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MELVIN A. TRAYLOR

FIELDIANA: ZOOLOGY

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Birds of Northeastern Peru¹

The present report is an annotated list of birds collected by José M. Schunke in northern Peru, from 1945 to 1947. The majority of the specimens are from localities along the Ucayali River in the Department of Loreto; the remainder are from the divide between the Ucayali and Huallaga Rivers in the Department of Huanuco.

The localities along the Ucayali, all of which are well within the humid tropical zone, are:

Contamana: a town on the right bank of the Ucayali, at about 7° 16' S. Lat.

Cerro Azul: about fifteen miles east of Contamana at 500 meters elevation; this is not the Cerro Azul of the millionth map (American Geographic Society), a locality which is northwest of Contamana and much higher.

Pucallpa: a town on the left bank of the river at about 8° 25' S. Lat.

Yarinacocha: a small laguna about fifteen miles north by west of Pucallpa.

Río Pachutia: probably the Río Pachitea, a river flowing into the Ucayali about thirty miles south of Pucallpa.

Previsto and Quistacocha: unidentified localities which must be near Pucallpa, to judge from the collecting dates. Only one specimen was collected at each of the last three localities.

The two localities on the divide between the Ucayali and the Huallaga—Divisoria and Fundo Sinchona—for practical purposes may be considered the same. They are on the crest of the ridge where the road from Pucallpa to Tingo Maria, a small town on the Huallaga River, crosses the divide. The altitude at the crest is about 1,600 meters, and Schunke collected from about 1,300 meters to the top. These localities are in the subtropical zone, and only a very few of the tropical forms from the Ucayali were found.

The collection as a whole numbers 807 specimens, of which 689 are from the Ucayali and 118 from the divide. The total species from the Ucayali are 236 and from the divide 69. The total number of forms, however, is 301, which leaves only four forms common to both zones. Two of these are hawks, *Harpagus bidentatus* and *Buteo magnirostris*, the third is the wide-ranging squirrel cuckoo, *Piaya cayana*, and the fourth is *Cercomacra nigrescens*. This almost com-

¹ Manuscript submitted October, 1956.

plete separation between the species in these two collections from humid forests less than a hundred miles apart further demonstrates the reality of the Andean life zones.

The only previous report on the birds of northeastern Peru was that published by Sclater and Salvin (1873), which summarized the collections of Bartlett, Hauxwell and Bates. The recent papers on Peruvian birds by Zimmer have added many new forms to the list of species known from the region, and have been of great aid in the identification of forms in the families which he has covered. Gyldenstolpe's recent paper on the birds of the Rio Juruá of western Brazil (1945) has been particularly valuable since in most cases the same forms are found on the Ucayali and the upper Juruá.

During the preparation of this report comparative material was borrowed from the American Museum of Natural History and from the United States National Museum, and I wish to thank the authorities of these two institutions for their generous help. I would also like to thank Dr. Austin L. Rand and Mr. Emmet R. Blake of Chicago Natural History Museum for their constant help throughout the preparation of this paper.

All measurements are in millimeters. The wings were measured flat, and the culmen was measured from the base unless otherwise stated.

Systematic List

Family TINAMIDAE

Tinamus tao kleei Tschudi

Cerro Azul, 1 ♀.

This specimen is almost as gray above as typical *tao* from the Rio Tapajoz, but below it has the brownish wash characteristic of *kleei*. Bond and de Schauensee (1943, p. 168) concluded that *weddelli* Bonaparte of Bolivia is separable from *kleei* on the basis of greater size. They based their conclusions on a comparison of a male and female from Palmar, Cochabamba, with a male and female from La Pampa, Sandia, in southern Peru. The comparative measurements were:

Species	Sex	Wing	Exp. Culmen	Tarsus
<i>weddelli</i> (Palmar)	♂	270	36	86
	♀	268	36	87
<i>kleei</i> (Sandia)	♂	244	31.5	69
	♀	230	30	64

Specimens in the Conover collection, however, fail to show these differences. Two males from Bolivia are in substantial agreement with Bond and de Schauensee's birds: wing 291, 269; exposed culmen 35, 36; tarsus 85, 74. A female and an unsexed specimen from Cerro Azul and the Río Urubamba, Peru, are closely similar: wing 263, 288; exposed culmen 37, 37; tarsus 79, 81. A male and a female from Cututcu, eastern Ecuador, also agree: wing 271, 290; exposed culmen 34, 33.5; tarsus 81, 88. From Bolivia to eastern Ecuador, therefore, there is no significant difference in size or color, and this whole population should bear the name *kleei*, with *weddelli* as a synonym. The much smaller size of the birds from Sandia is due to immaturity, according to Conover, who has examined them critically.

In a more recent paper (1955b, p. 207) Bond has reached the same conclusion, and he makes *weddelli* a synonym of *kleei*.

Tinamus major ruficeps Sclater and Salvin

Yarinacocha, 1 ♂; Pucallpa, 2 downy ♀.

Blake (1955, p. 10) and Bond (1955b, p. 208) have both come to the conclusion that *peruvianus* cannot be maintained as a valid race.

Tinamus guttatus Pelzeln

Yarinacocha, 1 ♂, 2 ♀.

Crypturellus cinereus cinereus Gmelin

Yarinacocha, 2 ♂, 3 ♀.

Crypturellus soui inconspicuus Carriker

Yarinacocha, 1 ♂, 3 ♀, 1 ♂ imm., 1 ♀ juv.

One female shows rufescent coloration approaching that of *nigriceps* of eastern Ecuador, but the other adult females and the adult male are similar to a series of *inconspicuus* from Bolivia.

Crypturellus undulatus yapura Spix

Yarinacocha, 1 ♀.

Crypturellus variegatus salvini Salvadori

Cerro Azul, 1 ♀.

This specimen agrees with a series of four birds from eastern Ecuador.

Crypturellus brevirostris bartletti Sclater and Salvin

Yarinacochoa, 2 ♂, 1 ♀, 2 ♀ imm.

Family ANHINGIDAE

Anhinga anhinga anhinga Linnaeus

Yarinacochoa, 1 ♂, 1 ♀ imm.

Family ARDEIDAE

Butorides striatus striatus Linnaeus

Yarinacochoa, 2 ♀.

Nycticorax nycticorax hoactli Gmelin

Yarinacochoa, 4 ♂, all imm.

Tigrisoma lineatum lineatum Boddaert

Yarinacochoa, 1 ♂; Contamana, 1 ♂ imm.

Family ANHIMIDAE

Anhima cornuta Linnaeus

Yarinacochoa, 2 ♂, 1 ♀.

Family ACCIPITRIDAE

Elanoides forficata yetapa Vieillot

Yarinacochoa, 1 ♀.

Leptodon cayanensis Latham

Yarinacochoa, 1 ♂.

Harpagus bidentatus bidentatus Latham

Yarinacochoa, 1 ♂, 2 ♀; Pucallpa, 1 ♀; Fundo Sinchona, 1 ♂.

Birds from upper Amazonia (eastern Colombia, Ecuador, Peru, Bolivia, and the upper Rio Juruá, Brazil) are larger than those from eastern South America. The wing measurements for adults and immatures are given separately below, since the immature birds average smaller than adults.

	Adults	
	♂ ♂	♀ ♀
Upper Amazonia.....	(6) 214-222 (217.5)	(4) 218-232 (224)
Eastern South America.....	(1) 205	(3) 204-213 (210)

	Immatures	
Upper Amazonia.....	(2) 192-203 (200)	(1) 213
Eastern South America.....	(2) 199-215 (207)	(7) 193-215 (204)

Although these differences seem consistent except among the immatures, the sample is too small to provide a basis for a new race.

Accipiter bicolor bicolor Vieillot

Yarinacocha, 1 ♀.

Accipiter superciliosus superciliosus Linnaeus

Yarinacocha, 1 ♂, 1 ♀; Cerro Azul, 1 ♂.

This is apparently a rare bird in Peru. The only previous record was of a female from Moyabamba and a male from Rioja, both specimens in Chicago Natural History Museum and both listed by Hellmayr and Conover (1949, p. 64).

Buteo albonotatus Kaup

Yarinacocha, 3 ♂, 1 ♀.

Hellmayr and Conover (1949, p. 154) do not recognize the race *abbreviatus* of South America, pointing out that many "*abbreviatus*" were probably winter migrants from North America, and that the species is not known certainly to breed east of the Andes. The three males from Yarinacocha were collected in December and January and could well be migrants; the female was collected September 17, which would be early. South American specimens do average smaller in wing length. Combining Hellmayr and Conover's (1949, p. 157) measurements with my own, I have:

	Wing	
North and Central America.....	12 ♂ ♂	384-411 (av. 395)
	6 ♀ ♀	410-431
South America.....	7 ♂ ♂	367-386 (av. 381)
	2 ♀ ♀	398, 460(!)

Despite the exceptional Bolivian female with a wing of 460, the South American birds show a consistent enough reduction in wing length to at least keep open the question of the validity of *abbreviatus*.

Buteo magnirostris occiduus Bangs

Yarinacocha, 3 ♂, 3 ♀; Fundo Sinchona, 1 ♂.

Busarellus nigricollis nigricollis Latham

Yarinacocha, 2 ♀.

Spizastur melanoleucus Vieillot

Yarinacocha, 1 ♂, 1 ♀.

This is the first record of this species for Peru, and a considerable extension of range for the form. Previously, its known range in South America included the Guianas, eastern Brazil, Paraguay and northern Argentina.

Spizaetus ornatus ornatus Daudin

Yarinacocha, 1 ♂.

Geranospiza caerulescens caerulescens Vieillot

Contamana, 1 ♀.

This is apparently the first record of this race from Peru. The *Geranospiza caerulescens* of Taczanowski (1884, p. 168) from Lechugal in extreme northwestern Peru belongs to the race *balzarensis* W. L. Sclater of western Ecuador. The latter is a much larger bird, the wing of the female, from Taczanowski, being 322, while in the present specimen of *caerulescens* it is only 268.

Family PANDIONIDAE

Pandion haliaetus carolinensis Gmelin

Yarinacocha, 2 ♂.

Family FALCONIDAE

Herpetotheres cachinnans cachinnans Linnaeus

Yarinacocha, 4 ♂, 1 ♀.

Although Peru has been considered to be within the range of the pale southern race *queribundus*, these specimens are as dark as a series of *cachinnans* from the Guianas. A comparison of birds from Paraguay and Bolivia with those from Venezuela and the Guianas indicates that *queribundus* is at best a weakly distinguished race. Hellmayr and Conover have synonymized it with *cachinnans* (1949, p. 237).

Micrastur semitorquatus semitorquatus Vieillot

Yarinacocha, 2 ♂.

Micrastur buckleyi Swann

Yarinacocha, 1 ♂.

In a recent publication (1948, p. 199) I have discussed this form more fully and shown why I consider it a full species. Its resemblance to *semitorquatus* in color is remarkable, but the differences in size and proportions can only be accounted for on the basis of two separate species.

Micrastur gilvicollis gilvicollis Vieillot

Contamana, 1 ♂.

Daptrius ater Vieillot

Yarinacocha, 2 ♂, 1 ♀ imm.

Family CRACIDAE

Mitu mitu Linnaeus

Yarinacocha, 1 ♀.

Chamaepetes goudotii tschudii Taczanowski

Fundo Sinchona, 1 ♀.

This specimen is definitely *tschudii* of northern Peru and Ecuador and not *rufiventris* of central Peru. The latter has been taken at Cushi Libertad in southern Huánuco, not far from Fundo Sinchona but on the opposite side of the Huallaga.

Pipile cumanensis cumanensis Jacquin

Yarinacocha, 1 ♀.

Aburria aburri Lesson

Fundo Sinchona, 2 ♂, 1 ♀; Divisoria, 1 ♀.

Family PHASIANIDAE

Odontophorus speciosus speciosus Tschudi

Fundo Sinchona, 1 ♂.

The males of the nominate race are most easily separated from *söderströmii* of eastern Ecuador by the heavy white streaking above, and the dark auriculars.

Hellmayr and Conover (1942, p. 275) state that the female of *speciosus* is unknown. There are at present two topotypical females of this race from Chanchamayo in the Conover collection. Above, they are like the males except that they lack the white shaft streaking. Below, the throat is black, the black extending up the sides of the head and including the auriculars, and the upper breast is bright chestnut, this color extending up the sides of the neck. The rest of the under parts are slate gray, many of the feathers being lightly edged with chestnut.

The females of *söderströmii* (three specimens from eastern Ecuador) are best separated from females of *speciosus* by the darker, more reddish brown of the upper parts and by the reddish auriculars. Hellmayr and Conover stated that the throat was black in the females, but the present specimens show a range of variation similar to that of the males, from pure black to auburn with only a few black bars on the lower throat. The rest of the under parts likewise vary from a clear brownish gray to a lighter gray tinged with chestnut.

Odontophorus stellatus Gould

Yarinacocha, 5 ♂, 1 ♀, 1 ♂ imm.

The gray on the hind neck and upper back extends considerably farther down the back in Peruvian specimens than in birds from Ecuador and Brazil.

Family PSOPHIIDAE

Psophia leucoptera leucoptera Spix

Cerro Azul, 2 ♂, 1 ♀.

Family RALLIDAE

Aramides cajanea cajanea Müller

Yarinacocha, 2 ♀.

Laterallus fasciatus Sclater and Salvin

Yarinacocha, 1 ♂, 1 ♀; Pucallpa, 1 ♂, 1 ♀.

Porphyryla martinica Linnaeus

Yarinacocha, 1 ♀ imm.

Family **HELIORNITHIDAE****Heliornis fulica** Boddaert

Yarinacocha, 1 ♂, 1 ♀.

Family **EURYPYGIDAE****Eurypyga helias helias** Pallas

Yarinacocha, 1 ♂.

Family **JACANIDAE****Jacana spinosa peruviana** Zimmer

Yarinacocha, 1 ♂, 1 ♀, 2 ♂ imm., 1 ♀ imm.

The two adult birds agree well with the type of *peruviana*, differing only in being slightly darker below. They are much darker than the neighboring race *jacana* but are poorly differentiated from the more distant race *intermedia* of Colombia and Venezuela (cf. Hellmayr and Conover, 1948, p. 9).

Family **SCOLOPACIDAE****Tringa solitaria solitaria** Wilson

Pucallpa, 1 ♂.

Tringa solitaria cinnamomea Brewster

Pucallpa, 1 ♀ imm.

Family **RECURVIROSTRIDAE****Himantopus himantopus melanurus** Vieillot

Yarinacocha, 1 ♂.

Although the white band across the back is only partially formed, the large amount of white on the head places this specimen nearer to *melanurus* than to *mexicanus* of North America and northern South America. The Ucayali valley seems to be the meeting ground

for these two races, since Zimmer (1930, p. 255) had an undoubted specimen of *mexicanus* from Puerto Bermudez.

Family LARIDAE

Phaetusa simplex Gmelin

Yarinacocha, 1 ♂, 2 ♀.

See Hellmayr and Conover (1948, p. 296, footnote) for the use of the binomial.

Family COLUMBIDAE

Columba cayennensis sylvestris Vieillot

Yarinacocha, 3 ♂, 2 ♀.

Columba subvinacea recondita Todd

Yarinacocha, 2 ♂, 2 ♀.

Although the whole of Peru has previously been considered within the range of *ogilvie-granti*, type locality Guayabamba, Peru, the present series is inseparable from a series of *recondita* from the Río Tapajoz. This is also true of a pair from the lowlands of eastern Ecuador. All previous records of *ogilvie-granti* from Ecuador and Peru are from above 3,000 feet, and it appears to be a race of the lower subtropical zone, whose place in the tropics is taken by *recondita* of Amazonian Brazil. In 1945 Gyldenstolpe (1945, p. 46) tentatively assigned specimens from the upper Juruá to *ogilvie-granti*, but more recently (1951, p. 58) he has reconsidered and placed them in *recondita*. In Bolivia *ogilvie-granti* descends to the tropics in the departments of Beni and Santa Cruz.

Columba plumbea subsp.

Yarinacocha, 2 ♂.

One of these specimens is typical of *pallescens* of Amazonia, and the other agrees with *bogotensis* of the eastern Andes. The former has been reported from Puerto Indiana on the lower Ucayali and the latter from Chanchamayo on the upper Ucayali drainage, so these specimens are intermediate geographically and they also indicate a mixed population morphologically.

Columba plumbea bogotensis Berlepsch and Leverkühn

Fundo Sinchona, 1 ♂.

This specimen agrees well with birds from the Chanchamayo valley; the separation between *bogotensis* and *pallescens* may prove to be altitudinal in eastern Peru.

Columbigallina talpacoti talpacoti Temminck

Yarinacocha, 2 ♂, 2 ♀.

Claravis pretiosa Ferrari-Perez

Yarinacocha, 1 ♂, 1 ♀.

Leptotila verreauxi decipiens Salvadori

Yarinacocha, 1 ♂, 1 ♀.

Leptotila rufaxilla dubusi Bonaparte

Yarinacocha, 1 ♀.

Osculatia saphirina rothschildi Sztolcman

Cerro Azul, 1 ♂.

The race *rothschildi* was separated from the nominate race of eastern Ecuador on the basis of the following characters, shown by a single female from Cadena, Marcapata Valley, Cuzco: lower back and rump more bluish, less purplish; white spot on secondaries larger; size smaller. The present specimen and a male from the Marcapata Valley amply confirm the validity of this race.

The most constant character is the color of the back, which is much more bluish-, less reddish-, purple in *rothschildi* than in *saphirina*. The extent of the white spot on the secondaries is more variable. In *saphirina* the spot is confined to one feather and measures about 2×4 mm. In the topotype of *rothschildi* the spot is similar to that in *saphirina*, but the Cerro Azul male has a white spot about 5×6 mm. on the innermost secondary, a 2×4 mm. spot on the adjoining feather, and white edgings on two of the others. In size, *rothschildi* seems to average smaller; wing measurements of 2 males are 134, 140; of five *saphirina* males from eastern Ecuador 138, 140, 141, 143, and 146.

The Cerro Azul specimen gives a large extension of range for this form. Further intensive collecting in the tropical zone along the foot of the Andes will be needed to determine if the range is really as fragmented as it appears to be.

Geotrygon montana montana Linnaeus

Yarinacocha, 2 ♂, 1 ♀, 1 ♀ imm.

Family PSITTACIDAE

Ara militaris militaris Linnaeus

Fundo Sinchona, 1 ♀.

Ara macao Linnaeus

Contamana, 1 ♀.

Ara manilata Boddaert

Yarinacocha, 1 ♀.

Ara couloni Sclater

Fundo Sinchona, 2 ♂.

This species is apparently a representative of *A. maracana*, but the differences are too striking to be considered only of subspecific value.

Aratinga weddelli Deville

Yarinacocha, 3 ♂, 2 ♀.

Forpus xanthopterygius crassirostris Taczanowski

Yarinacocha, 1 ♂ imm., 3 ♀.

Gyldenstolpe (1945, p. 52) shows that the races of the "*passerinus*" group of parrots which have bright blue rumps should be considered a separate species to which the name *xanthopterygius* should be applied.

Brotogeris versicolurus versicolurus Müller

Yarinacocha, 1 ♂, 2 ♀.

Brotogeris gustavi cyanoptera Salvadori

Yarinacocha, 3 ♂, 7 ♀.

Brotogeris g. cyanoptera is found throughout western Amazonia from southern Colombia through eastern Ecuador and Peru and western Brazil to northern and eastern Bolivia. *Brotogeris g. gustavi*, which is characterized by yellow on the bend of the wing and

the carpal edge, has a very restricted range in the upper Huallaga valley in northern Peru. Hitherto the two forms have been considered separate species. However, within a series of birds from Moyobamba and Yurimaguas on the lower Huallaga, two specimens have the bend of the wing and the carpal edge yellow, four show varying amounts of yellow on the wings, and the rest have plain green wings. Thus, the gap between *gustavi* and *cyanoptera* is fully bridged and the two forms must be considered conspecific, the specific name *gustavi* having priority. When the relationship between *cyanoptera*, *beniensis*, and *chrysosema* in northern Bolivia and western Matto Grosso is more fully explored it may be found that all three forms are conspecific.

Pionites melanocephala pallida Berlepsch

Yarinacocha, 1 ♂, 3 ♀.

Compared with three males of *P. m. melanocephala* from British Guiana, these birds are strikingly different, being paler buff on the breast and abdomen and having the throat, lower flanks, and thighs a pure clear yellow. In *melanocephala* the feathers of the latter parts are a light orange brick color with narrow yellow tips, but in the Peruvian specimens they are pure yellow down to the base. A pair of birds from Sarayacu, Ecuador, however, is exactly intermediate between *melanocephala* and Peruvian *pallida*. They are darker buff below as in *melanocephala*, but have the flanks and thighs yellow with only a faint tint of reddish. Close examination shows, however, that all the feathers are pinkish at the base, as opposed to the pure yellow feathers of the Peruvian birds, so that the difference in color is not due to varying degrees of wear. If larger series from Ecuador and Peru should show that these differences are constant, a third race would have to be separated. At present the type locality of *pallida* is "eastern Peru and eastern Ecuador." To avoid confusion in case it becomes necessary to describe a third race, I suggest that the type locality of *pallida* be restricted to Yurimaguas, Dept. San Martín, Peru, the only locality from which Berlepsch listed a specimen (1889, p. 317).

Amazona festiva festiva Linnaeus

Yarinacocha, 1 ♀ imm.

Amazona amazonica amazonica Linnaeus

Yarinacocha, 1 ♂, 1 ♀.

These specimens differ from birds from the rest of South America in having a pale ashy blue wash to the plumage and in having the black edges on the feathers of the hind neck more distinct. The bills are also much larger: culmen from cere, ♂ 35, ♀ 34, as opposed to 9 ♂♂ 30–32, 8 ♀♀ 27–31, for birds from Venezuela, the Guianas and Brazil. However, of the birds available for comparison only one female is from Amazonia, the restricted type locality of *amazonica*, so that it is not possible to say what separation, if any, is warranted.

Griscom and Greenway's race, *micra* (1937, p. 420) appears valid, but with its range restricted to Dutch Guiana and possibly eastward. A single male from Dutch Guiana has a wing of 198, within the range of *micra* as defined by the authors, but two males from British Guiana have wings 212 and 219, well within the range of typical *amazonica*.

Amazona farinosa inornata Salvadori

Yarinacocha, 1 ♂; Cerro Azul, 1 ♂, 1 ♀.

Wing lengths of 240–245 place these specimens in the subspecies *inornata*, rather than in the larger race *chapmani*. At the time of the original description of *chapmani* (Traylor, 1948, p. 195) I believed that its range was divided into two widely separated parts, eastern Ecuador and Bolivia respectively, with *inornata* being found in Brazil and Peru. Recently, however, Bond (1955b, p. 232) has recorded a specimen of *chapmani* from El Tingo, on the Huallaga River, Dept. San Martín, and suggests that populations of this form will be found in Peru west of the eastern Andes.

Family CUCULIDAE

Coccyzus erythrophthalmus Wilson

Yarinacocha, 1 ♂.

Coccyzus americanus subsp.

Yarinacocha, 1 ♀.

The wing of this specimen is 147, halfway between the averages of *americanus* and *occidentalis*.

Piaya cayana nigricrissa Cabanis

Yarinacocha, 2 ♂, 2 ♀; Pucallpa, 1 ♀; Fundo Sinchona, 1 ♂; Divisoria, 1 ♀.

Piaya minuta minuta Vieillot

Yarinacocha, 1 ♂ juv.

The juvenile plumage has been well described by Zimmer (1930, p. 261).

Crotophaga major Gmelin

Yarinacocha, 2 ♂, 2 ♀.

Crotophaga ani Linnaeus

Yarinacocha, 4 ♂, 2 ♀.

Tapera naevia naevia Linnaeus

Yarinacocha, 2 ♂, 1 ♀.

Since Bangs and Penard (1918, p. 50) resurrected the race *chochi* for the birds of southern South America on rather meager material there has been very little agreement among authors as to the validity of the race, or the range it supposedly occupies. Peters (1940, p. 58) gave its range as from Matto Grosso to northern Argentina. Bond, however (1955b, p. 235), includes birds from western Peru, western Ecuador, and Colombia within the race. He also questions whether *excellens* of Mexico and Central America can be separated from *chochi*.

The characters separating *chochi* from *naevia* of the Guianas, as given by Bangs and Penard, were greater size and more brownish coloration above. With 31 adult males available, covering the whole range of the species, it is evident that these differences are apparent on the average, but not to a degree sufficient to maintain *chochi* as a distinct subspecies.

Specimens from the Guianas and Venezuela have the edges of the back feathers and the long upper tail coverts a pale grayish brown, without much warmth. They also average the smallest of any population (wing lengths of 8 ♂♂: 101, 107, 108, 108, 109, 109, 111, 115; av. 108.5). The two males from Yarinacocha approximate this group both in color and size (wings 106 and 109). Birds from southern Brazil, Paraguay and Bolivia, the *chochi* of Peters, have the pale edgings to the back feathers and upper tail coverts, on the average, a more buffy, less grayish brown. There is, however, so much overlap in color between the two populations that only the extremes of each series could be allocated to *naevia* or *chochi* without reference to localities. In size the southern population averages

larger than the northern, although again there is wide overlap (wing lengths of 11 ♂♂: 109, 110, 111, 111, 112, 112, 112, 112, 114, 118, 119; av. 113).

Birds from Panama to western Ecuador and Peru are, as noted by Bond, inseparable from the populations of southern South America despite their wide separation geographically. They may average slightly browner, less gray above, but it would not be possible to determine the origin of any specimen on color alone. Size is virtually identical (wing length of 6 ♂♂: 107, 110, 111, 112, 115, 116; av. 112).

Specimens from Costa Rica to Mexico are quite distinct from the other populations and merit separation as *excellens*. The pale margins of the feathers of the upper parts are a warm tawny, and all seven of our specimens can be separated on this character alone. They also average larger (wing lengths of 4 ♂♂: 113, 120, 121, 122; av. 119).

To summarize the variation within the species, populations from northeastern South America and eastern Peru average smaller and grayer than populations from southern and northwestern South America, but the differences are not sufficient to separate two races. All should bear the name *naevia*, with *chochi* as a synonym. The population from Costa Rica to Mexico is much more tawny above, and should be called *excellens*.

Neomorphus geoffroyi aequatorialis Chapman

Divisoria, 1 ♀.

This bird definitely belongs to the *salvini* group of this species, which is found from Ecuador to Nicaragua and is characterized primarily by the plain unbarred forehead. Above, however, it shows an approach to *geoffroyi* in being more greenish, less violet, particularly on the upper back and secondaries. This is apparently the first record of this form for Peru, although Carriker (1935, p. 316) records a specimen of *N. g. australis*, a race of the *geoffroyi* group with barred forehead, from Huacamayo, Puno, Peru. The Divisoria bird is just completing its molt from juvenal directly to adult plumage, as noted by Chapman (1926, p. 339).

Family STRIGIDAE

Otus choliba crucigerus Spix

Yarinacocha, 2 ♂, 3 ♀.

Lophostrix cristata amazonica Kelso

Yarinacocha, 1 ♀, 1 ♂ imm.

Compared with three specimens of *cristata* from Lago do Baptista, Amazonas, near the mouth of the Rio Madeira. The female is more brown, less rufous than the Rio Madeira birds, one of the characters used by Kelso (1940) in separating the race.

Pulsatrix perspicillata perspicillata Latham

Yarinacocha, 3 ♂, 1 ♀, 1 ♂ imm.

The Yarinacocha birds are slightly deeper buff below and darker brown on the back and scapulars than birds from Pará and Guiana. The paler back of the Pará specimens shows up in series in the greater contrast between the back and dark head.

Pulsatrix melanonota Tschudi

Divisoria, 1 ♂.

Compared to two specimens from Colombia and Ecuador, this bird and a female from Chanchamayo are more blackish, less rufous brown, particularly on the breast and in the barring on the abdomen.

Glaucidium brasilianum ucayalae Chapman

Yarinacocha, 1 ♂.

Family NYCTIBIIDAE

Nyctibius grandis Gmelin

Yarinacocha, 1 ♂, 2 ♀.

Nyctibius griseus griseus Gmelin

Yarinacocha, 1 ♂.

This bird is small, with a wing length of only 250. Other specimens from Peru show that the population from the lower slopes of the Andes is referable to the larger *panamensis*. Zimmer (1930, p. 267) had a male from Huachipa with a wing of 272, and Taczanowski (1884, p. 207) lists a female from eastern Peru with a wing length of 285. This large race apparently extends along the eastern slope of the Andes all the way to Argentina, since a male and female from the Department of Santa Cruz, Bolivia, have wing lengths of 265 and 266, and two males from Tucuman, Argentina, have wing lengths of 279 and 267. The small nominate race is found through-

out the lowlands of South America (see Wetmore, 1926, p. 202, and Laubmann, 1940, p. 1).

Family CAPRIMULGIDAE

Nyctidromus albicollis albicollis Gmelin

Yarinacocha, 4 ♂, 1 ♀.

I agree with Zimmer (1930, p. 268) that *obscurus* Cory from Yurimaguas was based on a particularly dark individual variant, and that the Peruvian population belongs with the nominate race.

Caprimulgus serico-caudatus serico-caudatus Cassin

Yarinacocha, 1 ♂.

This specimen closely resembles Cassin's description (1849, p. 238) of the adult plumage except for the heavy spotting on the abdomen and barred under tail coverts, which Cassin considered juvenal characters. The unique tail pattern, in which the white tips to the feathers make a perfect band when the tail is spread, is beautifully demonstrated.

This specimen, however, is smaller than Cassin's (comparative measurements: wings 165, 184; tails 125, 140).

Until recently there were no definite locality records for this species, but Griscom and Greenway (1941, p. 165) reported a female from Santarem, and de Schauensee (1941, p. 316) reported another female from Curytiba, southeastern Brazil. The present specimen is the first record from Peru, and shows that the species is widely if sparsely distributed.

Family TROCHILIDAE

Glaucis hirsuta affinis Lawrence

Yarinacocha, 1 ♂; Pucallpa, 2 ♀.

Glaucis hirsuta insularum Hellmayr and Seilern

Pucallpa, 2 ♂ imm.

These males are much larger (wings 66 and 69) than the resident race *affinis* (wing of males 58-62) and evidently are migrants of the West Indian race *insularum* (wing of males 66-70). The latter form is not noted by Bond (1950, p. 83) as being migratory. However, Zimmer (1950a, p. 6) lists two dealer skins from H. Whitely, labeled

"Peru" and "Brazil" respectively, with wing lengths of 74 and 71. He believed that the localities were incorrect, and referred both specimens to *insularum*. Since we now have from eastern Peru two accurately labeled specimens of this large form, taken February 28 and March 9, it appears that *insularum* is at least partially migratory, and Zimmer's skins are probably correctly labeled. The alternative is that the large form in Peru represents an undescribed species.

Phaethornis hispidus Gould

Pucallpa, 1 ♀.

Phaethornis philippi Bourcier

Yarinacocha, 1 ♂.

A rare species, previously recorded only from Orosa and Lagarto in Peru (see Zimmer, 1950a, p. 31).

Phaethornis longuemareus atrimentalis Lawrence

Yarinacocha, 2 ♀.

Anthracothorax nigricollis nigricollis Vieillot

Yarinacocha, 2 ♀.

Chlorostilbon mellisugus napensis Gould

Yarinacocha, 1 ♀.

This specimen exhibits the peculiar characters described by Zimmer (1950b, p. 1) for the females of this race. The breast and abdomen are heavily spotted with metallic green, and the under tail coverts are green, with fine pale edgings. The throat, however, is gray and the presence of new gray feathers coming in on the throat gives further assurance that this is a female, and not a young male assuming adult plumage.

Thalurania furcata jelskii Taczanowski

Fundo Sinchona, 1 ♂.

Hylocharis cyanus rostrata Boucard

Yarinacocha, 1 ♂ imm., 1 ♀.

Amazilia lactea bartletti Gould

Yarinacocha, 2 ♂, 3 ♀.

Adelomyia melanogenys melanogenys Fraser

Fundo Sinchona, 1 ♀.

I follow Zimmer (1951, p. 20) in the subspecific allocation of this specimen.

Phlogophilus harterti Berlepsch and Stolzmann

Fundo Sinchona, 1 ♀.

This is apparently a rare species, the type and three specimens reported by Zimmer (1951, p. 15) being the only recorded examples. The present specimen is virtually identical with Zimmer's Pozuzo male, which I have had the privilege of examining. Both differ somewhat from the original description (1901, p. 717), being uniform buffy below, rather than darker on the throat and whitish on the belly, and having the disk-like markings faint on the sides of the throat and wanting on the flanks.

Polyplancta aurescens Gould

Fundo Sinchona, 1 ♀.

Ocreatus underwoodi peruanus Gould

Fundo Sinchona, 2 ♂.

Heliothryx aurita phainolaema Gould

Fundo Sinchona, 1 ♀.

The bill length of this specimen is 17 mm., exactly between the ranges of 14.5–17 for *auriculata* and 17–19.5 for *phainolaema* as recorded by Zimmer (1953, p. 7). On geographical grounds, it belongs with *phainolaema*.

Family **TROGONIDAE****Pharomachus mocino antisianus** d'Orbigny

Divisoria, 1 ♂.

Trogon melanurus eumorphus Zimmer

Yarinacocha, 1 ♂.

This specimen shows the heavier black markings on the wing coverts, one of the characters used by Zimmer (1948, p. 38) in separating this race.

Trogon collaris castaneus Spix

Fundo Sinchona, 1 ♀.

Trogon curucui peruvianus Swainson

Yarinacocha, 1 ♂.

Zimmer (1948, p. 22) has shown that *peruvianus* Swainson is an earlier name for the form commonly called *bolivianus* Ogilvie-Grant.

Family **ALCEDINIDAE****Ceryle torquata torquata** Linnaeus

Yarinacocha, 2 ♂.

Chloroceryle amazona amazona Latham

Yarinacocha, 2 ♂, 3 ♀.

Chloroceryle americana americana Gmelin

Yarinacocha, 2 ♂, 1 ♀.

Chloroceryle inda inda Linnaeus

Yarinacocha, 1 ♂.

Family **MOMOTIDAE****Baryphthengus ruficapillus martii** Spix

Cerro Azul, 1 ♀.

Comparison of this specimen with two specimens from Moyobamba and Rioja, including the type of *olivacea* Cory, shows that there is a surprising amount of individual variation in the color of the upper parts in this species. Cory (1918, p. 108) separated *olivacea* on the basis of the bright yellowish olive green of the back. The Cerro Azul bird, however, is dark olive green above, even darker than specimens from Colombia and Ecuador, and Cory's type is only an extreme individual variant. Lletget's *aequatorialis* (1942, p. 338) was based on two specimens from Avila, eastern Ecuador, and was separated from *olivacea* on its darker green back and shorter wing. Lletget did not compare *aequatorialis* with *semirufus*, which he believed to be in the separate genus *Urospatha*. He had no comparative material, working solely from published descriptions, and *aequatorialis* must remain in the synonymy of *martii* unless further collecting proves it valid.

Momotus momota bartletti Sharpe

Yarinacocha, 1 ♂, 1 ♀.

Although Chapman (1923, p. 42) considered *bartletti* a synonym of *ignobilis*, these two birds and a male from Madre de Dios, south-eastern Peru, agree closely with Sharpe's plate of *bartletti* (1892, pl. 9) and do not agree at all with the original description of *ignobilis* (Berlepsch, 1889, p. 307) or with Chapman's description of his three examples of that race from Perene, near La Merced. The latter had greenish breasts and "quite strongly contrasted cinnamon abdomen." The Yarinacocha and Madre de Dios birds are uniformly rufous below, with only some green on the throat, and in this respect are identical with a single specimen of *simplex* from Santarem. Above, they also resemble *simplex*, but the chestnut nuchal patch is evident and there is a tawny wash on the upper back. In these last two characters they again differ from *ignobilis*.

Gyldenstolpe (1945, p. 93) suggested that *bartletti* might have to be revived for the birds of the upper Juruá and eastern Peru, but he hesitated to do so because of lack of topotypical material. With the three Yarinacocha and Madre de Dios birds at hand, agreeing with the original description of *bartletti*, and with Gyldenstolpe's description of Juruá specimens, such a course appears justified. The range of *bartletti* appears to be the tropical lowlands of eastern Peru south of the Amazon and adjoining Brazil. In the upper tropical and subtropical zones its place is taken by *ignobilis* in northern and central Peru, and by the very distinct *chlorolaemus* Berlepsch and Stolzmann of southern Peru.

Family GALBULIDAE

Galbalcyrhynchus purusianus Goeldi

Yarinacocha, 2 ♂.

Galbalcyrhynchus purusianus and *leucotis* have been considered conspecific by recent authors, the only difference between them being the presence of a white auricular patch in *leucotis*. The bird of northeastern Peru has always been considered *leucotis* since Bartlett found it at "Sarayacu, Upper and Lower Ucayali and Yurimaguas, but not common (E. B.);" (Selater and Salvin, 1873, p. 294). However, Bartlett evidently collected both forms, since Selater and Salvin (1866, p. 192), in reporting on Bartlett's four specimens, state: "One of them has not the white auricular spot, which is perhaps characteristic of the male bird." It is now known that the

white spot is found in both sexes, so that the single unspotted bird could not have been the female of *leucotis*. The two adult males of *purusianus* from Yarinacocha are further proof that both forms are found on the Ucayali, and in the absence of intergrades they must be maintained as distinct species.

Galbula cyanescens Deville

Yarinacocha, 3 ♂, 2 ♀.

Todd (1943a, p. 7) and Gyldenstolpe (1945, p. 96) have both shown that *G. tombacea* and *G. cyanescens* are separate species.

Jacamerops aurea aurea P. L. S. Müller

Yarinacocha, 1 ♂, 1 ♀.

I agree with Bond (1954, p. 46) that *isidori* Deville, type locality Sarayacu, is inseparable from the nominate race of British Guiana. Five males from British Guiana show every variant in the color of the upper parts from plain green with only a trace of blue on the pileum to one bird with a reddish-golden mantle and dark violet blue pileum. The two Yarinacocha specimens, virtual topotypes of *isidori*, fall within this range of variation and must be called *aurea*.

Family **BUCCONIDAE**

Notharchus macrorhynchos hyperrhynchus Sclater

Yarinacocha, 1 ♂, 1 ♀; Pucallpa, 1 ♂.

Bucco macrodactylus Spix

Yarinacocha, 1 ♂.

This specimen differs from two Colombia birds in being darker brown, less rufous above.

Bucco capensis dugandi Gilliard

Yarinacocha, 1 ♀.

This recently separated form (Gilliard, 1949, p. 1) ranges from southwestern Venezuela to northeastern Peru. We do not have sufficient material to examine it critically.

Monasa nigrifrons nigrifrons Spix

Yarinacocha, 5 ♂, 2 ♀; Contamana, 1 ♀.

Chelidoptera tenebrosa tenebrosa Pallas

Yarinacocha, 3 ♂, 1 ♀; Lous(?), Río Pachutia(?), 1 ♂.

Fifteen Peruvian specimens average somewhat larger than eighteen typical specimens from the Guianas and central Brazil (wing 111.5 as against 105.3; tail 57.3 as against 51.7). There are no color differences, however, and the size differences are not sufficient to be separable.

Gyldenstolpe (1945, p. 106) states that Cory's race *pallida* (1913, p. 288) from northwestern Venezuela, if actually separable from *tenebrosa*, will have to be known by Bonaparte's name *albipennis* (1853, p. 47), which was based on a specimen from Cumana in eastern Venezuela and has many years priority. A re-examination of Cory's series shows that *pallida* is, indeed, a well-marked race, being paler below, particularly on the abdomen, and with a whitish band separating the black breast from the rufous abdomen. These differences in no way agree with Bonaparte's description "kleiner und schwarzer," and the race should be known by Cory's name. This arrangement also fits better the geographical facts, since birds from Cumana, in eastern Venezuela, would be expected to agree with Guiana specimens, and birds from the Maracaibo basin, west of the Cordillera Merida, could well be different. This accords with Selater's statement (1882, p. 165) that Bonaparte's type of *albipennis* belonged with *tenebrosa*, and a single male from Amacuro in eastern Venezuela is as dark as *tenebrosa* from British Guiana.

Family **CAPITONIDAE****Capito aurovirens** Cuvier

Yarinacocha, 1 ♂, 1 ♀; Contamana, 1 ♂.

Capito niger subsp.

Yarinacocha, 1 ♂.

Peters (1948, p. 25) recognizes neither *macintyreii* nor *conjunctus* of Brodkorb (1939, p. 135), placing them both in the synonymy of *punctatus*. Bond (1954, p. 49) recognizes *macintyreii* for the population of eastern Ecuador and Peru, with *conjunctus* as a synonym. Having no specimens of *punctatus*, and only one specimen from eastern Ecuador (*macintyreii*), I have not found it possible to form a critical opinion on these races.

Eubucco versicolor steerii Sclater

Divisoria, 1 ♂.

Family **RAMPHASTIDAE****Aulacorhynchus prasinus atrogularis** Sturm

Fundo Sinchona, 1 ♀.

This specimen has been compared with three topotypes of *atrogularis* from Chanchamayo with which it agrees exactly, although Peters (1948, p. 73) suggests that birds from the Department of Huánuco will be *dimidiatus* Ridgway. Ridgway (1886, p. 93) described *dimidiatus* from two skins found on an Indian belt and suggested that they came from the Orinoco or upper Río Negro; however, it is now known that such is not the case. The author characterized *dimidiatus* as "similar to *A. atrogularis* (Sturm) but with the bill very much shorter, the gonys very little longer than the ramus of the mandible, instead of nearly twice as long, and black stripe along edge of mandible much broader."

The relationship between the lengths of the gonys and ramus differs markedly between the two sexes in this species, the gonys in the females being proportionately much shorter than in the males. Through the courtesy of Dr. Herbert Friedmann of the National Museum, I have been able to examine Ridgway's two specimens of *dimidiatus*. They are both small females, and in the proportion of gonys to ramus fall within the limits of *atrogularis*, as shown by the comparative measurements.

	Sex	Wing	Culmen	Gonys	Ramus	Gonys/ Ramus
Chanchamayo.....	♀	114	59	38	30	1.27
Chanchamayo.....	♀	116	60	36	34	1.06
Chanchamayo.....	♀	107	61	37	32	1.15
Fundo Sinchona.....	♀	109	59	39	31	1.25
Marcapata.....	♀	113	56	34	31	1.10
"dimidiatus" type.....	(♀)	120	57	37	30	1.23
"dimidiatus".....	(♀)	—	55	33	31	1.07

The proportion of gonys to ramus for *atrogularis* varies from 1.06 to 1.27 and for *dimidiatus* from 1.07 to 1.23, so that there is evidently no difference in this character. In absolute size of culmen, however, the two *dimidiatus* are at the small extreme of *atrogularis*. This size difference does not appear to be due to age, since in all other respects they seem to be adult. The pattern of the coloring of the culmen is

sharp and clean cut, instead of being blurred as in young birds; the culmenal stripe, however, is not significantly wider than in *atrogularis*.

Bond (1954, p. 51) had a single specimen from "W. Peru" which he assigned to *dimidiatus* because of its wide culmenal stripe. In size it agreed with *atrogularis* (culmen 75;= ♂). As noted above, the width of the culmenal stripe is not a good character when the type series is compared to *atrogularis*; it is probable that Bond's specimen is an aberrant *atrogularis*. Unless adequately labeled specimens later show that a race exists with a notably small bill, *dimidiatus* should be placed in the synonymy of *atrogularis*.

Pteroglossus castanotis castanotis Gould

Yarinacocha, 3 ♂, 1 ♀.

These birds have larger bills and lack the brown patch on the crown characteristic of the southern race *P. c. australis* (see Traylor, 1952, p. 19, for the characters and ranges of these two forms).

Pteroglossus viridis humboldti Wagler

Yarinacocha, 1 ♂, 1 ♀; Pucallpa, 1 ♀.

These specimens, particularly the two females, have a dirty chestnut wash over the center of the abdomen. This is not in agreement with the descriptions of Gould (1854, pl. 22) and Sclater (1891, p. 146), who give the color of the under parts as pale yellow. However, these birds evidently agree with the specimens from which Taczanowski (1886, p. 149) took his descriptions "jaune sulfureux en dessous; milieu de l'abdomen largement coloré d'une nuance rougeâtre sale et pâle."

It appears possible that the population of northeastern Peru may have to be separated from that of Brazil on the basis of the reddish wash on the center of the abdomen. The earliest available name would be *didymus* Sclater (1890, p. 403) from upper Amazonia. This form is known only from the unique type, which differs from *humboldti* (type locality Teffé, Rio Solimoes, as restricted by Gyldenstolpe, 1951, p. 120) in the reddish wash on the abdomen and the lack of black serrations on the edge of the upper mandible. The latter character must be due to immaturity or be an individual variant, since in all other characters *didymus* is identical with specimens from Peru.

Pteroglossus mariae Gould

Yarinacocha, 1 ♂; Cerro Azul, 1 ♂.

Todd (1943b, p. 161) has shown that the ranges of *flavirostris* and *mariae* overlap and that they should be considered separate species.

Pteroglossus bauharnaesii Wagler

Yarinacocha, 1 ♂, 2 ♀, 1 ♀ imm.

The feathers on the crown of the immature bird have black scaly, uncurled tips about 4 to 5 mm. long and 1 mm. wide. The bill is short and a uniform dirty orange, "pico naranjudo con matriz negro." The plumage pattern is similar to the adult but duller, and there are no scaly feathers on the throat.

Selenidera reinwardtii langsdorffi Wagler

Yarinacocha, 1 ♀.

Bond (1954, p. 52) records an intermediate population between *reinwardtii* and *langsdorffi* from Moyobamba, demonstrating that the two forms are conspecific.

Ramphastos culminatus Gould

Yarinacocha, 1 ♀.

Ramphastos ambiguus ambiguus Swainson

Fundo Sinchona, 3 ♂, 1 ♀; Divisoria, 1 ♀.

Ramphastos cuvieri cuvieri Wagler

Yarinacocha, 1 ♂, 1 ♀.

Family PICIDAE

Picumnus cirratus jelskii Taczanowski

Fundo Sinchona, 1 ♂.

Chrysoptilus punctigula speciosus Malherbe

Yarinacocha, 2 ♂, 1 ♀; Cerro Azul, 1 ♀.

Piculus flavigula flavigula Boddaert

Pucallpa, 1 ♀.

The wing length of this specimen (122) is slightly greater than the wing lengths in a series of five females from British Guiana (114-120). There are no color differences, however, and the small size

difference is not sufficient to place this bird in the race *magnus* of western and southern Brazil.

Piculus chrysochloros laemostictus Todd

Cerro Azul, 1 ♂.

This is, apparently, the first record of this species for Peru. Geographically it should belong in *laemostictus*, and in general fits the original description. Todd failed to give any measurements, but this must be one of the larger subspecies since this specimen has a wing of 142 compared to a range of 117–127 for a series of eight specimens of *chrysochloros* from Paraguay. In color it agrees quite closely with the nominate race, except that it lacks the red mystacial stripe, a character noted by Gyldenstolpe (1945, p. 117), who also called attention to the large size of Rio Juruá specimens.

Celeus spectabilis subsp.

Yarinacocha, 1 ♂.

Sclater and Salvin (1880, p. 161) described this species from a single specimen from eastern Ecuador. In 1941, Bond and de Schauensee (1941, p. 4) separated a race, *exsul*, from Bolivia. It was characterized as being less heavily marked below, the flanks being almost immaculate, and in having the red markings on the sides of the head in the male extending over the eye. The Yarinacocha male shows the former character, but not the latter. The black marks on the mantle are chordate, rather than barred, in *exsul*, and the present specimen is intermediate. Bond and de Schauensee had a pair from Ecuador and a pair from Bolivia; they did not say to what extent their specimens agreed with the plate of the type (Hargitt, 1890, pl. 10). In the specimen from Yarinacocha the rufous of the head is much darker than in the plate and is confined to the head instead of extending over the neck. The neck is pale buff above, like the ground color of the back, and is black below, like the breast. Except for Bond and de Schauensee's four specimens, the only previous record for this species is apparently the type.

Celeus jumana citreopygius Slater and Salvin

Yarinacocha, 1 ♀.

This specimen, as well as a male from Aramasso Island, Rio Solimoes, Brazil, agrees with the description of *citreopygius* in having rufous upper tail coverts, but both birds have the inner webs of the

remiges barred with black at the basal half, a character of *jumana*. The Yarinacocha bird is a dark sooty brown on the head and breast, with very little rufous.

Celeus torquatus occidentalis Hargitt

Yarinacocha, 2 ♂, 1 ♀.

Celeus flavus peruvianus Cory

Yarinacocha, 4 ♂, 1 ♀, 1 ♀ imm.

There are apparently two color phases in this species, one bright yellow and the other buff. Of five British Guiana specimens, two are in the yellow phase, two are in the buff phase, and the last is intermediate. Of eight Peruvian specimens, five are bright yellow, two are dirty orange buff, the phase that Cory (1919, p. 457) used for his type of *peruvianus*, and an immature female is pale buff. Although Todd (1946, p. 306) considered that these differences in plumage were solely due to wear, birds in equally fresh plumage may be found in either phase. The differences are not, apparently, due to age, since a buff-plumaged British Guiana male, presumably adult, is moulting, and the new feathers are coming in buff. In both phases the Peruvian birds are much darker and certainly deserve separation from the nominate race.

Dryocopus lineatus lineatus Linnaeus

Yarinacocha, 2 ♂.

Melanerpes cruentatus extensus Todd

Yarinacocha, 1 ♂.

Veniliornis affinis hilaris Cabanis and Heine

Yarinacocha, 1 ♀.

Phloeocastes melanoleucus melanoleucus Gmelin

Yarinacocha, 1 ♂, 1 ♀, 1 ♂ (= ♀).

Phloeocastes rubricollis trachelopyrus Malherbe

Yarinacocha, 1 ♀; Contamana, 1 ♂, 1 ♀; Pucallpa, 1 ♀.

Two females from Para and five from Bolivia average smaller than six from Peru and warrant separation as *olallae* Gyldenstolpe (1945, p. 127): wing measurements of seven *olallae* females 175-183

(av. 180), of six *trachelopyrus* females 182–196 (av. 188.5). Birds from the Yungas of Cochabamba (2100 meters) and Incachaca, Cochabamba (2300 meters), are the same as specimens of *olallae* from eastern Bolivia, but Gyldenstolpe lists a single specimen from 2400 meters in La Paz as *trachelopyrus*. Bond (1954, p. 61) records the same distribution for his Bolivian specimens, *trachelopyrus* in La Paz and *olallae* in Cochabamba.

Phloeoceastes haematogaster haematogaster Tschudi

Fundo Sinchona, 2 ♀.

Family **DENDROCOLAPTIDAE**

Dendrocolaptes picumnus validus Tschudi

Fundo Sinchona, 1 ♀.

Xiphorhynchus picus peruvianus Zimmer

Yarinacocha, 2 ♂, 1 ♀.

Xiphorhynchus guttatus guttatoides Lafresnaye

Yarinacocha, 2 ♀.

Xiphorhynchus triangularis triangularis Lafresnaye

Fundo Sinchona, 1 ♀.

Xiphorhynchus ocellatus chunchotambo Tschudi

Fundo Sinchona, 1 ♂.

Xiphorhynchus spixii insignis Hellmayr

Yarinacocha, 1 ♀.

Family **FURNARIIDAE**

Furnarius leucopus tricolor Giebel

Yarinacocha, 2 ♂, 6 ♀; Contamana, 1 ♂.

Synallaxis albigularis Sclater

Yarinacocha, 1 ♂, 1 ♀.

Synallaxis rutilans amazonica Hellmayr

Yarinacocha, 1 ♂, 1 ♀.

Certhiaxis mustelina Sclater

Yarinacocha, 7 ♂, 2 ♀.

Cranioleuca curtata cisandina Taczanowski

Fundo Sinchona, 1 ♂, 1 imm. ♂.

Cranioleuca vulpina vulpecula Sclater and Salvin

Yarinacocha, 2 ♀.

Metopothrix aurantiacus Sclater and Salvin

Yarinacocha, 1 ♂.

Xenotistes rufosuperciliatus cabanisi Taczanowski

Fundo Sinchona, 1 ♂.

Family **FORMICARIIDAE****Cymbilaimus lineatus intermedius** Hartert and Goodson

Fundo Sinchona, 1 ♀.

Taraba major melanurus Sclater

Yarinacocha, 5 ♂, 2 ♀; Contamana, 1 ♂.

Thamnophilus doliatus subradiatus Berlepsch

Yarinacocha, 2 ♂.

Thamnophilus palliatus similis Zimmer

Fundo Sinchona, 1 ♂, 2 ♀.

Thamnophilus aethiops kapouni Seilern

Yarinacocha, 1 ♀.

Dysithamnus mentalis tambillanus Taczanowski

Fundo Sinchona, 1 ♂.

Pygiptila stellaris maculipennis Sclater

Yarinacocha, 1 ♂, 1 ♀.

Myrmotherula haematonota sororia Berlepsch and Stolzmann

Fundo Sinchona, 1 ♂.

Myrmotherula axillaris heterozyga Zimmer

Yarinacocha, 4 ♂, 2 ♀.

The males are markedly paler than two males of *melaena* from Moyobamba and Rioja, and the females are more grayish, less reddish brown.

Cercomacra cinerascens sclateri Hellmayr

Yarinacocha, 1 ♂; Pucallpa, 1 ♀, 1 ♂ (= ♀).

Cercomacra nigrescens fuscicauda Zimmer

Yarinacocha, 2 ♀; Fundo Sinchona, 3 ♂; Contamana, 1 ♀.

This is a particularly well-marked race in the female, the wings and tail being so much darker than in *notata* of north-central Peru as to appear a different species.

Pyriglena leuconota castanoptera Chubb

Fundo Sinchona, 1 ♀.

This specimen is identical with Chubb's description (1916, p. 47) of the type of *castanoptera*.

Myrmoborus myotherinus myotherinus Spix

Yarinacocha, 1 ♂.

Hypocnemis cantator peruviana Taczanowski

Yarinacocha, 1 ♀.

Sclateria naevia argentata Des Murs

Yarinacocha, 1 ♀.

Myrmeciza melanoceps Spix

Yarinacocha, 2 ♂, 2 ♀; Pucallpa, 1 ♂.

Formicarius colma nigrifrons Gould

Cerro Azul, 1 ♂.

Formicarius analis analis d'Orbigny and Lafresnaye

Yarinacocha, 3 ♂.

Formicarius rufipectus thoracicus Taczanowski and Berlepsch

Divisoria, 1 ♂.

Gymnopithys lunulata Sclater and Salvin

Yarinacochoa, 1 ♀.

This is the fourth known specimen (all females) of this species, the male of which either has not been collected or has not been recognized. This specimen differs from descriptions only in lacking the white interseapular spot.

Rhegmatorhina melanosticta brunneiceps Chapman

Cerro Azul, 1 ♂.

Hylophylax poecilonata lepidonata Sclater and Salvin

Yarinacochoa, 1 ♀.

Phlegopsis nigro-maculata nigro-maculata d'Orbigny and Lafresnaye

Yarinacochoa, 3 ♂, 1 ♀.

Myrmothera campanisoma minor Taczanowski

Cerro Azul, 1 ♂.

Family COTINGIDAE

Pipreola pulchra Hellmayr

Divisoria, 1 juv. ♂.

Rhytipterna simplex frederici Bangs and Penard

Yarinacochoa, 1 ♂, 1 ♀.

Lipaugus cryptolophus cryptolophus Sclater and Salvin

Divisoria, 1 ♂, 1 ♀.

Pachyramphus castaneus saturatus Chapman

Yarinacochoa, 1 ♂.

Pachyramphus polychopterus tenebrosus Zimmer

Yarinacochoa, 1 ♂.

Zimmer (1936b, p. 10) includes the Ucayali in the range of *niger* of western Brazil, but the present specimen agrees exactly with the diagnosis of *tenebrosus*, "even more decidedly black" than *niger*. It

is considerably darker than a specimen from Yurimaguas that Zimmer referred to *tenebrosus*, although it showed an approach to *niger*.

Platypsaris minor minor Lesson

Yarinacocha, 1 ♂.

This specimen is identical in color with a male from British Guiana. De Schauensee (1953, p. 42) has recently resurrected the name *roseicollis* Lafresnaye and d'Orbigny for a race in Bolivia, characterized in the male by paler under parts, the pink of the throat spreading over the breast, and greater size. We have no material of this form, but the wing length of the Yarinacocha bird is 96 mm., the measurement given for de Schauensee's Bolivian male.

Tityra cayana cayana Linnaeus

Pucallpa, 1 ♂.

Querula purpurata Müller

Yarinacocha, 3 ♂.

Cephalopterus ornatus ornatus Geoffroy Saint-Hilaire

Fundo Sinchona, 2 ♀.

Gymnoderus foetidus Linnaeus

Yarinacocha, 1 ♀.

Rupicola peruviana peruviana Latham

Fundo Sinchona, 3 imm. ♂.

Family PIPRIDAE

Machaeropterus pyrocephalus pyrocephalus Sclater

Yarinacocha, 2 ♂, 1 ♀.

Schiffornis major major Des Murs

Yarinacocha, 1 ♂.

Family TYRANNIDAE

Muscisaxicola fluviatilis Sclater and Salvin

Fundo Sinchona, 2 ♂.

Sayornis nigricans angustirostris Berlepsch and Stolzmann

Fundo Sinchona, 1 ♂.

Colonia colonus niveiceps Zimmer

Divisoria, 1 ♂; Fundo Sinchona, 1 ♀, 1 imm. ♂.

Pyrocephalus rubinus rubinus Boddaert

Yarinacocha, 3 ♂, 1 ♀; Contamana, 1 ♂.

Zimmer has shown (1941b, p. 16) that birds of this species from the tropical zone of eastern Peru are winter migrants from Argentina, belonging to the nominate race.

Muscivora tyrannus tyrannus Linnaeus

Yarinacocha, 4 ♂, 2 ♀ (all immature).

Tyrannus tyrannus Linnaeus

Yarinacocha, 4 ♂, 2 ♀.

Inclusive dates are September 17 to April 3.

Tyrannus melancholicus melancholicus Vieillot

Yarinacocha, 3 ♂.

Empidonomus aurantio-atro-cristatus aurantio-atro-cristatus

d'Orbigny and Lafresnaye

Yarinacocha, 2 ♀ imm.

Taken April 9 and 10.

Legatus leucophaeus nevagens Chubb

Yarinacocha, 3 ♂, 2 ♀.

Birds from Nicaragua to northern Peru have considerably more yellow below than specimens from Guiana and Bolivia, so that their separation from the nominate form is warranted. Cory and Hellmayr (1927, p. 177) either failed to recognize *nevagens* or were unaware of it, since they did not list it in the synonymy of *leucophaeus*. Zimmer, however (1930, p. 371), considered *nevagens* a valid form, and assigned to it his specimens from northern Peru. More recently Bond (1947, p. 136) and de Schauensee (1945, p. 42) list the nominate race, without comment, from Peru and Colombia respectively.

Sirystes sibilator albocinereus Sclater and Salvin

Yarinacocha, 1 ♂; Pucallpa, 1 ♀.

Peruvian examples of this species are apparently rare (cf. Zimmer, 1937a, p. 25). The male appears immature, with ochraceous edgings on the wing coverts.

Myiodynastes maculatus solitarius Vieillot

Contamana, 2 ♀.

These are May specimens and almost certainly winter visitants (see Zimmer, 1937b, pp. 12-15).

Myiodynastes chrysocephalus chrysocephalus Tschudi

Fundo Sinchona, 1 ♀.

Conopias trivirgata berlepschi Sneath

Yarinacocha, 1 ♂.

The first record for Peru and a considerable extension of range for the species, the nearest recorded locality apparently being Tefte, Rio Solimoes (cf. Zimmer, 1937b, p. 18). This specimen is virtually identical with a male from Santarem.

Myiozetetes similis similis Spix

Yarinacocha, 3 ♂, 1 ♀.

Zimmer (1937b, p. 18) includes both banks of the Amazon from the Rio Madeira west, eastern Colombia, Ecuador, Peru, and northern Bolivia in the range of *similis*. Recently Gyldenstolpe (1945, p. 232) has resurrected *connivens* Berlepsch and Stolzmann, type locality Santa Ana, Urubamba Valley, for birds from the Rio Purus, Rio Juruá and eastern Peru, although he lacked material from the latter country. We lack typical material of *similis* from the region of the Rio Madeira with which to examine this problem critically.

Material is available, however, with which to examine the race *fiedleri* Dunajewski (1939, p. 11, type locality Ucayali region, Cumaria). This form is described as more intensive yellow below, almost reddish yellow on the flanks, than any other form, and paler above than any race except *columbianus*. The four Yarinacocha birds, when compared to a long series of *similis* (or *connivens*) from Huánuco and San Martín, fail to show these characters, and *fiedleri* must become a synonym of whichever form is finally determined as the inhabitant of eastern Peru.

Ptyozetes grenadensis obscurior Todd

Yarinacocha, 1 ♂, 1 ♀.

Pitangus sulphuratus sulphuratus Linnaeus

Yarinacocha, 1 ♂.

Dunajewski (1939, p. 10) has separated the birds of northern Peru as *hellmayri*, the alleged character being smaller size than in the nominate form of British Guiana. Wing measurements of material in Chicago Natural History Museum fail to support this race, although they show a surprising range of individual variation.

BRITISH GUIANA

	Wing	Tail
5 ♂♂	101, 106, 110, 111, 115 (av. 109)	76, 78, 78, 84, 85 (av. 80)
3 ♀♀	102, 109, 111 (av. 107)	74, 79, 81 (av. 78)

PERU

4 ♂♂	104, 106, 108, 110 (av. 107)	78, 81, 82, 86 (av. 82)
3 ♀♀	93, 100, 101 (av. 98)	73, 75, 76 (av. 75)

Measurements of the males of the two populations are practically the same. The Peruvian females are notably smaller than those of British Guiana, but such small samples are not adequate to support another race. Unless further collecting shows this difference to be constant, *hellmayri* should be considered a race of *sulfuratus*.

Pitangus lictor lictor Lichtenstein

Yarinacocha, 2 ♂.

These birds are equal in size (wing 89, 91) to a series from British Guiana and should be referred to the nominate race. Birds from Colombia and Panama, representing *panamensis*, are smaller.

Myiarchus ferox ferox Gmelin

Yarinacocha, 7 ♂, 1 ♀.

Myiarchus cephalotes cephalotes Taczanowski

Divisoria, 1 ♂.

Myiarchus tuberculifer tuberculifer d'Orbigny and Lafresnaye

Yarinacocha, 1 ♀.

Empidonax traillii subsp.

Yarinacocha, 1 ♂.

Collected March 26.

Myiotriccus ornatus aureiventris Sclater

Fundo Sinchona, 3 ♂.

As noted by Zimmer (1939, p. 1) there is an apparent gap in the range of this species between the races *phoenicurus* of eastern Ecuador and Peru, north of the Marañón, and *aureiventris* of southeastern Peru. There are no records from the Huallaga drainage, the most northerly record for *aureiventris* being from Pozuzo, Huánuco, on the Ucayali side. The present specimens extend the range of this form another seventy miles to the north, but still on the Ucayali drainage.

The Fundo Sinchona birds average larger than *aureiventris* or *phoenicurus*, although there is some overlap in measurements with the latter. Comparative measurements are:

		Wing	Tail
Southeastern Peru.....	5 ♂♂	61-66 (av. 64)	47-48 (av. 47)
(<i>aureiventris</i>)			
Fundo Sinchona.....	3 ♂♂	68-70 (av. 69)	52-53 (av. 52.5)
Northern Peru and			
eastern Ecuador.....	7 ♂♂	61-68 (av. 66)	46-50 (av. 48)
(<i>phoenicurus</i>)			

In color the Fundo Sinchona birds seem to average closer to *aureiventris*, although at best the distinction between the two races is tenuous.

Pyrrhomyias cinnamomea pyrrhoptera Hartlaub

Divisoria, 2 ♂; Fundo Sinchona, 1 ♂.

In color these specimens are intermediate between *cinnamomea* of southern Peru and Bolivia and *pyrrhoptera* of Colombia and Ecuador, but in size they are closer to the latter.

Tolmomyias poliocephalus poliocephalus Taczanowski

Yarinacocha, 1 ♀.

Ramphotrigon ruficauda Spix

Cerro Azul, 1 ♂.

This is apparently the second record for this species from Peru; there are four specimens from Chamicuros in the British Museum (Natural History).

Todirostrum chrysocrotaphum neglectum Carriker

Yarinacocha, 1 ♂.

There is no suggestion of the white loreal spot characteristic of the nominate form.

Todirostrum maculatum signatum Sclater and Salvin

Yarinacocha, 1 ♂.

Euscarthmornis (striaticollis) iohannis Sneath

Yarinacocha, 2 ♂.

Lophotriccus vitiosus vitiosus Bangs and Penard

Yarinacocha, 1 ♂; Pucallpa, 1 ♀.

Elaenia spectabilis spectabilis Pelzeln

Yarinacocha, 2 ♂, 2 ♀; Contamana, 1 ♀.

Elaenia parvirostris Pelzeln

Yarinacocha, 1 ♀.

In the museum collection from Cercado, Santa Cruz, Bolivia, there is a female which lacks the lipochrome pigment, a condition that seems to occur fairly frequently in this species (cf. Cory and Hellmayr, 1927, p. 415, footnote *a*).

Elaenia sp.

Pucallpa, 1 ♀.

This specimen is nearest to *albiceps* in having a very small bill, but is much more olive on the throat and breast and more yellow on the abdomen. The tips of the wing coverts and narrow tips (1 mm.) on the rectrices are rufous, probably a sign of immaturity. Three wing bars are formed by the tips of the coverts. Size: wing 75, tail 62, culmen 12.

Myiopagis gaimardii gaimardii d'Orbigny

Yarinacocha, 4 ♂, 1 ♀.

This series matches a male from Rioja and a female from Moyobamba which Zimmer (1941a, p. 18) referred to the nominate race.

Phaeomyias murina waga Taczanowski

Yarinacocha, 1 ♂.

Camptostoma obsoletum olivaceum Berlepsch

Yarinacocha, 1 ♂, 1 ♀.

Tyrannulus elatus Latham

Yarinacocha, 3 ♂, 2 ♀.

Family **HIRUNDINIDAE**

Hirundo rustica erythrogaster Boddaert

Yarinacocha, 4 ♂, 1 ♀.

Stelgidopteryx ruficollis ruficollis Vieillot

Yarinacocha, 4 ♂, 1 ♀.

These specimens and seven others from northern Peru have the rump paler than the back and show an approach to *uropygialis* of western Ecuador and northwestern Peru.

Pygochelidon cyanoleuca cyanoleuca Vieillot

Fundo Sinchona, 1 ♂, 1 imm. ♂.

Iridoprocne albiventer Boddaert

Yarinacocha, 17 ♂, 5 ♀.

Progne chalybea chalybea Gmelin

Yarinacocha, 1 ♂, 1 ♀ imm.

Phaeoprogne tapera tapera Linnaeus

Yarinacocha, 2 ♂.

Family **CORVIDAE**

Cyanocorax yncas yncas Boddaert

Fundo Sinchona, 1 ♂, 1 ♀, 1 imm. ♂; Divisoria, 1 ♂.

The three adults are deeper yellow below than other Peruvian specimens, but on the color of the upper parts they cannot be separated.

Family **TROGLODYTIDAE**

Heleodytes turdinus hypostictus Gould

Yarinacocha, 1 ♀, 1 ♀ imm.

Thryothorus leucotis peruanus Hellmayr

Yarinacocha, 2 ♂, 4 ♀.

Thryothorus genibarbis juruanus Ihering

Yarinacocha, 1 ♀; Pucallpa, 1 ♂; Contamana, 1 ♂.

Apparently these birds are the first record of this species from Peru. They have been compared to a pair of *juruanus* from João Pessõa, Rio Juruá, with which they agree closely, except for the Yarinacocha female, which has the mid-line of the belly very pale buffy, almost as pale as the breast.

Troglodytes musculus albicans Berlepsch and Taczanowski

Yarinacocha, 3 ♂, 4 ♀.

I follow Chapman and Griscom (1924, p. 292) in considering *albicans* and *clarus* synonyms. The other race to which Ucayali birds might be expected to belong is *carabayae* of central and southeastern Peru, but these specimens show no approach to that form.

Troglodytes musculus subsp.

Fundo Sinchona, 1 ♂.

This specimen cannot be placed in any of the described races of this species. Below it is about as dark as the specimens from Chinchao, Vista Alegre, and Huachipa which Zimmer (1930, p. 405) placed with *albicans*, although they were considerably darker than the average of that form. The Fundo Sinchona bird, however, has a pale vinaceous tinge that is reminiscent of *audax* of the coastal region. Above, on the head and back, it is a trifle darker than Zimmer's Huánuco birds, and the rump and upper tail coverts are much darker. The tail, particularly, is strikingly different, not only from neighboring populations in Peru, but from any specimens I have seen from the whole range of the species. The tail is dark fuscous brown, so dark that it is difficult to discern the black barring. The wings are

dark, too, particularly the inner secondaries and tertials, on which the black barring is also obscured by the dark general color of the feathers.

Taczanowski (1884, p. 522) gives as juvenal characters for the allied form *tesselatus* "wings and tail darker than the adult, equally barred with black." However, the present specimen shows no evidence of immaturity, either in the texture of the plumage or in any suggestion of barring on the breast, an immature character in most races of the species. The marked differences in the wings and tail do not appear to be connected with age.

Microcerculus marginatus marginatus Sclater

Cerro Azul, 1 ♂.

Family MIMIDAE

Donacobius atricapillus nigrodorsalis Traylor

Yarinacocha, 5 ♂, 1 ♀.

Although Schunke collected six specimens, the species is apparently uncommon along the Ucayali, since this is only the second record from that region. The characters and relationships of this race were discussed in the original description (Traylor, 1948, p. 196). Gyldenstolpe (1951, p. 279) notes that specimens from the Rio Juruá are darker above than birds from farther east, possibly showing an approach to this form.

Family TURDIDAE

Turdus hauxwelli hauxwelli Lawrence

Yarinacocha, 1 ♂.

Gyldenstolpe (1945, p. 279) separates *fumigatus* and *hauxwelli* as different species, since he has specimens of both forms from the same localities in central Amazonia. The two forms replace each other, however, over the major part of their range.

Turdus ignobilis debilis Hellmayr

Yarinacocha, 5 ♂.

Family SYLVIIDAE

Ramphocaenus melanurus amazonum Hellmayr

Yarinacocha, 1 ♂.

Family VIREONIDAE

Vireo olivaceus chivi Vieillot

Yarinacocha, 6 ♂, 1 ♀.

These are summer birds (June to September) and could not be the northern migrant race.

Family COEREBIDAE

Cyanerpes cyaneus dispar Zimmer

Yarinacocha, 1 ♂.

Dacnis cayana glaucogularis Berlepsch and Stolzmann

Yarinacocha, 2 ♂.

Dacnis flaviventer d'Orbigny and Lafresnaye

Yarinacocha, 1 ♂ ad., 2 ♂ imm., 2 ♀, 1(?).

Hemidacnis albiventris Selater

Yarinacocha, 1 ♂.

This bird does not differ in color from a single "Bogotá" male, but the bill is shorter and more slender (length 10.5 as against 9.5; cf. Hellmayr, 1935, p. 283, footnote 1).

Coereba flaveola dispar Zimmer

Yarinacocha, 3 ♂.

These specimens agree well with a series from Huánuco, listed by Zimmer (1942, p. 4) as *dispar*. None shows any trace of a white speculum, which precludes the race *intermedia* of eastern Ecuador and northern Peru.

Conirostrum speciosum amazonum Hellmayr

Yarinacocha, 6 ♂, 1 ♀.

Family PARULIDAE

Myioborus miniatus verticalis d'Orbigny and Lafresnaye

Divisoria, 1 ♂; Fundo Sinchona, 1 ♀.

Basileuterus tristriatus tristriatus Tschudi

Divisoria, 2 ♂.

Basileuterus rivularis fulvicauda Spix

Fundo Sinchona, 1 imm. ♂.

Family **ICTERIDAE****Clypicterus oseryi** Deville

Previsto, 1 ♂; Quistacocha, 1(?).

Psarocolius decumanus decumanus Pallas

Yarinacocha, 2 ♀.

Hellmayr (1937, p. 14) lists Peruvian birds from south of the Marañón as *maculosus* Chapman. These two specimens, however, and three other northern Peruvian specimens are indistinguishable from a series from British Guiana and should be referred to the nominate form. None of them shows any of the scattered white or yellow feathers that are characteristic of *maculosus* and are present in a series from Bolivia.

Psarocolius angustifrons alfredi Des Murs

Yarinacocha, 2 ♀.

The bills of both specimens are yellow without any trace of blackish, but in one the yellow patches on the sides of the forehead are practically absent, and in the other they are smaller than in typical *alfredi*, thus approaching the nominate form.

Cacicus cela cela Linnaeus

Yarinacocha, 4 ♂, 5 ♀.

Cacicus uropygialis uropygialis Lafresnaye

Fundo Sinchona, 1 ♀.

Archiplanus solitarius Vieillot

Contamana, 1 ♀.

Scaphidura oryzivorus oryzivorus Gmelin

Yarinacocha, 1 ♂.

For the use of *Scaphidura* instead of *Psomocolax*, see Parkes (1954b).

Molothrus bonariensis nigricans Traylor

Yarinacocha, 5 ♂, 2 ♀.

During the study of this species, in preparing a description of the present race (Traylor, 1948, p. 198), additional details were learned concerning the sequence of molts and plumages.

Friedmann (1929, pp. 132-138) gives a thorough discussion of the molts and plumages of the different races, but study of a large series from Bolivia and Argentina shows that the change from juvenal to adult plumage in the male is more complex than his description shows. Friedmann lists post-natal and post-juvenal molts for the first autumn, and during the latter the first winter plumage is assumed, similar to the adult except for a few wing and tail feathers retained from the juvenal plumage. Thereafter there is an annual post-nuptial molt, the first breeding plumage being acquired by wear and differing very little from that of the first winter. A series of sixteen Bolivian males demonstrates, however, that there is a well-marked first winter plumage, different from that of the adult, and that there is a partial pre-nuptial molt producing the first breeding plumage.

The first winter plumage, assumed at the post-juvenal molt, is dark steel blue on the head and body and there is a greenish gloss on the wings and tail, the latter, however, not as bright as in the adult. There is sometimes a faint purplish gloss on the head, neck, upper back and breast, but the color never approaches that of the adult in intensity. The wing and tail lengths in this plumage usually average 5 mm. less than in the adult. The first winter plumage is assumed (in Bolivia) during April and May, and lasts through the early winter.

Three April males from Cercado, Santa Cruz, Bolivia, illustrate the assumption of this plumage. In the first, the sides of the abdomen and breast, scattered feathers of the throat, head, and upper back and the whole of the rump are steel blue. The wing coverts are metallic green and the six inner primaries and innermost secondary are fuscous black with a faint greenish gloss. The remaining feathers are juvenal, gray buff below with indistinct fuscous shaft streaks, and fuscous above; the wing and tail feathers are fuscous with buff edgings. In the second, the molt is practically complete except for two outer primaries, three outer secondaries, the lores, and scattered feathers on the back and abdomen. In this specimen the remaining juvenal feathers are fuscous, with no sign of buff. The third specimen is similar, but the remaining primaries are being renewed.

The first nuptial plumage is assumed by a partial pre-nuptial molt in which the feathers of the head, neck, upper back, and breast come in bright glossy purple as in the adult. These fresh feathers stand out sharply against the blackish or fuscous body feathers of the worn first winter plumage. The pre-nuptial molt takes place in late winter, July to September, and is complete in all observed October specimens. Birds that have retained some juvenal body feathers during the first winter present a peculiar appearance at this time, with pale brown juvenal feathers, fuscous black or blue black first winter feathers and glossy purple adult feathers all intermingled.

This sequence of plumages holds throughout the range of the nominate race and in *minimus* and *nigricans* also, but we lack sufficient material of the other races to determine their plumages.

Agelaius icterocephalus icterocephalus Linnaeus

Yarinacocha, 5 ♂, 4 ♀.

Family **THRAUPIDAE**

Tanagra xanthogaster brevirostris Bonaparte

Fundo Sinchona, 1 ♂, 1 ♀.

This pair agrees well in color with specimens of *brevirostris* from Huánuco. They are also closer in size (wing, ♂ 63, ♀ 61) to this race, rather than to the smaller *dilutior* Zimmer of the Ucayali valley.

Tanagra minuta minuta Cabanis

Yarinacocha, 1 ♂.

Tanagra chlorotica taczanowskii Selater

Yarinacocha, 4 ♂, 1 ♀.

Chlorochrysa calliparea bourcierii Bonaparte

Divisoria, 1 ♂.

This specimen agrees with birds from Huachipa, Huánuco, in having a bluish wash on the belly with no hint of the violet found in *calliparea*.

Tangara chilensis chilensis Vigors

Yarinacocha, 1 ♀; Contamana, 2 ♂.

Tangara schrankii Spix

Fundo Sinchona, 2 ♂.

Tangara xanthocephala venusta Sclater

Divisoria, 1 ♂, 1 ♀.

In the intensity of yellow on the crown these birds do not differ from birds from Venezuela, Colombia, and Ecuador.

Tangara chrysotis Du Bus

Divisoria, 1 ♀.

Tangara cyanotis lutleyi Hellmayr

Divisoria, 1 ♂.

Tangara cyanicollis cyanicollis d'Orbigny and Lafresnaye

Fundo Sinchona, 1 imm. ♂, 2 ♀.

One female has some violaceous on the throat, thus showing an approach to the northern race, *caeruleocephala*, but the series as a whole is nearer the nominate race.

Tangara ruficervix amabilis Zimmer

Divisoria, 1 ♀.

This specimen has been compared with a topotypical male from Uscho and a female from Chaupe. It varies from them only in having the black bands adjacent to the orange occipital band somewhat reduced. It is definitely *amabilis*, however, and not *fulvicervix* of the Chanchamayo Valley south into Bolivia; in *fulvicervix* the black bands are completely lacking and the orange nuchal band is darker and reduced in size. Chapman (1926, p. 662) has called attention to the striking sexual dimorphism in the latter. He considered that this fact and the complete absence of the black nuchal bands served to separate *fulvicervix* as a distinct species. While this may be true biologically, it is virtually impossible to demonstrate, since the ranges of the two forms do not overlap. There is no question that *fulvicervix* is the southern representative of *ruficervix* and its allied races, and in a genus like *Tangara*, with a plethora of forms, the use of a trinomial for *fulvicervix* is preferable for showing the relationship of the forms.

Tangara mexicana boliviana Bonaparte

Yarinacocha, 2 ♂, 2 ♀.

Tangara gyrola catharinae Hellmayr

Fundo Sinchona, 1 ♂.

This specimen matches closely a series of eight males from Huachipa and Vista Alegre, Huánuco, which Zimmer (1943, p. 7) considered to be *catharinae*. However, six males from the Yungas of Cochabamba, Bolivia, differ considerably from the northern Peruvian specimens. In the former the crown averages darker, less reddish brown, and the size is significantly greater. Of the six Bolivian birds, four have the crown markedly darker and are separable at a glance; the other two can be matched by the darkest Peruvian specimens. In wing measurements there is a similar amount of overlap: six Bolivian males have wings 76, 77, 78, 79, 79, 79, and nine Peruvian males have wings 73, 74, 74, 74, 75, 75, 76, 76, 77. However, two males from Marcapata in southeastern Peru are virtual topotypes of *catharinae* and are intermediate in character. In length of wing (77, 78) they are closer to Bolivian birds, but the color of the crown is paler brown, as in birds from northern Peru. Although there is a cline of increasing size and darkness of the crown from north to south, it is not possible to separate a second race.

Compsocoma flavinucha somptuosa Lesson

Divisoria, 1 ♂, 1 ♀; Fundo Sinchona, 1 ♂.

These birds agree in intensity of coloring with two specimens from Río Mixiollo, and will belong with the race from northern Peru when that is formally named (see Zimmer, 1944, p. 8).

Thraupis virens coelestis Spix

Yarinacocha, 2 ♂, 2 ♀.

These birds are intermediate between *coelestis* and *caerulea*, and I follow Zimmer (1944, p. 12) in assigning them to the former.

Thraupis palmarum melanoptera Sclater

Yarinacocha, 1 ♂.

Ramphocelus nigrogularis Spix

Contamana, 1 ♂.

Ramphocelus carbo connectens Berlepsch and Stolzmann

Yarinacocha, 6 ♂, 5 ♀, 1(?).

Although Zimmer (1945, p. 1) tentatively assigns a female from Yarinacocha to *R. c. carbo*, this series shows no approach to that

race and agrees closely with a series of *connectens* from Junín. In only two specimens is there a faint reddish wash on the abdomen, and in none is there a reddish wash on the back.

Calochaetes coccineus Sclater

Divisoria, 1 ♂, 1 ♀.

This is the second record for this species from Peru, as Bond (1955a, p. 55) recorded a specimen collected by Carriker at Eneñas. Through the kindness of Dr. Zimmer I have been able to compare these birds with specimens from Colombia and Ecuador in the American Museum. They are identical in size and color.

Piranga leucoptera ardens Tschudi

Fundo Sinchona, 1 ♂, 1 imm. ♂.

Nemosia pileata nana Berlepsch

Yarinacocha, 2 ♂, 2 ♀.

Hemithraupis flavicollis sororia Zimmer

Yarinacocha, 1 ♂, 1 ♀.

Thlypopsis sordida chrysoptis Sclater

Yarinacocha, 1 ♀ imm.

Chlorospingus flavigularis flavigularis Sclater

Fundo Sinchona, 2 ♂, 3 ♀.

Zimmer (1947, pp. 6-10) has recently resurrected *parvirostris* Chapman as a separate species and has defined the characters separating *parvirostris* from *flavigularis*. The present specimens are definitely *flavigularis*, agreeing in almost all particulars with Zimmer's diagnosis; particularly in size they belong with the larger *flavigularis* (wing ♂♂ 82, 84; ♀♀ 74, 75, 75). Zimmer's measurements for *flavigularis* are: wing ♂♂ 76-84 (80.3); ♀♀ 73.2-77 (75.8), and for *parvirostris*: wing ♂♂ 71-80 (75.6); ♀♀ 67-71.5 (69.6). The only character ascribed to *flavigularis* that is not well shown in these specimens is the gray lore, which is wanting in two of them, small in two others, and well developed in only one. The altitudes at which these birds were collected varied from 1300 to 1550 meters, about the upper limit for *flavigularis*. A single male from Pozuzo, Huánuco, is also *flavigularis*.

Family FRINGILLIDAE

Saltator coerulescens azarae d'Orbigny

Yarinacocha, 2 ♂; Contamana, 1 imm. ♀.

Paroaria gularis gularis Linnaeus

Yarinacocha, 12 ♂, 5 ♀.

Several specimens lack the black feathering behind the eye, and in most it is reduced compared to Guiana specimens. However, in none of the specimens is the black loreal feathering lacking, as in *cervicalis* from Bolivia, and the population as a whole is nearer the nominate form.

Sporophila sp.

There are several specimens of *Sporophila* that I am unable to allocate to species. One is a male from Pucallpa, in fresh immature plumage, which is slightly olive brownish above, similar to *Sporophila americana*, but dark uniform ochraceous buffy below, only slightly paler on the belly. Even with extreme wear it probably could not become as pale as *americana*, which it resembles in size as well as color of the back.

There are also two females and two immature males from Pucallpa. They may be either *S. luctuosa* or *S. nigricollis*, but I am unable to separate them satisfactorily either by comparison with identified specimens or from printed descriptions.

Sporophila americana subsp.

Pucallpa, 1 ♂.

This specimen is in worn immature plumage, with a few scattered adult feathers on the head and wing coverts. It compares very closely with a British Guiana male which is in worn immature plumage, but marked as breeding. This record of *S. americana* from Peru marks a surprising extension of range for a species that hitherto has been known only from northern and eastern South America.

Sporophila luctuosa Lafresnaye

Fundo Sinchona, 2 ♂.

Sporophila castaneiventris castaneiventris Cabanis

Yarinacocha, 1 ♀; Pucallpa, 2 ♀.

I agree with de Schauensee (1952, p. 194) that the race *rostrata* Todd of Amazonia cannot be upheld. No constant color characters can be seen when comparing a series from British Guiana with one from Peru and the lower Amazon. The length of the culmen, on which Gyldenstolpe (1945, p. 326) relied when recognizing *rostrata*, shows an almost complete overlap (culmen of 5 males from British Guiana 8.5–9, av. 8.9; of 8 males from Peru and the lower Amazon 9–10, av. 9.3).

Atlapetes brunnei-nucha frontalis Tschudi

Divisoria, 1 ♂; Fundo Sinchona, 1 ♂.

Parkes (1954a, p. 135) has resurrected Tschudi's name for the birds from Panama to northern and western Venezuela and southern Peru. The characters separating this race from *brunnei-nucha* of southern Mexico are given as "Similar in size, but bill averaging longer. Similar also in color, but white of underparts much more extensive. Yellow border of crown deeper in color, near Yellow Ocher (Ridgway, 1912), rather than Primuline Yellow." There are at hand a good series of fresh material from Marcapata, Cuzco, and the two males from Huánuco, representing *frontalis*, and a long series from Vera Cruz of *brunnei-nucha*. The one character that consistently differentiates the two forms is the deeper, almost orange yellow border of the crown in *frontalis*. The extent of the white on the under parts is variable individually and with the make of the skin, but there are no geographical trends; neither are there any differences in bill length. The color of the crown border, however, distinguishes the population of Peru from that of Mexico, but material from the rest of the range of *frontalis* is lacking.

Myiospiza aurifrons aurifrons Spix

Yarinacocha, 1 ♀.

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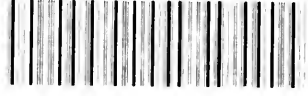
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