, one ♂, June 6; Plancha de Piedra, one ♀, July 2; La Libertad, two ♂, two ♀, August 18 to November 20, 1923 (Biol. Surv.).

Empidonax minimus Baird

Least Flycatcher

Uaxactun, one ♀, May 2, 1931 (U. of M.).

Weight: 9.5 grams.

Empidonax wrightii Baird

Wright's Flycatcher

Remate, one ♀, April 18, 1923 (Biol. Surv.).

Empidonax albigularis australis Miller and Griscom

Remate, one ♀, April 5, 1923 (Biol. Surv.).

The addition of this rare *Empidonax* to the recorded fauna of the Petén is but another example of Malleis' thoroughness as a collector. We are indebted to Griscom²⁹ for our first adequate understanding of the characters and distribution of this interesting flycatcher.

Terenotriccus erythrurus fulvicularis (Salvin and Godman)

Santa Rita, one ♀, May 27, 1923; Laguna del Zotz, one not sexed, December 25, 1917 (Biol. Surv.).

Myiobius sulphureipygius sulphureipygius (Selater)

Uaxactun, one ♀, April 29, 1931 (U. of M.); Santa Rita, one ♂, April 22; Remate, two ♀, August 6-7, 1923 (Biol. Surv.).

Weight: (Uaxactun female), 10 grams.

Onychorhynchus mexicanus mexicanus (Selater)

Uaxactun, one ♂, one ♀, April 21 and May 5, 1931 (U. of M.); San Miguel, two ♀, April 21 and May 28; Santa Rita, one ♂, April 22; Pacomón, one ♂, June 2, 1923 (Biol. Surv.).

The Uaxactun specimens were breeding. Like *Myiobius* this genus is characterized by a large head and small neck so that it is usually impossible to leave the skin of the neck intact when skinning over the head.

Platyrinchus cancrominus Selater and Salvin

Uaxactun, five ♂, two ♀, April 8 to May 8, 1931 (U. of M.); Remate, one ♀, August 8, 1923; Laguna del Zotz, one ♂, December 24, 1917 (Biol. Surv.).

²⁹ *Op. cit.* (1932): 265-267.

All five males taken at Uaxactun were breeding birds with enlarged gonads, but two of them have no trace of the yellow crown patch. Males weigh 9.4 to 10.4 grams; females 7.8 to 8 grams. I found them in heavy undergrowth in the big forest and always within three or four feet of the ground.

Tolmomyias sulphurescens cinereiceps (Sclater)

Uaxactun, one ♂, May 5, 1931 (U. of M.); Nueva Aguada, one ♂, June 29; Remate, one ♂, July 27, 1923 (Biol. Surv.).

Weight: (Uaxactun male), 14 grams.

Rhynchoicyclus brevirostris brevirostris (Cabanis)

Pacomón, one ♂, June 5, 1923 (Biol. Surv.).

Todirostrum cinereum finitium Bangs

Flores, one ♂, April 14; Chuntuqui, one ♀, April 25; Remate, two ♂, July 27-29; La Libertad, two ♂, two ♀, August 26 to November 10, 1923 (Biol. Surv.).

Todirostrum sylvia schistaceiceps Sclater

San Miguel, one ♂, April 21, 1923 (Biol. Surv.).

Elainea flavogaster subpagana Sclater and Salvin

Flores, one ♂, two ♀, April 13 to June 26; Pacomón, one ♂, one ♀, June 2-5; Ixtinta, one ♀, June 27; Remate, one ♂, July 29; La Libertad, one ♀, August 18, 1923 (Biol. Surv.).

Elainea viridicata placens Sclater

San Miguel, one ♂, April 21; Santa Rita, one ♂, April 22; Sacchich, one ♀, May 26; Remate, one ♀, August 10; La Libertad, two ♂, two ♀, August 18, 1923 (Biol. Surv.).

Camptostoma imberbe Sclater

Chuntuqui, one ♂ (?), April 26; Remate, one ♀, July 31, 1923 (Biol. Surv.).

Leptopogon amaurocephalus pileatus Cabanis

Uaxactun, one ♂, April 17, 1931 (U. of M.).

Weight: 10.8 grams.

Pipromorpha oleaginea assimilis (Sclater)

Yaxha, one ♂, June 30; La Libertad, one ♂, four ♀, August 18, 1923 (Biol. Surv.).

Pipra mentalis mentalis Sclater

Uaxactun, three ♂, one not sexed, April 4 to May 4, 1931 (U. of M.); Santa Rita, one ♀, May 27; La Libertad, eight ♂, four ♀, August 17 to September 1, 1923 (Biol. Surv.).

Two of the Uaxactun males are in the green immature plumage. On one of them the adult plumage is just beginning to appear on the throat and sides of the head.

Manacus candei (Parzudaki)

Uaxactun, three ♂, four ♀, March 28 to April 30, 1931 (U. of M.); Pacomón, one ♂, June 4; La Libertad, two ♂, August 18 to 25, 1923 (Biol. Surv.).

The legs and feet of the adult male are Cinnamon-Rufous in color. Males weigh 18.5 to 20 grams; females, 16 to 17.4 grams. A female taken April 6 was incubating.

In spite of its conspicuous yellow and white plumage and lively habits, the adult male of this exquisite manakin is very difficult to see. Two or more noisy males lived in a thicket at the edge of the jungle close by my living quarters at Uaxactun, yet I could rarely get even a glimpse of one. On April 30, however, I managed to watch at close range an adult male performing his amazing dance. This consisted of jumping back and forth between two twigs about a yard apart and a foot above the ground. Each jump was executed with surprising quickness and was accompanied by a loud "snap" like the crack of a whip. Three or four seconds usually elapsed between jumps, but each jump was made with such speed that it was difficult to see the motion of the wings at all. The "snap" seemed to come at the start of the jump, and the bird always landed facing the spot from which it started. After being a spectator at the dance of this manakin I read with the deepest interest Dr. Frank M. Chapman's³⁰ delightful account of the similar dance of the related *Manacus vitellinus* in Panama.

Schiffornis turdinus verae-pacis (Selater and Salvin)

Uaxactun, two ♂, one ♀, April 3 to May 5, 1931 (U. of M.); Santa Rita, one ♂, April 22; Remate, one ♂, August 7, 1923; Laguna del Zotz, two ♂, December 24, 1917 (Biol. Surv.).

Weight: males, 30.5, 31.3 grams; female, 28.9 grams.

Attila spadiceus flammulatus Lafresnaye

Uaxactun, one ♂, April 2, 1931 (U. of M.); Chuntuqui, one ♀, May 7, 1923 (Biol. Surv.).

Weight: male, 47.7 grams.

Pachyrhamphus cinnamomeus fulvidior Griscom

Uaxactun, one ♂, two ♀, April 1 to May 1, 1931 (U. of M.); Remate, one ♂, August 3, 1923 (Biol. Surv.).

Weight: male, 18.7 grams; females, 21, 22.5 grams.

³⁰ "From a Tropical Air Castle," *Nat. Hist.*, 32, 1932: 470-480 (Nov.-Dec.).

The above specimens show well the characters of the northern form as described by Griscom.³¹ Two of the Uaxactun specimens were collected from the same fruit-bearing tree, *Malmea depressa* (Baill.), at the edge of the clearing. Specimens taken April 14 and May 1 were breeding.

Tityra semifasciata personata Jardine and Selby

Uaxactun, one ♂, May 8, 1931 (U. of M.); Chuntuqui, one ♂, one ♀, May 8 and 12; Remate, one ♀, August 6; La Libertad, one ♀, August 22, 1923 (Biol. Surv.).

Weight: (Uaxactun male) 75.5 grams.

Rather common about the dead trees in the Uaxactun clearing.

Iridoprocne albilinea (Lawrence)

Chuntuqui, one ♂, one ♀, April 25; Flores, one juvenile ♂, June 15, 1923 (Biol. Surv.).

Progne chalybea chalybea (Gmelin)

Grey-breasted Martin

Uaxactun, one ♂, April 4, 1931 (U. of M.); Flores, two ♂, two ♀, April 9 to June 13; Chuntuqui, one ♂, one ♀, April 29, 1932 (Biol. Surv.).

Weight: male, 41.4 grams.

Martins were nesting in numbers in the dead trees of the Uaxactun clearing.

Stelgidopteryx ruficollis subsp.

Rough-winged Swallow

Flores, one ♂, one ♀, June 14; La Libertad, one ♀, November 10, 1923 (Biol. Surv.).

The two birds taken in June are in very worn and faded plumage, but they presumably belong to the subspecies *ridgwayi* of which I have seen no comparably worn examples. The specimen taken in November is molting its primaries, but it can probably be referred to *serripennis*.

Polioptila caerulea caerulea (Linnaeus)

Blue-Grey Gnatcatcher

Remate, one ♂, July 30; La Libertad, two ♂, one ♀, September 3 to November 9, 1923 (Biol. Surv.).

Polioptila bilineata bilineata (Bonaparte)

Chuntuqui, one ♀, April 28, 1932 (Biol. Surv.).

³¹ "The Ornithology of the Caribbean Coast of Extreme Eastern Panama," *Bull. Mus. Comp. Zool.*, 72, 1932: 357.

Ramphocaenus rufiventris rufiventris (Bonaparte)

Uaxactun, two ♀, April 26 to May 13, 1931 (U. of M.); Remate, two ♂, one ♀, April 18 to July 27; Chuntuqui, one not sexed, May 7, 1923 (Biol. Surv.).

Heleodytes zonatus restrictus Nelson

Cactus Wren

Gavilán, three ♂, one ♀, one juvenile ♀, July 1, 1923 (Biol. Surv.).

Having compared these with Nelson's type series, I find that they must be referred to *restrictus* although they are not quite typical. These are the first authentic specimens of the subspecies from Guatemala.

Thryothorus albinucha albinucha (Cabot)

Remate, one immature ♀, August 5, 1923 (Biol. Surv.).

Wing, 50; tail, 52.

As this is the first specimen taken in the Petén since the collecting of the unique type of *petenicus* Salvin,³² it is most unfortunate that immaturity prevents its being of much value in comparing that alleged form with *albinucha* of Yucatan. Comparing it with the type of *albinucha*, however, I find no differences which might not be attributed to age.

Thryothorus rutilus cano-brunneus Ridgway

Uaxactun, five ♂, one ♀, April 7 to May 7, 1931 (U. of M.); Remate, three ♂, two ♀, May 2 to August 10; Chuntuqui, two ♂, one ♀, May 2 to 8; Xtinta, one ♀, June 27, 1923 (Biol. Surv.).

I have compared the specimens with the excellent series of the species in the Museum of Comparative Zoölogy and with the types of *cano-brunneus* and *umbrinus* in the National Museum. The form is new to the Guatemalan list, another instance of adding northern Petén to the range of a Yucatan subspecies.

Troglodytes musculus intermedius Cabanis

Flores, one ♂, one not sexed, April 9; Plancha de Piedra, one ♂, July 2; La Libertad, one ♂, November 8, 1923 (Biol. Surv.).

Nannorchilus leucogaster subsp.

Uaxactun, two ♂, April 3 to May 1, 1931 (U. of M.); Remate, one immature ♀, July 27, 1923 (Biol. Surv.).

The Uaxactun specimens are adult males and are much paler and greyer above than skins from British Honduras or even southern Quintana Roo, but until more material is available both from the Petén and from adjoining

³² "Description of Thirteen New Species of Birds Discovered in Central America by Frederick Godman and Osbert Salvin," *P. Z. S. London*, 1863: 187.

areas, it is impossible to settle their status satisfactorily. They measure: wing, 49.5 and 50 mm.; weight, 10.2 and 10.4 grams.

Henicorhina leucosticta prosthaleuca (Sclater)

Uaxactun, six ♂, two ♀, March 31 to May 1, 1931 (U. of M.); Santa Rita, one ♂, one ♀, April 22 to May 27; Sacchich, one ♂, April 23; San Miguel, one ♂, May 28, 1923 (Biol. Surv.).

This series is rather variable in color, but some of the skins are identical with a series from Vera Cruz.

Henicorhina leucophrys subsp.

Santa Rita, one immature ♀, May 27, 1923 (Biol. Surv.).

Dumetella carolinensis (Linnaeus)

Catbird

Uaxactun, one ♂, April 22, 1931 (U. of M.).

A few were noted about the clearing, the last being seen April 27.

Melanoptila glabrirostris Sclater

Black Catbird

Ixtinta, one ♂, June 27, 1923 (Biol. Surv.).

The capture of *Melanoptila* in the Petén is quite unexpected and very difficult to explain. Its normal range is the coast region from Yucatan to Honduras.

Turdus grayi tamaulipensis (Nelson)

Uaxactun, two ♂, April 10 and 16, 1931 (U. of M.); Remate, two ♂, July 29 and 30; La Libertad, one ♂, September 8, 1923 (Biol. Surv.).

Weight: (Uaxactun males) 72.3 and 68.2 grams.

Although not extreme examples, these are perfectly characteristic *tamaulipensis*, a form not recorded before from Guatemala.

Turdus assimilis parcolor Austin

Uaxactun, one ♂, one ♀, April 2 and May 1, 1931 (U. of M.); Santa Rita, one ♀, May 27; Plancha de Piedra one ♀, July 2; Remate, two ♀, July 28 and 29, 1923; Laguna del Zotz, one ♂, December 15, 1917 (Biol. Surv.).

Hylocichla mustelina (Gmelin)

Wood Thrush

Uaxactun, one ♀, April 2, 1931 (U. of M.).

Hylocichla minima aliciae (Baird)

Grey-cheeked Thrush

Uaxactun, one ♂, April 28, 1931 (U. of M.).

Wing: 107 mm.

As Griscom³³ has recently pointed out, the grey-checked thrush migrates along the outer islands of the east coast of Central America and is very rare on the mainland. This specimen from the center of the base of the Yucatan Peninsula suggests that perhaps the western contingent may shorten its route by crossing there instead of taking the much longer way around the Yucatan coast. There is but one previous record of the species in Guatemala.

Hylocichla ustulata ustulata (Nuttall)

Russet-backed Thrush

Uaxactun, one ♀, April 15, 1931 (U. of M.).

Vireo olivaceus (Linnaeus)

Red-eyed Vireo

Chuntuqui, one ♂, April 26, 1923 (Biol. Surv.).

Vireo flavoviridis flavoviridis (Cassin)

Yellow-green Vireo

Remate, one ♂, April 5; Flores, four ♂, April 13 to June 22; Chuntuqui, two ♂, one ♀, May 2 to 4; San Miguel, two ♂, May 28; San Andrés, one ♀, May 30; Pacomón, one ♂, June 2; Macanché, one ♂, June 28; Gavilán, one ♂, July 1; La Libertad, one ♂, three ♀, August 21 to September 30, 1923 (Biol. Surv.).

Vireo griseus griseus (Boddaert)

White-eyed Vireo

La Libertad, one ♀, November 10, 1923 (Biol. Surv.).

Vireo ochraceus semiflavus Salvin

Remate, one ♂, one ♀, July 29; La Libertad, one ♀, one not sexed, August 18, 1923 (Biol. Surv.).

Hylophilus decurtatus (Bonaparte)

Uaxactun, one ♂, April 1, 1931 (U. of M.); Remate, one ♀, April 5; Flores, one ♂, April 13; San Miguel, one not sexed, April 21; Chuntuqui, one ♂, May 8; Nueva Aguada, one ♂, June 29, 1923 (Biol. Surv.).

Hylophilus ochraceiceps ochraceiceps Selater

Uaxactun, one ♂, one ♀, April 7, 1931 (U. of M.); San Miguel, one ♀, May 28; Remate, two ♂, August 8, 1923 (Biol. Surv.).

Mniotilta varia (Linnaeus)

Black and White Warbler

Remate, one ♀, April 5; Chuntuqui, one not sexed, one ♀, April 24 to 28, 1923 (Biol. Surv.).

³³ *Op. cit.* (*Bull. Amer. Mus. Nat. Hist.*, 1932): 309.

Dendroica aestiva rubiginosa (Pallas)

Alaska Yellow Warbler

Flores, two ♂, one ♀, April 9 to 14, 1923 (Biol. Surv.).

Dendroica magnolia (Wilson)

Magnolia Warbler

Chuntuqui, one ♀, April 25; La Libertad, three ♀, November 8 to 10, 1923 (Biol. Surv.).

Seiurus aurocapillus (Linnaeus)

Oven-bird

Remate, one ♀, April 18, 1923 (Biol. Surv.).

Seiurus motacilla (Vieillot)

Louisiana Waterthrush

Remate, two ♂, August 11, 1923 (Biol. Surv.).

This is the earliest fall date recorded for Guatemala.

Seiurus noveboracensis notabilis Ridgway

Grinnell's Waterthrush

Uaxactun, one ♂, May 1, 1931 (U. of M.); Chuntuqui, one ♂, May 6, 1923 (Biol. Surv.).

The last one was seen at Uaxactun on May 7.

Oporornis formosus (Wilson)

Kentucky Warbler

Uaxactun, one ♀, April 8, 1931 (U. of M.).

Also seen there April 10 and 15.

Oporornis philadelphia (Wilson)

Mourning Warbler

Uaxactun, one ♂, May 3, 1931 (U. of M.).

This is but the third specimen taken in Central America north of Nicaragua.

Geothlypis trichas brachidactyla (Swainson)

Maryland Yellowthroat

Uaxactun, one ♂, May 6, 1931 (U. of M.).

Chamaethlypis poliocephala palpebralis (Ridgway)

Ground Chat

Chuntuqui, two ♂, May 8 to 11; Gavilán, one adult ♀, one juvenile ♀, July 1, 1923 (Biol. Surv.).

One of the Chuntuqui specimens has the whole chin and throat white.

Icteria virens virens (Linnaeus)

Yellow-breasted Chat

La Libertad, one ♂, November 10, 1923 (Biol. Surv.).

Wilsonia citrina (Boddaert)

Hooded Warbler

Uaxactun, one ♀, April 11, 1931 (U. of M.); La Libertad, one ♂, September 30, 1923 (Biol. Surv.).

Setophaga ruticilla (Linnaeus)

Redstart

Uaxactun, one ♀, April 23, 1931 (U. of M.); Chuntuqui, one ♀, May 3; La Libertad, one ♀, November 10, 1923 (Biol. Surv.).

Basileuterus culicivorus culicivorus (Lichtenstein)

Uaxactun, one ♂, one ♀, April 7 and 10, 1931 (U. of M.); San Andrés, one not sexed, May 29; Nueva Aguada, one ♂, June 29; Guyo, one ♂, July 25; Remate, three ♀, July 27 to August 6, 1923 (Biol. Surv.).

Weight: (Uaxactun) male, 9.6 grams; female, 8.9 grams.

Guiraca caerulea caerulea (Linnaeus)

Blue Grosbeak

Uaxactun, four ♂, one ♀, April 23 to May 6, 1931 (U. of M.); San Miguel, one ♀, April 21; Chuntuqui, one ♂, May 12, 1923 (Biol. Surv.).

Fairly common at Uaxactun, especially about the mule corral where they came to feed on waste grain. Those collected were all extremely fat.

Cyanocompsa cyanooides concreta (DuBus)

Uaxactun, two ♂, May 1 to 6, 1931 (U. of M.); Chuntuqui, one ♂, May 7, 1923 (Biol. Surv.).

Weight: 29.3 and 28.6 grams.

Cyanocompsa parellina dearborni Miller and Griscom

Uaxactun, two ♂, April 13 and 19, 1931 (U. of M.); Remate, one ♂, one ♀, one not sexed, August 4 to 10, 1923 (Biol. Surv.).

Weight: (Uaxactun males) 16.2 and 14.6 grams.

Found only in the heavy forest.

Oryzoborus funereus funereus Selater

Chuntuqui, one ♂, May 25, 1923 (Biol. Surv.).

Sporophila morelleti morelleti (Bonaparte)

Chuntuqui, one ♂, one ♀, May 2 to 5; Pacomón, one ♀, June 3; Flores, six ♂, June 12 to 25; Ixtinta, one ♂, June 3; Macanché, one ♂, one ♀, June

28; Remate, two ♀, August 8; La Libertad, one ♀, September 4, 1923 (Biol. Surv.).

Tiaris olivacea pusilla Swainson

Macanché, one ♂, June 28; La Libertad, three ♂, September 16 to November 10, 1923 (Biol. Surv.).

Volatinia jacarini atronitens Todd

Uaxactun, two ♂, April 3 to May 2, 1931 (U. of M.); Chuntuqui, one ♂, May 22; La Libertad, one ♂, one ♀, May 22 to September 5; Remate, one ♂, August 7, 1923 (Biol. Surv.).

Caryothraustes poliogaster poliogaster (DuBus)

Remate, one not sexed, July 31, 1923 (Biol. Surv.).

Saltator atriceps atriceps Lesson

Uaxactun, two ♂, one ♀, May 2, 1931 (U. of M.); Chuntuqui, one ♂, one ♀, April 30; Flores, one ♀, June 24, 1923 (Biol. Surv.).

Weight: males, 68 and 73.2 grams; female, 75 grams.

Common about the edge of the Uaxactun clearing. Their notes are extremely harsh and disagreeable.

Saltator grandis grandis (Lichtenstein)

Flores, three ♂, April 9 to June 20; Pacomón, one ♀, June 6, Ixtinta, one ♂, June 27; La Libertad, one ♀, November 10, 1923 (Biol. Surv.).

This species first recorded from Guatemala by Griscom³⁴ apparently occurs only in the northeastern part of the country.

Spiza americana (Gmelin)

Dickeissel

Uaxactun, one ♂, two ♀, April 13 to 28, 1931 (U. of M.); Chuntuqui, two ♂, three ♀, April 29 to May 8; La Libertad, one ♂, September 5, 1923 (Biol. Surv.).

Dickeissels were frequently seen at the Uaxactun clearing in flocks of about ten to thirty. Some came regularly to the mule corral to feed on waste corn. The last were noted April 28, when several flocks were still in the clearing. Those collected were thin or showed but a trace of fat.

Ammodramus savannarum cracens (Bangs and Peck)

Grasshopper Sparrow

La Libertad, one ♂, one ♀, September 10 and 16, 1923 (Biol. Surv.).

This rare grasshopper sparrow has been recorded only from the "pine ridges" of eastern British Honduras.

³⁴ *Op. cit.* (*Bull. Amer. Mus. Nat. Hist.*, 1932): 354.

Aimophila petenica petenica (Salvin)

La Libertad, two ♂, one not sexed, two immature ♂, one immature not sexed, August 17 to September 16, 1923 (Biol. Surv.).

Wing: (♂), 56, 56; (not sexed), 57 mm.

The study of these virtual topotypes of the long lost *Aimophila petenica* (Salvin) has necessitated a reëxamination of the whole *Aimophila botteri-sartorii* complex. Having seen all of the available material, I have been able, I believe, to make some real advance in our knowledge of the problem. The material is still extremely inadequate, however, and I have no illusions as to the finality of my statement of the situation.

As Ridgway³⁵ himself suggested, *sartorii* cannot be maintained as distinct from *petenica*. Ridgway examined the type of *petenica* and found no color differences between it and his type of *sartorii*. The characters of "almost chestnut" edging of the wing coverts mentioned by W. de W. Miller and L. Griscom³⁶ is a variable one as is demonstrated by the Biological Survey series from Chiapas, which they did not consult. The above specimens from Petén match exactly in size some of the Chiapas series of "*sartorii*." Nor can the distinction between the wing formulas be maintained. There is then no possible doubt that *Aimophila sartorii* is a pure synonym of the older *Aimophila petenica*.

Aimophila b. vulcanica Miller and Griscom³⁷ was pointed out years ago by Ridgway on the basis of two specimens from the Salvin and Godman collection and was properly judged a member of the "*sartorii*" group. It differs in being larger, darker below, and in having more rufescent edging to the feathers of the back.

In view of the striking differences between *Aimophila botteri* and *Aimophila petenica*, I believe that they are specifically distinct. *A. p. petenica* is uniform from Petén through Chiapas to Vera Cruz and differs sharply from *Aimophila botteri* in being smaller and much blacker above and greyer below. Apparently their geographical ranges overlap in Chiapas and Vera Cruz. Specimens of *Aimophila botteri* are reported from Chiapas and Vera Cruz, but I have not personally examined breeding *A. botteri* from those regions. *Aimophila petenica* does not approach *Aimophila botteri* in either size or color even in Vera Cruz.

The juvenal plumage of *Aimophila petenica*, as might be expected, approaches that of *Aimophila botteri* much more closely than does the adult plumage. Having compared the above Petén juveniles of *Aimophila petenica*, however, with juveniles of *Aimophila botteri* (in the M. C. Z. collection) from Arizona, Oaxaca, and Morelos, I find that they differ as

³⁵ *Op. cit.*, (Bull. U. S. Nat. Mus.) Pt. 1 (1901): 261.

³⁶ "Further Notes on Central American Birds, with Descriptions of New Forms," *Amer. Mus. Novit.*, 184, 1925: 3.

³⁷ *Ibid.*

follows: *Aimophila petenica* is small (wing, 54-55); darker above; scapulars broadly black, narrowly edged with dark chestnut; wing coverts narrowly edged with buff; lores dark; chin and malar region spotted.

Aimophila botterii is larger (wing, 61-63); lighter above; scapulars with narrow black shafts and broad rusty edges; wing coverts broadly edged with paler buff; lores light colored; chin and malar region unspotted.

The forms of *Aimophila petenica* should stand as:

Aimophila petenica petenica (Salvin)

Vera Cruz (Huatusco, Medellin), Chiapas (Palenque), and Petén (La Libertad).

Aimophila petenica vulcanica Miller and Griscom

Nicaragua (Volcán de Chinandega), Costa Rica (Miravalles³⁸).

In this connection I have reexamined the much discussed male in the Dwight collection taken May 17, 1924, at Antigua (5,000 feet), Guatemala. It undoubtedly represents an undescribed subspecies, and I strongly suspect that it will prove to be a form of *Aimophila botterii*. It differs from *Aimophila petenica vulcanica* (the subspecies of *Aimophila petenica* whose characters most nearly approach those of *Aimophila botterii*) in having much more rusty above and buffy below, especially the under tail coverts.

There remains the distinct possibility that *petenica* and *botterii* may prove eventually to intergrade subspecifically in southeastern Central America, but I feel very sure that in Mexico their relation will prove to be in every respect that of full species.

Material of *Aimophila petenica* examined:

Vera Cruz: one ♀ (type of <i>sartorii</i>),	Huatusco, July 12. Sartorius.
one ♀	Medellin, May 5, 1897 (M. C. Z.).
Chiapas: seven ♂, two ♀,	Palenque, May 11 to 21, 1900. Nelson and Goldman.
Petén: three adults, three immatures,	La Libertad, August 17 to September 16, 1923. Harry Malleis.

Spizella passerina pinetorum Salvin

Chipping Sparrow

Uaxactun, one ♂, April 5, 1931 (U. of M.).

Collected from a flock of indigo buntings feeding on grass seed in the clearing.

Passerina ciris ciris (Linnaeus)

Painted Bunting

Flores, two ♂, April 13, 1923 (Biol. Surv.).

³⁸ M. A. Carriker, Jr., "An Annotated List of the Birds of Costa Rica including Cocos Island," *Ann. Carn. Mus.*, 6, 1910: 908.

Passerina cyanea (Linnaeus)

Indigo Bunting

Uaxactun, one ♂, April 5, 1931 (U. of M.).

Indigo buntings winter in large flocks in the Uaxactun clearing. As I have detailed elsewhere,³⁹ banding showed that the great numbers wintering in the clearing are apparently divided into flocks which have very restricted territories. One such flock, numbering about a hundred, probably migrated north as a unit and a part, at least, of the flock returned the next season to winter in the identical spot.⁴⁰ The flocks in the Uaxactun clearing were last seen on April 30, presumably leaving for the north that night. Solitary females were taken in nets just within the forest edge May 4 and 13. I had supposed that indigo buntings would be confined to the clearing, but on April 19, I collected a male by chance from a tree top in the big jungle nearly a mile from the clearing. More than a hundred were handled, and all were very fat.

Arremonops striaticeps chloronotus (Salvin)

Uaxactun, five ♂, six ♀, April 7 to May 11, 1931 (U. of M.); Chuntuqui, two ♂, two ♀, April 27 to May 8; Pacomón, one ♂, June 4; La Libertad, one ♂, two ♀, September 4 to 30, 1923 (Biol. Surv.).

Measurements of Uaxactun specimens are: wing, (♂), 66-70; (♀), 62-65 mm.; weight: (♂), 23.5 to 27 grams; (♀), 22 to 24.2 grams.

Arremon aurantiivirostris saturatus Cherrie

Laguna del Zotz, one ♂, December 25, 1917 (Biol. Surv.).

Coereba mexicana mexicana (Sclater)

Remate, one not sexed, August 10, 1923 (Biol. Surv.).

Cyanerpes cyaneus cyaneus (Linnaeus)

San Miguel, one ♀, April 21; La Libertad, four ♂, six ♀, August 17 to 25, 1923 (Biol. Surv.).

Tanagra affinis Lesson

Chuntuqui, one ♀, April 24, 1923 (Biol. Surv.).

Tanagra lauta lauta Bangs and Penard

La Libertad, four ♂, two ♀, August 17 to 26, 1923 (Biol. Surv.).

³⁹ "Winter Returns of the Indigo Bunting in Guatemala," *Bird-Banding*, 3, No. 3, 1932: 110. (Based on banding *Passerina cyanea* at Uaxactun, Petén).

⁴⁰ Since the publication of the above-mentioned note on the recapture of banded indigo buntings at Uaxactun, I have received word from A. Ledyard Smith of the recapture of a single female (the only indigo bunting trapped at Uaxactun in 1933) on April 16, 1933, two years after banding (F-30330, banded at Uaxactun on April 10, 1931).

Tanagra gouldi gouldi (Sclater)

La Libertad, one ♀, August 6, 1923 (Biol. Surv.).

Tangara larvata larvata (DuBus)

Uaxactun, one ♂, April 3, 1931 (Biol. Surv.).

Thraupis cana diaconus (Lesson)

Flores, one ♂, one ♀, October 3; La Libertad, one ♂, one ♀, October 3, 1923 (Biol. Surv.).

Thraupis abbas (Lichtenstein)

Uaxactun, one ♂, April 1, 1931 (U. of M.); Chuntuqui, one ♂, one ♀, May 7 to 25; Pacomón, two ♂, one ♀, June 2 to 3; Flores, one ♂, June 12, Gavilán, one ♀, July 1; La Libertad, six ♂, two ♀, October 3 to 6, 1923 (Biol. Surv.).

When collected, the Uaxactun specimen was feeding on the fruit of a small tree, *Malmea depressa* (Baill.).

Piranga bidentata sanguinolenta Lafresnaye

Pacomón, one ♀, June 6, 1923 (Biol. Surv.).

Piranga roseo-gularis roseo-gularis Cabot

La Libertad, one immature ♂, September 16, 1923 (Biol. Surv.).

This constitutes an addition to the Guatemalan list and a very considerable extension of the known range of this peculiar Yucatan tanager.

Habia rubica rubicoides (Lafresnaye)

Uaxactun, two ♂, three ♀, April 6 to May 8, 1931 (U. of M.); Sacchich, one ♂, April 23; Chuntuqui, one ♂, April 29; Neuva Aguada, one ♀, June 29; Remate, one ♂, one juvenile, August 5 to 9, 1923 (Biol. Surv.).

These ant tanagers were breeding at Uaxactun in April and May.

Habia salvini peninsularis (Ridgway)

Uaxactun, one ♂, one ♀, April 11 to 21, 1931 (U. of M.); San Andrés, one ♂, April 20; San Miguel, one ♂, April 21; Santa Rita, one ♀, April 22; Chuntuqui, two ♂, May 6 and 8, 1923 (Biol. Surv.).

I have compared these with the type of *peninsularis* and with three specimens from Chichén Itzá which they resemble closely. The subspecies has not been recorded before from Guatemala. Judging from the description of *rooensis* Griscom,⁴¹ the specimens listed above cannot be referred to that form.

⁴¹ "The Ornithological Results of the Mason-Spinden Expedition to Yucatan," Pt. I, *Amer. Mus. Novit.*, 235, 1926: 17.

Lanio aurantius Lafresnaye

Uaxactun, one ♂, April 2, 1931 (U. of M.); Sacchich, one ♀, May 26; San Miguel, one ♀, May 28; Remate, one ♂, one ♀, July 28 to August 11, 1923 (Biol. Surv.).

Weight: male, 35.5 grams.

Eucometis spodocephala pallida Berlepsch

Uaxactun, two ♂, one ♀, March 31 to April 11, 1931 (U. of M.).

Available comparative material is entirely inadequate, but these are certainly *pallida*, the small, light-colored Yucatan form. They are the first authentic specimens of this race from Guatemala. They measure: wing (♂), 83, 84 mm.; (♀), 83 mm.; tail (♂), 71.5; (♀), 72 mm.

Gymnostinops montezuma (Lesson)

Oropendula

Uaxactun, one ♂, March 28, 1931 (U. of M.); Pacomón, two ♀, June 3; Flores, one juvenile ♀, June 12, 1923 (Biol. Surv.).

Weight: male, 459 grams.

Fairly common at Uaxactun.

Psomocolax oryzivorus impacificus Peters

Rice Grackle

Uaxactun, two ♂, one ♀, April 13 to May 6, 1931 (U. of M.).

Breeding. Wing (♂), 205, 183 mm.; (♀), 158 mm.

Weight: males, 221, 184 grams; female, 171.5 grams.

Tangavius aeneus involucratus Lesson

Red-eyed Cowbird

Flores, three ♂, two ♀, April 9 to June 13, 1923 (Biol. Surv.).

Agelaius phoeniceus richmondi Nelson

Red-wing

Flores, four ♂, one ♀, April 9 to 11, 1923 (Biol. Surv.).

Sturnella magna inexpectata Ridgway

Meadow Lark

La Libertad, one ♂, one ♀, August 17 to September 1, 1923 (Biol. Surv.).

Icterus spurius (Linnaeus)

Orchard Oriole

Flores, three ♂, two ♀, April 12 to 19, 1923 (Biol. Surv.).

Icterus prothemelas (Strickland)

Uaxactun, two ♂, one ♀, April 6 to May 4, 1931 (U. of M.); Chuntuqui, one ♂, May 25, 1923 (Biol. Surv.).

Icterus mesomelas mesomelas (Wagler)

Chuntuqui, one ♂, one ♀, April 26 to May 2, 1923 (Biol. Surv.).

Dives dives (Lichtenstein)

Uaxactun, one ♂, April 14, 1931 (U. of M.); Flores, one ♂, April 9; San Miguel, one ♀, May 28; Gavilán, one ♀, July 1; La Libertad, one ♀, November 10, 1923 (Biol. Surv.).

Weight: male, 100 grams.

Breeding at Uaxactun. Its very musical note was frequently heard about the clearing.

Cassidix mexicanus mexicanus (Gmelin)

Great-tailed Grackle

Flores, two ♂, two ♀, April 9 to June 14, 1923 (Biol. Surv.).

Xanthoura luxuosa guatemalensis Bonaparte

Green Jay

Chuntuqui, one ♂, May 7, 1923 (Biol. Surv.).

Psilorhinus mexicanus cyanogenys Sharpe

Brown Jay

Uaxactun, one ♀, April 4, 1931 (U. of M.); Remate, one ♀, April 18; Chuntuqui, one ♀, May 3; Macanché, one ♂, June 28, 1923 (Biol. Surv.).

Common at Uaxactun.

